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Fig. 1.

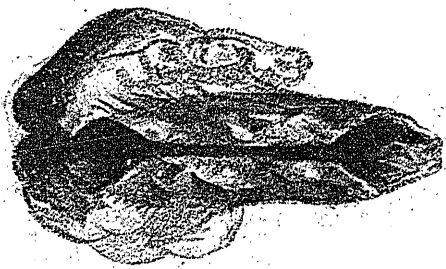


Fig. 2.

The vermiform appendix in a gangrenous state.
Fig. 1, slit open. Fig. 2, laid in situ after being opened.

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MONTREAL, FEBRUARY, 1847.

[No. 10

**CASE OF INFLAMMATION OF THE APPENDIX
 VERMIFORMIS,**

**FROM GALL STONES LODGING IN IT—ENDING IN
 GANGRENE AND DEATH.**

By **WOLFRED NELSON, Esq.**

*The post mortem appearances (with lithograph), reported by
 J. CRAWFORD M. D.*

On Friday, 1st inst., 3 P. M., was called to the *Rev Mr. Strong*: complained of "a fixed pain at the bottom and on the right side of the belly. The tip of your finger can cover the part—the pain is much increased when there is a peristaltic motion of the bowels—violent gripings come on about every 20 or 30 minutes—no thirst, but the mouth is dry." Such was the description he gave of his case. Mr. S. was 31 years of age, of a bilious temperament, habitually costive; would occasionally take blue pill followed by seidlitz powder: had had no move for the last 24 hours. The skin was moist and cool, pulse about 80 and soft, tongue white. Of calomel, jalap and rhubarb 10 grains each, were given; a drachm of soluble tartar in a pint of water for drink. Bags of heated oats or bran to be kept constantly over the pain. Saw him again at 7 P. M. Had passed a copious, soft stool, deep brown colour and very offensive odor, with much flatus. "Much better, the griping less severe and frequent, but the pain still in the same spot." Five grains cal. with one of ext. aconite and half a grain ext. belladonna in a pill were given. Continue hot applications, sol. tartar, &c. Enemas with castor oil to be administered during the night should the pain increase.

2nd, 9 A. M. "Passed an uneasy night; occasional slumber but no refreshing rest: griping less often but extremely severe: the pain always in the same place:" skin, pulse, and tongue as yesterday. "No pain on pressure but on that particular spot;" countenance dejected, eyes sunken, and tinged with yellow. Two enemas had been given in the night, some liquid fæces passed. Repeated the calomel, &c. 12 P. M., no amendment: two grains calomel every hour—fomentations. 3 P. M., "Fixed pain and griping more violent," yet was there *no reaction nor pain of the abdomen, save "in that one spot."* Bled to the extent of 22 ounces: became faint, had a copious liquid stool, and passed large volumes of flatus; felt much relieved; continued medicine. 7 P. M., "better than at any time yet, but that

little place is always very painful, and the griping though less often is very severe." To the calomel was added half a grain of morphine: a blister applied over the right iliac region; bags filled with hot oats to be continued; soluble tartar, as usual. 3rd, 2 A. M., was sent for, had become suddenly worse; "pain in the part intense: running down to the anus and to the end of the urethra: if you could only open that small place how it would relieve me; mouth dry; but not thirsty:" surface cool; pulse 90 and weak: bottles filled with hot water to the feet, &c. Notwithstanding the symptoms of collapse, twelve leeches were placed over the right groin, the pain being so intense there. The blood taken yesterday highly buffed.

The patient had been made aware of the nature of his case from the first: I requested that other medical aid might be had: in about two hours I had the pleasure of having Dr. Crawford's valuable assistance. The Doctor concurred in my view of the case and in all that had been done. A few drops of the arom. spt. amm. were given as a gentle diffusible stimulus. Bags of bran steeped in hot water were applied over the leech bites, which bled rather freely. Four grains calomel, two of ext. hyos. and two of opium were given every four hours. Once between each dose, the cal. and hyosalone were to be taken. 9 A. M., we returned, found a striking alteration in the symptoms. The surface was now warm: the pulse 120, small and hard: the abdomen becoming tense; pain more diffused: continued medicine, fomentations, &c.

Anticipating the necessity for the further application of leeches, a number were ordered to be provided against the next visit.

1 P. M.—We were joined by Drs. Campbell and McDonnell: were unanimous as to the nature of the case: external heat much increased: "pain had shot all over the abdomen:" pulse 140, small and hard: breathing hurried. Eighteen leeches were applied over the right hypogastrium and a large blister over the epigastrium: medicine as usual. 6 P. M., met Drs. Crawford and McDonnell: all the unfavourable symptoms much aggravated: at 9 met Dr. C. again: evidently sinking: died at 2 P. M.

It is worthy of remark, that so long as the pain was confined to the region over the appendix vermiformis

the pulse, skin, and general aspect were those of inflammation of a mucous surface; but so soon as the pain "spread at once all over the abdomen," then the symptoms characteristic of inflammation in the *serous* tissue, or peritonitis, became very striking. Vomiting of a little mucus had taken place on the invasion of the complaint, but not afterwards—at no time was there hicough.

Our patient was made fully aware of the impending result, and he awaited it with all the calmness and dignity of a good Christian and a good man.

I was kindly assisted in the post mortem examination by Drs. Crawford and McDonnell. The appearances fully justified the diagnosis. That there was impaction and inflammation of the appendix vermiformis in the first instance; and that the symptoms of jaundice were due to obstruction in the biliary organs. Dr. Crawford has taken notes of the morbid appearances, and will be so good as to append a detail of them together with such remarks as he may deem proper, that the profession may have the advantage of profiting by this highly interesting and singular case.

Montreal, 7th Jan. 1847.

Autopsy.—On laying open the abdominal parietes, the peritoneal coat of the intestines generally, was of a bright rose colour; and was in many parts covered by an exudation of coagulable lymph, particularly where the bowel doubled on itself; these knuckles were in consequence slightly adherent together: a few ounces of turbid serum commixed with lymph were found in the peritoneal cavity. The appendix vermiformis was so altered in appearance and structure, as scarcely to be recognizable; it was about the size of a man's thumb, both as to its length and breadth; and of a dark or purplish red colour, easily breaking down, on any rough handling; being evidently in a state of gangrene throughout its whole structure: its upper portion alone, at its junction with the cæcum retaining its normal texture, its cavity was capable of admitting a finger: it contained a small quantity of dark thick fluid, but not sufficient to distend it. Two small portions of gall stone, each about the size of a small finger nail, were found in this cavity. The cæcum did not appear to be more involved in the peritoneal inflammation, than the other bowels; its mucous tunic was quite normal. The liver was mottled, pale, and of a blue colour. The gall bladder distended with extremely tenacious thick dark bile resembling tar, which adhered firmly to the lining membrane of the gall bladder, and to that of the ducts, which it almost completely blocked up, so that it was with some difficulty that the bile could be forced

through them—explaining in a very satisfactory manner the cause of the co-existent jaundice, which was very manifest over the surface of the body, and in the tunica adnata.

Remarks.—This case in its earlier stages was very obscure, there being nothing to indicate the existing inflammation, except the local pain, which although fixed was liable to exacerbations of a spasmodic character. There was neither tenderness nor tension of the abdomen. The stomach, although frequently excited to nausea, by eructations, was not provoked to vomiting. The pulse until one o'clock of the day of his death, indicated depression, rather than inflammation: possessing very little firmness, or resistance, and varying in number from 80 to 90. From this time the inflammation spread with amazing rapidity, and manifested itself by general abdominal pain, and intolerance of pressure. Although there was considerable flatulence, the abdomen did not at any time become tympanitic.

The great peculiarity of the case however was, its originating in the appendix vermiformis, an occurrence equally rare, as its invariably fatal consequences are inexplicable.

That such an apparently innocuous body as a gall stone, a pip of an apple, a small bean, or a plumb stone, can excite fatal inflammation, shortly after its introduction into this portion of the intestinal canal, a few well attested cases fully demonstrate: while the peculiarity of organization which renders this part so obnoxious to inflammation, from what would appear so insufficient a cause, is not so clearly understood.

The rapidity with which peritonitis ensues after the introduction of foreign bodies into the appendix vermiformis, is noticed by Dr. Wardrop, in his edition of Baillie's *Morbid Anatomy*: "Twenty-four hours after that a small bean had been swallowed, peritonitis ensued, and proved fatal in three days, when the bean was discovered in the appendix;" he also notices a cherry stone producing similar consequences.

Dr. Copland mentions four cases similar to the above, originating in the introduction of foreign bodies into the appendix, which were followed by gangrene of this portion of the bowel, and general peritonitis, the cæcum not being in any especial manner involved; in all these cases, however, there was obstruction of the bowels, obstinate retching, vomiting, and tormina. Symptoms of ilius having been superadded to those of enteritis, none of which, however, it will be seen, occurred in the present case.

CASE OF PROTRACTED UTERO GESTATION.

By JAMES A. SEWELL, M. D., Quebec.

To the Editors of the British American Journal of Medical and Physical Science.

I see in the November number of your Journal a report of the case of the "Com. vs. E. F. Hoover," which induces me to send you the following, which I extract from my note book just as I recorded it at the time of its occurrence. The case is of interest in a Medico-Legal point of view, as I conceive the data, (always uncertain), are, nevertheless, as correct as they can well be in any case of the kind; and goes to support the justice of the laws of those countries which allow a greater latitude than our own, for the occasional deviations of nature from her established rules, with regard to the period of utero-gestation; whereby, as in the case above alluded to, the guilty are punished, while the, (it may be), innocent woman, (as in the following case), would be protected from the fiery darts of slander, had the husband unfortunately have died shortly after her conception.

Mrs. A. B., aet. 22.—Second pregnancy delivered Sep. 8, 1842. Natural labour.

This lady was confined by me in July 1839, with her first child. She stated to me during her pregnancy that she "expected" about the 19th of June, but the event did not take place till the 19th of July. It became a matter of joke between us that she was carrying her child ten months; but it was merely a joke, as I conceived she had miscalculated her time, which was not to be wondered at with her first child. I am now, however, of opinion that she did in reality carry her infant ten months, and, moreover, that she has done the same thing on the present occasion.

The circumstances of her second pregnancy are as follow. In July 1840, she left her husband in this country and proceeded on a visit to her friends in England; was absent about 14 months, and returned to this city and her husband on the 19th of Sep. 1841, having menstruated on ship-board during the first week of that month.

On the 5th of October the catamenia returned, being exactly the period at which she looked for them. In November, however, they did not make their appearance, but about this time she began to complain much of "morning sickness," and to be troubled with toothache, with which symptom her first and subsequent pregnancy declared itself; her breasts also began to fill up and be hard, with the usual dark areola around the nipple, and she at once declared herself to be in the family-way, in which opinion I fully coincided, and which I had no reason to change afterwards. Her ca-

tamenia did not return, and she was confined on the 8th Sept., 1842, of a large healthy female infant.

From what period are we to date, is a question which now naturally presents itself. If we follow the usual course, I should count from midway between the last time she was unwell, and the next monthly period at which the catamenia should have returned. Say then she was taken unwell on the 5th Oct., from which she had perfectly recovered on the 10th, and allow 15 days to elapse, which will bring us to the 25th of October, the day from which I think we are justified in reckoning.

If then these data are correct, Mrs. A. B. carried her infant in utero 318 days, or more than ten and a half calendar months. If on the other hand, impregnation did not take place till the 4th of November, or the day immediately preceding that on which the return of the catamenia was looked for, (and which I conceive is the latest date we can ascribe to it), even then gestation will have been protracted to 307 days, or twenty seven days beyond the usual 40 weeks.

En passant I would merely remark, that this season, in Quebec, has been noticed for the great number of cases in which ladies have exceeded, by many days, (and in some instances even weeks), the period for which they had secured the services of their professional attendants.

Québec, Dec. 1846.

POISONING BY ACETATE OF LEAD.

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

On the 19th Nov. 1846, I was requested to attend Mrs. W., aet. 27, married 8 years, without issue, of intemperate habits. The messenger informed me that she had by mistake taken $\frac{1}{2}$ oz. of sugar of lead for loaf sugar. I proceeded at once to her house, "well armed" with sulphate of zinc, &c. The room was filled with friends summoned from the neighbourhood, all endeavouring to administer relief to the suffering patient. She complained of a twisting pain around the umbilicus, with retraction of the abdomen towards the spine; pain in the back, nausea, tremors, great uneasiness and anxiety, dilatation of the pupils, metallic taste in the mouth, constriction of the throat, hiccough; pulse 70, small and hard, (increased in force in consequence of ardent spirits drunk during the day); laborious breathing; thirst; a desire for cold drinks; to these symptoms succeeded spasms, and pains principally of the hands and feet.

Treatment.—Without delay I administered sulphate of zinc, gr. xx., which produced immediate emesis, encouraged by copious draughts of tepid water: after

the operation of the emetic, sulphate of magnesia ℥ij.; a warm bath at 98, acid (sulphuric aromat) gtt. xij. omni hora, in a wine-glass full of water. This treatment gave considerable relief.

20th, at 8 o'clock a. m.—Complained of slight pain in the bowels; medicine operated well—ordered calomel gr. iv. opii gr. i. At bedtime ol. ricini ℥i. 21st. Much improved; pain in the bowels removed; states that she had been afflicted with "Fluor albus" for 6 months, and that the leucorrhœal discharge has ceased since she took the lead. The aromatic sulphuric acid to be continued three times a day.

It is an established fact that the preparations of lead do not pass off, or at least very sparingly, in the secretions. In this respect lead forms a striking contrast with iodide of potassium. When the latter accumulates in the blood it produces sneezing, headache, watery eyes, and a variety of other symptoms, and at the end of a few days these symptoms vanish.

The poison of lead, on the contrary, remains in the system, and its effects are consequently more lasting. "The presence of lead in the solids and fluids has been detected in a case at King's College Hospital, London, treated by Dr. Budd, where the patient had been a house-painter for some years, and died from colic and epilepsy. The metal was detected in the brain by chemical analysis, but Mr. Bowman could obtain no evidence of it by the microscope." However, the fact that acetate of lead has been lately detected in the urine, confirms the idea that it is the least poisonous of the salts of this metal. Poisoning from lead is never intentional, but only accidental. Its presence can easily be detected by rubbing it in mortar with a little spirituous solution of guaiac, and a few drops of liquid ammonia, which produces a beautiful grass green, passing to glaucous, if lead be present.

