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THE

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OF

MEDICAL & PHYSICAL SCIENCE.

EDITED BY

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

Lecturer on Materia Medica and Pharmacy, University of McGill College; Member of the Board of Governors of the College of Physicians and Surgeons of Lower Canada; one of the Physicians to the Montreal General Hopital; one of the Consulting Physicians to the University Lying-in-Hospital, &c.

VOL. V.] JANUARY, 1850. [No. 9.

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Communications on Scientific subjects and Books, &c., for review, to be addressed to the Editor: on all other matters connected with the Journal, to the Publisher: in either case, Post-paid—No communications for insertion in the succeeding number will be received after the fifteenth of the month.—From this rule there will be, in future, no departure.

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Midwifery and Diseases of Women and Children,	by M. M'Culloch, M. D.; 8, A.M.
Materia Medica and Pharmacy,	" A. Hall, M. D.; 9, A.M.
Institutes of Medicine,	" Wm. Fraser, M. D.; 10, A.M.
Principles and Practice of Surgery,	" G. W. Campbell, M. D.; 11, A.M.
Anatomy, (Descriptive),	" O. T. Bruneau, M. D.; 2, P.M.
Theory and Practice of Medicine,	" A. F. Holmes, M. D.; 3, P.M.
Forensic Medicine,	" F. Badgley, M.D.; 6, P.M.
Chemistry,	" Wm. Sutherland, M. D.; 7, P.M.
Clinical Surgery,	" J. Crawford, M. D.; 1, P.M.
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The Medical Library, which is furnished not only with books of reference, but the usual elementary works, will be open to matriculated students, without charge, under the necessary regulations. Access to the Museum will be allowed at certain hours.—The Demonstrator of Anatomy will be daily in the Dissecting Rooms to oversee and Direct the students.

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GEORGE D. GIBB, M.D.,
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Montreal, Jan. 1, 1850.

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

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ART. XLII.—EPIDEMIC BOWEL COMPLAINT DURING THE LATTER PORTION OF THE SUMMER 1849, AT ST CATHARINES, C. W.

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

As no cases of algide cholera came under the notice of the physicians of the above town, some account of a peculiar form of diarrhœa and dysentery presenting many anomalous symptoms, and requiring a form of treatment differing essentially from that prescribed by the authorities of systematic works on practice of physic, may prove of sufficient interest to occupy a portion of the pages of the *British American Journal.*

The disease first made its appearance about the middle of July, and soon became endemic to this place, for villages, at the distance of four miles, and the surrounding country, enjoyed a comparative immunity from the visitation; this could scarcely be wholly attributed to the neglect of sanatory precautions, as the houses are not built closely together, the town stands upon elevated ground, the soil is of a sandy nature, mixed with coarse gravel, no stagnant pools exist in the vicinity, the canal water being kept in constant motion by the descent to Lake Ontario, and the frequent lockage of various craft passing through; the inhabitants have never been afflicted by any maladies, deriving their origin from idio-miasma, and they suffer less during the vernal and autumnal months, from malaria, than those residing beyond the limits of the town. This season was remarkable for the equable continuance of both rainy and dry weather, the thermometer seldom above 85°, vegetation was most luxuriant, and the crops of the neighboring farms were abundant. The quantity of free atmospheric electricity was unusually diminished, two thunder-storms happened during the months of July and August, when the prevalence of the epidemic was at its height; the operator at the telegraph office complained of the conduction being so imperfect, that frequently the apparatus worked so feebly, even with an addition of cups both to the main and local battery, as to render communications very indistinct; a small electrical machine in my possession, which always, previously, acted well, and at present yields sparks of great length and intensity, could not be brought to exhibit any but the weakest electrical phenomena; these facts are merely curious in themselves, as the influence of the electrical condition of the atmosphere upon the causation of disease is, at the present day, wholly undecided.

At the distance of three miles along the canal, there occurred four cases of well marked Asiatic cholera, the patients were negro volunteers, belonging to a detachment temporarily stationed at that spot. At Port Colborne, the entrance to the Welland Canal from Lake Erie, on one night in July, six people were seized with spasmodic cholera, and all the cases proved fatal. On another night shortly after, it again made its appearance, and seven died, subsequently thirteen cases occurred during the space of six days, and then it finally disappeared; the total number of cases occurring in the colored corps was about seven, these latter and those of the detachment received treatment at the hands of Dr. Jukes, who employed the calomel system, and the deaths were five; the others were generally submitted to the tender mercies of several Charlatans who prey upon the poor Irish laborers, and they died to a man.

It was remarked upon both nights, when the mortality was so great, that a singular sulphurous odor pervaded the air. In the village of Port Colborne, there are a number of springs in the neighborhood impregnated with sulphuretted hydrogen, and the phenomenon might be wholly ascribed to barometric causes.

At no place but St. Catharines did the epidemic, then prevalent, during all this time, make any serious inroads; this disease was frequently preceded, for a day or two, by catarrhal symptoms, its accession was then ushered in by chills, anorexia, nausea, and vomiting, with slight cramps of the abdominal muscles and extremities, gradually the gastric irritability increased, accompanied by abdominal pain, tormina, and frequent copious evacuations of a serous dark, bilious character, and extremely fœtid. As the disease advanced, blood, first in small quantity, appeared with the stools, which soon consisted solely of blood and mucus, accompanied with distressing tenesmus, tongue generally clean and red, becoming dry as the complaint was developed, not unfrequently it was coated with a white or yellowish white fur; the pulse small and frequent, from 100 to 130; copious cold sweats, the urine diminished, and in fatal cases suppressed; much jactilation and despondency, coldness of the extremities, death was preceded by collapse and lividity of the surface; the attending fever, and but few patients escaped this complication, was sthenic, not unfrequently of a remittent or intermittent type, and in some, typhoid.

In a few instances the dysenteric symptoms supervened at an early stage, but, generally, their invasion took place at the close, having the semblance of the disease, commencing at the cardiac orifice, and traversing successively the entire intestinal tract, to terminate in the rectum; tenderness upon pressure, over the several regions of the abdomen, was absent in most of the cases coming under my observation; the

sudden approach of collapse at any stage of the disorder, evinced a choleraic tendency; it also seemed to be substituted for the ordinary diseases of miasmatic origin, that usually prevailed during former years, at the same season, and when those did declare themselves, they invariably assumed "the livery of the prevailing epidemic."

So universal was this complaint, that scarcely one-fifth of the population escaped some form of it, either very mild, or presenting all the symptoms above described; the majority were, however, of by no means an aggravated kind, most persons whom one encountered after their mid-day meal were flushed, and complained of transitory griping pains.

In a great number the exciting cause was, conclusively, of a contagious nature; upon one member of a family contracting the disease, the remainder, notwithstanding all due precaution in diet, cleanliness, and ventilation, one by one also succumbed, and not a few well ascertained instances occurred, of visitors who had arrived from a healthy locality receiving the disease when exposed to intercourse with those laboring under it, or upon their return or departure from the neighborhood.

Duration;—this, in fatal cases, was never less than from five to ten days, sometimes three weeks elapsed before its termination, in death or recovery, but in a large number, the symptoms were relieved in the space of two or three days.

The history of the following cases may serve to illustrate the semilology more fully, and afford a sketch of the treatment practised.

Case A.—A married lady, ætat 34, full habit of body, of a decided strumous diathesis, the mother of seven children.

1*st Day.*—A few days previous, she experienced slight catarrhal symptoms, for which she was at a loss to account, wandering pains, occasional cramps in the gastrochnemii and adductors of the thighs; last night she passed several dark watery stools, containing scybala tinged with blood, attended with no pain, she has one now every thirty or forty minutes; no pain on pressure; vomiting of ingesta immediate upon their reception in any quantity; tongue clean and red; pulse frequent and tense; cool extremities, and much prostration.

℞ Mist. Camph. C. Chloroform, comp. ʒi.
Morph. Sulph. gr. ½.
Aquæ, q. s. pro. mist. Statim sumend et repetat. dos. bis per horas tres.
Cataplasm. sinap. ad epigastrium.
Etiam ℞ Hyd. chlorid gr. ss. semihorio capiend. donec emesis sublevanda erit.

The vomiting was allayed after the third doze of calomel, and one repetition of the camphor mixture.

℞ Plumbi acetatis, gr. v.
Hyd. chlorid, gr. i.
Pulv. opii, gr. ss. *m.*
Fiat. pulv. 3 tiis. horis adhibend. Mitte. iij.

2*nd Day.*—Bowels moved less often, and evacuations less watery; has a febrile exacerbation about 9 o'clock, a.m.; pulse 120, small; capillary circulation improved; complains of tormina; urine scanty; distressing thirst; vomiting at intervals. To be confined strictly to the horizontal posture, and the dejections received upon cloths placed for the purpose; to be allowed to swallow small pieces of ice occasionally; a blister to be applied over the stomach; one grain of calomel to be laid upon the tongue and swallowed, followed by a little gum water, with liq. opii. sedat. *m*xv., every hour or every second hour, according to the urgency of the symptoms.

3*rd Day.*—Vomiting and chilliness, followed by high fever, at 9 o'clock; bowels very frequently moved, dejections consisting principally of fluid, containing blood, in large quantity and mucus.

Repetat. pulv. acet. plumbi., &c., ut ante.
Capiat quininæ disulph gr. x. proxima hora.

4*th Day.*—Bowels not opened for twelve hours; vomiting wholly subdued; tormina; fever in the afternoon; tenesmus and bloody stools four or five times. Repeat the quinine to-morrow at day-light.

5*th Day.*—The remittent fever has been successfully interrupted; dysenteric symptoms increasing; urine nearly suppressed; copious enemata of cold water, with a drachm of laudanum in each, were ordered at intervals of four or six hours.

℞ Ferri persesquinitrat. sol. (form. Mr. Ker) *m.* xx.
Omni vel 2da. q. q. h. sumend. ex. aq. q. v.

6*th Day.*—Urine copious; stools nearly free from blood tinged with oxyde of iron, and more purulent. *Ut heri.*

7*th Day.*—Improvement continues; evacuations now consistent and fœculent, colored highly by the iron, recurring only every sixth hour.

8*th Day.*—Dysenteric symptoms removed; *omitte remedia.*

9*th Day.*—Convalescing; complains of exhaustion; quinine in small doses, &c.

Case B.—A female, ætat 39. Burning heat at scrob. cordis; vomiting and faintness; tenderness over the course of the colon; evacuations very frequent, serous, mixed with sanguinolent mucus, tenesmus.

℞ Ferri persesquinitr. sol. ʒiv.
Infus. quassia ʒiv.
Capt. cochl. comp. 2 dis. horis.
Mist. camph. c. chlorof. comp. p. r. n.

2*nd Day.*—The same as yesterday.

3*rd Day.*—Improving. Enema, decoct amyli et opii post sedes sing. liquidas. Ferri persesquinit ut ante 3tiis v. 4tis horis.

4*th Day.*—The same as last report.

5*th Day.*—No discharge from the bowels for 14 hours.

6*th Day.*—Convalescing. Prescribed infus calumbæ.

Case C.—Laborer, ætat 40. Has been suffering from diarrhœa for three days, for which he treated himself with some of the compounds of laudanum and

capsicum, so much in vogue; evacuations frequent, containing much blood and mucus; vomiting has ceased; no pain on pressure; tongue red, clean, and dry; cold extremities and clammy, copious sweating. To be confined to the horizontal posture, &c.

℞ Hyd. Chlorid. gr. v.
Pulv. opii. gr. ii. Statim sumend.

2nd Day.—Relieved by the powder, having passed six hours in sleep; pulse 100, soft and weak, sweating copiously; bowels opened five times, within the space of eight hours. Persesquinitrate of iron in the dose of half a drachm, mixed with a little syrup, every hour, second or third hour, according to the frequency of the passages from the bowels.

3rd Day.—*Ut heri.*

4th Day.—Improving.

5th Day.—Only three dejections in 24 hours, colored with the iron, and becoming more consistent; pulse 90, weak. Recommended rice, broths, &c., the maintenance of the horizontal posture, and the continuation of the medicine twice a-day.

6th Day.—Contrary to my injunctions he arose this morning and walked out into his garden, upon returning into the house, he remained sitting in a chair until syncope supervened, and he was carried to bed; I found him pulseless almost, bathed in cold perspiration, and evidently becoming collapsed, I administered Brandy, Camphor and Chloroform, quinine and ammonia, alternately for about thirty hours, at the end of that time he expired. No sectio cadaveris.

Under treatment of this kind, modified in different cases, the number of deaths were only four, out of ninety patients.

Among the remedial agents camphor and opium claimed a high rank, tending to diffuse excitement and relieve the sinking and faintness so distressing, when the disease had reached its climax. Next to those the persesquinitrate of iron appeared to exert the most controlling influence. In the hurry, consequent upon the attendance of a large number laboring under a complaint requiring much assiduity, several applied for my services whom I could not attend regularly, but I recommended the use of this solution with infusion of quassia, and I have since ascertained that the prescription invariably proved highly successful, often, when used early in the attack, cutting it short at once. Mercurial preparations proved indispensable, in cases complicating remitting fever, or exhibiting much hepatic engorgement. Acetate of lead fully sustained its high reputation, in cases where the discharges were watery or contained much blood, in the former I gave preference to large doses; a form of subacute gastritis, which speedily yielded to blistering, sometimes followed this use of it. Enemata of acetate of lead, nitrate of silver, tinct. ferri sesquichlorid, tannin, opium, &c., all were highly valuable in various cases, more particularly where the disease lingered in the lower part of the bowels.

St. Catharines, November 27, 1849.

Art. XLIII.—THE H LERA AT VAUDREU L

By H. Cartier, M.D., Vaudreuil.

Votre lettre m'est parvenue. En réponse, j'ai l'honneur de vous informer que le choléra a sévi avec beaucoup de rigueur dans cet endroit. Du 17 juillet au 1er octobre, j'ai été appelé, tant dans Vaudreuil que dans l'Ile Perrot. auprès de 75 cas de cette terrible maladie. Dans tous les cas il y a eu vomissements, selles grisâtres, et crampes plus ou moins fortes. De ce nombre, 61 étaient des adultes, et 14 des enfants il est mort, des premiers 9, et 5 des derniers. J'ai essayé plusieurs des traitements recommandés, mais celui qui m'a réussi le mieux, et que j'ai généralement employé, a été le traitement par le calomel et le camphre, d'abord à fortes doses, puis en doses moins fortes, et répétées d'heure en heure, quelquefois même de demi-heure en demi-heure, jusqu'à changement dans les symptomes. De tous les cas fatals, il n'y en a eu que trois chez lesquels je n'ai pu arrêter, ni le vomissement ni la diarrhée; les autres ont cédé au traitement, mais dans aucun la chaleur n'a pu être ramenée. Tous ont conservé leur parfaite connaissance et l'usage de la parole jusqu'au dernier moment, quoique chez quelques uns le pouls eut cessé de battre depuis plusieurs heures.

Le choléra a sévi le plus fortement dans les endroits bas et marécageux, le long de la rivière—il n'y a eu que très peu de cas dans les concessions et sur les terreins élevés.

Outre le choléra, nous avons aussi eu un très grand nombre de cas de diarrhées et de dysenteries, mais aucun n'a été fatal.

Vaudreuil, Nov. 12, 1849.

Art. XLIV.—CRITICAL EXAMINATION OF GENESIS III. 16. HAVING REFERENCE TO THE EMPLOYMENT OF ANÆSTHETICS IN CASES OF LABOUR.

By the Rev. Abraham De Sola, Lecturer on Hebrew Language and Literature, University of M'Gill College.

The employment of anæsthetic agents in midwifery, has been opposed by many persons, on grounds, both religious and professional. The professional objections, we have neither the ability nor inclination to canvas here; but, we do propose, agreeably to the Editor's invitation, to make some few observations, in a spirit, we trust, of fairness and candour, as to the so-called religious objections, founded, not on any received figurative interpretation, which would at once preclude our remarks, but upon the plain, grammatical sense of certain words of Holy Writ. This announcement, coming as it does from one who does not generally accept the principles of Christian interpretation, may perhaps be considered startling, certainly somewhat novel in its character, but to remove any nervous objections which may on this account prevail in the mind of the Christian reader, we shall proceed to give a brief outline of the manner in which we shall conduct our investigation of that Scriptural passage upon which, as all agree, the *pro's* and *contras* in this discussion are almost entirely based.

From the perusal of various books and papers on this subject, and, more especially, from the perusal of Dr. Simpson's excellent work, * at his third and fourth chapters, which may be regarded as a kind of *concervatio argumentorum*, we are led to conclude that all objections to the superinduction of anæsthesia in labour, are founded on certain words occurring in the 16th verse of the 3rd chapter of Genesis. Now, we believe that, if it can be shown on scientific principles that the words have no such meaning as have been attributed to them by the translators of the Anglican version and others, the objections founded on them, must be considerably modified, if not entirely removed; hence, one principal portion of our labours will be a grammatical analysis of these disputed words.

As it appears to us that in conducting such an inquiry, no source of information should be neglected, however repugnant it may prove to our pre-conceived notions and prejudices, we shall not fail to seek light and assistance from Hebrew, as well as Christian, authorities. The advantage of consulting the former, must be evident to every unbiassed mind, recollecting as it needs must, that for whatever knowledge we may possess of the Hebrew language and its grammar, we are indebted to them;—that Christian compilers of Hebrew grammars and Lexicons have taught little or nothing more, and very much less, than they have taught; and that their commentaries and paraphrases, have avowedly assisted Christian translators in their renderings of the Sacred text.

But, before proceeding to our task, we think it necessary to make some observations on a passage in Dr. Simpson's work, which, we think, ought not to pass unnoticed, since it may induce many, anxious to arrive at the truth, but unable to consult the original text of Scripture, to form erroneous notions on the question under consideration, to establish false hypotheses, and to imagine that they have unanswerable arguments against those who defend on Scriptural grounds the employment of anæsthetics in labour. The passage referred to is as follows: "Those who from the terms of the first curse, argue against the superinduction of anæsthesia in labor, aver that we are bound to take and act upon the words of the curse *literally*, 'I will greatly multiply thy sorrow and thy conception,' or as Gesenius and other Hebrew authorities state, that being a case of Hendyadis, it may be *more* correctly rendered, 'I will greatly multiply the sorrow *of* thy conception, &c.'"† Now, we have to remark, that the rendering here spoken of, instead of being more correct, is most incorrect. It is plainly untenable, and if Gesenius has written after this fashion, it is truly astonishing. Not having his Lexicon, in the original, before us, we can only turn to an English translation (Gibb's), and there we find that Gesenius says no such thing. We do, indeed, find that under the root עצב (ngatsab) he thus remarks, "עצבון (ngitsabbohn), verbal from עצב (ngatsab) means, 1, labor, toil, 2, pain, Gen. iii. 16. עצבונך והרונך, (ngitsebonech ve. heronech) *thy pain and thy conception*, *i. e.* the pain of thy conception." Here, it will be perceived that there is no case of Hendiadys affirmed, though there is one suggested. The learned Professor translates just as the Anglican authorised version translates. He says, plainly enough, the words mean *thy* pain (Authorised version, thy sorrow), *and thy* conception, always supposing that his translator has not misunderstood nor misrepresented him, and we have no reason to believe that he has. It is true, as we before remarked, that he *suggests* such a case, but here he speaks theologically, and we may be permitted to differ from him. Philologically, he must needs reject the theory, and for these simple reasons: prefixed to the latter of the two nouns, there is the letter ו (vau), which, when so occurring, must necessarily be translated by either of the words, *or*, *and*, or *but*; in short, ו is either a conjunctive or disjunctive. Now, the occurrence of either of these, would at once exclude from the mind of one, at all acquainted with Hebrew philology, any idea of Hendiadys. If we may be permitted to transfer here certain principles of Hebrew grammar, with which the merest tyro in that study is acquainted, but of which the holders of the opinion under notice, appear to have been ignorant, or unmindful, we should remark that Hendiadys can only obtain, in Hebrew, where two nouns are in juxtaposition; or, to speak more technically, *in construction* with each other, and for this latter purpose, the *first* noun must be in the genitive case, and have the word *of* added to it. Unless this rule be observed, the nouns will stand as *absolute*, or having no connection with each other. This will be more clearly seen by example. Let the two words, דבר (dabbar), *a word*, and אמת (emeth), *truth*, be placed together, and the former, being in the nominative case, and therefore having the vowel point (â) called *Kamets*, must be translated as in that case; and the two words will mean, *a word truth*. But the [kamets,] being changed into : (sheva), as is required for the genitive, the words will then express, *a word of truth*, which we would render in English, *a true word*. It will be perceived, then, from this example, that, what in English requires to be an adjective, may be, and is, in Hebrew, a noun substantive, used as a definitive or predicate. And indeed, to the class of noun substantives,* almost all adjectives in Hebrew are reduced. Hence, too, it will be perceived, the figure of Hendiadys is more common in Hebrew than in other languages. But let us now apply these rules to the examples with which we have more immediate business. We observe, in the first place, that the noun עצבון *ngitsabbohn*, is in the genitive case, and so far, agrees with the rule laid down for constructive nouns; but, we quickly perceive that it it is so, not because it is in construction with the following noun, but with the personal pronoun ך (cha) *thee*. Moreover, we observe that the second noun הרין (hèrayon), is also in

* "Anæsthesia, or the employment of Chloroform and Ether in Surgery and Midwifery." By J. Y. Simpson, M.D., F.R.S.E. &c.

† "Anæsthesia, &c," p. 112, Ed. Phil.

* The early Hebrew grammarians divide the parts of speech into *three* only, viz., the noun, verb, and particle.

the genitive case, having the conjunction ו (vau) prefixed, and the personal pronoun ך (cha) postfixed. We must then, of necessity, translate the two words thus: —עצבונך (ngitsebonech) *the trouble*, or *labor of thee*, *i.e.*, *thy trouble*—והרונך (vehèronech) *and the conception* of thee, *i.e.*, thy conception.