Richmond, C. W., Dec. 18, 1846.

[The above case is interesting simply from the effects induced on the Leucorrhœa, and it is chiefly on this account we give it insertion.—Eds.]

STATISTICS OF THE UNIVERSITY LYING-IN HOSPITAL, MONTREAL.

By M. McCulloch, M.D.M.R.C.S.L., attending Physician, and Lecturer on Midwifery, McGill College.

This institution was first opened to the public in November, 1843, under the direction of the Medical Faculty of the college, and is now entirely supported by the zealous efforts of benevolent ladies.

Three hundred and fifty-four patients have been already delivered.

Of the number there were—

Vertex presentations, - - - -	339
Funis and Head, - - - -	1
Face, - - - -	2
Face, - - - toward the Pubis, -	6
Breech, - - - -	2
Feet, - - - -	5

If we exclude from the calculation the breech and feet cases only, the result will be ninety-eight presentations of the head in every hundred labours.

Ergot has been administered only to two patients, and venesection had recourse to, once before and once after delivery. Two of the mothers had convulsions after delivery; and twelve cases of puerperal fever occurred.

The labour terminated within six hours in one hundred of the cases, within twelve in two hundred and forty, and within twenty-four hours in three hundred and thirty-six. Four were forty-eight hours, and one only of longer duration.

In the three hundred and fifty four cases, the average duration of labour was eleven and a half hours.

A patient, who daily expected to be confined, entered the room where another was suffering in labour, and, without any premonitory symptoms, the liquor amnii suddenly escaped, and, with only two pains, the child was born before she could be removed to a bed.

Two of the mothers died, one from uterine inflammation, after a very severe labour, and another in a comatose state, twelve hours after an easy delivery, in consequence of falls on the head previous to her admission. The deaths being thus one in a hundred and seventy-seven.

The eldest patient was forty-five years of age, and the youngest fourteen years and seven days. Although the face of the child was towards the pubis, she had an easy labour of seven hours duration, and her infant weighed six pounds. There were three cases of twins.

One of them has already been reported in this journal by Dr. Sewell, who found the patient with symptoms of labour in her masters house, and, very much against her inclination, sent her to the hospital; where she continued to deny that she was pregnant, until she was delivered, and then the presence of a double placenta, with two cords, disclosed the secret of her having a short time previously given birth to another infant. Her former residence was immediately searched by the police, and the other twin found concealed in her trunk.

The only instrument used to assist delivery was the forceps, once in the three hundred and fifty-four cases.

One hundred and seventy-eight of the children were males, and one hundred and seventy-six females.

Eighty-three of the children were weighed, and the average was seven pounds and a half; only four of that number weighed twelve pounds each.

Malformation was observed in only two of them, one had spina bifida, and the other was anencephalous and survived nearly an hour; it was at the full term, and otherwise well formed.

The longest umbilical cord was thirty, and the shortest six, inches.

Only five children were still-born, being in the proportion of one in seventy-five births.

Montreal, January 25, 1847.

REMARKS ON DR. MACDONNELL'S PAPER ON THE USE OF THE MICROSCOPE.

To the Editors of the *B. A. J. of Medical and Physical Science*.

Gentlemen,—I received the enclosed communication from Dr. — some days ago, but disliking to place it before the public through the medium of the daily journals, I desire to know whether you will insert it as it stands, in your next number.

I remain, &c.,

F. T. C. ARNOLD, M. D.,
58, Craig Street.

Montreal, Jan. 7, 1847.

The October number of the *British American Journal*, having but very recently reached me, I apprehend, that any observations which I may have to offer on Dr. Macdonnell's article upon the use of microscopes, will seem, at the present time, rather out of place: but laying aside this considerations, *bongré malgré*, I deem the exalted and self-sufficient tone which that gentleman has assumed, in reference to illuminating various operations of nature, and to explain certain properties of matter through the microscope, ought not to remain entirely unnoticed.

On a subject of so much importance as one which also treats upon the means of discovering the hitherto concealed causes of those morbid actions or excitements which disturb the animal economy, from its normal operations, the author, in my humble opinion, should court the practical investigation of his professional brethren in terms less intemperate, and less dogmatical than those he seems to have adopted in his communication.

I am ignorant of what is meant by the pretended value of his information not being intended to such scoffers of science.

I may class myself among those against whom so offensive an insinuation cannot be applied, but I must confess to be one who entertains strong doubts as to the success and benefits the learned experimentalist

promises to result from the use of the microscope in the elucidation of many departments of practical medicine. I hold it no inconsiderable step in favour of science, to bring ourselves to doubt of the reality of some facts advanced for truth, without any reference whatever to the celebrity of names: nay, it is to doubt, that innumerable medical errors have not been permitted to travel down to us, from time out of mind, as matters of unquestionable veracity: and it is to a rigid and impartial investigation, that many of the facts that are ushered into the world, lose their importance,

We cannot all with the same electrical rapidity as the learned doctor, penetrate at once into a *new Theory of Physics*, however simple its principles, without dissipating many clouds, and bringing to our examination the clearest and steadiest rays of the light of science and experiment. Experience, indeed, has taught many of us, that discoveries founded on novel principles and experiments, and bolstered by strong professions of success, have often disappointed the expectations built upon them; and the hope of something solid and useful as well as new, has been puzzled by the vanishing tenuity of the thread of reasoning which has been drawn out beyond the staple of the argument, till apparent axioms have sunk into postulates, and these have dwindled away into hypotheses, rather darkened by variously interlaced inductive reasonings; and in the end, Ixion-like, we embraced a cloud, or like the sage of old, terminated our labour with the no feigned cry of "all this is vanity and vexation of spirit."

It is not my intention to interpose any doubts which I entertain from practical results, to the success assumed by Dr. Macdonnell on the application of the microscope, in ascertaining the properties of matter in certain diseased actions of the animal economy, but merely to content myself with submitting such sources of information upon the subject as cannot fail to be regarded as the highest in the scientific world: I allude to the Royal Society of London; and than which, no society's transactions, contain richer and almost unrivalled treasures of facts and discoveries in every branch of demonstrative and experimental knowledge, and are more constantly referred to, as the highest and most satisfactory authority by all writers on subjects connected with the arts and sciences.

I shall now offer a short abstract of Mr. Lister's paper on the compound achromatic microscope of Mr. William Tully. Mr. Lister enters into a searching review of the comparative merits of various microscopes constructed by Cuthbert and Dolland in England, and by Chevallier, Selliqué, Amici, Utschneider and Franhope on the Continent—but the author speaks with much

commendation of the superior and peculiar construction adopted by Mr. Tully. The magnifying power may be varied at pleasure, either by drawing out the tubes containing the eye-pieces, or by substituting an eye-glass of different power or differently combined, and by these changes an uninterrupted range of amplification is obtained from 35 to 800 diameters. The construction of the instrument admits of the utmost variation of magnifying power, without the risk of losing sight of the object viewed. In stating the results of his experience, the author takes occasion to advert to some of the sources or fallacy, by which observers with microscopes have often been greatly misled. When a pencil of rays proceeding from an indefinitely small bright portion of an object are brought to a focus by *the most perfect object glass*, the image thus formed is in reality not a point, but a small circle, and will always appear as such, if the eye-glass of the microscope be sufficiently powerful. These circles have a considerable analogy to the spacious discs of stars viewed through telescopes: like the latter, they become much enlarged by diminishing the aperture of the object-glass, and they are also enlarged by increasing the intensity of the illuminated. The overlapping of contiguous circles of diffusion has given rise to many fallacious appearances; such as the spottiness which some surfaces assume, and which have been mistaken for globules. This optical illusion has been the basis of some ingenious but visionary speculations on the intimate structure of organic matter. The appearance, in certain directions of the light, of lines on the surface of an object when they do not really exist, may be traced to a similar cause.

As I have already stated, no practical results from the use of the microscope are intended to be offered by me, (not having been as Dr. Macdonnell for some years back, in the daily habit of using this instrument in the investigation of diseases of the kidneys, urethra, bladder, &c.) but merely to impart to those who may feel predisposed to place implicit reliance on its use in practical medicine, the full benefit of the valuable investigation of Mr. Lister, F.R.S., and in the assurance, that the errors and fallacies, as well as discrepancies which exist in the results of the use of the microscope in the elucidation of physiology, have not been published to the world by so learned a body as the "Royal Society of London" with a view "to undervalue its revelations, and ridicule its pretensions," but in the full integrity of purpose, that of guarding the experimentalist from those optical illusions, which too often originate ingenious but visionary speculations.

A COUNTRY PRACTITIONER.

December 3, 1846.

[It is not the intention of Dr. MacDonnell to enter into a discussion with the writer of the above *very intelligible* production; for it is by no means an enviable occupation to engage in controversy with an antagonist ignorant, by his own admission, of the subject in dispute; and who, moreover, professes that he "*holds it no inconsiderable step in favour of science to bring ourselves to doubt of the reality of some FACTS advanced for truth!*" With such an adversary, how could any one, who entertains the usual estimate of the value of facts in establishing truth, hope to meet with success.—R. L. M'D.]

PRACTICE OF MEDICINE AND PATHOLOGY.

HISTORY OF A CASE OF REMARKABLE COLOURED SECRETION FROM THE SKIN.

By C. D. PURDON, M. D., Belfast.

Barbara Murphy, et. 40, an inmate of the Infirmary attached to the Belfast Charitable Society, the mother of two children: catamenia regular up to the last six months: attributes the first commencement of her state to a fever with which she was attacked about twenty years ago, immediately after which she experienced a pain in the ball of the great toe of the right foot, terminating in a swelling of the same part. Both ankles became painful and swollen; a short time after this ascites supervened; all these symptoms subsided on her becoming pregnant, during which time she enjoyed perfect health. About three weeks after her confinement she was seized with pain, accompanied with swelling, in the joint of the first finger of the right hand, which gradually attacked each joint of the upper extremities in succession, and spread thence to the lower, commencing above. After some time the wrists, ankles, and smaller joints of the hands, became distorted and nodose, in which state they have since continued. From this time nothing remarkable was to be observed in her state, but she continued to suffer from occasional attacks of rheumatism, and was almost always confined to bed, until three years ago, when, during an attack of rheumatic fever, the heart for the first time became affected, after which anasarca and hydrothorax supervened. These were partly relieved by a severe diarrhoea, but on its subsidence both became greatly aggravated; however, they were not only kept in check but much ameliorated by the different remedies employed. Some months ago they returned with such severity as to threaten a sudden termination of her life; when at the worst a miliary eruption appeared on the trunk, greatest in the epigastric region, from which a clear serous discharge flowed in such quantities as literally to wet the bed; there was also a great moisture on the legs, which had blisters on them, in place of the eruption; this of course was attended with the greatest relief, and the breathing became almost free. The discharge continued for some days, after which it ceased, and symptoms of dyspnoea returned with great severity for fourteen days, when, after having a sense of prickling over the whole body for about twelve hours, the eruption again appeared, attended with the discharge, and causing the same relief. In this state of alternate relapse and recovery she has been for the last two months; the duration of the paroxysms being either eight or fourteen days; but the most curious point in the case is, that the serous discharge has changed very much in its character for the last four or five attacks, being nearly alternately blue and straw-coloured, or yellow, almost like pure bile. When the blue discharge appears, she is aware of its advent by a mouldy smell and a prickly sensation, which precedes it invariably for twelve hours; the yellow is not attended by either of these. The blue always appears along the posterior part of the chest; the yellow generally proceeds from the abdomen and back of the neck, and rarely from the back: the blue never has appeared on the abdomen; the two colours have been procured from the different parts at the same

time. The discharge from the extremities has never been coloured. In place of catamenia there is a discharge of a reddish green colour. As to treatment every remedy has been tried without relief to any of the symptoms, either of the rheumatic or cardiac affections. The yellow colour is tolerably permanent, the blue, however, fades; she has not taken any preparation of iodine for some years, and at present uses only opiates and saline draughts. In addition, it is worthy of remark, that a very peculiar elongation of the *quick* under each great toe nail has taken place. This became manifest on the nail being paired, and now appears like a loose fold of flesh, which hangs over the ball of the toe, and resembles in shape the bony nail.—*Dublin Quarterly Journal of Medical Science.*

OBSERVATIONS ON THE OXALIC DIATHESIS, AND THE INFLUENCE OF THE RHUBARB PLANT IN ITS PRODUCTION.

By JOHN S. BARTNUM, Esq., Surgeon, Bath.

Having for some years been in the habit of paying attention to the general and chemical conditions of the urine, it was with much pleasure that I perused the paper of Mr. Wilson, inserted in No. 35 of the *Provincial Journal*, (September 2, 1846,) especially from having, on several occasions within these two or three last years, noted in my own person, the effects on the urine of the rhubarb stalk and other articles of diet. The portion of urine passed after rising in the morning was always examined by the microscope without heat, as the shortest and not fallacious mode.

Being apparently in the most perfect health, excepting rather overworked, and as far as unlike a patient suffering from oxaluria as possible, at first I could scarcely believe myself to have passed oxalate crystals, still confirmed in my supposition by Dr. William Budd, who immediately remarked that I must have been eating rhubarb, which, however, had not been recently the case. This induced further and oft repeated examinations, the general results of which I can only now give, having not long since destroyed the daily records, considering them as not worth keeping.

While passing the smaller oxalates, and then partaking freely of rhubarb, the first effect was generally to increase the size and quantity of oxalates thrown down, with the occasional addition of some of the reniform bodies; the diet being continued, the crystals of all shapes increased in size, especially the latter, till on two occasions they almost solely were passed. However, after a day or two, the oxalates diminished and then disappeared, although rhubarb was still partaken of; this may probably be explained by having regarded the appearance of the oxalates, as sure warning that I must give myself more relaxation. The results have been similar on two or three occasions, when from continuous exertions I have expected their presence and found them; but I have never been able to induce their appearance by the freest use of rhubarb, except in the very fine cuboid forms, for a day or so, unless they were previously present.