The foregoing, we fear somewhat tedious, illustration, may perhaps be sufficient to show that there is no case of Hendyadis in the passage under consideration, and that those who insist upon such a figure, and the translation so resulting, can only do so, in defiance of, and opposition to, the most simple and evident rules of Hebrew grammar.

We shall now proceed to our examination of Genesis iii. 16. The first word upon which we have to remark is עצבון *ngitsabohn*, rendered by the authorised version, *thy sorrow*. To determine the primary signification of this word, we shall, of course, refer to its root; but, shall not, as Dr. Simpson has incorrectly done, discover this root in *ngatsab* or *atsab* * *i.e.*, 3rd pers. masc. gen. pret. tense and indicative mood of the form or conjugation, *Kal*; but in the *noun*, עצב *ngetseb*. The first may be a very *useful* form, wherein to reduce all roots, for lexicographers and grammarians;† but we think we are justified in stating, that the great majority of those who have at all regarded the philosophy of grammar, have decided that, in such cases, the noun is prior to the verb. It is of course impossible to show this at any great length, here; but to those who desire to see the subject briefly, but lucidly and ably considered, we recommend the perusal of the introductory chapters of the late Professor Hurwitz's excellent "Hebrew Etymology." Affirming, then, the root of עצבון *ngitsabohn*, to be the noun עצב *ngetseb*, we seek its signification, not from Gesenius, whom Dr. Simpson "believes to be the highest authority he could quote on such a point;"‡ but from an authority whom all Hebrew critics would decide to be incomparably higher than Gesenius, viz., R. David Kimchi. In his "Sepher Hashorashim,"§ before giving the signification of this noun, he adduces the following passages of Scripture: 1, Gen. iii. 16, "In עצב *ngetseb* (authorised version, in sorrow) shalt thou bring forth children." 2, Prov. xiv. 23, "In all *ngetseb* עצב (a. v. labour) there is profit." 3. Isa. lviii. 3, "And exact all עציכם *ngatsbechem*" (a. v. your labours). 4, Prov. v. 10, "And עציך *ngatsabecha* (a. v. thy labours) be in the house of a stranger." 5, I Chron. iv. 9, "Because I bare thee כעצב *bengotseb*" (a. v. in sorrow). 6, Isa. xiv. 3. "The Lord shall give thee rest מעצבך *mengotsbecha*" (a.v. from thy sorrow). 7, Gen. iii. 17, "Cursed be the ground for thy sake בעצבון *bengitsabohn*, (a. v, in sorrow) shalt thou eat of it." 8, Gen. iii. 16, "I will greatly multiply עצבונך *ngitsebonech*" (a. v. thy sorrow). After citing these eight passages, Kimchi then remarks, ענין הכל העמל והיגיעה nginyan hakol hengamal vehayegingha, *i. e.* "The meaning of (*ngetseb* contained in) all these texts is labour and toil," (hengamal vehayegingha) The words of Kimchi are explicit enough; but to remove all doubts from the mind of the reader, and, to show that we wish to consider this question in a fair spirit of inquiry, we shall examine now what are the significations of עמל *ngamal* and יגיעה *yègingha*, not seeking our information from any Hebrew author, but from Gesenius himself. The learned professor tells us that עמל *ngamal* means, 1, labour, fatigue, or toil; 2, fruits of labour; 3, trouble, adversity, like labour, *κάματος*, *πόνος*, Gen. xlii. 51, &c; 4, iniquity, injustice." But that the third signification he gives cannot be understood in the sense of pain or sorrow, is clear, 1st, from his expression, "like labour"; 2ndly, from his Greek illustration; (We should here remark that Parkhurst renders KA'MNΩ, *to labour even to fatigue*, and *πόνος*, in one of its significations, also, *labour*.) 3rdly, from the Scriptural passages quoted by him. Let us refer to his first (Gen. xlii. 51), where Joseph calls the name of his first born Menasseh, "because God, *said he*, hath made me forget all עמלי *ngamale* (a. v. my toil), and all my father's house." That the authorized version, Buxtorf who translates, *labor meus*, and others who render it *toil*, have translated correctly, will be admitted by those who observe that Joseph apparently alludes to the toil of providing for the seven years' famine, which toil the text has already particularized, and further, from his adding, "and at my father's house," alluding in this latter expression to the sufferings he had experienced through his brethren. Otherwise understood there would be a strange redundancy in the passage. Gesenius's next reference is to Deut. xxvi. 7, where the Israelite says, "The Lord heard and looked on our affliction and עמלנו *ngamalenu* (a. v. our labour) and our oppression. The same remarks which refer to the correctness of the received English version of the preceding passage in Genesis, apply to this passage also. Gesenius's last references are to Job, iii. 10, "nor hid עמל *gnamal* (a. v. sorrow, but may as well mean) trouble or fatigue from my eyes"; and to Job xvi. 2, "Ye are all מנחמי עמל *menachamè ngnamal*, (a. v. miserable comforters), *i. e.* "Ye trouble or fatigue me with your long and profitless harangues." Thus much respecting עמל *ngamal*, the first of Kimchi's significations of עצב *ngetseb*; that his second, viz., יגיעה *yègingha*, means labour, toil, or fatigue, is generally admitted. Thus then we find that one of, if not the most eminent of Hebrew scholars, has pronounced that both *ngetseb* and *ngitsabbohn* in Gen. iii. 16., do not mean sorrow, as the English version of the Bible renders them: but that they signify physical labour, toil, or effort, without any reference to pain or sorrow.

(To be Continued.)

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* Anæsthesia, p. 113.

† Since from it, or rather, from the Infinitive mood, from which it is derived, spring the other six forms of the verb, with their various moods, tenses, participles, &c.

‡ Anæsthesia, p. 113.

§ Ed. Venet, 385th column.

ART. XLV.—REPONSE AUX OBSERVATIONS DE E S. DE ROTTERMUND, Ecr.. SUR LA PARTIE CHIMIQUE DU RAPPORT DE PROGRES POUR L'ANNEE 1847-8, DE L'EXPLORATION GEOLOGIQUE DU CANADA.

Par T. S. HUNT, Chimiste à l'Exploration Géologique.

Le numéro de Décembre, de ce journal, contient un article donné pour être une critique faite par M. E. S. de Rottermund, de mes labeurs comme Chimiste et Minéralogiste de l'exploration Géologique de la province, tels qu'exposés dans le Rapport de Progrès pour l'année 1847-48.

Que les travaux d'un homme public soient exposés à la critique, il n'y a là rien d'étrange ; mais ce doit être un sujet de surprise, dans le cas présent, que le rôle d'Aristarque soit joué par un individu qui, comme le prouve clairement l'article sous considération, ignore presque entièrement les premiers principes de la chimie.

Je me permettrai donc, afin de complaire au désir de quelques-uns de mes amis, d'appeler pour un moment, l'attention des savans sur l'absurdité des accusations portées contre moi, non pas tant pour ma défense personnelle, car je puis à peine concevoir qu'une *pareille* attaque puisse faire tort à ma réputation scientifique, que par devoir envers le public, dont je suis le serviteur, et qu'on ne peut guère supposer en état de distinguer le vraie du faux, dans un écrit dont l'auteur fait ses assertions d'un ton si magistral.

(1) M. de Rottermund fait allusion aux recherches qu'il a faites dans le Laboratoire de l'Exploration, durant les deux années qu'il a occupé le poste de chimiste, et suggère que je les ignore ou que je n'ai pas voulu condescendre à en faire mention. Je regrette qu'il n'ait pas été capable d'apprécier le motif de mon silence. Le document non officiel donné pour être son Rapport, comme assistant de l'Exploration pour le département chimique, a déja été examiné dans ce journal, par le Professeur Croft, de Toronto, dans une critique dont justice, quant à la science, est manifeste à tous ceux qui sont en état d'en juger, et il m'a semblé qu'après une exposition si complète de ses erreurs et de ses absurdités, toute allusion de ma part, n'aurait été que le souvenir inofficieux de sa malheureuse controverse et de sa défaite. *

(2) A l'égard de mes remarques, page 139, sur la répartition des acides et des bases dans une solution, comme une opinion généralement reçue parmi les philosophes chimistes, M. de Rottermund observe : " Il faut que nous nous entendions sur ce principe plus antique que le phlogistique. Je ne sait pas de quelle espèce ou de quel siècle de philosophie (il ?) veut parler, car je veux démontrer l'impossibilité de cette doctrine." Et ceci est suivi d'une démonstration qui prouve clairement que M. de Rottermund est absolument incapable de comprendre le language commun. Mais je ne veux pas que ce qu'il affirme de l'antiquité de cette doctrine induise ses lecteurs à croire que les découvertes des temps modernes ne l'ont pas confirmée, et qu'elle n'est pas admise par les philosophes chimistes de la présente époque. Je citerai ce que dit Sir Robert Kane, dans ses Elémens de Chimie, publiés en 1842.

" Si les acides et les bases ne diffèrent pas grandement en énergie d'affinité, ils s'arrangent de manière à ce que chaque base soit partagée entre tous les acides, et chaque acide entre toutes les bases, en quantités qui dépendent des quantités de chaque acide et de chaque base qui peuvent être présentes, et de sa force d'affinité." Edit. Am. p. 168.

On ne s'exprime pas autrement dans la dernière édition des Elémens du Dr. Turner, rédigée par Justus Liebig, de l'Université de Giessen, et publiée en 1842.

"Quand deux acides et deux bases se rencontrent ensemble en proportions neutralisantes, on en doit inférer que chacun des acides s'unit avec les deux bases, d'après un mode réglé par leurs forces respectives d'affinité, et que quatre sels se trouvent contenus dans la solution. De même, la présence de trois acides et de trois bases donnera naissance à neuf sels, et quand quatre de l'un et de l'autre sont présents, seize sels seront produits. Cette manière de voir offre la théorie la plus plausible de la constitution des eaux minérales et des produits qu'elles donnent par l'évaporation," p. 148.

(3) Le critique parait disposé à s'égayer aux dépens de ma balance, dont la délicatesse le frappe, comme étant extraordinaire ; l'instrument fait certainement honneur à Deleuil même, dont les balances ont à Paris la réputation de ne pouvoir pas être surpassées en justesse ; mais la manière *dont il s'en sert* peut donner lieu à une plus grande hilarité. Quiconque est au fait des analyses quantitatives sait que les chimistes ont pour habitude d'exposer sous une certaine forme, qui est de convention, les quantités respectives des différentes substances trouvées dans l'eau : ainsi, par exemple, les sels de sodium dans une eau minérale, soit comme carbonate, sulfate, chlorure, bromure ou iodure, sont changés en un composé d'une constitution définie et connue, comme chlorure sodique ou sulfate sodique ; et c'est d'après la quantité de ce composé que la quantité de *la soude* est calculée.* La quantité du chlore et des autres radicaux combinés avec le sodium est alors déterminée, et comme le chlore se combine directement avec le sodium, l'équivalent d'oxygène qui est représenté comme combiné dans la soude est soustrait de la somme des poids du chlore et de la soude, pour donner le montant du chlorure de sodium. Les autres calculs sont faits de la même manière, et les proportions dans lesquelles toutes ces combinaisons sont effectuées, sont déterminées par les nombres équivalents, qui, dans le fait, sont les proportions relatives de combinaison de différentes substances. Ces nombres ne sont encore déterminés qu'approximativement ; mais les raffinemens dans la manipulation chimique, nous mettent, d'année en année, en état de corriger les déterminations précédentes, et d'offrir un calcul plus approximatif.

La composition des différentes combinaisons données dans 1000 parties d'eau, a été calculé d'après les nombres corrigés récemment et posés par Fresenius, ci-devant de l'Université de Giessen, maintenant de Wiesbaden, dans son traité, publié en 1846. Sous ces circon-

* Mars 1847, p. 289 : aussi Mai 1847, p. 10, et Juin, p. 36.

* Voir Fresenius, Analyse Quant. p. 489, et Annalen der chemie und pharmacie, lii. p. 66.

stances, M. de R. en vient à examiner l'exactitude de mes résultats, et prenant non pas mes déterminations originales au moyen de la balance, mais les calculs faits d'après ces déterminations, de la manière qui vient d'être décrite, il entreprend de faire la preuve de ces calculs, mais malheureusement, il a recours, non aux nombres de 1846, mais à ceux donnés par Rose, dans la première édition de son Traité Pratique d'Analyse Chimique, sous la date de 1832 (qui sont ceux qu'il cite) et donne les résultats ainsi obtenus comme servant à corriger les miens !

Il ajoute de plus, " qu'en examinant chaque item de la composition des sels, donné par M. Hunt, il n'y a pas un seul corps qui a son poids exact." Ils doivent comme de raison, être différents de ceux qu'il a déduits des anciens nombres atomiques, mais ils sont aussi exacts que possible, puisqu'ils sont calculés en stricte conformité aux tables corrigées des proportions de combinaisons. La remarque qu'il fait, que suivant mon analyse, " on devrait trouver du chlore à l'état gazeux dans l'eau minérale," est une illusion provenant de la même erreur dans ses chiffres, bien qu'il puisse être démontré qu'un excès de sonde comme carbonate, ou carbonate et silicate, ôte, même pour M. de R., la nécessité d'une telle supposition.

Mais les remarques sur cette analyse sont terminées par une bévue bien capable d'exciter l'admiration ; pour fournir une preuve encore plus convainquante de l'inexactitude de mes résultats, il a additionné les quantités, données conformément à l'usage ordinaire, de soude, de chaux, de magnésie, de chlore, d'acide sulfurique, &c., et ayant ajouté à la somme la quantité d'eau donnée comme résidu en 1000 parties, il trouve, à sa grande surprise, 1000·967824 parties. Il semble ignorer que la soude et le chlore éliminent, en se combinant, 8 parties d'oxygène sur 58·5 parties du chlore de sodium formé, et que c'est là la différence, quant au poids, entre le chlorure de sodium, qui existe dans les eaux minérales, et la combinaison inconnue du chlore avec l'oxyde de sodium, sur laquelle M. de Rottermund base sa *correction !* " L'augmentation si grande" dans mes analyses n'a donc d'existence que dans ses ridicules mépris-es. Pour ce qu'il est de la quantité d'eau ajoutée " pour faire paraître les chiffres ronds," j'ai seulement à dire que, quant au plan de donner la composition de 1000 parties d'eau, j'ai eu pour l'adopter l'autorité du Dr. Schweitzer, dont les analyses d'eaux minerales sont connues de tous les chimistes. L'analyse de l'eau de mer du Pas-de-Calais, citée par moi, p. 161 du rapport, en est un exemple.

Pour ce qui est des gaz, M. de Rottermund aurait pu s'épargner la question, " M. Hunt croit-il que l'acide carbonique ou (et ?) l'hydrogène carboné sont la même chose, etc. ?" s'il avait lu la description du procédé adopté pour l'exacte détermination du gaz acide carbonique à la source, lequel, étant fondé sur le fait qu'il est de la nature de ce gaz de former un sel avec la chaux, ne permet pas qu'il soit confondu avec les gaz adventices, l'oxygène, le nitrogène, et l'hydrogène carburé, qui sont présents dans ces eaux en quantités peu considérables et variables.

(4) Mais pour passer à la " Source au Soufre Blanc," dont je remarque que " bien qu'elle porte le nom d'eau sulfureuse, son titre à cette dénomination n'est pas très fondé ; elle a une saveur et une odeur faiblement sulfureuse, et elle noircit légèrement les sels de plomb et d'argent ; mais la quantité de soufre existante soit comme hydrogène sulfuré, soit comme sulfure alkalin, est très peu considérable, et ne peut pas être estimée quantativement par les procédés ordinaire." Bien que je donne comme *vulgaire* le nom par lequel cette source est généralement désignée, M. de R. dit : " M. Hunt lui-même donne le nom de Soufre Blanc à la source," et puis il s'efforce de faire douter de l'exactitude de mon exposé, quant à la petite proportion de soufre qu'elle contient. J'ai parlé dubitativement quant à la condition du soufre, parcequ'il est admis par les écrivains les plus récents, que l'exactitude, ou la justesse des procédés proposés jusqu'a présent pour déterminer, est très douteuse,* et quand la quantité est petite au point d'être à peine appréciable, ce ne pourra être que par induction, comme en sera convaincu quiconque est au fait du procédé, qu'on pourra déterminer si l'ingrédient sulfureux est un sulfure alkalin ou le gaz hydrosulfurique. J'ai fait allusion, dans mon rapport, au témoignage de médecins, quant à l'efficacité de cette eau, dans les cas où l'on suppose que le soufre est efficace, et le critique trouve, ou feint de trouver, quelque chose dérisible dans l'idée que d'aussi petites doses de soufre puissent produire des effets sensibles. Contredira-t-il le savant Dr. Daubeny, professeur de chimie, d'Oxford, et la profession médicale généralement, sur l'efficacité qu'ils attribuent à l'iode, comme constatée dans les eau de Spa, telle que celle d'Adelheidsquelle, qui, d'après l'analyse de Struvé, ne contient que $\frac{1}{45.714}$ de cet élément, ou dans l'eau de Saratoga dite de Congress, qui a moins de $\frac{1}{1.440.000}$ d'iode, et environ $\frac{1}{48.000}$ de brôme ?

Pour ce qui est de la présence de la silice dans les eaux, telle que considérée, p. 147, il en parle (en s'efforçant de prendre le ton railleur et ironique,) comme de " la grande découverte qui s'est faite dans le laboratoire, qui va éblouir le monde savant, et les frapper de stupeur—mais comme la découverte est bien grave," &c. En ai-je parlé comme d'une nouvelle découverte ? non, car je savais que c'était un ingrédient qui ne manquait jamais dans les eaux naturelles, et que sa présence a été reconnue par Berzelius, par Struvé et par Schweitzer. J'ai suggéré qu'elle pouvait exister dans les eaux alkalines comme silicate, et depuis que mon rapport a été écrit, je trouve que M. Henry, † dans ses examens des eaux minérales des Pyrénées † en est déjà arrivé à la même conclusion, et dans son analyse, de la source de Chatenois, il a (" vu l'incertitude qui règne encore," quant à la compsition des silicates solubles) représenté la soude comme un mélange de carbonate et de silicate dont il n'entreprend pas de déterminer les proportions relatives. ‡ Telle est la découverte dont M. de R. me fait erronément honneur.

* Fresenius Anal. Quan. p. 487.
† Journal de Chimie et de Pharmacie, tom. vii. p. 15.
‡ Bul. de l'Académie de Médecine, 1844-5, p. 160.

Mais le sage et savant critique est grandement en peine de savoir comment l'eau en question peut être alkaline, et il parle d'alkalis et de sels basiques, sans pouvoir trouver la solution de la difficulté qui l'embarrasse. S'il avait été à la cuisine ou à la buanderie, sans recourir à de plus hautes autorités, le cuisinier ou la blanchisseuse auraient dû lui apprendre que le *carbonate de soude* que l'eau contient, la rend alkaline. Mais il ne peut comprendre comment le carbonate de soude peut rendre la silice soluble ; il est vrai, comme il le dit, que la silice décompose le carbonate de soude *au feu* ; mais c'est aussi un fait qu'il aurait pu apprendre dans un ouvrage élémentaire quelconques, que la silice est facilement soluble dans une solution bouillante de carbonate de soude, propriété que le chimiste analytique appelle très souvent à son aide ; et c'est aussi un fait qui ne devrait pas être ignoré de mon prédécesseur, que quand une solution diluée de silice, ainsi obtenue, est neutralisée par un acide quelconque, la totalité de la silice demeure en solution, en ce que Berzelius a décrit comme " la modification soluble," soluble tant dans l'eau pure que dans les acides.* Il prend sur lui de parler de la méthode d'analyser les minéraux silicieux, mais tous les résultats qu'il obtiendra, sans tenir compte de ces réactions, seront bien éloignés de la vérité.

En voulant corriger mes chiffres, dans l'analyse de la " Source au Soufre Blanc," il est tombé dans une étrange méprise, dont il est aisé de s'appercevoir sans être chimiste. La table montre les divers ingrédiens salins avec l'acide carbonique, en sus de ce qui est nécessaire pour former des carbonates, et le reste est l'eau qui complète les mille parties. J'ai donné au-dessous de cette table, la somme de toutes les matières solides : cette somme, le savant critique l'ajoute à celle de l'eau, *en oubliant l'acide carbonique*, et trouve, comme de raison, que la somme est 1000 parties, moins le montant de l'acide carbonique ; mais, ne s'appercevant pas de sa bévue, il s'écrie : " Que le lecteur juge s'il y a de la vérité dans les chiffres !"

(5) M. de Rottermund en vient en suite à l'examen des analyses que j'ai faites de la Source Sûre de Tuscarora, et trouve, tout d'abord, une difficulté dans ce que je dis, que l'eau, non seulement ne donne *pas de précipité* avec une solution de nitrate d'argent, mais que même elle n'en est pas *affectée sensiblement*, c'est-à-dire qu'il n'y a aucun changement visible. Il dit, " (le ?) sulfate d'argent est aussi insoluble ; donc il a dû y avoir un précipité ; en se servant du nitrate argentique le premier, au lieu de sel de baryte, il a confondu le chlore avec l'acide sulfurique." Il n'a qu'à ouvrir un ouvrage élémentaire quelconques, pour apprendre que le sulfate d'argent est soluble dans 88 parties d'eau bouillante, et à un degré très considérable dans l'eau froide, et il pourra se convaincre aisément par l'expérience, qu'une eau contenant une beaucoup plus grande proportion d'acide sulfurique ou de sulfate soluble que la source de Tuscarora, ne donnera pas de précipité par l'addition d'une solution de nitrate d'argent. Il apprendra de plus que la méthode même qui est recommandée par Rose et Fresenius, pour séparer le chlore de l'acide sulfurique, est basée sur la solubilité du sulfate, et l'insolubilité du chlorure d'argent.*

Quant à ses commentaires sur le cours de l'analyse quantitative, j'ai seulement à observer qu'il a eu lieu exactement d'aprés la routine proposée par Rose et Fresenius, dans des cas semblables,† et que l'omission d'une seule filtration ou précipitation aurait rendu le résultat incomplet et indigne de confiance. Les difficultés qu'il y trouve ne témoignent que d'une ignorance déplorable des notions les plus élémentaires dans la chimie analytique.