If Mr. Wilson continue his inquiries, I think he will find, that any article of diet, adding to the irritability of the kidneys and bladder, will induce an additional secretion of the oxalates; for I always found, that partaking freely of water-cresses added materially to the quantity of oxalates, provided I were already passing them, from the irritation of the bladder, caused by the abundant secretion of free lithic acid. Whether the elimination of oxalates, as well as of lithic acid, was due to the water-cresses, or the common salt accompanying them, I cannot say. That must be left for future investigation.

It will be found almost universally, that cases characterized chiefly by deposits of oxalates are combined with an asthenic condition of the assimilating organs; some of them corresponding closely with those caused by the excretion

of an abnormal amount of urea, the urine then being dense and loaded with lithates, while others, from the excessive excretion give rise to a suspicion of diabetes mellitus, so much so, that of the many specimens sent me for examination, where a large quantity of urine is voided, the greater proportion are of low specific gravity, with some few small oxalates, and often swarms of vibriones. These latter cases, however, are essentially cases of want of nervous power without any specific ailment, sometimes passing phosphates, sometimes oxalates, according to the varying condition of the system, which always displays a very reduced vitality.

In this, as in all other diseases of the urinary organs, where chemistry is called into our aid, there is great danger of their being treated as though the body were a mere laboratory, wherein we could modify these secretions at our will, overlooking the essential cause of the ailment; but, however useful and necessary such examinations may be, it behoves the practitioner carefully to eschew being implicitly guided by them; as some cases of this disease are treated successfully by alkalies, others by acids; some by restricted; others by a generous diet; for though medicinal remedies are most useful, and in the majority of cases requisite, they will be of little avail, if not well supported by carefully-applied general and dietetic measures.

I think that the size of the crystals of oxalates passed will often afford a good indication of the extent of the oxalic diathesis. If the crystals, especially the reniform, be large, distinct, much inclined to become clustered, crystallize on the hairs, &c., much oxalate of lime is passing. As the case improves, the crystals lessen in size and numbers till at length they become undistinguishable, except to the educated eye. Though it is unusual, the reniform bodies may continue to the last, when, in some positions, they may become in appearance almost like a blood-corpuscle; in the majority of cases these crystals are not to be found.

It has been suggested (by whom originally I cannot learn,) that these reniform bodies are not oxalate of lime, but lithic acid, modified in shape by the presence of oxalic acid. This can scarcely be, for I have, with several different specimens, macerated the whole deposit in liquor potassæ, to get rid of any free lithic acid; then, in diluted acetic or muriatic acid, whereby the phosphates and lithates are separated; yet both the cuboid and reniform crystals have remained quite unaltered. I have not succeeded in throwing down crystals of oxalate of lime, when a deposit of free lithic acid and oxalates was dissolved in sulphuric acid; and the former separated by the addition of water, perhaps from sufficient care not having been taken in the matter.

Should it be desired to separate any deposit of these salts for examination, it is most easily effected by decanting the upper layers of fluid, adding distilled water to the remainder, with or without potass, or acetic acid. The oxalates soon fall to the bottom, and may be readily collected on a watch-glass, without heat or any other process that could modify its composition after leaving the body. By careful manipulation you may obtain and weigh all the crystallized salt in a given specimen. To those not conversant with the salt naturally deposited, yet desirous to examine it, one of the best modes of learning all its usual shapes and sizes is to add a dilute solution of oxalic acid to fresh healthy urine, when after some hours the characteristic crystals will be found in abundance.

I do not know whether this city more abounds with cases of this disease than most others, but among its labouring population, of the class next above the poor, such as policemen, schoolmasters, carpenters, &c., (some hundreds of whom come wholly under my observation,) dyspepsia, of an atonic character, and marked by the pallid, depressed, emaciated countenance, with more or less hypochondriasis, pain of the side, (often of great intensity,) or of the back,

and the passage of oxalate crystals is most ripe, though in most cases readily amenable to judicious treatment. From my own observation this form of dyspepsia does not seem so common among the women of this class as among the men, even in those, wherein from their appearance and symptoms I had fully expected to find it. Of the presence of the oxalates in the more acute or in cutaneous diseases, I can say nothing, not having examined them for that purpose.—*Provincial Med. and Sur. Journal.*

CONDITION OF THE BRAIN IN PERSONS WHO DIE BY STRANGULATION.

Dr. George Burrows, in his work on Disorders of the Cerebral Circulation, reviewed in our last number, makes the following important remarks:—

“It may now be affirmed that the encephalon is not exempt from this law in physics—the gravitation of the fluids to the lowest parts of the corpse. The discovery of the operation of this force on the blood, within the cranium after death, suggests a precaution very essential to be followed, when it is desired to ascertain the precise amount of congestion of the cerebral vessels at the time of death. In such cases; a ligature should be placed round the throat of the corpse, and drawn sufficiently tight to compress the cervical vessels, and arrest all flow of blood through them. This precaution will be most required in the examination of bodies, where, from the kind of death, the blood may be suspected to remain fluid in the heart and great blood-vessels. The depending or elevated position of the head, during the examination of the body, will not then induce deceptive appearances, which misled us in our conclusions as to the previous amount of congestion in cerebral vessels.”

This caution, (says the reviewer), is rendered the more necessary, because the non-congested state of the brain, which has been observed in persons who have been hung or strangled, has been adduced in proof of the iatro-mathematical proposition, (viz., that of a fixed quantity of blood circulating within the cranium.) But Dr. Burrows shows that the brain may, or may not, be congested according to circumstances, and these circumstances consist in the mode in which the strangulation is effected and in the anatomy of the cerebral vessels. He thus accounts for the occasional absence of cerebral congestion in those who have suffered death by hanging.

“When criminals are hung by the executioner, the knot of the rope is usually adjusted on one side of the neck, and it is found, after death, beneath the ear, resting on the mastoid process. It has been often observed, in the dissection of such criminals, that the cheek and integuments on this same side of the head are not near so livid and congested as on the other side. The pressure of the rope has not completely obstructed the return of blood through the external jugular vein on the one side, although it has effectually stopped the current on the other. In such cases, it is probable, that the deep-seated internal jugular vein on the one side has only been partially compressed, and has permitted, to a certain extent, the return of blood from the internal parts of the cranium.

“But there is another still more efficient cause of this occasional absence of congestion of the cerebral vessels after death by hanging; it is the subsidence of the fluid blood after death, while the body is yet suspended, through the cervical vessels which are not completely obliterated by the pressure of the cord. And it should be recollected that there are some channels which are scarcely, if at all, affected by the compression of the rope. These other channels are the vertebral sinuses and spinal plexus of veins, so ably delineated by M. Breschet.”

The sinuses of the cranium may also be drained otherwise than through the vertebral sinuses. In examining the bodies

of those who have died by strangulation, the great vessels of the neck are usually cut across to get at the thoracic viscera, and then when the head is elevated to open the skull, the blood gravitates and flows from the cut ends, and the blood-vessels, (previously congested,) are rendered comparatively empty. Dr. Burrows further observes, in proof of this explanation, that in other instances, where life has been destroyed by obstruction of the respiration, congestion is usually present.—*Brit. and For. Med. Rev.*, October 1846.

MODUS OPERANDI OF OPIUM IN THE TREATMENT OF HEMORRHAGE.

By Dr. W. GRIFFIN.

“Of all the wonderful influences exerted by opium, that by which it sustains the powers of life when sinking from hemorrhage, and arrests the flow of blood, is the most extraordinary. When after severe uterine hemorrhage, the countenance is sunk, the eye glassy and hollow, the lips blanched, the skin cold, and the whole person corpse-like, when the pulse is almost gone at the wrist, when every beat of the heart is scarcely perceptible, and stimulants, even brandy or rectified spirits, are either vomited or uninfluential, there remains yet one remedy capable of restoring the patient to life, and that is opium. I believe its power of saving life, under these circumstances depends principally on its specific property of producing congestion in the brain. That amount of congestion by which it occasions apoplexy, when given in large doses to persons in health, seems only sufficient to sustain the necessary tension of the cerebral vessels in those who are dying from hemorrhage. Persons die in cases of hemorrhage, not so much from mere debility of the heart's action, as from the loss of nervous powers in the brain consequent to it. The opium in such cases not only stimulates the heart's action, but restores a sufficient degree of tension to the vessels of the brain to prevent faintness; and, by the judicious repetition of the remedy, life is preserved on the very borders of death. There are no cases in which opium can be given so freely and so fearlessly as in these. When the danger is imminent, five grains may be given at the first dose, and two or three every hour or half hour afterwards, until the pulse becomes distinct, the breathing easier, and the tossing about in the bed is allayed. It is hardly necessary to observe, that in such cases, in conjunction with the use of opium, the administration of warm wine or brandy, with heat to the extremities, is highly useful, if not essential.”—*Medical and Physical Problems.*

ERGOTINE AS A HÆMOSTATIC.

On the occasion of M. Bonjean's presenting the French Academy of Sciences with an account of an additional experiment he has made with *Ergotine*, in which the bleeding from the carotid of a horse, divided through a third of its circumference, was at once arrested by the application of ergotine, M. Velpeau delivered the following sensible and pertinent observations:—

“What M. Bonjean says of ergotine has been said by an infinity of other persons concerning different substances. Hæmstatic means of a real efficacy are nevertheless as rare as ever. The error arises from these authors having forgotten two things in their experiments. 1. In animals, the plasticity of the blood is much greater than in man, whence it follows that means which will arrest hemorrhage in the one, may easily fail to do so in the other. All those who have made experiments on living animals know that, in the horse, the ox, the sheep, for example, the largest wounds of arteries rarely give rise to mortal hemorrhage. The blood, ceasing to flow almost of its own accord, leads the public and inexperienced authors to believe that it is the means or remedy employed which has closed the artery. Thus, what powders, waters, liquids, what arcana of every kind, have been vaunted at first as infallible; and then, after a searching examination, rejected as useless? 2. In man, many arterial hemorrhages also cease either spontaneously or under the exertion of mere compression, without our being obliged to have recourse to the ligature; so that it is easy to attribute to a pretended hæmstatic substance a result which takes place quite independently of its employment.”

“I have neither cause nor desire to throw any doubt upon the value of M. Bonjean's experiments; but practice has been so often deceived by similar announcements, that it behoves the

Academy to accept them with due reserve. I must add, that the practitioners who have tried *ergotine* or the *ergot of rye* have as yet derived nothing conclusive from its use. When, in *uterine hemorrhage*, the *ergot* proves useful, it does so by inducing contraction of the uterus, and not by any special action it exerts on the blood or on the arteries. Thus we see the question of surgical hæmostatics is at once a very complex and a delicate one; and we should not receive facts concerning it without a certain degree of distrust; and only give them a very limited publicity, until they have been tested by a more mature examination."—*Med. Chirurg. Rev.*, Oct., from *Comptes Rendus*, 6th July, 1846.

PHOSPHORESCENCE OF THE HUMAN BODY.

The subject of this case was a male infant sixteen months old. The child had suffered from teething, and had been casually seen by Dr. H. McCormack, of Belfast. An emetic was administered, and an irritating liniment rubbed on the breast. The nurse, in raising the child in bed at night, observed a phosphorescent light about the hips, both before and after the candle had been lighted. The legs were also observed to be luminous for a short time. From what Dr. McCormack could learn, the appearances very much resembled that produced by phosphorized oil, but none of this had been employed. The phenomenon occurred only once. The mother had, however, observed, that on one occasion a spark (electrical) had flown to her hand from the infant's body. Cases of human phosphorescence in the living body are rare, and the fact recorded by Dr. McCormack is, therefore, interesting.—*Med. Gaz.*

SURGERY.

CASE OF CAROTID ANEURISM.

In which Galvanism was applied to the Blood in the Sac by means of Acupuncture.

By JOHN HAMILTON, M. R. I. A., Surgeon to the Richmond Hospital.

The relation of the following case may prove serviceable to those who may try the galvano-puncture in cases of aneurism. In the first trials of a new remedy, every case should be faithfully narrated, the unsuccessful as well as the successful, that the causes of failure in the first may be clearly recognised and avoided.

James Holmes, aged 43, admitted into the Richmond Hospital, March 26, 1846. He had formerly served as a soldier in the East Indies, and was, at the end of eleven years, sent home on account of bad health. When admitted he presented the appearance of a man whose constitution had been completely broken down (as, in fact, it was) by climate, drinking, and the effects of the syphilitic poison. He had two soft nodes, one on the sternum, the other over one of the ribs. There was strumous enlargement of the lymphatic glands on the left side of the neck, with two or three fistulous openings from which thin pus flowed. He had diarrhœa, cough, headache, and restless nights; but the most distressing symptom of all was nearly constant vomiting of a greenish-yellow fluid, and of almost every thing he took. His complexion was of a pale straw colour, and he was so weak that he could scarcely stand. He had formerly been twice in hospital under my care, once for a large abscess in the buttock; and once for a suppurating node on the parietal bone, a large portion of the outer table of which had exfoliated and been removed.

Examination of the chest detected chronic bronchitis, and on the right side, where he complained of pain, there was evidence of circumscribed effusion to a small extent, with dullness on percussion, and absence of respiration, not influenced by change of position. No enlargement of the liver was discovered, nor did sufficient evidence of organic disease present itself elsewhere, but the existence of Bright's disease of the kidneys was suspected. He had occasionally slight

œdema of the face, about the eye-lids. Under treatment, the nodes disappeared, the diarrhœa ceased, the pain and effusion in the right side of the chest were removed, and his general aspect improved, but all the usual remedies failed in permanently checking the vomiting: creosote seemed to have some influence, but only temporary. It was very hard to point out the cause of this obstinate vomiting; there was no sign of disease of the brain; it had not the character of that attending scirrhus of the pylorus, nor was there pain or tenderness in the epigastrium. About a month after admission the lymphatic glands in the neck increased in size, and were painful. His voice, before of natural strength and tone, became weak and husky; but it was not until he had been in hospital six weeks that he was discovered to have an aneurism of the carotid artery.

May 7th. He complained of having suffered from great throbbing in the glandular swelling in the left side of the neck. Beside the most superficial glandular enlargement with its fistulous openings, a deeper-seated tumour could be felt, soft, and containing fluid, but having a well-marked diastolic pulsation: it was partly on the inside of, and partly covered by, the sterno-mastoid muscle. Pressure on it impeded respiration; pressure on the carotid below it could not be borne, both on account of the pain and its inducing vomiting; it could not, therefore, be tried long enough to empty the sac. There was no *bruit de soufflet*. The existence of the aneurism had not been observed before, probably, on account of its having been, while small, masked by the suppurating glandular enlargement over it; besides, he usually kept a poultice on the part, and, making no complaint, the whole attention was absorbed in the other more obtrusive and serious complaints. As the aneurism got larger, the glands got less, from both which causes its existence became more apparent. It was not painful or tender, but the pulsation distressed him, and the pressure on the side of the larynx produced cough of a wheezing, laryngeal character, and reduced the voice nearly to a whisper.

This man, with such a constitution, was obviously no subject for any operation with the knife; in this my colleagues and myself fully agreed: the cure by pressure was, in such a situation, of course, out of the question. Some months previously I had seen in one of the French journals an account of the application of galvanism and acupuncture in curing an aneurism, by coagulating the blood in the sac. I thought the plan sufficiently feasible to determine me to try in the first eligible case.

The present case, cut off from the usual resources of art, was clearly one in which even a doubtful remedy might be fairly tried. I began to form the opinion, too, that, in the absence of any more obvious cause, the pressure of the aneurism on the par vagum might account for the obstinate vomiting.

May 15th. In the presence of my colleagues, Drs. Hutton, Macdonnell, and Macdowell, and Mr. Stapleton, of Jervis-street Hospital, I proceeded to apply the galvanism to the tumour. The state of the aneurism previous to the operation was as follows: it was about the size of a hen's egg; but rather flat, of somewhat irregular shape, with a round, smooth projection on the inside, where the walls of the sac appeared thinnest. The centre of the tumour was on a level with the cricoid cartilage, the sterno-mastoid muscle was stretched over it; the pulsation was strong; but no *bruit de soufflet* was audible.

I passed a thin gold needle into the outside of the sac, till it had penetrated to about an inch: the same was then done on the inside, the thin projecting part of the aneurism being avoided; the needles could be made to touch in the centre. I used needles of gold, as better coagulators of blood than those of steel; by the advice of Mr. Fagan, the electrician to the hospital, who was kind enough to regulate the galvanic battery for me, they were isolated every where, ex-

cept at the point, by a varnish of shell-lac. The battery used was one of Smee's, consisting of twelve zinc and silver plates. The action was given very gradually, by, at first, only immersing the plates to two or three inches. When the whole force of the battery was used, it only caused moderate pain, and produced slight contraction of the muscles; he compared the pain to the prick of a leech. At the end of fifteen minutes the coagulation of the blood was not such as to cause any remarkable change in the tumour, but it appeared to beat with less force at the outside. After this the pulsation became evidently less, the tumor firmer and larger, and he began to complain of uneasy, weighty sensations, and very severe pain, which he compared to his throat being held fast by the teeth of a dog. He said he suffered much from pain in the left side of the forehead, with lightness, and other unpleasant feelings. The sensations in the tumour were very distressing, and those in the head, from their violence, assumed rather an alarming character; but the most serious symptom was the great increase of the swelling as coagulation took place chiefly in a direction upwards and downwards, in the course of the sterno-mastoid muscle; this seemed the chief cause of the pain and the tight feel in the throat.

At the end of twenty-five minutes complete coagulation had taken place in the aneurism, which felt solid, and pulsation was imperceptible; for these reasons the galvanism was discontinued. The discontinuance might have been demanded also for another reason, that round the positive needle, on the outside, that parts in immediate contact were observed to vesiculate, and then to turn quite black for the size of a spangle, the vitality being destroyed by the galvanic action: when this needle was withdrawn there was a slight flow of blood, but none from the puncture of the negative needle.

So far, therefore, as the solidifying of the blood in the aneurism, the operation had succeeded, but not without considerable grounds of uneasiness. The unpleasant feel in the head continued, with the pain over the left eye-brow; the pupil was observed to be contracted, and their was *loss of sight in the left eye*. He was restless, and tossed about, complaining much of the tightness of his throat; he had twitches in the lower extremities, and complained of being chilly, and the pulse fell from 74 to 60. With respect to tumour itself, the sudden increase was sufficiently alarming, as it was three or four times larger at the termination of the application of the galvanism. The increase, as observed before, took place chiefly upwards and downwards in the course of the muscle; it reached from about one inch above the clavicle to an inch and a half below the ear. The tumour was also more prominent. From what did this increase arise?

May 16th. Has passed a sleepless night, and frequently vomited the iced brandy and water which he had been ordered. He had pain both in the head and in the tumour, and was unwilling to have the latter touched, it was so sore. Reaction had now set in, and the pulse was 86. The tumour was quite solid in every part, except at the inside, where it was softer, and where, I thought, I felt pulsation, but it was too indistinct to be certain. The whole solid body of the tumour was lifted up by each pulsation of the trunk of the carotid beneath it. He did not suffer pain in either the head or tumour; but complained of great weakness. Tongue rather dry, and thinly furred.

17th. Says he is better; no pain or throbbing sensation in the tumour; it looks large, I should say about four times larger than before the application of galvanism. It feels hard and perfectly free from pulsation at its posterior half; but at its anterior half, where there is the sensation of fluid, pulsation is perceptible, but less strong than before. He does not now complain on its being touched. Where the positive needle was inserted, the small, round, black spot is observable; pulse 80; vomiting as before. After this the pulsation returned in the whole tumour, which, though much in-

creased, resumed more of its original oval form, but became very prominent, the sterno-mastoid muscle being on the stretch across it.

A question now naturally presented itself,—should the application of the galvanism be repeated? My own impression decidedly was, that it should not, for should it be followed by a still further increase of size, in addition to its already large bulk, the pressure on the trachea and juglar vein might induce serious, if not fatal results. During a temporary absence in England, my colleague, Mr. Adams, who kindly took charge of the case, had a full consultation upon it, at which Sir P. Crampton was present, when it was decided that further interference by operation in such a constitution would only hurry on the fatal termination of the case.

The vomiting continued as violent as ever, and he died, apparently of exhaustion, on the 8th June, a little more than three weeks after the application of the galvanism. A few days before his death there was no pulsation in the aneurism.

Post-mortem Examination.—There was nothing found in the viscera to explain the vomiting, the stomach being only a little redder than natural, as was also a short portion of the ileum. The substance of the liver did not appear diseased, but it presented a curious malformation, being divided into a number of small lobules, like the kidney of an ox. No appearance of disease in the brain. The kidneys in the first stage of Bright's disease. The heart, aorta, and large vessels of the neck, were removed along with the aneurism, and carefully examined; the heart and aorta were healthy. The aneurism was about the size of a large orange, its superior surface was on a level with the upper edge of the hyoid bone, its lower with the seventh ring of the trachea: it was globular at its interior two-thirds, flatter behind, between which two portions, on the outside, was a deep groove, partly filled by the edge of the sterno-mastoid, and partly by the jugular vein, which was quite flattened and impervious. The par vagum nerve ran over the posterior surface, at first expanding out into a fibrous arrangement, afterwards so flattened on the surface of the tumour that it formed a membrane a quarter of an inch broad, so thin and so closely applied, that it required delicate dissection to raise it off the wall of the aneurism, and trace it on to its trunk above the tumour, where it became normal.

The sack of the aneurism felt strong and rather thick, particularly in front, and as if its contents were in a great measure solid; posteriorly it had a softer and more fluid feel. It sprung from the anterior part of the common carotid artery, but the vessel was lost in the tumour, and only traceable a short distance up the lower part of the back. Below the aneurism, the trunk of the carotid was sound, but both external and internal carotids were much reduced in size, and so much obstructed that a probe could not be passed through them into the aneurism.

A section of the aneurism showed the contents to be solid, the centre occupied by clotted blood, of the colour and consistency of black current jelly; from a quarter to half an inch from the margin, the layers were of a pale red colour, and had a fibrous arrangement, exactly resembling muscle; when they were removed the lining membrane was found smooth but uneven.

As far as coagulating the blood in the sac, the application of the galvanism in this case was successful, complete coagulation having been effected by it. From the proximity of the carotid artery to the heart, and the direct course of its trunk (both favouring the rapid current of the blood,) as also from the very free anastomosis with the numerous branches of the corresponding artery, an aneurism in this situation is one least likely to preserve the coagulum formed by the galvanism. In the present instance, likewise, a successful result may have been prevented by the total impossibility of using sufficient pressure to obstruct the current, and prevent its washing away the newly-made clot. To be completely

successful, repetition of the operation would have been required; my reasons for not deeming this advisable have been already stated. What I have observed, however, convinces me that in more suitable cases this mode of treating aneurisms will yet be found most valuable.* The sudden and rather alarming increase of the tumour, which occurred during the application of the galvanism, should it be constantly observed may fairly be brought forward against its use in aneurism situated, as this one was, in the neighbourhood of important organs, which would be very intolerant of sudden pressure, although they may bear or accommodate themselves (as we know they do) to the gradual pressure of tumours.

It is not easy to account satisfactorily for this rapid enlargement; the perfect integrity of the sac shows it was not from extravasation of blood by rupture; moreover, no traces of blood could be discovered. We know that during the galvanic action a quantity of hydrogen is evolved from the negative pole; it would, however, have been scarcely equal to the actual amount of the increase; the sensation, also, was of something more solid than if the contents were gaseous fluid. It now appears to me more likely to have been caused by the galvanic influence extending beyond the sac, and coagulating the fluids in the cellular tissue around it, the coagulated matter having been afterwards absorbed. The size of the aneurism at the time of death was certainly not larger than it would have been in the usual progress of the disease, and if the galvanism had never been applied.

M. Petrequin insists on the necessity of the needles crossing, to produce a proper coagulum. The needles, in this case, though they could be made to touch, certainly did not cross, and yet coagulation was complete. But I have further reasons for believing this is not necessary: I thought that, in performing the operation for the future, it would be as well to avoid, if possible, the entrance of the hydrogen gas evolved from the negative pole directly into the circulation. I therefore suggested to Mr. Fagan to make the experiment of putting an albuminous fluid into a small bladder, and to insert the positive needle into the fluid; but merely to apply the negative wire to the outside of the bladder. He accordingly filled a small portion of sheep's intestine with one part of white of egg and two parts water, quite full, and without any air. He inserted the positive needle its whole length through the gut into the fluid, and applied the negative wire merely to the outside of the sac, and succeeded in producing a large tea-spoonful of mucous-looking coagulum, without a bubble of hydrogen in the fluid inside, but many adhering to the outside, and to a silver plate on which the sac was placed. We have no grounds to say the entrance of hydrogen into the blood is injurious; but the fact that coagulation can be produced without its necessarily being present is interesting. The condition in which the par vagum was discovered may, perhaps, explain the incessant vomiting. It is scarcely possible to suppose that a nerve so closely connected with the functions of the stomach could be so much deranged in structure without considerable gastric disturbance.—*Dublin Quarterly Journal, of Medical Science.*

HYDROCELE OR SEROUS CYST, IN THE RECTUS ABDOMINALIS.

Dr. Mayne exhibited to the Pathological Society of Dublin (Dec. 6th, 1845) a specimen, illustrative of the difficulty which sometimes occurs in the diagnosis of abdominal tumors.

The subject of the case was a man, aged 55 or 56 years, an occasional inmate of the South Dublin Union Poor House. He had been liable to attacks of severe bronchitis, for which he was

* A case is given in the *Revue Médicale*, for December, 1842, of a popliteal aneurism in a man of seventy, cured by M. Petrequin, of the Hotel Dieu of Lyons, with acupuncture and galvanism, in a single sitting; and several cases have since appeared in the public journals.

in the habit of seeking admission into the poor house; and, when relieved, he used to return to his occupation—that of a laborer.

About three months since, this man applied to Dr. Mayne, on account of a new complaint, namely, a frequent desire to discharge the contents of his bladder, which, if not immediately satisfied, caused his urine to pass from him involuntarily. He could retain a moderate quantity without inconvenience, but, whenever a certain degree of distension of the bladder took place, an urgent call to evacuate the urine immediately followed. He also directed Dr. Mayne's attention to a tumor in his abdomen, to which he attributed these symptoms. This tumor was seated above the pubis, on the right side of the linea alba, in the track of the right rectus abdominis muscle. It was of an oval shape, about the size of a goose-egg, perfectly uniform on the surface, and yielded an obscure sense of deep fluctuation. There was a very strong impulse communicated to it, whenever the patient coughed. It was not, in the slightest degree, tender upon pressure, but, by compressing it, the inclination to pass water was strongly excited.

At first, Dr. Mayne thought it might be a sacculus, connected with the bladder, consequent on some disease of the urinary passages, but a full-sized silver catheter passed along the urethra without difficulty, showing that there was no stricture, nor any disease of the prostate gland. The urine drawn off was perfectly healthy, from which a sound condition of the mucous coat of the bladder was inferred; and the evacuation of this viscus had no effect whatever in diminishing the bulk or tension of the abdominal tumor, which rendered it unlikely that any communication could subsist between the tumor and the bladder.

Dr. Mayne was led to regard it as a chronic abscess, and the treatment was regulated accordingly; blisters, iodine, etc., were prescribed with little benefit.

After some time, the patient left the poor house, but he returned, lately, laboring under typhoid pneumonia. He was in a state of profound prostration, with extreme dyspnoea, some anasarca, and general dulness over the whole of one lung, posteriorly. He soon sank.

At the autopsy, Dr. Mayne was particularly anxious to ascertain the nature of the tumor,—it was now before the society. They might perceive that it was hydrocele, placed at the back of the right rectus muscle. In this situation, the posterior lamina of the sheath of the muscle is deficient, so that the tumor rested upon the peritoneum.