(6) Venons en maintenant à la prétendue découverte faite par M. de Rottermund, de l'existence de l'antimoine dans cette source. Ce métal a été découvert, depuis son annonce, avec l'arsenic, l'étain, le plomb et le cuivre, dans quelques sources ferrugineuses d'Allemagne, et il dit, " M. Hunt voudrait-il me dire quand et par qui l'existence de l'antimoine dans l'eau a été trouvée, et il verra que j'ai été le premier qui a fait cette importante decouverte pour la science de la chimie et de la médecine ; mais je lui dirai que pour le trouver, quoiqu'il est (soit ?) plus facile quand on est prévenu, qu'il n'est pas capable même de le constater ; car la marche qu'il a suivie et qu'il décrit parle par elle-même."

D'après le ton de ce paragraphe, le lecteur qui n'en saurait pas davantage, pourrait supposer que M. de Rottermund a été reconnu par les autorités scientifiques de l'Europe, comme l'auteur de cette découverte. Mais tel n'est pas le cas ; la première annonce de ce fait a été faite à l'Académie des Sciences de Paris, à la fin de l'année 1846, par M. Walchner.‡ M. Trepier avait avant cette époque, trouvé de l'arsenic dans une eau minérale apporté d'Algerie, et M. Walchner réussit à le trouver dans des sources ferrugineuses d'Allemagne, associé avec du cuivre, du plomb et de l'étain, et dans la source de Weisbaden avec l'antimoine. Cette intéressante découverte a été peu de temps après confirmée par M. Will, qui a trouvé tous ces cinq métaux dans les sources ferrugineuses de Rippoldsau. § Selon lui, 10,000,000 parties des trois sources contiennent respectivement 0·16, 0·10, et 0·24 d'une partie d'oxyde d'antimoine. Si M. de Rottermund est, comme il s'en vante, reconnu comme chimiste par les premiers chimistes de l'Académie des Sciences de Paris, comment se fait-il que sa prétendue découverte ne soit pas reconnue par ce corps, et que l'honneur en soit attribué à un autre ? M. de Rottermund affirme que je ne suis pas capable d'en découvrir la présence, " comme le démontre la marche que j'ai suivie." A-t-il lu mon rapport ? Je n'ai suivi aucune marche particulière, ni décrit aucun procédé pour cette fin. Suivant Rose et Fresenius, ‖ le seul reactif sur lequel on puisse compter pour la séparation complète de l'antimoine d'avec toutes ses solutions est l'hydrogène sulfuré ou l'acide hydrosulfurique, qui

* Voyez aussi Graham's Chemistry, p. 315, et Rose Traité Pratique, tom. i. p. 227.

* Fresenius Anal. Quant. p. 352.

† Rose, Traité, tom. i. 432, et seq. ; et Fresen. Anal. Qual. p. 223.

‡ Comptes rendus de l'Académie des Sciences xxiii, p. 612.

§ Annalen der chem. und pharm. tom. lxi. p. 192.

‖ Rose Traité, tom. 11, p. 214 ; et Fresen. Anal. Quant. p 230.

précipite un sulfure orangé. Mais l'eau minérale en question contient déjà de l'hydrogène sulfuré, comme je l'ai fait voir au moyen des réactifs ordinaires ; de sorte que le seul procédé auquel on pouvait recourir pour la séparation du métal avait déjà été employé dans le laboratoire de la nature. Le fait que la présence de l'hydrogène sulfuré est incompatible avec l'existence de l'antimoine en solution embarrasse M. de Rottermund, mais il essaie de se tirer d'embarras en s'efforçant de démontrer que l'hydrogène sulfuré ne peut pas être présent, en autant que, suivant lui, il est incompatible avec le protoxyde de fer, " car l'hydrogène sulfuré, ou l'acide sulfhydrique précipite le protoxyde de fer." Quant à la vérité de cette assertion, tout commençant sait que les solutions de protoxyde de fer ne sont nullement précipités par l'hydrogène sulfuré. Pour me servir des paroles de Rose, l'hydrogène sulfuré " ne fait pas naître de précipité dans les dissolutions ferreuses neutres."* La raison en est que la plus faible trace d'acide peut dissoudre immédiatement le sulfure de fer précipité, et l'on se prévaut de cette propriété dans le cours ordinaire de l'analyse, pour séparer le fer du cuivre, du plomb, de l'antimoine, &c., qui sont précipités facilement par l'hydrogène sulfuré, même de solutions acides.† Ceci ne prouve donc pas que j'ai eu tort d'affirmer que l'eau contient réellement de l'hydrogène sulfuré et un sel de protoxyde de fer ; mais s'il m'en fallait une nouvelle preuve, j'ai pour moi l'autorité de M. de Rottermund lui-même. Il dit p. 10 de son rapport déjà cité, que les eaux de cette source contiennent les gaz hydrosulfurique et carbonique, du sulfate de protoxyde de fer, du sulfate d'alumine, de la potasse, &c. ; mais maintenant qu'il convient à son but de prouver que l'hydrogène sulfuré ne peut pas exister avec un sel de protoxyde de fer, il oublie ses premiers exposés. " Soyez donc compatible avec vos assertions, M. de Rottermund.

Il parle ensuite de confusion dans le procédé suivi pour la détermination du fer, et montre, pour en dire le moins, une ignorance inexcusable du language ordinaire ou des procédés de la chimie. Je ne dis pas que j'ai trouvé dans la source, soit le protoxyde, soit le peroxyde de fer, mais que *le fer y existe comme protosel ; que je le déterminai comme peroxyde,* d'après la méthode ordinaire,‡ et *le calculai ensuite comme proto-sulfate, ou sulfate de protoxyde de fer.*

Je n'ignore pas les obstacles offerts par des matières organiques à la précipitation de certaines substances minérales ; mais la chimie moderne a des moyens bien simples pour surmonter cette difficulté. § Plus bas, M. de R. parle de l'acide phosphorique, dont j'ai dit qu'il existe des traces dans cette source, et dit : " Je suis fâché qu'il n'ait pas voulu donner la description par quel réactif, et dans quelle période de l'analyse il l'a remarqué." S'il avait lu tout l'article, il n'aurait pu manquer de voir qu'à la page 152, j'ai décrit pleinement le procédé suivi, qui est celui que recommande Fresenius pour la séparation de l'acide phosphorique et de l'alumine.*

Pour ce qui est de la " correction" faite dans les analyses de M. Croft, il avait donné dans sa détermination, l'alumine et le fer précipité ensemble comme peroxyde de fer, et j'ai, pour comparaison, additionné les quantités de ces deux ingrédiens, telles que déterminées par moi. La prétendue confusion qui embarrasse et amuse en même temps le critique n'existe que dans son intellect.

Mais voyons pour les chiffres ; il demande " qu'est-ce que cela signifie que M. Hunt trouve dans la même source la quantité d'acide sulfurique avec la formule SO_3 est ensuite SHO_4 ?" Ne sait-il pas que SO_3 est l'acide anhydre, que, suivant la coûtume, on calcule toujours en spécifiant les déterminations d'une analyse, tandis que l'excès d'acide en outre de ce qu'il faut pour former des sels avec les bases présentes, est représenté comme combiné avec un équivalent d'eau pour former le composé SHO_4 (SO_3, HO), qui, dois-je le dire pour l'information de M. de Rottermund, est l'huile de vitriole, et non l'acide de Nordhausen. Comme c'est la seule combinaison stable de l'acide anhydre avec l'eau, il est présumable que c'est celle qui existe dans l'acide sulfuriquue dilué et dans la source de Tuscarora. Si les recherches de M. de Rottermund ont jeté quelque nouveau jour sur les combinaisons de l'acide sulfurique avec l'eau, je serai charmé de l'apprendre.

En finissant, je prendrai la liberté de dire que mes observations n'ont pas été dictées par un sentiment de malveillance envers M. de Rottermund, mais bien par le désir de lui faire voir les nombreuses erreurs dans lesquelles il est tombé, pour n'être qu'imparfaitement au fait du sujet qu'il a traité, et je me flatte qu'il recevra comme venant d'un ami, le conseil que je lui donne de sauver sa réputation, sinon en qualité d'un " simple citoyen" qui joue le rôle de critique, du moins en celle d'un chimiste " reconnu comme tel par les premiers chimistes de l'Academie des Sciences de Paris," en gardant le silence, à l'avenir.

Laboratoire de l'Exploration Géologique,
Montréal, 18 Déc. 1849.

* Rose, Traité Pratique, tom. i. p. 69.

† Id. Traité Pratique, tom. ii. p. 131, et Mémoires de Will et Walchner, déjà cités.

‡ Rose, Traité de Chimie, tom. ii p. 61.

§ Id. Traité Pratique tom. i. p. 72 ; aussi Fresenius Bulletin de la Soc. Chim de Londres, part. ix. p. 130.

* Fresenius Anal, Quant. p. 250.

ART. XLVI.—PROCEEDINGS OF SOCIETIES.

Pathological Society of Montreal.

Saturday, November 10, 1849.

The President, Dr. Scott, in the chair.

Dr. Gibb laid before the Society, portions of diseased brain, a diseased heart, and a dried preparation of ossified arteries of the brain, taken from a case of Serous Apoplexy, occurring in his private practice.

Its history and notes, as narrated by him before the Society, were as follow :—

S. S., aetat 63, of short stature, thick neck, and plethoric habit of body, was formerly a wealthy merchant in this city, but now much reduced in circumstances. About two and a half years ago, he had a paralytic attack, which affected the left side ; he was able to

walk perfectly some time after it, without any halt or apparent deformity in his gait, but he has had an imperfect use of his left arm ever since, which is colder than the right, and much impaired in its motor power. He has enjoyed poor health for many months past, and is comparatively helpless: his once great activity is entirely gone, and he has the appearance of an aged and very infirm man.

He has been under my care, occasionally, since my return to the country, in April last.

On the 12th August, 1849, I was sent for to see him, at 3 o'clock, P.M. He had had, a short time before I arrived, what the lady with whom he resided called, one of his "stupid fits," that is, a total loss of consciousness and power of motion. He was in a second when I arrived.

I found him seated on a chair, speechless, and quite unconscious of what was passing around. His eyes were vacantly staring, pulse small and weak, breathing heavy, but not stertorous, legs and arms quite cold, and rigidity of the limbs, which could only forcibly be extended. I placed him in a horizontal posture on the sofa, and loosed his cravat. Hot bottles were applied to his feet and hands, which speedily restored warmth, and after the lapse of a short time he came to. He had eaten very heartily at his dinner, and had partaken of a great quantity of bread, so much so, that his present attack was attributed to it. He is exceedingly corpulent, takes no exercise, and is predisposed to apoplexy.

13th. He had another of these attacks, with rigidity of the *right* leg and arm, and loss of voluntary motion. On percussion over the heart, dulness existed to some extent, and a diastolic bruit was heard near the left nipple. I ordered a purgative mixture, containing, sulp. mag, pot. bi-tart. and ant. pot. tart, to keep his bowels freely relaxed.

8 p.m. I was sent for, and learnt he had been in a state of stupor nearly all the day. He had taken the doses of the saline medicine without any effect. I ordered a powder of hyd. chlor. and pulv. jalap.

14th. He slept well until 3 a.m. to day, when his bowels were freely open. But at 10 a.m. he was as bad as ever, quite stupid, and unable to rise. His pulse was labouring, his voice husky, temporal arteries prominent and throbbing, and his face so red from cerebral congestion, that I at once used *venesectio* from the arm to the extent of fourteen ounces, with benefit.

I saw him twice again before night, he appeared much better; his pulse was full, but compressible; he was conscious at times, and would reply to a question.

15th. Had not passed any urine for thirty-six hours, and his bowels were not completely open. He was in a perfect state of stupor, and could not at all be roused, and remained so the whole day. His mouth was drawn to the left side, and his face had pretty much the hippocratic expression. There was a painful rigidity of all of his limbs, flexion and extension being both equally difficult. His skin was cool, his pulse was incompressible, his breathing rough, and towards evening slightly stertorous, with an occasional interruption of some seconds, followed by a sudden noisy inspiration.

I ordered at 11 a.m, a diuretic draught which had the desired effect; and a purgative of hyd. chlor. jal. scam. and camb. which not operating by 9 p.m., I ordered, ol. crotonis, m iij.

16th, I found no great improvement at 9 a.m; his bowels had been moved twice during the night. At 1 p.m. I was accompanied by Dr. Fenwick, when I introduced a catheter and drew off a few ounces of urine. A blister was applied to the nape of the neck, and running downwards between the scapulæ. In the evening singultus set in, with mucous rales in the larger bronchiæ, his pulse was then very feeble. Sinapisms were applied to the chest's front and calves of the legs. I saw him again at 11 p.m., when I found his breathing and his pulse better, but my prognosis was serious.

My diagnosis was, from the symptoms throughout, possibly an effusion of blood on the left side of the brain, or pressure upon the medulla oblongata and pons varolii, from either blood or serous fluid.

17th. In the same state; breathing heavily, with a stertorous whiff; eyelids imperfectly closed; pupils contracted, but dilateable.

He was ordered during the day, hyd. chlor, gr. ij, pulv. jacob. ver. gr. ij, every two hours. In the evening, Dr. Fenwick and myself considered it expedient to open the temporal artery, and took away about eight ounces of blood, with apparently much benefit, as the pulse, which was before the operation, incompressible and hard, became softer and quicker, 130. Rigidity was now confined to the left arm.

18th. No apparent change; 9 a. m., skin warm and perspiring since yesterday; pulse 112, soft. 2 p. m. His head and shoulders were elevated a little, and I drew off his urine with a catheter. He died at half-past five p. m.

Necropsy, eighteen hours after death. Body not much emaciated. Rigor mortis scarcely perceptible.

Cranium. Dura mater healthy, but adherence to the cranium very strong on removing the calvarium. The sinuses and vessels of the brain did not appear congested. On removing the brain, which was found to be rather soft, about an ounce of bloody serum escaped from the base of the skull, the pia mater and arachnoid at that part were strongly adherent, and detached with difficulty, the latter membrane was much injected. The crura cerebri were quite soft and disorganized, as if from inflammation. The basilar artery was completely ossified, and the other arteries of the brain were so to a modified extent. On exposing the centrum ovale minus and majus, the usual punctiform vascularity was presented. Both lateral ventricles were filled with a clear limpid serum; the septum lucidum and fornix were in a state of ramollissement. On the upper surface of the right corpus striatum, was a cavity the size of a marble; under the microscope, the lining of this cavity was composed of exudation corpuscles, broken up and scattered nerve

tubes and fibres, and granular cells. No pus nor blood globules were found.

On the mesial line of the surface of the left corpus striatum were numerous white lines running transversely from before backwards.

Thorax. Lungs and pleuræ healthy. A quantity of fat filled up the anterior mediastinum. The pericardium contained about half an ounce of serum; the heart was covered with fat, quite empty, and the coronary arteries were ossified, as in the brain; and through the aorta, *in situ*, could be distinctly seen patches of atheromatous deposits. On opening the left ventricle, its walls were found extensively hypertrophied, as well as its cavity dilated; the aortic valves were thickened, and much ossified (without incompetency,) from atheromatous tubercles and patches on their aortic surfaces, these latter extended upwards into the arch of the aorta, thence to its thoracic and abdominal portions, and into all the great trunks given off from them, more particularly those branches from the arch itself; one large patch, of the consistence of bone, the size of a shilling, existed at the anterior part of the arch, before the giving off of the arteria innominata, it was nearly two lines in thickness, and its exposed surface resembled the compact texture of bone. Under the microscope these patches presented, tabular and needle shaped crystals of cholesterine, fat granules in clusters, and free, and isolated epithelial cells.

Abdomen. Dense subcutaneous adipose substance, the thickness of one inch and a half was cut through on making a section over the linea alba. The omentum was a mass of fat; intestines were healthy; liver enlarged and protruding abnormally upwards, its investing capsule of Glisson was thickened, and could easily be detached, exposing the surface of the liver, which was pale and granular, a section with a clean knife greased the blade, and a microscopical examination showed fat granules in abundance, with occasional needle shaped crystals of cholesterine. The kidneys were small and surrounded with fat. On the posterior surface of the left, superiorly, was an excavated ulcer, the size of a three pence, of a blackish color, the investing capsule over it being loose. They appeared healthy in other respects. The remaining viscera were healthy.

ART. XLVII.—SCOBIE & BALFOUR'S CANADIAN ALMANAC AND REPOSITORY OF USEFUL KNOWLEDGE, FOR THE YEAR 1850, &c. *The astronomical calculations having been made expressly for the Almanac, for the meredians of Toronto, Montreal, Quebec, Halifax, N.S., and Fredericton, N.B. Toronto: Scobie & Balfour, King-street.* 8vo. *Pp.* 80.

This almanac is decidedly the best and fullest which we have seen in this country, and is a marked improvement upon its predecessors. It is embellished with an excellent map of Upper Canada, and contains, moreover, information in regard to the British American Provinces of a most valuable character, the collection of which, must have cost no little time and trouble.

PRACTICE OF MEDICINE AND PATHOLOGY.

Aphorisms on Cholera.—Mr. Dendy read the following propositions to the London Medical Society, Monday on November 19, 1849, as embracing in a few words all that we know of cholera:—

1. The name—Acholera—Because when cholera or gall-flux is established, the prognosis becomes favourable. 2. It is the first stage of adynamic fever.—Because this fever, in varied degrees, is constantly developed on the subsidence of the flux. 3. The predisposing causes are, anxiety, low living, bad habits, crowded locality, malaria of decomposition. Because the absence of these is proved to be prophylaxis. 4. It is epidemic, and not essentially contagious.—Because there was prevalent establishment of the disorder over a large space of the kingdom in a few days. The exciting cause is a poison imbibed or inhaled, influencing the ganglia, the blood, and the bowels, the symptoms enduring until the poison is destroyed or expelled.—Because spasm, discrasis of blood, and intestinal flux, are the consequences, the blood being rendered unfit for circulation and secretion. 6. That premonitory diarrnœa is not an essence of the disease.—Because the epithelial flakes are fewer than in diarrhœa; and we have, periodically, a severe diarrhœa—not formidable, unless a malignant epidemic be prevalent. 7. Diarrhœa renders its subject highly susceptible of the malignant invasion.—Because the uterus, during parturition, so the mucous membrane, during diarrhœa is a weak point in the system. 8. The flux would probably be a safety-valve to the system, as the pustule of varioia and the exanthem of rubeola, and prove salutary, if the systemic energy were sufficient.—Because many of the highly malignant and speedily fatal cases occurred without the flux, and because, like that of inflammation, its unfettered intensity destroys. 9. The result of the malady depends essentially on the resisting power of the system *quoad* the dose of poison introduced.—Because persons in various conditions and subject to the same influence, evince symptoms of varied intensity. 10. Prognosis must be formed chiefly from re-establishment of suppressed secretion.—Because this indicates a renovation of the blood, and the elimination of deleterious matters from the system. 11. There is no specific—*i. e.*, antidote—to the poison yet discovered. 12. The adoption of one remedy (?) from isolated experience is unscientific, and its advocacy perilous. 13. The unlimited exhibition of alcohol and opium is unsafe.—Because it is followed so often by fever and narcotism.—*Lon. Med. Gazette.*

SURGERY.

An Ophthalmological Curiosity.—Miracles, they say, will never cease, and so may we say. We should have at once discarded the affair as a "hoax," were it not that we found it adopted by the continental and English journals. In the *Annales d'Oculistique* of Brussels it is dignified with the imposing title of "L'œil Phalanstérien," and not a smile displayed in the recital. By the way, no medical editor in the world ever ventures to smile except ourselves; they are all as "sad and learned" as a college of physicians. Joking, however, apart, we are not sceptical as to the tail, it is only the eye at the end of it which provokes our mirth. Tails undoubtedly there have been found attached to human spines. Dr. Jacob describes one in the Dublin Hospital Reports amputated from the sacrum of an Irish boy, and quotes another case from the Acta. Nat. Cur., recorded by one Philip Lochner. The newspa-

pers, too, have been lately telling of a tailed race of men in the interior of Africa. But the eye: how came that there? Its presence is contrary to all typical law, and sets all transcendental reasoning at defiance. The safest way, however, for us at present perhaps is to look upon the affair as requiring verification. When better informed, we may suggest something respecting it:—

"A letter, of which the following is a copy, was published in a French provincial paper (*Le Messager de la Haute-Marne*), on the 14th of October. It was addressed to the editor, and has been thought worthy of repetition by the Parisian press: 'Sir.—Some days ago I was called to attend a confinement at the farm of Combe-aux-Vaches, which forms, I believe, part of the arrondissement of Langres. The young countrywoman (*fermière*), after a most painful labor, which lasted no less than twenty-four hours, gave birth to a female infant, perfectly formed, but having at the extremity of the vertebral column a fleshy appendage of about four to five inches long, and terminated by a real eye, covered with a thick eyelid. It was not until ten days after the birth of the infant that I was able to satisfy myself of the existence of this extraordinary eye. The pupil, though little dilated, appears to be gifted with great sensibility. At the lightest touch of the finest hair, it instantly covers itself with a contractile membrane. I have ascertained that there is no sympathetic connection between the two eyes of the head and that of the caudal appendage, which can remain open when the others are shut, and *vice versa*. It was not possible to conceal for any length of time from the mother the existence of such a monstrosity. Happily she was not so much concerned about it as they had feared. She confessed to us, that whilst in the family-way she had read some book, of which she could remember neither the title nor the author's name, in which it was stated, that at a future period people would all have an elongation of the spine in the form of a tail, at the end of which would be an eye; and the idea had taken such a hold of her mind, that she had come at last to wish to see its fulfilment, on account of the great advantage of such a conformation. No doubt the anxious desire of the young mother, joined to a fervid imagination, had caused the production of this surprising phenomenon. For my part, I have always thought, although by no means a partizan of fanciful ideas, that desire and craving (*besoin*) are the sole causes of the generation of extraordinary organs, as was assumed by our great naturalist, Lamarck. I have thought it right, Mr. Editor, to make known to the public a circumstance so unusual, which proves of what freaks nature is sometimes capable.—Believe me, &c. Ravot, M. D."—*Dublin Medical Press.*

An Operation to supersede Castration.—Mr. Taylor, of Alfreton, Derbyshire, suggests that division of the vas deferens would suffice to prevent desire, and that castration might be dispensed with. He believes that desire is caused by the irritation of the vesiculæ seminales by semen, and that if the arrival of the semen to those reservoirs be prevented, desire will cease. His own words are:—Studying the anatomy of the testicle and spermatic cord, it struck me that an operation might be performed, which would obviate the undesirable effects of the removal of so important an organ, and which would still destroy desire without affecting the seminal secretion, and by this means avoid depriving the animal of his masculine characteristics, which, unfortunately, is done by the present operation. I find that when sows, (in this neighbourhood,) are what is popularly termed cut, the operation consists, not in the removal of the ovaries, but in simply dividing the Fallopian tubes, thus preventing sexual heat, which would otherwise come on in certain months of the year, and destroying, not only all desire, but all capability of procreation, without unsexing the animal. Now, I humbly opine, that a similar division of the vas deferens in the male would, on the same principle, deprive the animal of desire; and as the testicle would be still effectually nourished and retained *in situ*, it is fair to suppose that the semen would be secreted as before, and be taken up by the absorbents into the blood, by this means retaining all the masculine characteristics of the animal; but it may be averred by some, that this operation would not deprive the patient of sexual inclination. Allowing, as physiologists do, that desire is caused by the irritation of the semen in the vesiculæ seminales, I believe that this operation would be quite as effectual as the total removal of the testicle; as it is a well acknowledged fact amongst horse dealers and others, that a horse old enough for procreation will, after castration, have desire and power to impregnate one female with the semen which then fills the vesiculæ seminales, though of course not more than one. This, I think, is a full proof that desire is created by the irritation of the semen in the vesiculæ seminales, and that division of the vas deferens would be quite as effectual, far less cruel, and attended with much better effects, than the ordinary removal of the testicle. Acting under this impression, I placed a dog under the influence of chloroform, dissected the vas, removing an interspace of about three quarters of an inch; the animal recovered perfectly, the wounds healed by the first intention, and I took the first occasion that occurred to place him with a bitch in use, when his conduct plainly showed that all tendency to perpetuate his species was gone.—*Lancet*, Oct. 27.

[We cannot agree with the author in the view he takes of the origin of sexual desire; the fact of the castrated horse being capable of one copulation may be otherwise explained. We believe the instinct to be partly psychical and partly physical, and that a due nervous correlation between the cerebellum and testicles are necessary for its manifestation. The question, however, admits of a very ready solution by experiment.—Ed. Prov. Med. & Surg. Journal.]

Extraction of Foreign Bodies from the Cavity of the Mouth and Gullet.—By M. Dieffenbach.—[The subjoined extracts are taken from some valuable papers, published in the *Medical Times*, by Dr. Bushnan.]

Foreign bodies become fixed in the mouth only after having penetrated the mucous membrane, and are easily removed. When situated in the fauces or gullet, they create intolerable irritation, and eventually inflammation, if of a sharp or acrid description. Their immediate removal is therefore indispensible where there is a prospect of this being accomplished without operative interference, an endeavour may be made to provoke vomiting, by thrusting down the end of a feather dipped in oil; if the patient has the power of swallowing, an emetic may be exhibited by the mouth, or under urgent circumstances, injected into a vein. This treatment can apply only to small substances, for, if large and firmly impacted, the gullet may be ruptured. In all examinations with instruments, the tongue ought to be depressed to the utmost.

The body in question must either be withdrawn, or hurried into the stomach. The first course is the best, the last often dangerous. Venesection is occasionally indicated. Should everything fail, œsophagotomy is the sole alternative.

The substances which lodge in the fauces are generally small and pointed, such as fish bones and needles, most frequently the former. The patient being seated, is directed to gape and make a deep inspiration, whereby the velum is elevated, and the surgeon enabled to detect and extract the bone with forceps. A lady, after eating some cake, suddenly

shrieked with pain. I could perceive nothing about the neck, but on carrying my forefinger to the back of the tongue, brought away a long thick bristle, which lay arch-wise across.

Foreign bodies observe in their transit certain *stations* at which they halt; thus, in the pharynx, behind the thyroid and cricoid cartilages, in the beginning of the gullet, or at its lower end, close to the diaphragm or cardia. They seldom stop at the middle of the gullet. If very large, they may cause suffocation; thus a large piece of meat, or a hard-boiled egg, a pear, a chesnut, have each proved fatal. Gnattani witnessed the most frightful death ensue from a chesnut; the part of the gullet at which it stuck was gangrenous. Spiritus saw the same result follow the swallowing of a five-franc piece, which perforated the gullet above the cardiac orifice. Needles, inadvertently swallowed, pierce sometimes the gullet or stomach, advance by the aid of suppuration or otherwise towards the surface, and either escape spontaneously or through incision. Lyson observed a case where three needles that went in at the mouth came out at the shoulder; I have known one issue at the arm.

The procedure must be modified according to the nature of the substance. None but a bungler would attempt to disgorge a piece of meat sticking at the cardiac opening, or urge on a fragment of glass from the gullet into the stomach. External pressure will suffice potatoes or plums when stuck in the throat.

For the withdrawal of needles, fish-bones, and the like, there is no better implement than a large goose or swan quill-feather, with the barbed portion ruffled, imbued with oil. The patient sits with his head leaning upon the breast of an assistant, while the surgeon lowers the tongue, then introduces the feather, with its concave side downwards, into the throat, turns it rapidly, round, and draws it out. The popular practice of swallowing a crust of bread is sometimes availing, but may also increase the peril when arrested above the bone. A sudden slap on the back is by no means a bad plan, when the substance is large and obtuse. It is preferable to that of setting the patient on his head, as was done in the instance of Mr. Brunel, to promote the expulsion of the half-sovereign piece.

The principal instruments employed for the present purpose are of the description of forceps. Dupuytren advises, as a preliminary step, the introduction of a gum-elastic tube, surmounted with a silver ball, in order to ascertain the position of the foreign body. This, however, is superfluous, and will tend, moreover, to augment irritation. Cooper recommends the forceps of Weiss. The so-called leaden hammer of earlier writers consisted of a lead ball attached to a string, which was let down the throat, and pulled up again. Mesnier's lead hammer was of an olive shape; Petit's was equipped with a wire instead of a string. Petit used, besides, a metal noose fastened to a whalebone stem; Fabricius Hildanus a many-holed silver tube, provided below with a sponge. The double ring of Graefe, attached to the end of a rod of whalebone with a steel spring, is very convenient for taking pieces of money out of the throat. The customary instrument, termed *répoussoir*, or probang, namely, a bit of sponge as big as a walnut, stuck to the end of a whalebone rod, is generally useful either for entangling fish-bones and the like, or propelling large round substances. My own procedure is as follows: if the body be small and sharp, I employ the oiled feather as above described. An oiled wax taper, passed down to the cardiac orifice, has proved serviceable; for, as soon as withdrawn, the body has been rejected. If the body be large, as a portion of flesh-meat adherent to a fragment of bone, I use a lithotrite with an imperforate scoop, and rather straight. The instrument is introduced with the blades closed, until it arrives at its destination, when these are to be separated sufficiently to grasp the substances, and after a few gentle turns, withdrawn.

When there is impending suffocation from the presence of very large bodies impacted in the throat, some enjoin tracheotomy before resorting to opening the œsophagus. I have never been compelled to this extreme measure. The most difficult thing to deal with are sets of false teeth when swallowed. I once relieved an old lady in this predicament by means of my fingers. On several occasions I have removed, with curved polypus-forceps, from three to four teeth attached to gold plate, and which got accidentally into the throat; once, by the aid of an emetic, as a last resort, a set of four teeth very deeply located.

In all these operations the patient is to be in a sitting posture, the head properly supported, the mouth rinsed with tepid water, tepid water mixed with white of egg taken as a drink, and the instrument smeared with white of egg rather than with oil.

Extraction of Foreign Bodies from the Vagina.—By M. Dieffenbach.—For this purpose the surgeon may commonly use his fingers or a polypus-forceps; but if the foreign body be bulky and wedged in, the bullet or lithotomy-forceps and bioad hooks. The patient being seated upon the edge of a table, facing the light, with the thighs held widely apart by two assistants, the surgeon squirts a little oil into the vagina, examines the nature of the body with the fingers and speculum, then passes up the forceps previously oiled, gradually opens them, insinuating one blade behind the body, and finally withdraws it in the line of the pelvic axis. This is nowise difficult, when the body is not very irregular in shape, and the paris are not inflamed or swollen. Where, on the contrary, the vagina is contracted and deprived of elasticity through inflammation and puriform secretion, and the substance large, it must be broken up into fragments and taken away piecemeal.

After its removal the vagina ought to be well syringed, and the patient put into a warm bath. Mucilaginous decoctions may be subsequently injected, and the parts fomented with infusion of chamomile and Goulard lotion.

Foreign bodies in this situation are of every variety. If allowed to remain long, they determine inflammation, suppuration, and rupture of the vagina, either into the rectum or the bladder. Thus communication with these cavities, and effusion of their contents into the vagina, is the obvious result. Foreign bodies, if sharp and angular, occasion now and then dangerous lesions. I once had to remove from a young lady a number of different-sized fragments of a porcelain urinal which had broken under her. The labia were severely wounded, and the vagina completely filled with the sheard. The hæmorrhage was so excessive as to have caused fainting. I extracted the whole by means of polypus-forceps, and inserted a few fine sutures. The wounds healed promptly. Large, incrusted, and firmly-adherent sponges were removed by me with lithotomy-forceps, as also a variety of full-sized wooden pessaries, all in like manner covered with a crust. Some of these I was obliged to break, using several forceps, with the aid of assistants, or else cut them in half with Liston's bone-scissors. Morand withdrew from a lady a silver pessary through the openings in which bridles had shot across, and held it fast. Dupuytren extracted from a nymphomaniac a pomatum pot; on another occasion an old ring-pessary, which was wedged in, and caused most urgent symptoms. A girl introduced the cone of a pine into the vagina. The sharp imbricated scales got lodged in the mucous membrane, and were picked out one by one after the cone had been cut in pieces. The vagina was excessively turgid.—*Medical Times.*

MIDWIFERY.

On the influence exerted by the Male on the constitution and the Reproductive Powers of the Female.—By Alexander Harvey, M D., Lecturer on the Practice of Medicine in King's College, Aberdeen. Instances are sufficiently common among the lower animals, where the offspring exhibit, more or less distinctly, over and beyond the characters of the male by which they were begotten, the peculiarities, also, of a male by which their mother had at some former period been impregnated; or, as it has been otherwise expressed, where the peculiarities of a male animal that has once had fruitful intercourse with a female, are more or less distinctly recognized in the offspring of subsequent connexions of that female with other males. A young chestnut mare, seven-eighths Arabian, belonging to the Earl of Morton, was covered in 1815, by a quagga, which is a species of wild ass from Africa, and marked somewhat after the manner of the zebra. The mare was covered but once by the quagga; and after a pregnancy of eleven months and four days, gave birth to a hybrid which had distinct marks of the quagga, in the shape of its head, black bars on the legs and shoulders, &c. In 1817, 1818, and 1821, the same mare (which had in the meantime passed into the possession of Sir Gore Ousely), was covered by a very fine black Arabian horse, and produced successively, three foals, all of which bore unequivocal marks of the quagga. Several other examples illustrative of the general fact above stated will presently be given.

Great difficulty has been felt by physiological writers in regard to the proper explanation of this kind of phenomena. They have been ascribed by some to a permanent impression made somehow by the semen of the first male on the genitals, and more particularly on the ova, of the female; and by others to an abiding influence exerted by him on the imagination of the female, and operating on her mind at the time of her connexion subsequently with other males, and perhaps during her pregnancy. But they seem to be regarded by most physiologists as inexplicable.

Very recently, in a paper published in the *Aberdeen Journal*, an intelligent veterinary surgeon, Mr. James M'Gillivray of Huntly, has offered an explanation, which seems to me to be the true one. His theory is set forth in the following statements quoted from that paper: "When a pure animal of any breed has been pregnant to an animal of a different breed, such pregnant animal is a cross ever after; *the purity of her blood being lost*, in consequence of her connexion with the foreign animal;" and again: "If a cow, say of the pure Aberdeenshire breed, is in calf to a bull of the short-horn breed (known as the Teeswater breed), in proportion as this calf partakes of the nature and physical characters of the bull, just in proportion will the *blood* of the cow become *contaminated*, and herself a cross, for ever incapable of producing a pure calf of any breed." "It is maintained, therefore (Mr. M'Gillivray adds), that the great variety of non-descript animals to be met with are the result of the crossing system; the prevailing evil of which is, the admission of bulls of various breeds to the same cow, *whereby the blood is completely vitiated.*"

In explanation of his theory, Mr. M'Gillivray enters into particulars as to the nature of the connexion subsisting between the fœtus in utero and its mother, with the view of showing (what seems to him essential to the validity of the theory) that there is a *direct* vascular communication between the two; and that, while a portion of the mother's blood is continually passing by direct transmission into the body of the fœtus, the latter returns to the former so much of that blood as is not needed by it, and that this superfluous blood, after circulating through the system of the fœtus, passes as directly into the system of the mother, and commingling with the rest of her blood, *destroys its purity, contaminates, vitiates it.*

Mr. M'Gillivray is quite wrong, I apprehend, in assuming that there is in any case, a direct vascular connexion between the fœtus and its mother. Nor does the assumption appear to me at all necessary to establish the theory. But waiving, for the present all discussion of that point, it it may here be observed, that Mr. M'Gillivray regards the influence exerted by the male on the female animal, through the medium of the fœtus, as *constitutional*; and perhaps the best general expression of the theory is, that the fœtus, partaking, as it must, of the characters or peculiarities of its father, *inoculates* therewith the blood, and generally, the system, of its mother.

The subject now opened is certainly one of great interest in general physiology, as well as of considerable practical importance to breeders. It cannot but be interesting to inquire whether the fact instanced in Lord Morton's mare, is or is not a general law in animal physiology; and if it be, whether and how far it is modified, in its operation, in different animals, and under different circumstances. But to the human physiologist, and to the physician, it is of more immediate interest to inquire whether or not the fact extends also to his own species; and if it does, to ascertain how far it applies, and whether it does not admit of illustration by, and serve itself, in its turn, to illustrate certain known facts in regard to the communication and the constitutional effects of the syphilitic and other morbific poisons, the scrofulous diathesis, &c. And, in particular, it can hardly fail to suggest some such curious questions as the following—viz:

1st. Whether, in the case of a woman who has been twice married, and borne children to both husbands, the children borne to the second husband ever, or generally, partake of the peculiarities of the first husband?

2nd. Whether in a family of several children, the younger children rather than the elder, are disposed, *cæteris paribus*, to exhibit the characters of the father?

3rd. Whether a woman who has borne several children by the same husband, may not ultimately acquire some of the physical characters, or at least imbibe and manifest some of the morbid tendencies, of the latter?

In treating further of this singular subject, I shall *first* state the facts at present known to me regarding it, and *secondly*, consider the theories offered in explanation of it.

1. In regard to the facts of the subject, these will be most conveniently noticed, *first* in relation to the lower animals; and, *secondly*, in relation to the human species.

(1.) As regards the brute creation:—Besides the instance already quoted of the mare belonging to Lord Morton, there is another similar case recorded. A mare belonging to Sir Gore Ousely, was covered by a zebra, and gave birth to a striped hybrid. The year following, the same mare was covered by a thorough-bred horse, and the next succeeding year by another horse. Both the foals thus produced were striped—*i. e.*, partook of the characters of the zebra.* And it is stated by Haller, and also by Becker, that when a mare has had a *mule* by an ass, and afterwards a *foal* by a horse, the foal exhibits traces of the ass.

In the foregoing cases the mares were covered, in the first instance, by animals of a different species from themselves. But cases are recorded of mares covered in every instance by horses, but by different horses on different occasions—where the offspring partook of the characters of the horse, by which impregnation was first effected. Of this Mr. M'Gillivray gives two examples. Thus, in several foals, in the royal stud at Hampton Court, got by the horse *Actæon*,

* M'Gillivray, *Aberdeen Journal*, March 28, 1849. Paintings of these animals and their skins are said to be preserved in the Museum of the Royal College of Surgeons of England.

there were unequivocal marks of the horse *Colonel*,—the dams of these foals were bred from by Colonel the previous year. Again, a colt, the property of the Earl of Suffield, got by *Laurel* so resembled another horse *Camel*, "that it was whispered, nay, even asserted, at New-Market, that he must have been got by Camel." It was ascertained, however, that the mother of the colt was covered, the previous year, by Camel.

It has often been observed also, that a well-bred bitch, if she have been impregnated by a mongrel-dog, will not, although lined subsequently by a pure dog, bear thoroughbred puppies in the next two or three litters.

The like occurrence has been noticed in respect of the sow. A sow of the black and white breed (known as Mr. Western's breed) became pregnant by a boar of the wild breed, of a deep chestnut color. The pigs produced were duly mixed, the color of the boar being in some very predominant. The sow being afterwards put to a boar of the same breed with her own some of the produce were observed to be stained or marked with the chestnut color that prevailed in the former litter. And, on a subsequent impregnation, the boar being still of the same breed as the sow, some of the litter were also slightly marked with the chestnut color. What adds to the value of the fact now stated is, that in the course of many years' observation, the breed in question was never known to produce progeny having the smallest tinge of the chestnut color.*

Breeders of cattle are familiar with analogous facts as occurring in the cow. A pure Aberdeenshire heifer was served with a pure Teeswater bull, to whom she had a *first cross* calf. The following season, the same cow was served with a pure Aberdeenshire bull; the produce was a cross calf, which at two years old had very long horns, the parents both hummel. A pure Aberdeenshire cow was served in 1845, with a cross bull—*i. e.*, an animal produced between a first-cross cow and a pure Teeswater bull. To this bull she had a cross calf. Next season she was served with a pure Aberdeenshire bull,—the calf was quite a cross in shape and color.

Mr. M'Gillivray, after narrating the whole of the foregoing examples, says:—"Many more instances might be cited, did time permit. *Among cattle and horses they are of every day occurrence.*"

(2.) As regards the human species. The facts bearing on this division of the subject are exceedingly few, and not to be relied on: and the observations which follow are intended rather to suggest and direct, than to satisfy, inquiry. Dr. A. Thomson, in his article on Generation, in the "Cyclopædia of Anatomy and Physiology," remarks:—"It is affirmed that the human female, when twice married, bears occasionally to the second husband, children resembling the first, both in bodily structure and mental powers." And Dr. George Ogilvie, of this city, informs me of a case, which fell under his own observation, where a woman was twice married, and had children by both husbands, and where the children by both marriages were scrofulous, although only the first husband had marks of that diathesis; the woman herself, and her second husband, being to all appearance quite healthy.

Dr. Ogilvie's case is clearly beset by so many sources of fallacy, that we cannot venture at present to regard it as a case in point. Dr. Thomson does not bring forward any instances, nor offer any proof, in support of his statement; and indeed he gives it, without saying whether he thinks it well or ill-founded. Any such statement, it is plain, based on observation of the children of European parents,—*i. e.*, where the female and both her husbands and their children are all white—must be comparatively difficult of verification; but it is equally plain that means exist for subjecting it to a pretty decisive test. There are equally distinct breeds of the human family as of any of the lower animals; and all that seems requisite in regard to determining the question under consideration is, to observe accurately, whether the children of European parents, where the women has, in the first instance, had offspring by a negro, exhibit traces of the latter in the color of the skin, the form of the features, &c.; or, *vice versâ*, whether the children of negro parents, where the woman had, first of all, been impregnated by a European, exhibit the peculiarities of the latter. Of the former case, a medical friend informs me that he recollects hearing of an instance of the kind as occurring in this neighborhood, but cannot vouch for the truth of it. Of the latter case, if the general fact applies to the human species, instances must abound in our West India colonies, in the United States of America, and in other parts of the world. My colleague Dr. Dyce tells me that he has certainly known one instance (if not more) where a creole woman bore fair children to a white man; and that the same woman had afterwards to a creole man other children, who bore much resemblance to the white man, both in features and in complexion. But two very intelligent friends—the one a West India proprietor, the other a medical man—both long resident in Jamaica, tell me that they never noticed, nor ever heard, of an instance of the kind, although connexions of that sort are common there, and children borne under such circumstances very numerous. It is singular indeed, if instances of the fact in question do occur, and still more if they are of frequent occurrence, that they should not be notorious. It is conceivable, however, and by no means improbable, that cases do exist, but that they have been overlooked from the traces of the European being so minute as to escape ordinary observation, and the fact have remained unknown, from special attention never having been directed to it.

If the male does exert any such influence as is here in question on the constitution and the reproductive powers of the female, it is conceivable that, by each successive impregnation effected by him, that influence may be increased; and, if so, the younger children begotten by him, rather than the elder, might be expected, *cæteris paribus*, to bear their father's image. And this more special fact, if ascertained, would establish also the more general one. I am not aware, however, of any specific facts bearing upon it, nor of any popular notions regarding it. But my colleague Dr. Laing, is cognisant of the case of an English gentleman who had a large family by a negro woman, in the West Indies, and where the children successively exhibited more and more the European features and complexion.