The experiment of inflating the bladder was made before the society, and, as it became distended, the superior fundus was observed to come fairly into contact with the tumor. The same occurrence must have taken place during the patient's lifetime, whenever the bladder was dilated; and the pressure in this manner exercised upon it, renders a satisfactory explanation of the urinary symptoms under which he labored.

Dr. Mayne thought it probable that any attempt at a radical cure (supposing the diagnosis to have been made would have induced a fatal peritonitis.—*Dublin Hospital Gaz.*, Jan. 1st, 1846.

TREATMENT OF CERTAIN ANEURISMS BY GALVANO-PUNCTURE.

The *Gazette Médicale de Paris*, (Nos. 38 and 40; for 1846,) contains a memoir on this subject by M. PETREQUIN, of Lyons, who claims the merit of having been the first to suggest this new method of treatment. We copy from the *Monthly Jour. Med. Sci.* (Nov., 1846), an analysis of this memoir.

M. Petrequin gives the following account of his discovery:—the first results of his inquiries, he says, he published on the 25th of October, 1845, in his "*Mélanges de Chirurgie*," and "since then I have not ceased to labour at the subject. Everything was to produce in the plan and in the detail, as it is easy to judge; and I have the satisfaction of seeing that experimental observation has throughout confirmed all my anticipations." He was first led to think of resorting to chemical means for the coagulation of the blood in an aneurismal tumour, by the case of a young man in whom he believed he had detected, by the stethoscope, an aneurism of the ophthalmic artery, the consequence of an injury sustained by falling on his head from a considerable height.

Of these chemical means galvanism seemed the only one adapted to such a case as he had under treatment. He knew that electricity had been spoken of in connection with the treatment of aneurism. On inquiry he found that all that had been said on the subject amounted to the following brief sentence, published by M. M. Marjolin and P. H. Berard, in 1833:—"It has been suggested that the coagulation of the blood might be effected in the sac by the aid of electricity transmitted into it by needles plunged into the tumour. This idea, which we owe to M. Pravaz, has not hitherto, as far as we know, been carried into execution." M. Petrequin now applied to M. Pravaz himself, and learned from him that no trials had been made bearing on this subject, either on man or other animals. M. Petrequin's first trial, in the case of supposed aneurism of the ophthalmic artery, was not successful, and during an intermission of the treatment in M. Petrequin's absence, the young man was suddenly carried off by an attack of fever. Disappointed in this his first experiment, he was almost dissuaded from pursuing the idea further by finding that certain authorities, on reviewing the suggestion of M. Pravaz, had condemned it as totally inadequate. M. Petrequin hence concludes that the whole merit of the operation rests with himself—to which, in the meantime, we willingly give our assent. On the subject of the principles on which the success of the operation must depend, we allow M. Petrequin to speak for himself:—"The analysis of the first case led me to a knowledge of the principal difficulties, and of the resources by which they were to be overcome. Thus, in the first place, it became necessary to abate the force of the circulation in the afferent vessels, without which the clot is liable to be carried away by the current of the blood, as fast as it forms, particularly if the arterial tube be beyond a certain magnitude. In the sac the blood should be, as far as possible, stagnant and motionless; the patient should be recumbent, or seated at perfect rest in an easy-chair.

"To coagulate the blood in an aneurism, it is requisite, not only that the galvanic current should reach the surface of the tumour, and that it should be conveyed to a spot within it, but it is also indispensable that it should be directly transmitted through the blood itself by two opposing points. For this effect I employ steel needles, from seven to eight centimetres long (about three inches), fine and sharp, which may penetrate easily into the sac through the soft parts. There is here a double difficulty to be overcome; in reaching the seat of the disease they burn and cauterize the skin, irritate the nerves and cause unavailing suffering, ecchymosis, and unfavourable inflammatory action. Again they cause trouble by the loss of electricity, which may result in a failure of the operation. It occurred to me therefore, to isolate the needles in an extent corresponding to the thickness of the soft parts to be traversed, taking care to leave the heads and points free. I succeeded in this object by means of a coating of gum-lac, and better still with cutlers' varnish. It is easy to show that the isolation is thus rendered complete, for the energetic action which takes place when the poles of the galvanic apparatus are applied to the head, or to any free part of the needles, immediately ceases, whenever the poles are connected with any part of the needles covered with the isolated coating, and recommences as soon as the wires and needles communicate without its intervention, a convincing proof that the method is good. We may also use an enamel, or a china or stoneware glazing. 'Next of the mode of placing the needles. In my experiments on the blood, the occurrence of coagulation was found to be most ready when the extremities of the needles were crossed; this, therefore, is the arrangement to be adopted; and when the aneurismal sac is of considerable size, we should multiply the points of coagulation, so that the nuclei formed at different points, may finally pass into one common clot.'

"Thus I obtain the rule from experience, that we should insert the needles at opposite points for their better correspon-

dence; that we should give them a direction obliquely or perpendicularly opposed to the current of the blood to interrupt it; that we should cross them, to render their effect more energetic, and increase their number in larger aneurisms, to obtain at once a good number of clots, to afford as it were a framework for the general coagulum; lastly, that it is advantageous to change several times the direction of the currents, in order that the galvanic influence may act in every direction, and thus produce a multitude of filament stretched out to form the basis of a thread of coagulum amidst the mass of the contained blood."—Pp. 737, 738.

The first case in which M. Petrequin succeeded, was an aneurism of the temporal artery, the effect of an injury sustained by a fall from a height. The application of the galvanic current, according to the rules above stated, was kept up for ten or twelve minutes, and at the end of that time the pulsating tumour had become changed to a solid mass: moistened compresses were applied and retained with some turns of a bandage, and the hard knot quickly disappeared.

His second case was an aneurism at the bend of the arm, the effect of venesection. In this case, some amount of coagulation was produced, but, owing to the cowardice and unmanageableness of the patient, the attempt was finally abandoned.

In studying the phenomena of coagulation by a galvanic current, M. Petrequin recommends milk to be employed rather than blood, as affording greater facilities for the exact observation of the circumstances which favour or retard the effect; and the result of his observations, on the best kind of galvanic apparatus for the purpose, is, that a columnar pile, composed of separate small pieces, the number of which can be augmented at pleasure, with bits of cloth interposed moistened with solution of muriate of ammonia, answers best. The importance of attention to all the particulars that can be collected from the cases in which success has been obtained, will be obvious to all those who have in any degree engaged in galvanic experiments.

M. Petrequin next refers to the brilliant success obtained by Ciniselli of Cremona, in a popliteal aneurism, by following the rules laid down by him.

Our author's next case is also an aneurism of the bend of the arm, following venesection; the chief particulars of which are as follows:—

"The patient was an assistant in pharmacy, aged 30, affected with hypertrophy of the heart, whose brachial artery was wounded in venesection, whence a primitive false aneurism resulted. Some months afterwards he applied to M. Petrequin. The aneurismal tumour was then larger than a hen's egg. It was the seat of active pulsations synchronous with the stroke of the heart. By compression of the humeral artery the size of the tumour was diminished, and the pulsations became less evident. M. Petrequin, in the first place, adopted some treatment directed to the mitigation of the symptoms resulting from the disease of the heart.

"In three weeks the galvano-puncture was resorted to: four needles about three inches long were inserted at four opposite points of the tumour, so that their extremities crossed within. The galvanic apparatus used was a pile composed of sixty plates about three inches square, the interposed pieces of cloth being moistened with a solution of sal-ammoniac. The brachial artery was compressed so that the pulsations in the tumour ceased. Two of the needles were then brought into communication with the poles of the apparatus by means of brass wires wrapt round with silk at the points where they were handled. The galvanic current was very intense, and gave brilliant sparks at intervals. The shocks were violent, the patient being held by the assistants

The tumour at first diminished in size: then it seemed to become tense and red, without any increase of density. The patient complained of a burning heat at the points where

the needles were inserted, and around each there was a slight cauterization. In ten minutes the density of the tumour began to increase; there were evidently nuclei of coagulation already formed. The current was still kept up alternated through each pair of needles. In fifteen minutes the tumour felt hard, and no pulsation was discoverable even when the artery ceased to be compressed. For five minutes more the current was kept up, and then the needles being removed, compression was applied to the artery, and a bladder filled with ice placed on the tumour. For the first few days the tumour progressively diminished, without any unpleasant occurrence—then inflammation of the aneurismal sac arose, accompanied with dull pains. The punctures made by the needles showed black sphacelated points, rendering a fetid pus, and small blackish masses, the debris of the coagulated blood in a semi-organized state. Thus, the sac became inflamed and suppurated, emptying itself by the apertures made by the needles. The suppuration lasted a few days, and the exit of the pus was favoured by a slight compression. Twelve days after the galvano-puncture, it was ascertained that the tumour had completely disappeared—that there was no longer any trace of the aneurism—and that the circulation in the radial and ulnar arteries was restored. On examination it was discovered that the brachial artery was very superficial, and that a second brachial artery ran deeper and posterior to that which was wounded.

Our author ascribes the inflammatory symptoms which arose in this case, to the want of an isolating coating on the needles at the time of the operation.

M. Petrequin's next case is one of popliteal aneurism, in which the cure was effected without any unpleasant accompaniment. The needles were applied exactly as in the last case, with the exception that they were covered with an isolating coating in the middle part. The galvanic current was kept up for sixteen minutes, at the end of which time the tumour had become hard; the pulsation had ceased, and no arterial sound could be heard; the skin was neither red nor tense, except that there was a slight rose-coloured areola, of small extent, around the needles. The patient made no complaint during the operation. The tumour progressively declined in size, though, at the time of his dismissal, nearly a month after the operation, it was still of the size of a small egg; before the operation, it was the size of the fist.

The next case is also one of popliteal aneurism, which M. Petrequin cites from the Milan Medical Gazette, as treated by Favale of Naples. The cure was complete; the skin, however, inflamed and suppurated; it is not stated whether or not the middle part of the needles had received the isolating coating.

The last case contained in M. Petrequin's memoir, is one of aneurism at the bend of the arm, the effect of venesection. In this case the plan of proceeding was the same, and the success complete. The report extends only to the ninth day after the operation; but up to that time nothing untoward had occurred.

M. Petrequin suggests the employment of the galvano-puncture in some other diseases besides aneurism; for example, in varix, erectile tumours, sanguineous tumours, &c. As a sequel to our author's memoir, we present our readers with an account of the effect of galvano-puncture on varicose veins by Milani; and the paper referred to above, on the power of simple acupuncture in the obliteration of arteries. It appears there was an earlier paper on the effect of galvano-puncture in varix, by J. Bertoni, in the July number of the *Gazzetta di Milano*.

CLOSURE OF SEVERAL VARICES OF THE LEFT LEG, BY MEANS OF THE ELECTRO-PUNCTURE.

By Dr. MILANI, of Varese.

The patient was an organ-builder, fifty-five years of age, of a healthy and robust constitution, who went into the hos-

pital at Varese, on the 2d of August, 1846, to be cured of varix, which caused him so much pain as to prevent him from following his occupation. It had existed for four years. The whole of the internal saphena was considerably dilated, and presented ten different knots, some as large as a small nut, others about the size of a bean, while some smaller ones extended from the internal malleolus, to two fingers' breadth below the knee. The trunk of the saphena continued enlarged to about the inferior third of the thigh. A considerable knot could besides be distinguished at the external and upper part of the calf. Animated by the favourable result which he had seen to follow the application of electricity by M. Ciniselli, to a large popliteal aneurism, Dr. Milani, determined to try it in this case. Having prepared a voltaic pile of twenty-six discs, of about two inches in diameter, he introduced two needles into the tumour situated at the inner and middle part of the calf, and having previously applied two ligatures firmly around the leg, above and below the tumour, united the needles with two poles of the battery, by means of a copper-wire silvered over. The sitting lasted twelve minutes. The patient experienced, at first, a considerable shock, which became afterwards gradually less, with a continued sensation of pricking and burning. The tumour withered, became small, and however much the saphena and its branches were compressed above it, it could not be made to increase more in size. In its interior there could be felt with the finger a degree of hardness, especially around the needle communicating with the zinc pole. Vinegar and water was afterwards ordered as a lotion to the whole of the leg. On the fourth, the electricity was applied to the trunk of the saphena, two inches above the knee, but the number of the piles having been increased to thirty-one, and the patient, not being able to support the shock, five were removed. In the third application, made about the middle of the leg, the wires were passed through the eyes of the needles. There were twenty-four pairs of plates, and they were allowed to act for fifteen minutes, in which time there were formed clots which extended two or three inches upwards, along the saphena, in the form of firm cylinders, and of unequal hardness. The fourth application was made to a varix higher up than the former. In four minutes hardness could be felt in the tumour, chiefly around the zinc needle. In nine minutes, the clot extended a finger's breadth towards the lower part. The sixth, seventh, eighth and ninth applications lasted fifteen minutes, and gave the same results. In the last application, the needles were fixed in two neighbouring tumours. In eight minutes, clots were formed around the zinc pole, but the blood remained fluid around the copper pole. It was then determined to change the needles, introducing the first in the place of the second, and *vice versa*. In seven minutes, the other tumour, of the size of a filbert, was also closed up. At all the other times, it was only the zinc needle which offered any resistance in withdrawing it, but this time also the copper one was the same. By these means, the whole of the varices had disappeared in ten days.

Although the two points of the needles never touched each other, and sometimes were placed at a distance of an inch from one another, there never could be prevented from taking place a superficial cauterization of the skin, in the form of an areola around the two needles, always larger around the zinc one. Not even a plaster of wax, having only a small hole for the penetrating point, could prevent this occurrence. The treatment was supposed to be assisted by fomentations along the whole of the leg.

A varix of the size of a goose-egg, on the internal malleolus of the left leg of another patient, was filled with clot after two applications, and diminished to two-thirds of its size.—*Monthly Journ. Med. Sci.*, from *Gazzetta Med. di Milano*, 29th Aug., 1846.

MIDWIFERY.

CHARACTER OF THE BLOOD IN MALIGNANT AFFECTIONS OF THE UTERUS.

It has long been a matter of uncertainty whether in cancerous disease the blood undergoes a peculiar and constant change in its composition or its quality. The subject is one of considerable importance, and has latterly engaged the attention of Heller, who has examined carefully both the chemical composition and the microscopical characters of this fluid, in persons affected with carcinomatous diseases. It has been recently stated by Engel that the blood in cancer undergoes a pathological change which consists chiefly in the development of an excessive quantity of albumen, whilst in tuberculous diseases the fibrine is the element which is in excess both in the blood and in the morbid material poured out. This statement, however, is in the opinion of Heller merely hypothetical, and is based on evidence furnished by no direct chemical analysis, which alone can determine the question. Heller therefore took advantage of several cases of malignant affection of the uterus and vagina, which fell under his notice, and he examined carefully the blood passed by flooding, as also portions drawn directly from the arm. Omitting the particulars of the various cases, the general results only to which his researches led him, need be here stated.

His microscopical examination of the blood proved the following chief points: 1st. That the blood corpuscles in cancerous disease always present a great variety in their size, some of them being smaller than natural, and others considerably above the average size; some are even three times larger than ordinary. The smaller ones are usually finely indented, granulated, or mulberry-like; the larger ones invariably smooth. This variety in size of the blood corpuscles, though always present in the blood in cancerous disease, is not peculiar to this kind of blood, for it also occurs in blood which contains pus. 2. That when blood is examined according to the method employed for the detection of pus in it, peculiar cells may be found in it, which correspond in form and other peculiarities to the ordinary cells of cancer. This is a fact which had not been hitherto made out, but about which there is now no doubt. 3. That in addition to the above peculiarities, there are observed by the microscope minute bodies of a more or less crystalline form, and possessed of a bright golden-yellow metallic lustre, which are most distinctly seen on darkening the field of the microscope. When viewed by transmitted light they appear in part colourless or yellowish, and in part of a bluish tint, showing a play of colours. These peculiar glittering particles may in most cases be distinguished with the naked eye after the blood has coagulated, appearing either as golden pellicles in the clot, or as glittering particles floating in the serum.

The chemical analysis of the blood furnished results equally decided in their nature. In the first place there was observed a constant, absolute, and relative increase in the quantity of fibrine, both in the hemorrhagic blood as well as in that withdrawn by venesection. The quantity of fibrine varied, and this variety was most marked in the metrorrhagic blood; sometimes in this latter the quantity amounted to as much as 13.42 parts in 1000; in one case even to 16.44 parts. In the blood drawn from a vein the quantity was always above natural, yet seldom greatly exceeded three parts in a 1000. On comparing the quantity of fibrine in the blood discharged by hemorrhage from the uterus with that in the blood drawn by venesection, it would seem as if nature was endeavouring to get rid of a portion of excessively fibrinated blood by a spontaneous discharge from the uterus of blood loaded with fibrine. The albumen was presented in its normal quantity, or if anything rather below it, so that there are no grounds for regarding the cancerous diathesis as an albuminous one, or for considering the cancerous material as composed of albumen. The quantity of blood corpuscles was always very small, both in the hemorrhagic blood as well as in that drawn from a vein. Sometimes the disposition of corpuscles was so great that complete anæmia of the body was found after death.

The view, therefore, that the cancerous diathesis, is an albuminous one; and therefore opposed to the tuberculous diathesis, which is a fibrinous one, is completely erroneous, for the quantity of fibrine in the blood in cancerous affections is always in excess and the diathesis therefore in such cases should be regarded as a

fibrinous one, just as it is in tuberculous disease, where also an excess of fibrine (together with a diminution of red corpuscles), prevails in the blood.

This is another argument against the view of antagonism, which has been stated, though without good foundation, to exist between the cancerous and tuberculous diathesis.—*Lond. Med. Gaz.*, from *Heller's Archiev.*, 1846.

VOMITING OF PREGNANT WOMEN.

Dr. Stackler has communicated to the Medical Society of the Bas Rhin, two cases of obstinate vomiting, in pregnant women, in which the symptoms yielded to the black oxide of mercury, given in the dose of five centigrammes (three quarters of a grain) daily. There was not the least trace of salivation, nor any other inconvenience, after the use of this medicine. Dr. Jauger referred to cases of hysterical convulsions, and vomitings, sympathetic with the condition of the uterus, which had been cured by the black oxide of mercury. According to the physician, the medicine is equally appropriate in irritated states of the organ, whether in pregnancy or otherwise. Should further experience confirm this property of the black oxide of mercury, its importance will be readily comprehended by those who recollect how extremely severe are the obstinate vomitings with which females are occasionally attacked during gestation. Professor Forget took occasion of the communication of Dr. Stackler, to quote the case of a woman, who had been reduced to the last degree of emaciation by these nervous vomitings, and, at length, died, during the sixth month of pregnancy.—*Prov. Med. and Surg. Jour.* July 1, 1846, from *Gaz. Med. de Strasbourg*.

MATERIA MEDICA AND PHARMACY.

OBSERVATIONS ON COLCHICUM.

By M. DONOVAN, Esq.

The effects which colchicum produces on the human body are now well ascertained, although the mode of preparation, and the parts of the plant to be preferred, are not yet agreed on. Some prefer the dried bulb, some the recent bulb; one employs the wine of the bulb, another the vinegar of it, another the extract made by evaporating the vinegar; the oxymel has even been a favorite; but the seeds appear to be most generally approved of.

Before the grounds of preference can be understood, it is to be inquired how far the drying of the colchicum bulb interferes with its powers. Analogy tends to render it probable that the efficacy is impaired. Other bulbs, as garlic, onions, leeks, &c., are not only altered by drying, but rendered altogether destitute of these stimulating qualities for which they are valued. Squill, it is true, is not rendered powerless by drying, but its activity is certainly lessened. Dr. A. T. Thomson says:—"The acrimony on which its virtue depends is partially dissipated by drying and long keeping, and completely destroyed by any heat above 212 deg." If the colchicum be injured by drying, how much more so must be the acetous extract, in the preparation of which, unless a steam bath be employed, the heat rises above 212 deg. The vinum colchici of the three British pharmacopœias is made from the dried bulbs, and therefore must be of inferior efficacy.

I believe the most efficacious preparation of the bulb is the wine produced from it in its recent and undried state, as recommended by the late Sir Everard Home, who published three papers on it in the *Philosophical Transactions* for 1816 and 1817. In these papers he has given an account of its preparation, and of its effects, therapeutic and physiological. He directs two pounds of the recent bulbs, undried, to be macerated with twenty-four ounces of sherry wine in a gentle heat for six days.

He convinced himself by repeated trials, that this vinum colchici operates in every respect like the eau medicinale in removing the pains of gout. In his own case the symptoms disappeared in six hours after taking the remedy; but with other persons they did not go off for twelve hours, or even twenty-four. He found that, like the eau medicinale, it diminished the frequency of the pulse 10 or 20 beats in a minute, in twelve hours after taking the dose; and this he considers the criterion by which we may ascertain that the constitution is under its influence.

With regard to the *modus operandi* of colchicum, he conceives that it produces its effects on the circulation, and not on the stomach. This he ascertained in the following manner:—Thirty drops of colchicum wine were injected into the circulation, through the jugular vein, of a dog. The pulse increased 40 beats in a minute, and intermitted: in seven hours, he had a motion, and was well. In another experiment, the same dog got a double dose by the jugular, which produced much languor; but he recovered.

He says that the effects on the dog were the same as on himself. In a violent fit of gout, he took sixty drops of eau medicinale, which he considers the same as wine of colchicum. He soon became hot and thirsty; in three hours, the pain was much diminished; in seven hours, nausea came on; his pulse, which was naturally 80, fell to 60, and intermitted: and he became languid; but next day he was quite recovered.

In another experiment Sir E. Home injected 160 drops of colchicum wine into the jugular of a dog: the animal instantly lost all power of voluntary motion; the breathing became slow; and the pulse was scarcely to be felt. In two hours, the pulse rose from 80 to 150. In five hours after, he became very languid, and the pulse was very weak: he vomited some bloody mucous and died. The stomach and duodenum were found in a high state of inflammation. These facts Sir E. Home conceives to prove that the effects are exerted on the circulation, and not on the stomach, in the same way as every poison is known first to enter the circulation, before it specifically affects particular parts.

At the suggestion of Sir E. Home, these experiments on dogs were repeated, with eau medicinale in place of colchicum, by Mr. Gatcombe: and the results were nearly the same; which is a still further evidence of the identity of these two medicines.

The colchicum bulb, Sir E. Home says, contains both extractive and mucilage, both of which wine, in the first instance, takes up; but when the liquor is strained and allowed to stand, a considerable deposit is almost immediately separated.

This deposit he found to be not only active but virulent; six grains of it given to a dog, by the mouth, produced vomiting and purging which continued for twenty-four hours, the latter evacuations of both kinds being tinged with blood.

Coinciding with the supposed identity of the eau medicinale, which also lets fall a deposit, Sir E. Home concludes, from some experiments, that this remedy, when it contains the deposit suspended in it, produces double the irritation on the stomach and intestines that the clear vinum colchici does. He found that in an instance where he took a dose of eau medicinale, without having shaken the bottle, it was mild in its effects; but that the other half, which contained the deposit, when swallowed, on a different occasion, was very severe.

When the deposit is separated from wine of colchicum, he found that it by no means becomes inert. On the contrary, the filtered wine cured a person, on whom it was tried, of a fit of the gout, as well as if it had been in it.

These facts are of great importance, and require to be attended to in the use of this medicine; for we can separate the vomiting and purging portion from that portion which only exerts a specific action on the gout, by removing the

deposit from the eau medicinale or colchicum wine according to the conditions of the patient's case; and this is more necessary in the use of the eau medicinale, as its violence has in some cases proved fatal.

The sale of eau medicinale was some years since prohibited in France on account of a nefarious use to which it had been applied.

The deposit is most probably, as Sir E. Home and Mr. Brande suppose, a substance analogous to the deposit which settles from the juice of the wild cucumber named elaterium. This once separated, the juice becomes, like the filtered colchicum wine, mild in its operation.

Sir Joseph Banks, convinced by the evidence contained in these papers of Sir Everard Home, that the vinum colchici, from which the deposit has been removed, must be a less hurtful medicine than the eau medicinale, thought it a duty to himself and the public to make trial of it. When the gout in his left hand and in the joints of that side of the body was very severe, he allowed Sir Everard Home to give him ninety drops of the vinum colchici, and found that the symptoms of gout were sooner and more completely removed than they had ever been by the eau medicinale of which he had experience during seven years, having taken it regularly, and kept a regular account of the doses, their effects, and the intervals between them.

When the variable strength of the different preparations of colchicum, arising from age, climate, soil, season, and manipulation is considered, it becomes a question whether it might not be better to reject them all, and to introduce exclusively into the materia medica the active principle of the plant. Indeed this idea has been already acted on in Italy. Professor Quadri recommends the employment of a proximate principle discovered by him in colchicum, which he calls colchicina, and which he found most useful in gout, and less inconvenient than the bulb.—(*Annali Universali di Medicina da Omodei* 61, 410.) The production of known effects from a known dose would thus be as certainly ensured as in the case of any other medicine. Another advantage would be that inasmuch as the true antarthritic powers of the bulb cannot be always brought to bear on the disease on account of the veratrica, which Pelletier and Caventou proved it to contain, we could then increase the dose without any second source of apprehension.

Colchicina possesses great energy. MM. Geiger and Hesse administered one-tenth of a grain to a cat, eight weeks old, which killed the animal in twelve hours, after varied and excessive suffering. The stomach and intestines were found violently inflamed.—(*Journal de Pharmacie*, xx. 164.)

Until this change is made, the best preparation of the bulb is undoubtedly Sir Everard Home's wine, made from the fresh bulb, dug at the end of July, sliced thin, and the slices, as fast as cut, instantly thrown into the wine.

It is a common practice with physicians, in this country, to direct wine of the seeds of colchicum in their prescriptions, as if it were official in our pharmacopœias. But no such preparation is in them; and the misconception, so very general on this subject, is productive of much uncertainty and inconvenience to the apothecary. The vinum colchici of the pharmacopœias, as already remarked, is made from the dried bulbs, not from the seeds: from the latter, a tincture is made, and as it is one of great power there ought to be no confusion connected with it.

I have known the seeds beaten into a mass with mucilage (a work of no small labour) and formed into pills, to act as a brisk cathartic, and to give complete relief in facial neuralgia.

The acetum colchici of the pharmacopœias, neutralized with magnesia, and holding dissolved some sulphate of magnesia, is recommended by Sir C. Scudamore, in his treatise on Gout, as the best formula. He says the combination is offensive to the stomach, and certain in its effects on the

bowels. The dose recommended by him is half a drachm to one drachm and a half; and this he says never produces constitutional nervousness. I have taken two ounces, however, of the aectum colchici, within six hours, at two equal doses, without any other result than an intermitting pulse. A gentleman labouring under gout, took, on my assurance of the feebleness of this preparation, no less than eighteen drachms of it, in divided doses, every day, for six days, without any obvious effects.

Should Sir Everard Home's wine of colchicum ever come into use, and his authority ought to be sufficient warrant for its introduction, the apothecary should keep it in two states, one with the deposit, and the other without it.—*Dublin Medical Press.*

ON EXTRACT OF INDIAN HEMP.

Transactions of the Pharmaceutical Society.

By ANDREW ROBERTSON, Esq., Professor of Chemistry to the Medical College, Calcutta.

A number of pounds of the extract of hemp were prepared by me—I think upwards of thirty in all—for the purpose of having its medical properties fully tested by European medical men. A quantity went to Paris, another to Berlin, another to London, sent by different parties, and for my share of the matter I sent four pounds of it to Scotland, part of which went to you. I do not care about making more of it, as its preparation is most tedious and troublesome, in which I was tormented by the excise regulations of the country, for both the plant and the spirits used are the subject of heavy duties and stringent precautions, and the cost price of the extract to me, counting nothing for trouble, was fully 15s per lb. Dr O'Shaughnessy made his extract with alcohol, in a Papin's digester, at a heat above the boiling point of alcohol—the extract so obtained is brown; mine is of a deep green, and gives a grass-green tincture to alcohol, and has six times the activity of the brown, as ascertained by trial on hospital patients. If a speedy effect is desired it is given as a tincture; if a deferred and protracted, as a pill.