But however this may be, there is a popular belief that, in the course of years, a woman comes to resemble her husband, and that not merely in respect of temper, disposition, or habits of thought, but in bodily appearance. But, in so far as the notion may hold good, it may be true only of the features, and of these only as they indicate or bespeak the inward feelings of the mind, which, from long and familiar intercourse, may, to a certain extent, become common to man and wife. In so far as the notion is true in any other respect, and the parties have had several children, it may suggest the question, whether the assimilation is not referable to an influence exerted by the husband, through the medium of the fœtus in utero, on the constitution of the wife? The question is probably an idle one, and the notion only a popular error. In so far, however, as there is any-

* Philosophical Transactions for 1821, p. 23. "Apart from a state of domestication," says Mr. McGillivray, "I do not believe that there is one solitary instance in which an animal has produced offspring of various colors. Animals left entirely to the operation of natural causes, never exhibit this sporting of colors; they are to be distinguished by various and often beautiful shades of color; but then each species is true to its own family type, even to a few hairs or small parts of a feather."

thing in it, the explanation suggested gives a peculiar, and it may be added, a physiological significancy, to the language of Scripture relative to man and wife, at least when their intercourse has been fruitful—"They twain shall be *one flesh.*"

It is of more immediate interest, however, and of greater practical moment, to ascertain whether, through the medium of the fœtus, the husband may impart to his wife either the syphilitic virus, or the scrofulous diathesis, or any other constitutional morbid tendency—(*e.g.* insanity) which he may possess. Facts are wanting on this subject; but it is not undeserving of patient enquiry. Dr. Ogilvie's case, formerly referred to if it could be relied on, would be an instance of it. Before the mother could have imparted the scrofulous taint to her offspring by the second husband, she must herself have imbibed it from her first husband, through the medium of his offspring while in utero. And, although still seemingly free of the taint, it may have required only the appropriate external conditions to call it into full activity in her own person. And, with regard to the syphilitic poison, there is no difficulty in understanding, and it is quite within the bounds of probability, that the fœtus, if contaminated with it by its father, may convey it to the mother. Messrs. Maunsell and Evanson, after mentioning that they have notes of the case of a syphilitic child, whose mother had been infected by a former husband (they do not say in what way)—and to all appearance cured five years before its birth—the father of the child (her second husband) being in good health, state that their experience would enable them to adduce many curious facts bearing on the communication of the syphilitic poison. Perhaps their experience might furnish an affirmative solution of the question at issue. It has been affirmed that a man who has once had syphilis, but been seemingly cured of it for many years, may yet so retain the taint of it as to contaminate his offspring, without, at the same time, tainting his wife. Very possibly. But this does not prove that he may not contaminate his wife also; and the observation itself is in that respect fallacious, inasmuch as, in any given case of the kind, the wife may really have imbibed the virus, although in a latent form, and might subsequently give proof of the reality of the fact by tainting the offspring begotten by another and a perfectly healthy husband. Adopting this view, it may be found of importance, in contemplating marriage with a widow, to inquire into the constitutional peculiarities of her deceased husband!

II. Of the general fact now under consideration, and clearly established in respect of the lower animals, only two explanations, that are at all rational, have been offered. The first is that suggested by the great Haller, who ascribes it to a permanent impression made by the semen of the male on the genitals, and more particularly on the ova, of the female; the second, that suggested by Mr. M'Gillivray, who ascribes it to an influence exerted by the fœtus in utero on the constitution of the mother. The notion entertained by Sir Everard Home and others, that it is an affair of the imagination, seems too absurd to require serious consideration.

Haller's knowledge of the subject appears to have been very limited, and his explanation of it to have been offered incidentally. He was aware that when a mare has had a mule by an ass, and afterwards a foal by a horse, the foal exhibits traces of the ass; and he remarks "that the female organs of the mare seem to be corrupted by the unequal copulation with the ass;"—*i. e.*, that the semen of the latter exerts an influence on the genitals, and of course on the ova of the mare, which appears subsequently on the impregnation of these ova by males of her own species.*

It may be stated, in support of Haller's theory, that, in the case of birds, a single intercourse is known to impregnate many eggs which are laid successively after it; but, on the other hand, the influence of such intercourse extends only to the eggs of one season, or rather of one brood—the several eggs being laid in tolerably quick succession, and all of them probably in a state of maturity, and actually impregnated at the time of that intercourse. This fact, therefore, goes but a short way to favor Haller's theory, and it may indeed be said to tell as much against as for it. And if it shall be clearly ascertained (as seems presently to be the belief of physiologists), that any single ovum remains but a short time in the ovary, Haller's theory must be given up. But even if it could be shown that an ovum may remain in the ovary for a series of years, the fact would be of little value, unless it could also be shown that the semen can exert some definite kind of influence on an ovum, which it does not at the time actually impregnate. There seems little probability, however, of this being done; and there is one fact known in regard to the ova which makes it difficult to conceive it possible—the fact, namely, that unripe or immature ova lie deeply imbedded in the stroma of the ovary.

Mr. M'Gillivray's theory seems to me to meet the whole facts of the case, and to derive support from a great variety of facts in regard to the reception and constitutional effects of morbific poisons and morbid diatheses.

Mr. M'Gillivray, indeed, supposes, as was formerly noticed, that there is a direct vascular connexion between the fœtus in utero and its mother; and he seems to consider the validity of his theory to hinge on this assumption. The assumption, however, is untenable, nor is it at all necessary for the establishment of the theory. The researches of Dr. John Reid and of Mr. Goodsir, on the structure of the placenta, have demonstrated that the connexion is indirect only—the fœtus and the mother imbibing materials from each other, very much in the same way that the lacteal vessels take up the nutritive portions of the food in its transit along the small intestines; or that the roots and leaves of vegetables take up nourishment from the soil and the atmosphere—the materials imbibed, in each case, passing through a pervious, but not a perforated tube or membrane, and being taken up by a real act of absorption, during which act they are more or less altered in their character, or assimilated. But, independently of the considerations now stated, it appears from the observations of Prevost and Dumas, and of others, that the corpuscles of the fœtal blood are differently shaped from, and, in the later stages, larger than those of the mother—a fact which shows, at least, that no entire corpuscles of blood are transmitted from the one to the other, and, indeed, taken in connexion with the facts ascertained as to the structure of the placenta, proves that it is by transudation only, that the contents of the uterine and fœtal vessels mutually pass into each other.

In doing so, the materials in question are more or less altered in their character, or undergo what physiologists term a process of assimilation. In the case of the lacteal vessels, the chyle which they contain can never be detected as such in the alimentary mass: nor is the sap of vegetables precisely the same fluid that exists in the soil and in the air. In like manner, the blood in the umbilical vessels doubtless differs from that existing in the uterine sinuses. At the same time the assimilating process does not go the length probably in any case of wholly changing the character of the fluids concerned in it; and there is reason to believe that, in different cases, it proceeds to a very different extent—in some the change effected being to a less extent

* Dr. Kirkes also appears to regard the cause as a local one. Referring to Lord Morton's case, he observes—"The single impregnation, by the seminal fluid of the quagga, had impressed its character, not only on the ovum then impregnated, but on the three following ova impregnated by horses." Handbook of Physiology, p. 614. Such, too, is Mr. Mayo's view. Physiology, 2nd Ed., p. 490.

than in others. And possibly, in the case of the fœtus and its mother, the amount of the assimilation is not considerable.

No interchange of corpuscles takes place, but in respect of the other constituents of the blood, it is difficult to conceive why they should not be transmitted nearly unchanged. Professor Simpson of Edinburgh has recently shown that the small-pox virus may pass unaltered from the mother to the child in her womb, and produce in it the actual disease, even although, by reason of previous vaccination, the mother may herself remain unaffected by it. And a similar fact has long been known in regard to the transmission of the syphilitic virus from the mother to the fœtus in utero.

We can, therefore, have no difficulty in understanding, in respect of the fœtus itself, that, although its connexion with the mother is indirect only and merely to the extent of allowing the passage of the liquor sanguinis, and although this may even be so far altered in the passage, the constitutional peculiarities, derived to it from its father, and inherent in its blood, may, with the blood, be imbibed by its mother. And when we reflect on the length of time during which the connexion between them is kept up, the amount and the activity of interstitial change conttnually going on in the system of the fœtus, the large quantity of fœtal blood that must eventually be taken into the vessels of the mother, and the probability that the peculiar matter imparted by the male parent to the ovum at the moment of impregnation (be its nature what it may, and its quantity never so infinitesimal), assimilates, like a ferment, much of the fœtal blood to itself, it does not seem too hard to be believed that the blood and constitution generally of the mother may thereby become so imbued with the peculiarities of that parent, as to impart them to any offspring she may subsequently have by other males.

Aberdeen, April 30, 1849.

Appendix.—I. In the foregoing paper a question occurs as to whether, in the case of a woman who has been twice married, and borne children by both husbands, the children of the second marriage ever resemble the mother's first husband?

The following additional cases, illustrative of this question, have recently been communicated to me: the first by my friend the Rev. Charles M'Combie, of Tillyfour, minister of Lumphanan, in Aberdeenshire; the second by Professor Simpson of Edinburgh; and the third by Professor Pirrie of Aberdeen:—

1. Mrs. ———, a neighbor of Mr. M'Combie, was twice married, and had issue by both husbands. The children of the first marriage were five in number; of the second three. One of these three, a daughter, bears an unmistakeable resemblance to her mother's first husband. What makes the likeness the more discernible is, that there was the most marked difference, in their features and general appearance, between the two husbands.

2. A young woman, residing in Edinburgh, and born of white (Scottish) parents, but whose mother some time previous to her marriage had a natural (mulatto) child, by a negro man-servant, in Edinburgh, exhibits distinct traces of the negro. Dr. Simpson, whose patient the young woman at one time was, has had no recent opportunities of satisfying himself as to the precise extent to which the negro character prevails in her features; but he recollects being struck with the resemblance, and noticed particularly that the hair had the qualities characteristic of the negro.

3. Mrs. H———, apparently perfectly free from scrofula, married a man who died of phthisis. She had one child by him, which also died of phthisis. She next married a person who was to all appearance equally healthy as herself, and had two children by him, one of which died of phthisis, the other of tubercular mesenteric disease—having at the same time scrofulous ulceration of the under extremity.

II. In connexion with the constitutional influence exerted by the male, through the medium of the fœtus in utero, on the system of the female, another and a very singular question may be raised. In the case of an aboriginal woman of color, does previous impregnation by an European male render the female incapable ever after of fruitful intercourse with a male of her own race?

This question is suggested by an observation, made in various parts of the world, by the excellent Count de Strzelecki, relative to the effect of fruitful intercourse between an aboriginal female and an European male. "Whenever such intercourse takes place," says the Count, "the native female is found to lose the power of conception, on a renewal of intercourse with the male of her own race, retaining only that of procreating with the white men."

This, if a general fact, contrasts remarkably with Dr. Simpson's case, above mentioned (one of fruitful connexion between a white man and a white woman, after previous impregnation of the latter by a black man), unless, indeed, this be, which probably it is not, an exception to an equally general fact of the same sort. It would limit, also—nay, absolutely exclude, opportunities of observing whether children born of dark parents, where the mother formerly had issue by a European male, exhibit traces of the latter. But it was before stated on the authority of two gentlemen long resident in Jamaica, that in our West India colonies—in Jamaica at least—fruitful connexions of this kind are of common occurrence, and (which I mention at present as in keeping with this) on the authority of Dr. Dyce, that, in children born under such circumstances, marks of the European have been observed. Special inquiry, made recently, has served so far to confirm these statements, but not to satisfy me that the issue of such connexions is numerous.

The opportunities, however, enjoyed by the count Strzelecki, of making observations as to this point, in most parts of the new world, have been very great. "He has lived much (to use his own words) amongst different races of aborigines—the natives of Canada, of the United States, of California, Mexico, the South American republics, the Marquesas, Sandwich, and Society Islands, and those of New Zealand and Australia. And, referring to the statement made by him, and already quoted, the count observes—"Hundreds of instances of this extraordinary fact are on record in the writer's memoranda, all recurring invariably under the same circumstances, amongst the Hurons, Seminoles, Red Indians, Yakies, (Sinaloa,) Mendosa Indians, Araucos, South Sea Islanders, and natives of New Zealand, New South Wales, and Van Diemen's Land; and all tending to prove that the sterility of the female, which is relative only to one and not to another male, is not accidental, but follows laws as cogent, though as mysterious, as the rest of those connected with generation.

Strzelecki does not state to what extent, or indeed, whether, he has met with exceptional cases—*i.e.*, cases where, after connection of the kind in question, fruitful intercourse has taken place between a native man and woman. This it would be important to know. It seems not improbable, at least, that such cases may have been observed by him. They would not indeed, even were they numerous, invalidate the inference obviously drawn by him from his other observations, provided they were really exceptional. They would merely show that the fact does not hold universally or absolutely. But should the inference be in the meantime disputed, as I think it well may, it can only be determined in the affirmative, by proofs of the same general kind with those by which (for example) the contagious property of certain diseases is established—to wit, by comparative observations on the large scale, showing,—First, that native females who have once had fruitful connexion with European males, are, subsequently, as compared with other na-

tive females who have had no such connexion, much less fruitful with males of their own race; and secondly, that no other common circumstances, save that of such connexion, can be ascertained to exist in the case of most of the women that become barren, and not to exist in the case of most of those that are fruitful.

If future inquiry thus directed shall verify the inference, which at present can only be regarded as an hypothesis, it will establish a general principle in the physiology of generation of the highest interest and importance. Assuming, however, that it is well founded, and will hereafter be proved to be a fact, it were vain, perhaps, in the present state of our knowledge, to attempt an explanation of it; but with regard to its bearing on the subject of this paper, I am inclined to think, from the facts already adduced in these pages —uncertain as some of them may be—that the sterility is quite as likely to be owing to the system of the female being somehow altered or affected, during her pregnancy, by the fœtus begotten by the European, as to a local change in the general mass of ova effected by the mere act of intercourse —*i.e.*, the mere application to them of the semen of the European. Our knowledge, indeed, of the conditions essential to impregnation, and of the mode in which it is accomplished, does not warrant us to say that the change cannot be exclusively local. But the facts ascertained of late years as to immature ova occupying the centre of the ovary,—as to the ova undergoing a process of maturation and coming to the surface of the ovary, prior to, and in order to, impregnation,—and as to the mature ova passing off at each monthly period, and becoming blighted when not impregnated, tend rather to set aside the notion of local affection, and therefore to give probability to the other view. And if this other view should be established, the fact itself would clearly furnish additional testimony to the doctrine, and would merge in the still more general fact, that the fœtus in utero does inoculate the system of the female with the peculiarities of that of the male. The alleged relative sterility of the native female, after intercourse with the European male, is brought forward (it may be added) by Strzelecki as affording an explanation, and as being the chief cause, of the gradual diminution and ultimate extinction of the native tribes in most parts of the new world, which follow the introduction of the European races. "Wherever the white man has set his foot-mark, there the print of the native foot is obliterated; and as the tender plant withers beneath his tread, so withers the aboriginal inhabitant of the soil." And "human interference," says Strzelecki, "to avert this melancholy consequence has been hitherto of no avail;—a charter for colonisation granted to one race becomes virtually the decree for the extinction of the other."*

Very various causes, doubtless, concur to bring about this result. The one assigned by Strzelecki as the chief is obviously quite adequate, if a real one, to its production. And should his belief as to the reality of this cause be confirmed, and if it shall farther appear, that the principle involved in it applies only to aboriginal females contaminated by European males, and not to European females contaminated by aboriginal males—*i. e.*, should the former class of females only, and not the latter, be rendered sterile to males of their own race by such foreign intercourse, the discovery can scarcely fail, not merely to exhibit the predominancy of the white over the dark races of men, in a particular not previously suspected, but to indicate that the designs of Providence, in regard to the human family in this stage of existence, embrace the ultimate extinction of the primitive varieties of the dark races. Their physical peculiarities and their social degradation—a mystery, if not a standing memorial of a curse visited on their progenitors, in the times of miraculous interposition; the purpose of their existence in respect of this earth—a mystery also, yet somehow subservient, seemingly, to that of their more favored brethren; their end after that purpose is served—extirpation? But these are questions which, besides that they are foreign to the object of this paper, are, perhaps, too deep for human penetration.—*Monthly Journal.*

* Strzelecki records the following remarkable circumstance which came within his own personal knowledge:—A party of Aborigines in Van Diemen's Land, to the number of 210, were deported by government in 1835 to Flinder's Island, on account of aggressions made by them on the colonists in their neighborhood, by whom, however, they had been contaminated. They had only fourteen children born among them during the next seven years. It is true, that, in the course of that time, their own numbers had dwindled away to fifty-four. Still the small number of births is singular, and contrasts strikingly with the fact, that "each family, in the interior of New South Wales, uncontaminated by contact with the whites, *swarms with children.*

MATERIA MEDICA AND CHEMISTRY.

Therapeutic Action of Aconitum Napellus.—The following is an abridgment of papers, by M. Tessier, on this subject in the *Gazette Médical de Lyon*, for 15th and 31st January, 1849:—

Aconite has three modes of action, viz.: a narcotic, an antiphlogistic, and a special action on the skin.

1. Narcotic Action.—Some deny that aconite acts in this way; but, nevertheless, the fact is incontestable. It is sufficient to place some drops of the tincture on the tongue, to be satisfied of the narcotic action on the nervous system; for it excites a very decided feeling of numbness in that organ. Besides, when a full dose is administered, it is no uncommon thing to observe delusions, vertigo, collapse, and delirium—in fact, such effects are known to follow opium and poisons from the family *Solaneæ*. In painful diseases, too, it often gives a wonderful immunity from pain. I have administered Aconite in a great number of painful diseases —in dull pains in the bones, in facial neuralgia, in toothache sciatica, cancer, &c.; and have observed effects which, from their diversity, well merit attention. While morphia, with a few very rare exceptions, calms every species of pain, aconite only relieves a certain special class. Thus I have never been able, by means of it, to assuage the pain of exostosis, cancer, myelitis, nephritis agastralgia, or whitlow; but, on the other hand, I have obtained the best result from its use in such painful affections as have a catarrhal or rheumatismal cause, along with disordered function of the skin, such as rheumatism, angina, toothache, &c. Aconite is*t* then, in a certain class of cases, a narcotic agent (*agent stupéfiant*), but this action is subordinate to another, afterwards to be spoken of.

2. Antiphlogistic Action.—The reality of this mode of operation is believed in by Dr. Fleming; by Dr. Giacomini, who places aconite among the hyposthenic arterial remedies; and by the homœopaths, who affirm that this medicine may be used as a substitute for bleeding in the most urgent cases. To solve the question, as to the existence of antiphlogistic properties, it will not do (like Dr. Fleming,) to choose cases of rheumatism, bronchitis, pneumonia, erysipelas, or neuralgia, all of which can usually be cured without the abstraction of blood: but we must take diseases in which bleedings are regarded as indispensable, as inflammation of the brain, apoplexy, peritonitis, hypertrophy of the heart, inflammatory fever, and ophthalmia from the introduction of a foreign body into the eye. In my experiments with aconite on the latter class of cases, I have not met with a single instance in which the aconite could usefully be preferred to bleeding. I have also given it in active hemorrhages,

in hæmoptysis, and in menorrhagia—and without any advantage. From my observations, aconitedoes not appear to be more suitable to the plethoric : and upon the whole, I am inclined to think that it answers best with persons of a nervous or lymphatic temperament, and especially with those predisposed to rheumatismal and catarrhal affections. I do not, however, maintain that aconite *never* acts as an antiphlogistic : for by and by I am going to mention cases in which it has sensibly reduced the pulse ; but then I will show, at the same time, that the action on the circulation was *indirect*, and that it is by regulating another function that aconite diminishes fever.

3. Action on the Skin.—If the principal therapeutic action of aconite be neither narcotic and calmative, nor antiphogistic, what is it? My reply is, that the special action of aconite is on the skin. It possesses the property of eliminating from the vessels of the skin the hurtful matter, and of re-establishing the cutaneous functions when deranged by checked transpiration, or by some virus. I think that it has the special power of controlling diseases arising from cold, and others in which a morbid principle is retained in the cutaneous tissues, as occurs in the exanthematous fevers. It is a suitable medicine in all those diseases in which the function of the skin is disordered, as in articular and muscular rheumatism, as well as in rheumatism of the nerves including sciatica and odontalgia; also in affections of the mucous membranes, such as bronchitis, etc. ; likewise in the exanthemata.

Diseases in which Aconite is used.—Courbature.—A bruised feeling in the limbs, creeping sensations on the surface, lassitude, headache, and general discomfort, constitute the group of symptoms called by this name : and they are also symptoms which specially indicate the use of aconite. The desired relief will generally follow, by taking daily from five to ten drops of the alcoholic tincture, in a little water, or bland vegetable infusion.

Catarrhal Fever, as Hufeland showed, is caused by the suspension of the active functions of the skin. Its physical characters are : alternations of heat and cold, dragging pains in the limbs, increased frequency in the desire to make water, a tendency to sweat, general fever, complicated with a local affection, which is generally coryza, angina, or bronchitis. The therapeutic indications are : 1st, To re-establish the functions of the skin ; 2d, To subdue the irritation of the nose, throat, and bronchial tubes. Aconite fulfils all these intentions. In catarrhal fever, as in courbature, it causes the pain in the limbs, the shiverings, and the heats to subside, and, at the same time, greatly simplifies the progress of the affection of the mucous membrane. But aconite does not, unaided, fulfil the second intention, which requires the assistance of opiates, blisters, or such other means as may be suitable.

Angina and Acute Bronchitis.—Like MM. Tessier, of Paris, and Gabalda, the author has seen aconite of much service in these affections, by diminishing, in the former, the pains of deglutition, and in the latter, rendering the fits of coughing much less distressing.

Rheumatism.—To have a correct appreciation of the action af aconite in rheumatism, it is necessary to discriminate between the different forms of rheumatism, for it is very far from possessing the same influence over all of them. The cases in which it succeeds best are—recent rheumatic pains, unaccompanied by swelling and fever, or in which these symptoms are slight. In them, it possesses very great efficacy, and is preferable to bleeding ; also to inoculation with morphia, or the use of belladonna—which drugs are mere palliatives of pain. In acute articular rheumatism, accompanied by decided swelling of the joints and ardent fever, aconite is of less value. At the onset, however, of such attacks, it may be administered with advantage, for the purpose of diminishing the afflux of blood [*la fluxion*] to the joints ; but when the synovial membrane and the fibrous and ligamentous structures of the joints become inflamed, aconite is useless, and, in my opinion, the best treatment is by large doses of nitrate of potash. In chronic apyrexial rheumatism, the results are good, though not so striking as in recent attacks. By persevering in the use of aconite for six weeks or two months, obstinate rheumatic pains, which have existed for years, may be subdued. Aconite, besides being remedial, possesses preventive properties, by its decided influence over the rheumatic diathesis. When given with this view, it must be continued for months. In all rheumatic affections, but especially those which are chronic, the doses must be much larger than those which are suitable in the diseases formerly spoken of. It is necessary to begin with ten or twenty drops of the alcoholic tincture, and to increase the quantity up to four, six, or eight grammes.*

Eruptive Fevers.—In these affections, as in catarrhal fever, the pulse is brought down : the eruption is also made to come out better. The beneficial influence of aconite on the progress of the exanthemata has already been mentioned, in a work published at Lyons—La Pharmacopée de Vitet. It does not appear whether the discovery of this property of the medicine belongs to Vitet, or whether it was stated by him at second hand.

Erysipelas.—M. Tessier agrees with Drs. Fleming and Gabalda in believing that aconite diminishes the duration and the danger of this disease. I would wish to call the attention of surgeons to its value in erysipelas attacking wounds ; so that my observations may be verified. I have several times seen a prompt and remarkable amendment follow the daily use of from ten to twenty drops of the tincture, in cases of erysipelas spreading around wounds and ulcers, and accompanied by severe constitutional symptoms.

Pneumonia.—M. Tessier agrees with Dr. Fleming that the aconite, when administered at the commencement, tends to restore the suppressed transpiration from the skin, and may thus give a milder character to the disease ; but if inflammation have actively set in—if auscultation reveal engorgement and condensation—we must not anticipate resolution from the exhibition of aconite.

Mode of Administration.—I am truly astonished at Dr. Fleming recommending the largest doses to be used when an antiphlogistic, rather than an anodyne or narcotic, effect is desired. However much I respect so distinguished an authority, I must state that my practice is entirely different. In a case of rheumatism, neuralgia, or any other affection in which I wish the calmative properties of the medicine, I give from ten to twenty drops of the tincture, and gradually augment the dose to three, four, five, or even to eight grammes in the day ; but, on the contrary, when I give it in the courbature or catarrhal fever, I order only from five to ten drops in the twenty-four hours, and by such doses I bring down the pulse, and diminish all the other febrile symptoms, without inducing any symptoms of poisoning. I prefer the tincture, as more certain than the extract. The

* Let us caution our readers not to use the tinctures in common use in this country in such doses. No physician ought to prescribe aconite, without minutely specifying the preparation he intends to be used. That which we prefer is Dr. Fleming's *Tincture of the root*, which is transparent, in colour like sherry wine, and of a slightly bitter taste. The following is the formula.—"Take of root of A. Napellus, carefully dried and finely powdered: sixteen ounces troy ; rectified spirit, sixteen fluid ounces ; mace, rate for four days ; then pack into a percolater ; add rectified spirit until twenty ounces of tincture are obtained." Dose, from three to five minims in repeated doses.

tincture, diluted with one or two parts of water, may be applied topically in neuralgia; but used in this way, aconite is an uncertain remedy.—*London Jour. Med.*, June, 1849.

Concealing the Taste of Fish Oil.—Now that the swallowing cod-liver oil bids fair to become the fashionable mania of the day, it may be as well to state the simple and effectual means communicated by M. Fredericq, of disguising its abominable taste. This merely consists in masticating a morsel of dried orange peel just before and just after swallowing the dose.—*Rev. Med.-Chir.*, tom. v.

[We have employed this means in one case, and with a very satisfactory result. The patient states that the taste of the oil is entirely disguised, by the use of the orange peel.—Ed. A. J. M. S.] (Others advise the addition to the oil of a drop or two of creasote, which imparts to the medicine the taste of herrings, and makes it thus more palatable. —Ed. B. A. J.)

The adjourned Discussion on Chloroform.—Mr. Greenhalgh, who resumed this discussion, stated the results of thirty-two cases which had fallen under his observation, not one of whom was suffering from disease of the heart, brain, or lungs, or was subject to local congestion of any kind. In three the forceps was applied, out of whom one mother died, five days after delivery, from puerperal fever; all the children were born alive. In one case, turning was had recourse to; child still born. The remaining twenty-eight cases were natural labours. Eighteen of the children born were females; fourteen males. No hæmorrhage occurred in any case; neither was there any delay or difficulty in the expulsion of the placenta. Two suffered severely from intense headaches for some hours after delivery, one having been subject to hysterical pains in the head for some years; the other had rarely suffered in the head before. In no one case did any permanent ill effect result. The largest amount of chloroform given was two ounces and a half, over a space of nine hours. This, also, was the longest period of inhalation; the shortest being seven minutes; average, about two hours. The respective ages—five, twenty-six; five, thirty; three, thirty-two; three, thirty-four; two, twenty-two; two, twenty-seven; two, thirty-one; two, thirty-eight; one, twenty; one, twenty-three; one, twenty-four; one, twenty-five; one, twenty-nine; one, thirty-three; one, thirty-five: and one fifty. Numbers of labours; thirteen, second; seven, first; three, fourth; three, sixth; two, third; two, eight; one, seventh; and one ninth. Temperaments; eight were of the sanguine; seven of the nervous; the remainder of a mixed kind. Three were very stout; two were very thin. Five, although desirous of inhaling this remedy, commenced to breathe it in a highly nervous state, which greatly retarded its action. All the patients had arrived at the full period of utero-gestation. Mr. Greenhalgh, having briefly detailed the particulars of the forceps and turning cases, and given a short account of the effects of this remedy upon the patients during labor, proceeded to draw the following inferences: first, that young children appear to be more susceptible of its influence than those of more mature age; secondly, that females are more readily affected by it than males; thirdly, that the temperaments have but slightly modifying influences, except in the highly hysterical diathesis, in which not unfrequently the most violent excitement is induced, ending in a train of distressing nervous symptoms; fourthly, that drunkards, as a general rule, require a larger dose then those of more sober habits; and fifthly, that lascivious dreams and remarks are of very rare occurrence, the author of these observations having witnessed only two, out of a large number of cases in which chloroform was administered for various purposes. Mr. Greenhalgh concluded by stating, that although this agent is a very powerful and dangerous one,—occasionally, though rarely, producing very alarming, nay fatal effects,—yet if the cases be well selected, the remedy slowly and cautiously administered, and its effects properly watched, it may be advantageously given either in natural or instrumental labor.

Dr. Henry Bennett had administered chloroform in obstetric cases since its first introduction by Professor Simpson, and he was completely and thoroughly in favor of its employment in discriminate cases. He had used it extensively in three classes of cases. First, in those cases in which irritation of the system was kept up by fear or other causes, and the parturient efforts interfered with. In these cases chloroform relieved the distressing symptoms, allayed unnecessary pain, and quickened the labor. Such a case was that of a young woman he had attended with her first child. She had little energy, seemed overwhelmed with pain, and great mental excitement. The head had advanced into the pelvis, but there was excessive irritability, with cerebral symptoms. The pains were wearing and ineffectual. The bad symptoms all gave way under the use of chloroform, and the pains became natural and expulsive. In all such cases, where bleeding and opiates were formerly resorted to, he had found chloroform a much better sedative. This medicine seemed to act directly on the ganglionic system of nerves; that system on which, as Dr. Simpson, he thought, had proved, was mainly effective in the parturient process. At all events, the experiments of Dr. Simpson went far to prove this; for he had found the act of parturition go on in a sow whose spinal cord had been entirely destroyed. The second class of cases in which he used chloroform were those in which operative procedure was necessary to effect delivery; not only did it relieve unnecessary pain in these cases, but facilitated the efforts of the accoucheur in delivering his patient. In simple parturition, in which the labor was natural, he did not give chloroform, except at the request of the patient. In no case had he seen any ill effects fairly attributable to the chloroform; it was true, in one instance a lady died in childbed three weeks after delivery under the influence of chloroform; but here the fatal result was dependent on a very severe organic disease of the heart not discovered during life. He mentioned the case, however, in common fairness in discussion. In one case, also, some slight hæmorrhage had occurred: it was easily arrested, and was not due to the medicine. The third class of cases in which he employed chloroform were those of inflammatory disease of the uterine neck, in which it was necessary to apply caustic or to operate; it relieved pain, fear, and neuralgia, and was most valuable, as it was also in cases after operation had been performed, in relieving pain. He had never seen it lead to scenes of an indelicate character, or give rise to indecent talk in the woman; on the contrary, he had seen it have a temporary good effect in cases of nymphomania. On the whole, he strongly recommended the use of chloroform; he had three times himself inhaled it for surgical operations. The risk attending its use under proper management was no more than the chance of being thrown out of a railway carriage or steam-boat.

Mr. W. F. Barlow said that the subject might be treated of under two heads—first, was it desirable to relieve the pain of labor? secondly, was it safe? As to the first point, he did not imagine that any one would demur for a moment. He did not expect to hear any one say, that as an abstract matter it was undesirable to relieve pain of any kind. Every one who had seen a number of surgical operations must have had frequent occasions for remarking the peculiar firmness with which many women bore them, even when they were most protracted and severe, and he had heard experienced operators remark, that women endured the pain of a

knife, to speak generally, more uncomplainingly than men. However that might be, it was clear enough that there were many women who would not flinch from surgical proceedings, that would express most bitterly the sufferings of parturition, which, though happening in the natural course of things, were oftentimes all but intolerable, and were often made infinitely worse by being spread over so tedious a space. He thought that some persons were too much in the habit of making light of pain, and underrating its complex effects upon the body. Let them turn to Mr. Travers's beautiful work on "Constitutional Irritation," and there read of deaths which seemed to be owing to the shock of pain. Pain had remote effects as well as immediate, and the former were apt to be forgotten. It was very well for those who had no pain to suffer, to talk philosophically of the agonies of others; the remark was quite applicable to the pains of parturition. As to the second and more difficult question—can chloroform be safely administered in labor?—it was one which facts only could determine. He thought that Dr. Murphy was right in rejecting rumors and vague assertions as quite inadmissible in an argumentative discussion. If statements were to be made of deaths from chloroform, and used as arguments against its administration, it was but fair to demand that they should be explicit, and properly supported. If instances of a fatal result were mentioned, something should be said, surely, of the condition of the patient, of the mode in which the chloroform was administered, of the time it was inhaled, and of the state of the respiration and circulation at that period when efforts were first made to avert dissolution.

Mr. Gream spoke at considerable length against the employment of chloroform. He had tried both ether and chloroform himself to some extent when they were first introduced. He was satisfied of their injurious effects. He considered Dr. Murphy had advanced no new facts in his paper, which did not call for special notice. He drew a parallel between the practice of the late Dr. Clarke and Dr. Simpson as to operative midwifery and its results, the balance being in favor of the old plan, without anæsthesia. He quoted the opinions of Collins, Meigs, Montgomery, and others, against the agent, and said that no accoucheur of extensive practice in London used chloroform.

Dr. Webster said, as he did not practise either surgery or midwifery, he had no personal experience respecting the use of chloroform under such circumstances; still, he had paid considerable attention to the subject, and considering it was only by the accumulation of facts relative to the employment of so powerful an agent that we could arrive at any correct knowledge, he would now state some cases which were instructive. Dr. Murphy had said he never saw bad results supervene during the use of chloroform in midwifery. This was important; but he wished to learn if this opinion applied as well to the immediate as to the remote effects produced by the remedy: and especially whether any permanent or transitory impression had ever been produced upon the mental functions of individuals? On this point he (Dr. Webster) could speak with some confidence, and would therefore refer to three cases which had come within his cognizance, showing the serious consequences sometimes following the inhalation of chloroform during child-birth. In the first case, the patient, who had been delivered under the influence of chloroform, was, for three days subsequently, constantly incoherent and rambling. She soon afterwards became perfectly maniacal, and so furious as to require confinement in a lunatic asylum, where she remained for twelve months, when she was discharged cured. In the second case, the patient never recovered from the effects of the chloroform exhibited during her confinement, and soon afterwards became quite maniacal, and continued so for many months, but recovered ultimately. The third case to which he would now allude, by some psychological physicians, might, perhaps, not be considered as a true instance of insanity; however, to remove doubts, he would relate the chief symptoms. The cerebral disturbance following the use of chloroform during delivery never ceased entirely; the patient could not sleep at night for a long time, and often said she felt as if in the presence of a madman who was going to murder her. Three weeks afterwards, she became almost maniacal, exhibited much mental excitement, laughing frequently; had a strong desire to sing, with other extraordinary feelings; conducted herself like an infant, and lost her memory, in which state she continued during five months, when recovery took place.

Dr. Murphy briefly replied. He was anxious for truth, and was glad to hear of any well-authenticated facts on either side of the question. The names quoted by Mr. Gream were those of practitioners who had not tried chloroform; and therefore their opinions were of little weight. Dr. Webster's cases were not so valuable as they might be, as evidence of the asserted dangers of chloroform, if puerperal mania did not occur sometimes without the use of that agent. Doubtless there were some peculiar constitutions, in which chloroform, as was the case with opium, calomel, &c. could not be given without ill effect. To determine what were these constitutions in what way to administer the chloroform, and to determine its real value, was, and should be, the object of his inquiries respecting it.—*London Medical Gazette.*

Development of Electricity by the Contraction of Muscles.—The experiment of M. Du Bois Reymond, on the development of electricity by the voluntary contraction of the muscles, has been discussed on the Continent. MM. Despretz, Becquerel, and Matteucci have not been successful in producing the effects which were stated to have been obtained by M. Reymond, and attested by M. de Humboldt. M. de Humboldt has addressed a second letter to M. Arago, stating that, at a new *séance* in the cabinet of M. Emile Du Bois Reymond, the effects produced by M. Mitscherlich were most unequivocal, and fully established the truth of this new fact. "Occupied myself," concludes Humboldt, "for more than half a century in this class of physiological researches, the discovery which I have announced has for me a vital interest. It is a phenomenon of life rendered sensible by a physical instrument."—*Med. Times,* August25, 1849.

PHYSIOLOGY.

On the Muscular Contractions which occasionally happen after Death from Cholera.—Mr. Barlow has noticed two striking cases in which the movements occurred after dissolution, and lasted for a very considerable time. The muscles of the arms, chest, and legs, and, in one of these examples, those of the face, were observed to be affected, some muscles being much more influenced than others. Some of the movements in respect of form were not unlike those of volition. In one of these cases the motions ensued two minutes after death; in the other, a quarter of an hour. In both the muscles of the lower extremities were first affected, and the movements appeared successively in those of other parts. Two cases, very well marked, accurately observed, and presenting very similar features to the foregoing, and which had occurred long ago in India, were referred to. The author described those more local and transient forms of the affection which were more commonly observed; the movements might be confined to the legs, the chest, the face, to a single muscle, or even to certain fibres of it. A case of cholera was on record in which paralytic muscles had been

affected by spasms. These *post-mortem* contractions had been stated, by an observer, to admit of excitement and aggravation by "pricking." The writer had endeavoured, in one instance well-calculated for experiment, to repeat the observation, but had been unsuccessful. He had used, also, water of the heat of 150°, and of a yet higher temperature, in order to discover if the motions could be either induced or affected by it; no definite result could be obtained. Probably these motions, which had as remarkably narrow a sphere of action in some cases as they had a wide one in others, would have been much more frequently met with had they been oftener sought for. Attention was directed to the terror which they had caused to ignorant persons and persons not ignorant; they had given rise to unfounded notions of persons being buried whilst yet alive. They had been seen by friends, to their extreme amazement, as they were watching the bodies of the deceased relatives; and it was necessary, with the view of preventing groundless alarm and false conclusions, that all persons who might come in contact with the corpses of those who had perished from cholera should be informed that it was by no means extraordinary for such actions to be witnessed after death in this disease. The author had no explanation to offer of the cause or causes of these curious phenomena. For the present, they must be viewed as facts. Groundless speculations would only surround them with unnecessary mystery. He concluded by proposing a careful inquiry into all the circumstances under which they occurred; and some points were specified which it would be interesting to consider. Amongst other things, it was important to note their duration and the most protracted interval which might elapse between dissolution and their commencement.

[This automatic movement of defunct cholera patients was one of the remarkable features of the disease, first noticed by us in 1832. The first instance which occurred in the wards of the Redcross Street Hospital, in the borough, excited no little commotion, the bed-clothes being completely removed by the movement of one arm. The phenomenon subsequently became so common, as to cease to excite attention. We noticed at the same period the return of the natural temperature of the living body, as an universal fact, and in some few instances the cessation of life was so imperceptible, that we could only assure ourselves that the patient was dead by feeling the return of warmth to the previously ice-cold surface.—Ed. Prov. Med. & Sur. Journal.]

MISCELLANEOUS.

Letter from California.—Sickness at San Francisco and Sacramento City—Diseases, their Causes and Treatment—The Medical Profession—Sacramento City—Meteorological Observations—Present Condition and Future Prospects of California, &c.

To the Editor of the Boston Medical and Surgical Journal.—Sir,—Your Journal, like an old and valued friend, has always been a welcome visitor; but since I have left New England it has been *doubly* welcome. Its reception has, perhaps, been warmer and more ardent than heretofore, and its arrival most eagerly anticipated. I take this opportunity to express my thanks to the publisher for the promptitude and punctuality that he has always manifested in the management of his department, an *expression not due* to all the publishers of medical periodicals in the United States, as many subscribers besides myself well know.

I think that a few general remarks upon the points leading this article might be somewhat interesting to your readers, though some of the topics thus embraced are not purely *medical*. Yet they are of such nature that they could not with propriety be omitted, and are therefore interwoven with professional subjects, and respectfully submitted to your disposal.

There has been a vast amount of sickness in San Francisco during the past summer. In the months of August and September, particularly, there were from five to ten interments a-day; and though the health of the place is improving, there are daily many cases of fatal disease. A few days since I visited one of the grave-yards—there were six open graves! The prevailing complaints are dysentry and diarrhœa. Some have died of pulmonary disorders, particularly phthisis; others of fevers contracted in the interior or at Panama, and especially in the valley of the Sacramento. At the mines these disorders have been rife. Scurvy has carried off many miners, and several ships have brought into this port persons afflicted with this latter malady, some of whom have died. A gentleman informs me that there are five sailors now on board the U. S. Sloop of War Warren, who are ill with this complaint. Intemperance, dissipation, disappointment, privations, exposure, &c., have had more to do with this fatality, as a general thing, than the diseases themselves; for I believe it is the opinion of every one that the affections of this climate are all very manageable, with the exception of pulmonary and bronchial complaints, if the patients are seasonably and well cared for. I alluded to this subject in a former letter, when speaking of this country, its climate and diseases.* Let a man who has indulged in dissipation and imprudencies be taken ill, and for the first few days not have medical aid, sleeping in a tent upon the ground, or, as it often happens, be obliged to lay out of doors without any one to care for him, and it is not in the least degree mysterious or strange that the patient dies; I only wonder that so many of the sick, thus subjected to change of life, of manner, of living, and of climate, many of whom are men of dissolute habits, do recover under these circumstances. This is the fate, the lamentable fate, the mournful story, of many a young man who left friends and home only a few months ago in perfect health, with high hopes and bright prospects of the future, to seek fortunes among the golden sands of California. During a long sea voyage, or during their sojourn here, mingling with the multitude, their morals having become corrupted, their substance wasted, and their health seriously impaired, they are seized with disease, fall victims to its power, and their mouldering ashes sleep—*not alone*, for in the midst of these shades are already slumbering many bodies, the relics of golden ambition. Individuals of all nations, kindred and tongues, compose the silent groups; no stone marks the name of the departed, or designates the final resting-place of him whose earthly pilgrimage terminates here.

I have known five coroner's inquests held in one day.—By far the greater number of burials are paid for from the public treasury. Few deaths have occurred among those who live in houses, who have ordinary comforts and are well provided for. Women and children enjoy much better health than men; there has only been a very limited number of deaths among them—a fact worthy of notice, which I account for by the fact that the latter are generally more temperate, more cleanly in their personal habits, and less exposed than men.

I have recently taken a tour into the interior and spent some time at Sacramento City. The city is situated on the Sacramento river, about 175 miles from San Francisco. At present it contains something like 10,000 inhabitants, and is rapidly increasing in wealth and importance. The site occupies the high banks of the east side of the river, near its junction with the North Fork, which tributary is lost in the Sacramento on the northern border of the city. The surrounding country for some miles is a level plain, overgrown

* Vide Boston Medical and Surgical Journal, No. 3, Vol. XLI, page 52.

with large trees, the oak and sycamore being the principal ones. There is also wild grass and various shrubbery interspersed among the groves, which have some resemblance to old parks scattered here and there over the face of the country. The town is regularly laid out, and the streets arranged in alphabetical order from north to south, as A street, B street, C street, &c.; and from east to west numerically, as First street, Second street, Third street, &c. The trees that were standing on a line of the streets are preserved; some of them are of immense size, forming elegant and lovely shades and ornaments. Buildings are continually going up and being improved, so that it possesses the appearance of an old and neglected country village undergoing repairs, more than it does a city in embryo. Being located between the banks of two rivers, one of which overflows in the course of some seasons, inundating the region for severel miles in extent, and having in its immediate vicinity a lake, which, like the rivers, becomes extremely low in the summer, the exhalations from these sources help to form the miasmatic and noxious materials which germinate disease in the city. These causes, together with the high temperature of the climate, are operating more or less at all seasons; but August and September are the most unhealthy months. At this time the waters of the rivers and lakes are drying up, and the weather is extremely hot, the thermometer ranging from 80° to 120° a-day. The barometer varies from 29° 8 to 29° 10 or thereabouts. In the latter part of September of the present year, the nights were cool and the days hot. I observed the mercury to be sometimes as low as 45° at 6, A. M.; and the same day at 2, P. M., it would stand at 104! Such great changes in temperature, without the influence or concurrence of other causes, must and do exert very deleterious effects upon the inhabitants. Remittent, intermittents, and congestive fevers are common diseases, and are generally associated with dysentry or diarrhœa. The same disastrous results have obtained there, as I have spoken of as sources of disease at San Francisco, and for the same reasons many cases have proved fatal. I have referred to want of means, care, &c., and to the dissolute and improvident habits and management of the patients themselves. I think that two thirds of the persons who travel on this river at the season I speak of as being the most unhealthy, become sick. While I was making a short stay at Sacramento city, I had occasion to treat eight cases of fever, two of dysentry, and several of diarrhœa, besides seeing many others in the hospitals and private practice of other physicians. Patients who had good nursing, comfortable apartments and early treatment, generally speedily recovered.