As the process by which it was prepared is an idea of my own, since copied by others, and which probably may be claimed by them afterwards, I may mention it to you. It is a variation of the process of percolation, alcohol in vapour being the agent. A still was charged with strong spirits, and its nose introduced into the side of a cask in which the plant was pushed.

The vapour of the alcohol, and alcohol at a boiling heat thus acted on the plant, instead of cold alcohol in the usual mode of percolation. First issued a thin, tarry matter containing much resin latterly, a brown liquor containing little resin but much extractive. At this point water was substituted for the spirit in the still and as much as possible of the spirit retained by the plant thus expelled from it. From the bottom of the cask a pipe led to a common condensing worm. Part of the alcohol was recovered from the fluid by distillation, the rest dissipated by evaporation in Wedgewood ware on a sand-bath not exceeding the temperature of 150° deg. Fahr. One hundred weight of the plant was used at one operation, and about eight pounds of extract obtained. The operation was conducted so slowly in all its stages as to last a fortnight.

The extract of hemp has long been known in the East, in a most widely extended range of countries, under the names of Guinjali, Churrus, Hashish, Beng or Bang, the emerald cup of Haider, &c., and under every name renowned for its exciting and narcotic qualities. It is used by the natives here in the same way as opium is by the Chinese, and on that account is the object of fiscal regulations and duties. It is known throughout all India, Arabia, Syria, and Egypt. You will find it in the *Arabian Nights*, translated by Lane, under the name of Beng, as the narcotic used by Haroun Al Rashid, and others. There cannot, therefore, be a doubt that it is a drug nearly as active as opium.

The inactivity of the drug; therefore, prepared in Britain I can attribute only to faulty preparation and overheating or to its being made from old and decayed plants. The good plant is of a greenish brown, the heads loaded with a sticky resin; the bad is palish brown and does not adhere to the fingers. The good ex-

tract gives a grass-green tincture, the bad a brownish. My extract was made from dried plants of good quality, as it cannot be readily obtained fresh in Calcutta.

Mr. Fordred stated, that it had recently come to his knowledge that some of the extract, sold in London as extract of Indian hemp, was made from the plant grown in the neighbourhood of London, and he believed possessed but little, if any, of the narcotic properties of the Indian plant. The extract made from the hemp (*Cannabis sativa*) grown at Mitcham, was of a green colour, and being apparently an aqueous extract contained but little resin, while that prepared from the plant grown in India contained a large proportion of resin. He thought it important, as many medical practitioners in different parts of the country were trying the efficacy of this remedy, that they should be cautioned to be particular in obtaining the extract of the *Indian* hemp.

Mr. Redwood said, that much of the extract made from the hemp plant imported from India, as well as the extract which had been imported ready made, was found to possess but little narcotic power when tried in this country; certainly they had not realized the expectations which were formed from the accounts of its action given by medical men in India. Dr. O'Shaughnessy, when last in this country had admitted that the extract, even some that he had brought from India himself, had failed to produce the effects he anticipated when tried in our hospitals: and he had undertaken, on his return to India, to have some extract very carefully prepared, and sent over to this country. Mr. Squire had received a quantity of this extract, and he presumed it was that alluded to in the paper just read, as having been made by Mr. Robertson.

Mr. Barlett had witnessed the effect of a very small dose of extract of Indian hemp, obtained from Mr. Squire, on one of his assistants, and the action was that of a powerful narcotic. The young man stated that he felt all the symptoms of intoxication.

Dr. Ure had been recommended the use of the extract of hemp by his son; but although he tried it for some time, he never experienced the slightest effect from it. The extract was the same as the above, having been obtained from Mr. Squire.

The Chairman thought that the present state of medical knowledge, in reference to the action of Indian hemp, was very unsatisfactory and imperfect.—*Dublin Med. Press.*

UPON THE EFFICACY AND MODE OF ADMINISTRATION OF BELLADONNA AND ATROPIA.

By W. R. WILDE, M.R.I.A., Surgeon to St. Mark's Ophthalmic Hospital.

One of the greatest improvements in the oculist's materia medica of late years has been the introduction of the alkaloid denominated Atropia, which, we believe, we were the first to introduce into practice in this city, upwards of two years ago. It was procured for us by Messrs. Bowley and Evans, who have solutions of it according to our formulae, of the following strengths: one grain, two grains, and three grains, to one drachm of distilled water, and three drops of spirits of wine, and numbered 1, 2, and 3. The salt is rendered soluble by the addition of a drop of dilute nitric acid, and the spirit is added to make the solution keep.

A single drop of number 1 placed upon the conjunctiva of the lower lid (where it causes neither pain nor irritation,) in a healthy eye, dilated the pupil, in a period of time varying from five to fifteen minutes, to double, or even more than the ordinary medium size, and will retain it so, upon the average, from four to five days; at which period it generally begins to contract, but the pupil does not fully regain its previous size, nor the iris its mobility, till the sixth or seventh day. There will be, no doubt, exceptions to this rule, particularly in cases where there may be such an idiosyncrasy present as would render the eye susceptible to the action of the atropia belladonna used in any form, and perhaps keep the pupil permanently dilated for months. To counteract this effect of the solution, number 1, we have employed upon the second and third day after its application those remedies which generally excite the pupil to contract, such as sudden exposure to strong light, the application of electro-magnetism, the use of opium, and the application of the viscus tincture of that medicine upon the conjunctiva; but each and all these means failed to lessen the size of the pupil, in many instances, until the

end of the third, or fourth, or fifth days. Solutions number 2 and 3 produce a more decided effect upon the iris, and in a shorter space of time, and retain the pupil dilated for a long period—even to the eighth or tenth day. When the object is to keep the pupil in a state of permanent dilatation, as in cases of iritis and aquo-capsulitis, as well as to try and break up recent adhesions between the iris and lens, or to withdraw the iris from protruding through an aperture caused by a wound or ulcer near the centre of the cornea; in all cases of central cataract; where the cornea is opaque in its central portion, or that a portion of the pupillary margin of the iris is attached to the back of the cornea, after the distension of a cataract; or, in fact, in any case in which we wish to produce permanent or complete dilatation of the iris, the solution of atropia will be found much more efficacious than the usual mode of applying the extract of belladonna externally. It is, moreover, much more cleanly, and is not liable to the objection urged against the latter, of producing an unpleasant eruption around the brow on which it is applied, and it is preferable to the ordinary mode of placing a few drops of the solution of the extract between the palpebre, inasmuch as it causes no pain nor irritation.

In cases, however, where there is much conjunctivitis, or even deeper seated inflammation, attended with lachrymation, present, it does not possess the immediate and marked power over the iris which it does in the healthy eye, and its effects pass off much sooner; and this remark is applicable even to the three-grain solution. It is possible that in such cases the mucous discharge, and particularly the lachrymation which is present, may dilute it too much, or the morbid irritability and increased vascularity of the organ may render it less susceptible of the local application of this remedy than it would be in an otherwise healthy condition, therefore, in cases of violent iritic inflammation, the syphilitic, for instance, where the disease had considerably advanced, and extensive exudations of lymph had taken place, we would not solely depend upon the atropia solution, but likewise apply the extract round the orbit. In cases of recent protrusion of the iris through the central portion of the cornea, the result either of injury, or rupture from ulceration, &c., and when there was no great irritability and blepharospasmus present, we have applied the strong atropia solution externally, by means of a small portion of linen rag wet with it, and retained for a short time upon the closed eyelids, with the most happy results.

We may here remark that the benefits arising from dilatation of the pupil have not been sufficiently attended to in the general treatment of ulcers of the cornea. We have, on several occasions lately, been able not only to save the eye, but even to prevent adhesions between the cornea and iris (*synechia anterior*), and consequent blemish, by means of the judicious application of the preparations of belladonna. In cases of rupture from ulceration, which we have seen the patient shortly after the rupture occurred—and in many of those instances horns of the iris had absolutely taken place—we at once applied the atropia solution, closed the lids, kept them in that condition with isinglass plaster, and then applied a large pledget of lint smeared with the extract of belladonna over the eye and brow, and retained it in position by a light bandage, at the same time that we employed, when necessary, local depletion by means of leeches on the temples and over the malar bone, together with blistering, and constitutional treatment calculated to lower the inflammation and prevent the further spreading of the sloughy or ulcerative process in the cornea. We kept the eye covered up in this state for thirty-six or forty-eight hours, and have had, in most instances, the satisfaction of finding, when we came to examine the eye, that the iris had been withdrawn from the wound, the pupil had dilated, and the cornea had united.

There are, however, certain cases in which the use of atropia is inadmissible, namely, in examining the eye for cataract; where we do not wish the dilatation of the pupil to continue longer than a few hours, if possible. In cases where we wish to dilate the pupil before we perform the operation for absorption of the lens, we have more than once seen unpleasant consequences result after this manner. It is well known to operative ophthalmic surgeons, that after the dilatation with the ordinary belladonna extract or infusion; the iris will, during the operation of keratonyxis, partially contract, either from the loss of a few drops of aqueous humour, or from its irritability being excited by the side of flat of the needle touching the margin of the pupil, or from

the cataractous lens, whole or in a broken condition, pressing against it: and this condition is rather serviceable than otherwise, for should the lens be inclined to start from its bed, and press forward through the pupil into the anterior chamber, the iris acts as a partition to keep it in its place; while in a few hours the aqueous fluid is regenerated, the iris falls back into its natural position, and can afterwards be kept dilated by the continued external application of the belladonna.

If, however, the pupil has been previously dilated by the atropia, it is thoroughly immoveable, and the lens is liable either to press into it or become dislocated, and get into the anterior chamber. This latter accident occurred to us some time since, in breaking up the lens for congenital cataract. We had ordered a solution (No. 2) of atropia to be dropped into the eye the night previously, and on arriving in the morning we found the iris reduced to a mere ring. The child struggled a good deal, and a few drops of the aqueous liquid were lost during the operation, which consisted in a mere crucial incision into the capsule. On withdrawing the needle we remarked that there was no contraction of the pupil, into which the lens pressed. On visiting the child in the evening it had been so uneasy and complained so much of pain, and there was so much lachrymation present, that we were induced to remove the bandage and examine the eye. The cornea was found to have become plump, from the regeneration of the aqueous fluid, but the iris had remained immoveable, and the lens had started into the anterior chamber, where it caused considerable irritation and subsequent inflammation. It absorbed completely, however, without a second operation, and in a much shorter time than usual.

In cases of photophobia following cataract and other operations on the eye, and attended with myosis, which had resisted the continued external application of belladonna, as well as the strong atropia solution dropped into the eye, we have found the most marked beneficial effects result from the internal administration of the extract of belladonna, given in the form of solution, to the amount of the sixteenth of a grain, from three to five times a day. This, in the course of thirty-six or forty-eight hours has seldom failed to relieve the pain and intolerance of light, and also to dilate the pupil as far as possible.

In neuralgic affections of the eye, characterised by pain of a burning description coming on at a particular, and often regular intervals, sometimes at particular hours of the day, yet induced by reading or using the eye in any fine work, and unattended with inflammation or any apparent alteration in the texture or motion of the organ, &c. &c., in which rest, change of air, tonics of various descriptions, particularly iron, and other means, had failed, we have latterly administered belladonna internally, with the very best effect, in doses varying from the sixteenth to the sixth of a grain three times a day, given in the form of a solution. It may appear strange, but it is nevertheless true, that in some cases of old and inveterate photophobia, as in that form accompanying pannus, or the ophthalmia attended by vascular cornea in discharged soldiers, the internal use of belladonna will be found most efficacious.

We quote the following from a recent Number of the *Gazette des Hôpitaux*: "For a long time M. Berrard has employed in his practice at La Pitie, in place of the extract of belladonna, collyria containing the active principle of belladonna, atropia. This substance, signalized for the first time by M. Brandes, who had not, however, obtained it in its pure state, but since isolated by MM. Meire and Seines, presents many advantages over the extract of belladonna: first, by acting with extreme rapidity in dilating the pupil, and by being endowed with great energy, sufficient to produce its effect in a solution of 0.05 or 0.10, in twenty grammes of distilled water, possibly a consideration of little importance in an hospital, but of great value in private practice in enabling one to avoid the employment of black unguents, which disfigure so much, and for which some patients, particularly females, have a great repugnance."—*Dub. Quart. Journ. of Med. Science.*

METHOD OF MAKING LEECHES BITE.

Dr. Boursier says, that by placing leeches in a mixture of two parts of wine and one of water, they are in a few minutes very active, and take hold instantly; and that if they are gorged with blood, they disgorge themselves and will draw again.—*Journ. de Chimie Méd.*

MISCELLANEOUS.

COMPENSATION FOR POST-MORTEM EXAMINATIONS.

In our last number, p. 533, will be found the opinion of the Hon. Judge Ellis Lewis, affirming the right of a physician to compensation for making a post-mortem examination at the request of a coroner. We now lay before our readers the opinion of Chief Justice Gibson, as delivered in a case recently tried at Pittsburgh, in the Supreme Court of the Western District of Pennsylvania.

Dr. George Watt, of Pittsburgh, was called upon by the coroner, in two separate instances, to make official examination of dead bodies, upon which inquests were held.

For this service he charges the county fifteen dollars in each case; the County Commissioners declined to pay the bill, on the ground that the coroner had no power to contract for the county in such cases, and that no compensation for such services had been provided for in the fee bill by the legislature; and that they had no power to pay out the county funds, except where expressly empowered to do so by act of Assembly, and that there was no precedent to justify such an expenditure, and resisted the payment that the matter might be litigated and the question settled.

The Doctor then brought suit, and obtained judgment before an Alderman, and afterwards in the Court of Common Pleas; the cause was then removed by the Commissioners, by writ of error, to the Supreme Court, which Court affirmed the judgment of the Court below. The cause was conducted by Thomas Mellon and John Barton.

The following is the opinion of the Supreme Court, which was delivered by Gibson, Chief Justice.