The Remittent fever is generally ushered in with a chill, violent pain in the head, limbs and loins; but the chill, usually, is only slight, amounting to the sensation of feeling cold, as the patient expresses it, and these rigors are not apt to recur after the first few hours from the attack, though this sometimes is the case. Afterwards there is great heat and febrile excitement at particular periods, for the first few days. The exacerbations becomes less violent and less distinct as the disease runs on towards its termination. During the remissions these symptoms are, for the most part wanting, and there is dull headache, no thirst, and an inclination to sleep. The patient commonly begins to improve by the third or fourth day from the period of the first well-defined exacerbation. In nearly all these is considerable debility succeeding the disease, and it is some time before the patient fully recovers his ordinary strength.

The congestive form of this fever is very rare in persons of temperate habits; it may become so, however, in many instances, for want of timely treatment, or rendered so by mal-practice, particularly in plethoric subjects.

I have seen but one case where bloodletting was indicated. Cathartics are not often called for, and the same may be said of emetics and all other depletive remedies, such as purgative doses of calomel, antimony, &c. Heat should be applied to the extremities (mustard plasters), and cool applications should be directed to the head when there is strong febrile action. Some sudorific should be administered, such as copious draughts of some simple drink, as barley or crust water, with a few drops of the wine of ipecac., and paregoric added to it. This plan will much relieve the patient, and prevent symptoms of congestion. When diaphoresis is well established, unless there is some contra-indication, an alterative and sedative may be combined. The following pill answers very well:—R. Sulp. morph., gr. j.; pil. hydr., grs. viij.; pulv. ipecac., grs. xvj.; ex. coni., q. s. M. Ft. pil. no. viij. Give one pill every four hours. Or Dover's powder, nit. potass, camphor, properly combined, are valuable remedies; minute doses of calomel may be added if required. When there is diarrhœa and pain in the bowels, opium should always be given to "the point of relief." If the bowels are constipated, which is a rare condition, or if there is reason to apprehend that there is foul or crude matter lodged in the prima viæ, a laxative dose of castor oil, guarded with an opiate, should be administered. As soon as the febrile symptoms and headache have subsided, quinine should be given in *two grain doses*, three or four times a-day, until the patient regains his usual strength. As soon as it will be prudent, he should be allowed a generous diet, with wine and water or porter. He should take only moderate exercise, and avoid exposure to the morning or evening air, or to the influence of the hot sun. This method of treatment, the outlines of which are here essentially given, has been very successful with me, and I have treated a sufficient number of cases to predicate the doctrine that the disease does not require what is sometimes styled "Herculean treatment" to bring it to a successful termination.

I have seen and prescribed for many cases of intermitting fever, or fever and ague, the complaint having been contracted in the valleys of the Sacramento and San Joaquin, as well as some from the Isthmus. I have observed nothing remarkable or peculiar in these cases. I have not found those enormous and *excessive* doses of calomel and quinine necessary or required, which some writers and practitioners so strenuously recommend. I have never given more than two or three grains of quinine at a dose, and have employed calomel but seldom, and then very sparingly. I am satisfied that *two grains of quinine* is sufficient for a dose, and think that perhaps even smaller quantities would answer the desired end, with other judicious measures conjoined. If intermitting fever is the same all over the world, I do not hesitate to declare that those who have had the complaint have suffered (in the aggregate) as much from mal-treatment and over-dosing, as from the fever itself.

The diseases of this climate are attended with great debility. There is generally a tendency to a *typhoid* condition. There is also, in a majority of the cases, an irritable and lax state of the mucous membrane of the stomach and bowels, often attended with a sub-acute grade of inflammation.—Hence bloodletting, calomel, antimony, emetics, cathartics, &c., cannot be borne, and the best informed physicians in this country use them but sparingly. Some of these remedies are *never* prescribed—"*pro optimo est minime malus*," so that we are only to make use of such agents as promise good and do not endanger the life of the patient, as is the case with all depleting medicines. One great object is to sustain and nurse the strength of the sick person.

The dysentery and diarrhœa of this country resemble those affections as they appear in hot climates, or, at least, as they are described by writers. I have found it always important to have the patient warmly clothed, to keep up constant mild diaphoresis, and to have him abstain from drinks or

solids of any kind as much as possible. When there is a deficiency of bile and torpor of the liver, some mild mercurial, combined with opium, will be found of service. But it generally happens that the stools are copious, black or dark-brown, greenish, &c., evidently showing that there is a superabundance of bile, constituting what is styled "*bilious diarrhœa.*" I believe that mercury is hurtful in this variety of the complaint, being calculated to increase the morbid action, irritate and loosen the bowels, and debilitate the patient. *Opium*, as is well known, lessens all the secretions, except that of the skin. Its effect upon the liver is very striking; if properly administered for a short time, it seems to dry up this freshet of bile, after which a few days of rest and strict regimen will restore the patient to health. *Chronic diarrhœa* is managed upon the same principles, but is a more obstinate form of the complaint.

Those who arrive from sea, as well as those who have remained a great length of time in the mines, frequently come here with scurvy; many have fallen victims to this complaint. Dietetic treatment of the right kind is more availing than any other. A vegetable diet is all important; *potatoes and onions* are more serviceable, in scurvy, than drugs.

Many physicians have emigrated to this country; but as there has been a great amount of sickness, there has been something for them to do. It is fortunate for all that there has been a full complement of medical men here—their services have been needed, and in no case have they been withheld. Medical fees are high, and are generally paid either by the patient, his friends, or by the Common Council. I feel great pleasure in saying that physicians are doing as well here as they are in any part of the United States. The profession, like all others, is well represented. "Men of cultivated minds and indomitable energy have directed their steps hither, till almost our entire population is composed of individuals excelling in the various avocations they have been bred to." Medical fees can now be collected here by law, or the debtor can be imprisoned or whipped.

We had a powerful rain on the 10th and 11th insts.—Since then, we have had fine weather. The harsh, cold, gusty winds which have hitherto prevailed, have been superseded by the mild, warm land breeze; the dust and dirt is now moistened and trodden down, so that it is delightful riding or walking, or doing any kind of business. It is pleasant to have an excursion in a sail boat, in the bay of San Francisco, at this season. The mercury varies from 58 to 70 deg. in twenty-four hours. On the 16th and 17th of this month, it was from 62 to 82 deg. in the shade, as observed by myself and others. Since this "meteorological innovation," as a rain storm at this season is termed, the sickness has abated, and it would not be improper to say that San Francisco is now a healthy place. The rainy season proper, commences about the first of December.

No less change has there been in the growth and advancement of this city. Large and commodious buildings have taken the place of shanties; fine mansions and cottages are now where tents and cabins were four months ago; hospitals, churches and theatres are now in progress. Three hundred vessels are at present in the harbor; trade is carried on with the South American ports, the islands of the Pacific, Asia, and all parts of the world. The commercial interests of San Francisco are not small, and are rapidly increasing.

As to the mines and the interior of California, I have nothing to say different from what I stated in my former letter.* The political prospects of the country are brightening, law is respected and executed, life and property are as secure here as any where, and I have no doubt that the people will adopt the Constitution already framed by their delegates at Monterey, and that in a few months California will become a State, having a good and wholesome government. What she lacks in agricultural capabilities, she makes up in mineral wealth; her ungenial climates will be counterbalanced by "power of gold," so that she must inevitably rise to a high and noted position, and have dignity and station among her sister States. Very truly,

J. P. LEONARD.

San Francisco, Oct. 24, 1849.

* Vide Boston Medical and Surgical, No. 3. Vol. XIII. page 52.

THE

British American Journal.

MONTREAL, JANUARY 1, 1850.

TREATMENT OF MEDICAL WITNESSES AT CORONERS' INQUESTS IN CANADA WEST.

We have already had occasion to notice the unfair and illiberal manner, in which the members of our profession are treated, by the coroners in the sister Province. This, however, is less their fault than that of the law under which they act, and of which, under these circumstances, they may be considered as representatives. The question is now brought to a crisis, and it will remain a matter of consideration for the united wisdom of the Province, in Parliament assembled, whether a law so faulty in construction, and so unprincipled in nature, as that which regulates the practice of Coroners' Courts in Upper Canada, shall not be superseded by one, better adapted to fulfill the ends of justice, by securing efficient medical testimony, and remunerating such witnesses in accordance with their value. The thanks of the Profession of the Province are certainly due to Drs. Ferris, Mack, and Goodman, for the stand which they have taken; and we hope that the example which they have set, will be followed up on other occasions, elsewhere. It is far from our wish to embarrass or impede the ends of justice; but on the contrary would we most cheerfully promote them by all means in our power, consistently with that duty which we owe to ourselves, our families and our country. Our duty to the last requires no unreasonable services at our hands, although, most unfortunately, they have been, and are, grievously undervalued; and that, in this country, to such an extent, that professional services are continually demanded, while the Government offers nothing in exchange, but a paltry honor, which they consider amply adequate as a recompense for time spent, of which the public at large receives the benefit, while the donor may starve. A measure to ameliorate this state of things, was introduced into the Legislature, two sessions ago, but dropped through. We now think that the position assumed by "four of the oldest practitioners of St. Catherines," (who is the fourth?) will be that of medical men else-

where; we trust it may be so, for certain are we, that no other means can be adopted, with anything like equal success, to wring from the Legislature that simple measure of justice, which our profession ask at their hands.

CORONER'S INQUEST.—A statement of Medical gentlemen of St. Catherines, when called at an Inquest held by Dr. Raymond, on the 5th of December, on the body of Abraham Hampton.

William Ferris, M.D., says that he knows nothing of the death of Abraham Hampton.—(The coroner and jury requested witness to undertake a post mortem examination.) The witness refuses because payment is not provided by law. Says he has never made out a bill against the district for such examinations since the change in the law, although he has acted as a surgeon on such occasions, because others have done so, and payment refused by the District. The members of the medical profession generally in the district, refuse to attend examinations of this kind, and there is an understanding to that effect amongst the practitioners in town and believes in this district.

Theophilus Mack, Surgeon. He knows nothing of the death of Hampton. Will not attend a post mortem examination without provision being made for payment of services. He went to great expense in the Stinson affair, and led his professional friends into serious inconvenience at the time, without any remuneration; and he has been refused in in other cases.

Dr. Goodman, says he attended deceased some three months ago, in consequence of two of the false ribs being broken. The heart might very probably be affected by the pressure of the ribs on it, and the concussion. Ribs on the right side broken by a fall. Is willing to undertake a post mortem examination if he knows where to be paid for it. There is an understanding amongst the medical practitioners in town, that they will not attend post mortem examination, without remunerations for their services.

Alexander McDougal, says he is a Surgeon, knows nothing of the death of the deceased, but *will examine the body* by post mortem examination!!!

Dr. Carson. He knows nothing of the cause of the death of the deceased, nor of the deceased himself. He has no objection to attend a post mortem examination if any other professional man will assist him. Is no party to any understanding amongst medical men, that they will not attend. Is willing to assist Dr. McDougal.

Dr. A. McDougal's examination resumed, says he has performed a post mortem examination on the deceased. Found the brain slightly congested. Found left ventricle and auricle of the heart highly inflamed, and is of opinion that this was the cause of his death, he had examined the stomach and found it healthy, and there was no evidence of violence or traces of poison, and considered that the death of the deceased was produced by natural causes.

JURY'S REPORT.—The Jury empanelled on the eighth of December, 1849, for an Inquest at St. Catharines, find it their duty to make the following report:—

The Jury beg to represent, that they regret that notwithstanding repeated and earnest applications made to the District authorities, no means have been provided for remunerating medical gentlemen for attending inquests, and performing post mortem examinations when necessary.

Medical gentlemen in this district having been put to considerable loss, by the refusal of payment, have generally determined under these circumstances, not to give their assistance, and four of the oldest practitioners in town have positively refused theirs, on the principle of supporting the profession. Had it not been for Doctors McDougal and Carson complying with the request of the jury, and performing the operation on *this occasion*, the jury would have been unable to find a verdict. If this system be permitted to continue, it will be next to impossible to detect any murder, when no mark of violence is left on the person, and poisonings and all the most treacherous murderers may escape with perfect impunity. E. S. Adams, foreman, Lachlan Bell, R. A. Clarke, Daniel Sweeney, Bernard Foley, Chauncey Yale, Thomas McIntyre, J. F. Mittleberger, Rolland McDonald, Henry Brownlee, Francis Hall, Thomas Shaw.

Jury Room, December 3, 1849.

—St. Catherines "Journal," Dec. 13, 1849.

The Boston Tragedy.—The medical world, as well as the public generally, have been startled with the astounding intelligence from Boston, of the murder of Dr. Parkman, and the subsequent arrest of Dr. Webster, Prof. of Chemistry of Harvard University, as the supposed perpetrator. The murder was committed after one o'clock on the 23d of November last, and supposed to have been effected in the Medical College at Boston, and in Dr. Webster's laboratory; the missing body having been found in a vault below the apartments occupied by the Professor. Portions of the body would appear to have been hewn to pieces, and afterwards burnt in the furnace in the library. The coroner's jury has since sat, and although they have brought in a verdict inculpating Prof. Webster, yet, having carefully perused all the documents as yet published, we are convinced that however strong most of the circumstances appear against the Prof., there is a still stronger array of what may be deemed *negative* evidence in his favor. We cannot conceive, as one of such evidences, *e. g.* why the porter of the college should have taken the trouble of breaking through two brick walls to get into the vault, and discover the body, when Prof. Webster's keys were at the disposal of the police, and when he had previously opened his apartments for free examination; nor can we imagine how a person could be murdered in an apartment, (there being reason to suppose he had been stabbed,) and afterwards cut up for the purpose of being burned, without the effusion of a considerable quantity of blood, none of which appears to have been detected on the floors or tables. These, among many others, strike our mind with irresistible force, and permit the conviction that Dr. Webster is *not* the guilty person. The evidence submitted to the coroner's jury, and which appears to have been very voluminous, will not be published until after the trial. In the meanwhile, Dr. Webster remains in prison, his lectures being carried on by a medical gentleman, we believe from Geneva. The interests of the School will not therefore suffer.

Quacks and the "Sherbrooke Gazette."—This paper has been making a dolorous whine, and, taking the quacks of the Eastern Townships under its protection, has been abusing the College of Physicians and Surgeons in a most lusty manner for prosecuting them for breaches of the law. We have no sympathy

for the quacks nor for their advocate; some of these parties have been practising, unpunished, for years, but that fact is no argument why they should be permitted to continue to do so longer. A continued violation of the law is no reason for exemption from punishment for the offence, because such punishment comes late. We would like the advocate of the quacks to sustain the position, that the fifty-first murder should not meet its merited reward because the fifty preceding passed unnoticed, or were endured. No, the quacks indicted for violation of the law, are well known to have practised, even on the *Sherbrooke Gazette's* shewing, *for years in defiance* of the law; and if they are overtaken at last, they are but receiving that reward which they were liable to receive at any antecedent period, and which, although arriving late, is therefore the more merited. The licensed physician *shall be* protected; and it is an anomalous circumstance to witness a licensed practitioner, under the name of "Scalpel," (one too, well known to us,) in the same paper to which we have alluded, advocating their claims to sympathy in opposition to the law, and to that profession of which he exhibits himself a most unworthy member. Like the assassin, who prefers the darkness for his deeds, he writes under an anonymous signature, ashamed to announce himself in his rue colors, a proceeding worthy, and worthy only, of such a cause.

Quackery in St. Catharines, C.W.—A Card.—Dr. Barry, *Magistrate*, takes this opportunity of informing the citizens of St. Catharines and its vicinity, of his arrival among them, where he intends practising his profession as Physician, Surgeon, &c., and expects from his long residence in the province (seventeen years) a share of public patronage. The Dispensary is now open for the benefit of the sick poor; hours of attendance from 8 to 10 a.m. daily; outdoor attendance on the poor, gratis, from 1 to 3 p.m. The Doctor can be consulted at his Surgery, where the Dispensary is, at Mrs. Dales, William-street, from 10 to 12 in the morning, and all the afternoon. The Clergymen and other inhabitants are requested to send those who are really distressed and in want of medical aid, to the Dispensary, stating so in writing, and directed—Edward Barry, *Physician to the St. Catharines General Dispensary! ! ! !*

St. Catharines, Dec. 11, 1849.

What possible connection there can be, between a man's professional capabilities and his magisterial functions we cannot perceive. Is he the better "physician and surgeon," because he is a "magistrate;" or a better "magistrate," because he is a "physician and surgeon." Doctor Barry evidently wants titles; in his next advertisement, we would recommend him to sign himself Surgeon-in-Chief to the King of the Cannibal islands. This would be equally as good, as the proceeding of the oculist, who, to establish himself in practice in this city, a few years ago, announced himself as having been surgeon to an ophthalmic institution which existed only in his own imagination, whereby he did contrive to open considerably, *the eyes* of Her Majesty's leiges in this city. Why will not practitioners practice their profession in an honourable manner?

School of Medicine and Surgery, Montreal.—This institution goes on well, and has a good attendance of students. We understand that Dr. Trestler, lately appointed lecturer on Midwifery and Diseases of Women and Children has resigned, and that Dr. D'Orsonnens, of this city, is worthily fulfilling his place. The selection is a judicious one.

College of Physicians and Surgeons, C.E.—We beg to call the attention of the Profession of Lower Canada, to the proposed amendments to the By-Laws of the College, published in accordance with the provisions of the College in this behalf, in our advertising columns. We request earnestly their consideration of the same.

CORRESPONDENCE.

THE LAW AS REGARDS QUACKERY IN UPPER CANADA, AND THE NECESSITY OF REFORM.

To the Editor of the British American Journal.

Dear Sir,—Could you call the attention of our brethren in Toronto, to the fact of your success, from perseverance, in applying to the Legislature for a charter to give your College of Physicians and Surgeons the power to prosecute all quacks; and the happy result encourages me to hope, that you will give a space in your valuable Journal to a proposition to enable us, of Upper Canada, (now we have the Parliament here,) to obtain the same privileges you have secured. According to the act we have in force—unless you can prove that the party, practising as a quack, has done so for remuneration—the fine is not imposed, and that is the way they get rid of it; although no place is so much pestered with quacks, both male and female, as we are—such is the law. A most barefaced case lately occurred in the Township of Chinguacousey, near Toronto, in the case of Stoddart, tried at the late Sessions. The witnesses *swore* that they never knew him to practice for pay; that they never gave him any for medical attendance; but that the money they gave him was *not for doctoring but as a present, in the same manner as they would make a present to any other kind neighbor*, and so the case was dismissed. Would any one believe these were the identical men who always were complaining of the quacks. But it is not the first, by a great many cases on record, of similar results; and, more, this individual, it is said, is supported by a member of the profession, as he always calls the said member in when he

is at fault. This is disgraceful, if true. Excuse this hasty note, and believe me,

Your obliged servant

C. JONES.

Hornby, C. W.

[We propose to take up the consideration of medical matters in Canada West in an early number.—ED.]

MEDICAL ADVERTISING.

To the Editor of the British American Journal.

SIR,—Permit me to draw the attention of the Medical Faculty to the following advertisement in a late Bytown paper :—

"COPAIBA CAPSULES AND CUBEBS,

Suspended by Doctor ——.

Compound Resinous Extract of Copaiba and Cubebs, which contains all the virtues of these articles divested of their disagreeable taste and smell."

Your readers will be surprised to learn that this singular advertisement proceeds from a Surgeon of considerable eminence, well known as a contributor to the pages of the various Medical Journals. Had it not emanated from an individual whose example must exert some influence on the junior members of the Medical Profession, I would have passed it without notice, but it is the duty of every regular physician to express the general feeling of of the profession in justly condemning such advertisements. They are, to say the least of them, entirely unprofessional and savour too much of quackery. The use of quack medicines should be discouraged by the Faculty as disgraceful to the profession, injurious to health, and often destructive even of life. No person should be recognized as a regular Physician who publicly advertises any nostrum.

I am,

Yours faithfully, "IATROS."

Canada West, November, 1849.

NOTICE TO CORRESPONDENTS.

Dr. J. (Hornby.) *The objections to the employment of Intra Vaginal Respiration, recommended by Dr. M'Culloch, are more ideal than real. Dr. Simpson's Air Tractor appears to have been quietly laid on the shelf, we cannot, and do not, consider it an equivalent for the forceps in judicious hands. The other matters alluded to, will receive attention. The case of Chronic Hepatitis presents nothing unusual, and is scarcely worth while inserting.*

Dr. Jarron, (Drummondville.) *Communication received.*

Dr. Evans, (Richmond.) *Communication received.*

Medicus. The formula for Liston's Red Wash, is as follows :

℞ Zinci Sulphat 3i.
Spirit Lavend. Comp. 3ss.
Spirit Rosmarin 3ij.
Aquæ Fontan. Ibi. *m.* Fiat Lotio.

It is applied by means of lint, and covered with oil silk to prevent evaporation.

BOOKS RECEIVED.

Report of the Board of Health for the city of New-York. 1849

MONTHLY METEOROLOGICAL REGISTER AT MONTREAL FOR NOVEMBER, 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,	+ 30	+40	+32	+35.–	30.00	29.98	29.99	29.99	N W	N W	N W	Fair	Fair	Fair
2,	" 28	" 42	" 36	" 35.–	30.00	29.79	29.67	29.82	W N W	W N W	W N W	Fair	Fair	Fair
3,	" 34	" 45	" 44	" 39.5	29.65	29.62	29.69	29.65	W	W	W	Fair	Fair	Fair
4,	" 40	" 51	" 43	" 45.5	29.75	29.88	29.86	29.83	W S W	S W	S W	Fair	Fair	Cloudy
5,	" 42	" 44	" 42	" 43.–	29.85	29.80	29.85	29.83	S	S	N	Rain	Rain	Rain
6,	" 41	" 43	" 42	" 42.–	29.87	29.84	29.76	29.82	N E	N E	N E	Foggy	o'erc'st	Rain
7,	" 44	" 59	" 46	" 51.5	29.67	29.55	29.55	29.59	E S E	S E	S E	Foggy	Fair	o'erc'st
8,	" 45	" 49	" 48	" 47.–	29.62	29.58	29.56	29.59	E	E	N E	o'erc'st	o'erc'st	Rain
9,	" 49	" 52	" 48	" 50.5	29.61	29.62	29.69	29.64	N E	N E	N N E	Rain	Rain	Rain
10,	" 44	" 44	" 42	" 44.–	29.72	29.66	29.65	29.68	N N E	N N E	N N E	Rain	Rain	o'erc'st
11,	" 42	" 46	" 45	" 44.–	29.69	29.65	29.67	29 67	N	N	N	Cloudy	o'erc'st	Rain
12,	" 38	" 47	" 40	" 42.5	29.72	29.71	29.72	29.72	W by N	W by N	W	Fair	Fair	Cloudy
13,	" 41	" 46	" 44	" 43.5	29.70	29.65	29.61	29.65	W by S	W by S	W S W	Fair	Cloudy	Fair
14,	" 42	" 49	" 45	" 45.5	29.66	29.68	29.76	29.70	W	W	W	Fair	Fair	Fair
15,	" 32	" 42	" 33	" 37.–	29.97	30.00	30.04	30.00	W	W	W	Fair	Fair	Fair
16,	" 39	" 44	" 34	" 37.–	30.08	30.05	30.03	30.03	W by N	W by N	W by N	Fair	Fair	Fair
17,	" 29	" 45	" 35	" 37.–	29.98	29.87	29.82	29.89	N	W	W	Fair	Fair	Fair
18,	" 33	" 45	" 36	" 39.–	29.78	29.72	29.70	29.73	W N W	W N W	N W	Foggy	Fair	Fair
19,	" 34	" 46	" 40	" 40.–	29.72	29.71	29.68	29.70	N	N	N	Fair	Show's	Rain
20,	" 38	" 41	" 39	" 39.5	29.57	29.48	29.53	29.53	N	N	N	Rain	Rain	Rain
21,	" 42	" 44	" 41	" 43.–	29.59	29.58	29.64	29.60	W	W S W	S W	Cloudy	o'erc'st	Fair
22,	" 39	" 45	" 44	" 42.–	29.69	29.63	29.69	29.67	S	S	S W	Fair	Cloudy	Fair
23,	" 44	" 51	" 44	" 47.5	29.73	29.74	29.78	29.75	W	W	W	o'erc'st	Fair	Fair
24,	" 38	" 45	" 38	" 41.5	29.92	29.95	29.93	29.93	W	W	W	Cloudy	Fair	o'erc'st
25,	" 42	" 49	" 54	" 45.5	29.68	29.48	29.29	29.48	S E	S E	S	o'erc'st	Rain	Rain
26,	" 46	" 48	" 40	" 47.–	29.44	29.47	29.45	29.45	W	W	W by N	Fair	Cloudy	Cloudy
27,	" 37	" 42	" 32	" 39.5	29.48	29.43	29.53	29.48	W S W	S W	S W	Fair	Snow	Snow
28,	" 25	" 31	" 23	" 28.–	29.68	29.65	28.70	29.68	W	W	W	Fair	Fair	Fair
29,	" 27	" 35	" 32	" 31.–	29.60	29.31	29.21	29.37	N W	N W	N W	o'erc'st	o'erc'st	Snow
30,	" 25	" 30	" 25	" 27.5	29.30	29.46	29.50	29.42	N W	N W	N	Cloudy	o'erc'st	o'erc'st

THERM. { Max. Temp., +59° on the 7th
Min. " +23° " 28th
Mean of the Month, 41.0

BAROMETER, { Maximum, 30.08 In. on the 16th
Minimum, 29.21 " 29th
Mean of Month, 29.696 Inches.

MONTHLY METEOROLOGICAL REGISTER AT H. M. MAGNETICAL OBSERVATORY, TORONTO, C. W.,—NOVEMBER, 1849.

Latitude 43°. 39′.4. *N.* *Longitude* 79°. 21′.5. *W.* *Elevation above Lake Ontario*, 108 *Feet.*—*(For the Brit. Amer. Jour. of Med. and Phys. Science.)*

Day.	Barometer at Temp. of 32°.				Temp. of the Air.				Tension of Vapour.				Humidity of the Air.				Wind.			Inches of Rain.	Weather.
	7 A.M.	3 P.M.	10 P.M.	Mean	7 A.M.	3 P.M.	10P.M.	Mean	7A.M	3P.M	10P.M	Mean	7A.M	3P.M	10P.M	Mean	7 A.M.	3 P.M.	10 P. M.		
1,	29.934	29.820	29.770	29.842	29.8°	39.1°	38.0°	35.5	.153	.182	.187	.173	.93	.77	.82	.84	N by E	E S E	E by S	—	O'erc't,lt clds&haze till 6 pm; clr fr 9 pm
2,	29.717	29.678	29.627	29.671	38.2	42.8	40.1	40.4	.211	.217	.219	.212	.93	.80	.89	.85	E by S	E N E	Calm.	—	Generally overcast; light clouds & haze
3,	29.619	29.590	29.659	29.619	33.6	53.1	51.9	45.7	.176	.346	.330	.382	.92	.87	.86	.90	Calm.	Calm.	Calm.	—	Uncl'ded but hazy till noon; afternoon densely clouded
4,	29.716	29.679	—	—	52.0	51.4	—	—	.322	.368	—	—	.84	.99	—	—	Calm.	E by N	——	—	O'erc't lt clds & haze; slt rn fr 2 pm
5,	29.656	29.626	29.661	29.647	50.2	56.4	54.2	53.5	.333	.408	.405	.384	.93	.92	.97	.95	Calm.	Calm.	Calm.	.135	O'erc't; dense fog; slt rn 6 pm
6,	29.671	29.630	29.555	29.617	51.0	53.6	49.8	41.7	.367	.394	.352	.370	1.00	.98	1.00	.98	N E by E	Calm.	Calm.	.210	Densely o'erc't; rning 7 to 10 am; very dense fog
7,	29.449	29.376	29.410	29.411	47.4	54.2	45.4	48.9	.296	.355	.289	.312	.92	.86	.95	.91	Calm.	Calm.	Calm.	.030	O'erc't and foggy till noon; afternoon mostly clr; lt'ing 6 to 9 pm
8,	29.314	29.338	29.319	29.317	45.0	45.2	43.2	44.5	.270	.254	.268	.262	.91	.85	.97	.90	N N W	N by W	N	.640	Th'dr&lt'ing am; rng till noon; stormy, commenced rn'g again at 6 pm
9,	29.331	29.348	29.455	29.376	43.8	44.6	46.2	45.1	.255	.263	.289	.270	.90	.90	.93	.90	N	N N W	N by W	.460	Rning all day; densely o'erc't; stormy
10,	29.559	29.578	29.608	29.580	47.2	50.2	45.0	47.5	.305	.333	.270	.304	.94	.93	.90	.93	N by W	N W by N	N W by N	.280	Rning slt'ly all day; densely o'erc'st
11,	29.712	29.712	—	—	43.3	47.2	—	—	.243	.258	—	—	.89	.80	—	—	N by W	N by W	——	.015	Densely overcast all day
12,	29.755	29.704	29.697	29.718	39.0	46.8	40.6	42.2	.231	.275	.234	.247	.98	.87	.93	.93	Calm.	S	Calm.	—	Clded till 3 pm; gen'ly clr fr 4 pm; fnt aur lt 11 pm till midnight
13,	29.707	29.645	29.660	29.669	39.4	54.2	44.4	45.6	.232	.283	.271	.259	.97	.69	.93	.87	Calm.	W by S	S W	—	Uncl'ded; haze rnd horizon; fine day
14,	29.662	29.667	29.777	29.703	36.4	49.9	40.0	42.3	.205	.292	.186	.230	.96	.81	.76	.84	Calm.	S W by S	N by W	—	Uncl'ded; haze rnd hor; fine day; faint aur lt 9 to midnight
15,	29.896	29.869	29.914	29.902	31.7	42.0	34.0	36.1	.146	.196	.161	.173	.82	.74	.82	.82	N by W	E	Calm.	—	Gen clr, a few passing clouds; fine
16,	29.910	29.849	29.812	29.857	34.0	44.2	41.2	39.9	.180	.221	.233	.211	.93	.77	.91	.87	N E by N	E by N	N E	—	Clr am; lt clds & haze pm; fine
17,	29.764	29.688	29.629	29.693	32.6	45.8	39.4	39.1	.180	.251	.233	.216	.98	.82	.97	.91	Calm.	Calm.	Calm.	—	Passing clds; gen'ly clr; fine
18,	29.570	29.489	—	—	42.2	48.4	—	—	.241	.257	—	—	.91	.77	—	—	Calm.	Calm.	——	—	A few lt clds; gen clr; fine; faint aur light 11 pm
19,	29.481	29.475	29.480	29.477	42.8	47.4	46.0	45.3	.234	.275	.256	.250	.87	.85	.84	.82	Calm.	N E	Calm.	—	Gen clded; fnt aur lt in North at 11 pm
20,	29.455	29.463	29.535	29.488	42.0	47.5	44.0	44.4	.238	.258	.226	.244	.90	.80	.80	.85	Calm.	N N W	Calm.	—	Gen o'erc't; a few clr spaces
21,	29.597	29.535	29.508	29.541	41.4	46.1	37.6	42.1	.220	.242	.209	.226	.85	.79	.94	.86	Calm.	E S E	Calm.	—	Clr; save a few passing clds; fine
22,	29.461	29.471	29.545	29.493	44.0	49.0	44.8	45.9	.279	.319	.284	.294	.98	.93	.97	.94	Calm.	Calm.	Calm.	—	Uniformly o'erc't; dull; foggy
23,	29.673	29.731	29.785	29.726	40.8	42.8	38.5	40.6	.249	.266	.232	.248	.99	.98	1.00	.99	Calm.	Calm.	Calm.	—	Uniformly o'erc't; thick wet fog
24,	29.835	29.710	29.574	29.707	37.1	41.9	44.7	41.2	.207	.251	.278	.246	.95	.95	.95	.95	Calm.	E N E	E by N	.090	O'erc't, dense haze; thick fog; rn fr 10 to 11 pm
25,	29.317	29.158	—	—	48.7	53.4	—	—	.331	.389	—	—	.97	.97	—	—	E by S	S W by S	——	.730	Densely o'erc'st; constant lt rn most of the day
26,	29.443	29.450	29.480	29.458	40.6	41.2	38.4	39.9	.202	.174	.161	.181	.81	.67	.70	.73	S W	W by S	W S W	.225	Gen clded; a few clr spaces occasionally; fnt aur lt 11 pm
27,	29.508	29.524	29.568	29.531	31.4	39.8	32.5	34.5	.147	.125	.157	.144	.83	.51	.86	.74	W S W	W by N	Calm.	—	Lt passing clds; mostly clr; a few flakes of snow 11 pm
28,	29.640	29.632	29.620	29.630	30.0	30.4	28.6	29.8	.156	.158	.126	.147	.94	.93	.80	.89	Calm.	Calm.	W by S	•	Overcast; brt'nt jets of aur tinged with yellow 7 to 10 pm; snow showers al day; halo rnd the moon 9 to 11 pm
29,	29.436	29.243	29.196	29.297	29.6	32.2	32.4	31.4	.144	.143	.146	.149	.88	.79	.79	.85	W S W	W by S	S W by W	†	Uniformly overcast; dull
30,	29.302	29.324	29.341	29.284	33.8	38.5	31.2	34.9	.155	.148	.163	.153	.79	.64	.94	.77	W by S	W S W	Calm.	—	Gen clded; clr intervals occasionally
Mean	29.607	29.575	29.580	29.5868	38.95	45.34	41.23	41.87	.222	.255	.237	.238	.92	.82	.89	.88	4.11 miles.	6.19 miles.	4.74 miles.	2.815	Beautiful aur 4 am of 27th—brillian purple and yellow tints.

Highest Barometer, 29.995 at 10 a.m, on 15th. Lowest do. 29.168 at 3 p.m, on 25th. } Monthly Range 0.837

Highest Temperature, 56°.4 at 3 p.m, on 5th. Lowest do 24°.2, a.m, on 1st. } Monthly Range 32.2

Mean Max. Therm., 46°.58 Mean Min. do 37°.39 } Mean Daily Range, 9°.19

Greatest Daily Range, 22°.2 from am to 3 pm on 3rd

Great storm of wind commenced at 2 am on the 18th & continued without intermission till 2 am of the 10th. Mean velocity on the 48 hours = 16.72 miles.

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

North	West	South	East
1523.48	1509.92	661.70	799.47

Mean velocity, 4.78 miles per hour.

Maximum velocity, 22.7 miles from 8 to 9 pm on 8th

Most Windy Day, 8th.—Mean veloc per hour, 17.20 miles

Least do. 3rd, " " 0.57

Most Windy Hour, 2 pm; mean veloc, 6.45 miles per hour

Least Windy Hour, 7 pm; " 3.69 " "

Mean Diurnal Variation, 2.76 miles.

Year.	Temperature. Mean.	Max.	Min.	Range.	Rain. No. Days.	Inches.	Wind. Winds.	Calms	Mean force.	Snow. Days.	inch
1840, ..	36,00°	56.8°	19.0°	39.8°	5	1.220				8	—
1841, ..	35.40	63.8	8.5	55.3	8	2.450	263	59	0.91	5	—
1842, ..	33.20	56.8	8.1	48.7	9	5.310	482	142	1.22	10	—
1843, ..	33.25	62.6	14.1	38 5	10	4.765	387	237	0.59	7	1.2
1844, ..	34.92	56.0	12.1	43.9	8	inap	278	346	0.48	4	8.0
1845, ..	36.45	59.5	7.6	57.9	7	1.105	384	216	0.53	4	5.0
1846, ..	40.82	55.7	18.0	37.7	12	5.805	439	161	0.64	2	0.4
1847, ..	38.04	57.9	8.4	49.5	14	3.155	421	203	0.36	3	inapp
1848, ..	33.61	49.0	15.9	33.1	9	2.020	165	85	0.49	3	1.4
1849, ..	41.87	56.4	24.2	32.2	10	2.815	166	146	0.45	2	1.0

The means are deduced from six observations daily, viz., 6, 8 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, and 1846.

Magnetic Disurbances by the Photographic register of Dr. Brooke, (phil. trans. 1847) Nov. 27th, 28th, 29th and 30th.

*Snow in inches on 28th, inapplicable; †do on 29th, 1.0

THE ANATOMY PHYSIOLOGY, AND PATHOLOGY OF THE EYE,

BY HENRY HOWARD, M. R. C. S. L.,

Surgeon to the Montreal Eye and Ear Institution.

THE SUBSCRIPTION LIST to the above work is still open; and Members of the Profession desirous of subscribing to the same, are requested to furnish their names without delay. The work will be put to press as soon as one hundred subscribers are obtained, thirty-five being now on the list, to whom the price will be $4—and to non-subscribers $5.

Montreal, September 25, 1849.

SCHOOL OF MEDICINE AND SURGERY.

THE LECTURES at the SCHOOL will commence on Monday, the 1st of November, and will be continue till the last day of April, 1850. During the Session, Lectures on the following Departments of Medical Education will be delivered, viz:—

Anatomy,	Practice of Medicine,
Chemistry,	Midwifery,
Materia Medica,	Institutes of Medicine,
Surgery,	Medical Jurisprudence.

The Lectures are given in the French Language.

Montreal, October 1, 1849.

L. BOYER, M.D.,
Secretary.

MASSACHUSETTS MEDICAL COLLEGE.

THE MEDICAL LECTURES of HARVARD UNIVERSITY will commence at the MASSACHUSETTS MEDICAL COLLEGE in BOSTON, on the first WEDNESDAY in NOVEMBER.

Obstetrics and Medical Jurisprudence by	WALTER CHANNING, M.D.
Materia Medica and Clinical Medicine by	JACOB BIGELOW, M.D.
Theory and Practice of Medicine by	JOHN WARE, M.D.
Chemistry by	JOHN W. WEBSTER, M.D.
Pathological Anatomy by	JOHN B. S. JACKSON, M.D.
Anatomy and Physiology by	OLIVER W. HOLMES, M.D.
Principles and Operations of Surgery by	HENRY J. BIGELOW, M.D.

Clinical lectures at the Hospital three times a week by the professors of Clinical Medicine and of Surgery. Surgical operations are very numerous. The safe and effectual practice of etherization is taught in this School. Practical Anatomy is amply provided for by new and liberal arrangements.

Fees for the whole Course, $80. Marticulation, $3. Dissecting Ticket, $5. Graduation, $20. Hospital and Library gratuitous.

A descriptive pamphlet may be had by application, post paid, to David Clapp, Printer, corner of Washington and Franklin streets, Boston.

July 4, 1849,

TORONTO SCHOOL OF MEDICINE.

THE next session will commence on the LAST MONDAY in OCTOBER, and terminate on the LAST MONDAY in APRIL; under the following Lectures:

On Anatomy and Physiology	Dr. ROLPH.
Midwifery and Diseases of Women and Children	Dr. WORKMAN.
Principles and Practice of Surgery	Dr. PARK.
Theory and Practice of Medicine	Dr. MORRISON.
Practical Anatomy	Dr. AIKEN.
Materia Medica and Therapeutics	Dr. LANGSTAFF.
Chemistry	Mr. HURLBURT, A.M.

This school is recognised by the Faculty of Medicine of the University of McGill College, Montreal, and qualifies for graduation, in accordance with its rules.

Toronto, July 16, 1849.

PROPOSED AMENDMENTS

TO THE

BY-LAWS OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF LOWER CANADA.

IN accordance with the provision of the By-Laws of the College, requiring six month's publication of proposed amendments to any of the By-laws, previous to the Triennial meeting of the College, at which they will be considered, due notice of the following is hereby given.

At a meeting of the Board of Governors of the College of Physicians and Surgeons, held in the city of Montreal, on the ninth day of October, one thousand eight hundred and forty-nine; it was

Proposed by A. Hall, M.D., seconded by A. H. David, M.D., and resolved, that the following amendments to the By-Laws of the said College, be submitted for adoption at the ensuing Triennial meeting of the Corporation, to be held in the town of Three Rivers, on the Second Wednesday of July next ensuing, being the tenth day of July, one thousand eight hundred and fifty.

AMENDMENTS.

BOARD OF GOVERNORS.

§ 1. In place of § 1, substitute the following—"The affairs of the College shall be conducted by a Board of Governors, thirty-six in number, fifteen of whom shall be elected from among the members of the College resident in the District of Quebec and Gaspé—fifteen from among its members resident in the District of Montreal—three from among its members resident in the District of Three Rivers, and three from among its members resident in the District of St. Francis; and of the said Board of Governors, neither more nor less than eight shall be resident in the city of Quebec, and neither more nor less than eight shall be resident in the city of Montreal."

§ 9. After the words "certificates" insert "and licenses;" and for "until it shall have been duly closed," substitute "during the first day of its session."

OFFICERS OF THE COLLEGE.

§ 1. Add the following, "It being understood that when the President resides in either city, the Vice-President may be elected from among the Governors residing out of the city; and vice versa, if the Vice-President resides in either of the cities, the President may be elected from among the members of the Board not resident in the cities."

OF MEMBERS.

Omit the preamble.

§ 1. Instead of § 1, substitute the following, "No one who has obtained a license since the passing of the act of amendment (May 30. 1849), shall be admitted a member of the College of Physicians and Surgeons, until after the expiration of four years."

§ 2. Add the following, "which document must be handed to the secretary, at least ten days before the semi-annual meeting."

§ 5. Instead of § 5, substitute the following, "Every person proposed as a member, shall be considered elected, by receiving a majority of the votes of the Governors, present at the Board."

§ 7. For "certificate of membership," read, "diploma of membership."

OF LICENTIATES.

§ 1. For § 1 substitute the following, "Licentiates are entitled to the appellation of Licentiates of the College of Physicians and Surgeons of Lower Canada."

§ 3. For § 3 substitute the following, "The Diploma for Licentiates shall be signed by the President and Registrar, and by the Vice-president, and Secretary of the District in which the meeting is held, and shall have the seal of the College affixed thereto."

OF THE MEETINGS.

Add the following By-law.

§ 4. The Board of Governors may, if they see fit, depute Committees, consisting of not less than three members of the Board, in the districts of Quebec and Gaspé, Montreal, Three Rivers, and St. Francis, to be Boards of Examination in regard to the preliminary qualifications of candidates for admission to the study of Medicine; and the said Boards of Examination, shall hold their sessions for the purpose specified, at such time and place as they shall see fit, giving at least fifteen days notice of their intention so to do, in some public journal published in the District, with the circumstances specified under by-law 3. The said notification of meeting to be signed by either of the District Secretaries.

OF THE FEES.

Line 2, for "Certificate" read "Diploma."

Line 3, omit in toto, having reference to the enregistration of members.

Line 5, for "certificate recommending for License," read "fee for Licentiates."

The following to be a By-law.

§ 2. All candidates for license, or intending students proposing to pass their preliminary examination, shall deposit with the secretary the amount of fees due to the College in the event of successful examination, at the time that they hand in their credentials.

REGULATIONS.

§ 1. For "a certificate of license," substitute, "license."