Dr. George Watt vs. The County of Allegheny.—Had the plaintiff below attended merely as a witness, though as an expert, he would have been entitled to nothing; for as the law provides no compensation for witnesses summoned by the Coroner, they must give their attendance gratis; and to allow the plaintiff as a witness, even the compensation allowed to witnesses in other cases, would be an infraction of the fee bill. But he was not called as a witness. When the testimony before the inquest was closed, it seems the jurors, being unable to agree as to the cause of the death, requested a post-mortem examination, which was made by the plaintiff to their presence, who expelled their doubts by the application of chemical tests in the contents of the stomach. In this he performed not the office of a witness, but the business of a person employed in a particular service. The Coroner might have compelled him to swear to his opinion on a superficial view of the body, but he could not have compelled him to touch it, or to do the more nauseous or dangerous work of opening it. The service he performed, though necessary to the purpose of the inquest, which could not have been effected without it, was not official; and consequently not in the contemplation of the Legislature at the forming of the fee bill; so that compensation for it is neither enjoined nor prohibited by that or any other statute. But though spontaneously rendered, both justice and policy require it to be paid for by the county, if it was rendered at the public instance and request; and the question is whether the Coroner, as a public agent, had authority to employ the plaintiff at the public charge. That officer certainly has authority to pledge the responsibility of the county for the compensation of all incidental services which are necessary for the execution of his office, and which he could by no other means command.—When his duty requires him to disinter a body, for instance, he cannot be expected to do it with his own hands, or by hands paid for with his means. True he is entitled to fees, but not for mercenary services, and what he does receive is given for particular acts of official duties, not as a fund for contingent expenses. To the taking of every inquisition *super visum corpus*, perhaps without exception, a post-mortem examination is indispensable, and as the fees of the Coroner would be inadequate to the expense, if he was willing to forego compensation for his own services, either the public purse must pay for it, or the administration of public justice must suffer for the want of it.

And why should not the county pay for it?—On the principle of the Commissioners *vs. Hall*, 7 Watts, p. 290, the county would be liable for the medical treatment of a person taken ill upon trial, or as a juror in the box; and it would be strange if it should

not be equally liable for professional services in the administration of public justice by the coroner, who is also a judicial magistrate, and competent at the common law, though the power has been taken away by statute, not only to receive accusations but to try them. Even prisoners in the county jail are provided with medical treatment, though the statute does not expressly direct them to be provided with anything but clothing and food; yet they are supplied with bedding, fuel, and all other comforts proper for their condition.

There are a thousand contingent items of expenditure which cannot be disposed of specifically in a fee bill by special appropriation, and which must necessarily be charged to the account of humanity or justice. The coroner in this case had as much authority to order a post-mortem examination at the public charge, as the Court had to order boarding and lodging for the jury in the case of Commissioners *vs. Hall*. Each was employed in taking an inquisition of death, and each have the same collateral power in things incidental to the office. The plaintiff having been employed by the coroner was employed by the county; and he is entitled to a reasonable compensation. Judgment affirmed.—*American Journal of Medical Science.*

ENCOURAGEMENT OF QUACKERY BY MINISTERS OF THE GOSPEL.

The patronage and encouragement which quackery receives from ministers of the gospel, has often been made the subject of comment, and of severe animadversion, by medical writers; and its continuance is no less a matter of surprise than regret to those engaged in the cultivation of medical science, and in laudable endeavors to ameliorate the condition of suffering humanity, and to prolong the period of human life. That the conduct of ministers, in this respect, is loudly complained of by the profession, is to be attributed to the facts—first, that from the nature of their calling, and the position which they occupy in society, they have it in their power, and actually “do us much harm;” and science an irreparable injury, by encouraging quackery; second, as they are, generally speaking, men of education, and not unfrequently of science, we have a right to expect better things at their hands; and, third, as ministers and their families are usually attended gratuitously by the faculty, we think it is but reasonable to expect that they will refrain from doing that which is positively injurious to us as individuals, as well as to the profession we practice.—No body of men in our country occupy so enviable a position as do all classes of religious teachers; enjoying, as they do, a prescriptive respect, and being ranked, by common consent, as high as a lady, and above a man. They are looked up to as examples, and their counsel sought, and their advice taken, in secular as well as in ecclesiastical matters, while the sanctity of their calling gives enhanced value to their opinions on whatever subject they are expressed. That such is the case, we rejoice rather than complain, and would not have it otherwise if we could; for no one has a higher regard, or a more profound respect for the persons of ministers, or for the clerical office, than we have; nor has any one better reasons for entertaining such feelings towards them; and we cheerfully admit, that the immense influence which they wield is, generally speaking, exerted in the most decidedly salutary manner. But we are utterly at a loss to know why it is that their conduct, in reference to the most humane of all pursuits—one so near akin to their own calling—should prove so noted an exception; why it is that, so far as medicine is concerned, they are stumbling-blocks in the way of science, and patrons of superstition, error, falsehood, and humbug! In the remarks, therefore, which are to follow on this subject, while we shall speak with all that plainness which the importance of the subject demands, we are influenced by no other feelings than a sense of duty and a regard for truth and science.

That we are correct, then, in the position which we have

assumed, to wit:—that the hydra-headed monster—quackery—is encouraged, and derives increased strength, from the patronage bestowed on it by ministers of the gospel, we appeal to facts, and to the experience of all men. Scarcely is there to be found a quack nostrum advertised in the newspapers, or whose virtues are proclaimed by pamphlet, or hand-bill—claiming to be a universal panacea—which does not come recommended by a certificate from some one, or more, reverend minister, priest, or religious teacher, testifying as to its virtues, and commending it to all who may be suffering with any disease to which flesh is heir. Or, if in any community there happens to be a practitioner of Homeopathy, Hydrophathy, a “faith doctor,” or a Mesmerizer, ten chances to one if the first person who employs him is not one of the reverend gentlemen above named, or, it may be, a Right Reverend himself. Such being the case—and it cannot be denied—we ask if we are not right in assuming that ministers are, *par excellence*, patrons of quackery? We do not believe, for a moment, that their object is to retard the progress of rational medicine; but such is the effect of their conduct, and the injury to science is as great, and they as culpable, as though they were actuated by *malice prepense*. Furthermore, we are willing to believe, and do believe, that in many cases they are influenced by a desire to benefit others; but they cannot, on this account, either be excused or the score of “good intentions.” Paul verily thought that he was doing God’s service, when he stood by and consented to the death of Stephen; but was he any the less guilty on that account? No. Nor are they, who, from ignorance, or from any other cause, inflict an injury on science.

Ministers of the gospel, then, do more than any other class of men to uphold quackery, and, consequently, to retard rational scientific medicine. Why is this? Is it that they are better qualified than other men to form correct opinions on medicinal subjects? We assert the contrary: and hold that they are incapable of arriving at a correct conclusion on any subject pertaining to our science. The very nature of their calling, and the course of their studies, preclude the possibility of such a thing. They have no knowledge of Anatomy, or Physiology, without which it is idle to talk of correct notions on medical subjects; and it is worse than presumption in ministers to bring their opinions on such subjects in competition with those of men who have spent long years in their study and investigation; and such conduct is only calculated to diminish, and does diminish, the respect which is otherwise due to them, and to their sacred calling. But it may perhaps be said, in reply to this, “Surely, any one, whether he be a minister or not, can tell whether a particular remedy has done him good in a given disease?” Even this we are disposed to call in question, and are prepared to show that this cannot always be done. Now, how stands the case? A *soi-disant* Solomon, who is too lazy to gain an honest livelihood by the sweat of his brow, resolves on resorting to his wits, and as medical quackery seems to be the most certain and speedy way of arriving at fortune, he determines to go into it. He accordingly throws together a number of drugs, in the shape of a pill, or mixture, and claims for it extraordinary virtues in the cure of certain diseases. He next sets to work and writes letters, lauding his remedy to the skies, and recommending it in the strongest terms to all “the afflicted”—and to these he appends such names as his fancy may dictate. But this is not sufficient: in order to complete his designs, and give his nostrum free circulation, he must have the certificate of some one, or more, individuals of acknowledged standing and influence. Such persons are to be found in the clerical profession; and perhaps knowing the very great partiality which gentlemen of the cloth have for quackery in general, he waits on the nearest minister, presents him with a box, or bottle, of his nostrum, with the request that he will use it in his own person or

family. In some slight indisposition, the remedy is employed, and recovery, as a matter of course, takes place (perhaps convalescence is retarded instead of hastened by its use); but recovery having followed the swallowing of the medicine it is, of course, attributed to it. The minister is convinced! The cure took place under his own eye; or, it may be, in his own person—how can he doubt? He, therefore, cheerfully complies with the wishes of the quack, and furnishes the desired certificate. Now, under such circumstances, how is it possible for him to say, with any degree of certainty whether nature or the remedy effected the cure? And yet he testifies that it was the latter, and the nostrum goes forth to the world with the sanction of his name, and with his solemn attestation of its superior virtues—to the encouragement of quackery, to the reproach of science, and, we will add, to the shame of the minister, and to the prostitution of his sacred office. This is no fancy sketch, but a true picture. And this is the kind of evidence on which clerical certificates are usually obtained. Do they reason so in reference to other matters? If so, how pitiable is the condition of those who look up to them for religious instruction, and take their *ipse dixit* for gospel truth?

But let us reverse matters, and put a case in point to our reverend friends (we mean no disrespect), and suppose an able and ingenious enemy of the Christian religion were to come out with a work on some theological subject, presenting a fair exterior, and purporting to be on the side of virtue and religion, but on every page of which was distilled the subtle poison of infidelity—the more dangerous, because the more adroitly disguised: suppose, farther, that, in order to recommend his work to popular favor, the author were to procure certificates from physicians in all parts of the country, stating that they had examined the work, and could recommend it to all such as were anxious to have their minds enlightened on the important subject of religion,—it cannot be denied that such recommendation would have its influence, and cause the work to enter thousands of families which it would not otherwise reach. If what we have supposed were really to take place, would not every pulpit, from Maine to Mexico, thunder forth with anthems against the medical profession? They would be charged—and justly charged—with warring against Christianity, and encouraging infidelity. It would be said—and truly said—that, upon a superficial examination of a subject with which they were not at all familiar, they had ventured an opinion to the immediate injury of true religion, but the remote consequences of which no one could foresee. The cases are analogous, and the application obvious.

We have already extended our remarks much further than we at first intended, but we cannot close without saying a few words as to the encouragement which ministers give to the practitioners of the various false systems of medicine—in other words, to quack doctors. The time would fail us if we were to attempt to enumerate all the erroneous systems, pointing out the absurdities of each: we will, therefore, content ourselves, for the present, with a single one—Homeopathy. And, in the first place, we would ask the reverend gentlemen who countenance and employ homeopathic practitioners, if they understand homeopathy, and believe in its doctrines? The fact of their employing them presupposes a belief in, if not an understanding of the system. Now, for the benefit of such, we propose to examine this system for a moment.—The great fundamental principle of homeopathy, is, that infinitesimal doses of medicine—that is to say, that a grain of medicine so minutely subdivided that numbers fail to express its utter nothingness, will act powerfully on the human system! Another of the principles of this *beautiful and philosophical* system is, that a medicine, when thus minutely subdivided—for example, a grain of sulphur dissolved in one of our northern lakes; if a small quantity of the solution be collected in a bottle, that its strength will be

increased in a corresponding degree by simply shaking the bottle. Hahnemann gives minute directions on this subject, and gravely cautions his followers to be careful lest they give the bottle a shake or two too many, and thereby increase the strength of the medicine to such an extent as to endanger the life of their patient! Now, we wish to know of our reverend friends, patrons of homœopathy, if they do, or can believe these monstrous absurdities? And yet, if homœopathy be true, these things are so; and the fact of their encouraging the system implies that they believe them. But is it not absolutely insulting to the understanding of a rational man, to attempt to palm off such stuff on him for truth? He who can believe this, has no mind capable of appreciating correct reasoning, even if we had the patience or the disposition to argue with him.

In bringing our remarks to a close, we have only to say, that, while we fear there is but too much cause for their very general application, we cheerfully admit that there are many honorable exceptions. We know clergymen (and we take pleasure in stating it), who, both by their conduct and teaching, discountenance all species of quackery: devout men—men of learning and science, from whose lips we have learned lessons of wisdom and practical piety. To such our remarks are not intended to apply.

—*St. Louis Med. and Surg. Journal.*

ILLUSTRATION OF THE QUACKERIES OF THE NINETEENTH CENTURY.

A report having been circulated that a man named William Myhill, a small farmer and carpenter, residing at Horsey, in the county of Norfolk, had died from the effects of some medicine which had been administered to him by his wife, Mr. Pilgrim, the county coroner, directed the body to be exhumed, and on the 24th of last month held an inquest at Catfield, where the body had been interred. Several witnesses were examined, but the chief evidence offered was that of the servant maid, who in a long statement deposed to her mistress having obtained some medicine of a person living at Reepham, which she administered to the deceased just previous to his death, and then requested her (the servant,) not to say anything about it to any person, but to deny it if she was asked any questions on the subject. On Friday October 2nd, the inquiry was resumed, when amongst other witnesses who were examined as to the wife having administered something to the deceased, was a Mr. Staples, of Reepham, who calls himself a chemist and druggist. He deposed as follows:—

I vend drugs and prepare them, but I do not profess to be a surgeon. Some short time since Mrs. Myhill, the wife of the deceased, came to me and stated that her husband was very bad. I prescribed for the deceased from the representation made to me by his wife. I cannot say what she stated. I made up some medicine according to the nature of the disease. I was not told what was the matter with him, but I found it out by my study, my science, and my search. I do not recollect that I ordered brandy and water, neither do I exactly recollect what I did prescribe. At the time I put it on a slate, but it was afterwards rubbed off. The medicine was to relieve the pain—it was not opening medicine. Mrs. Myhill was to have called upon me again, and let me know how her husband was, and to tell me the effect the medicine had upon him. I am perfectly satisfied that the medicine I prescribed could not do him any harm, but I did intend that it should do him good. I considered that the deceased was in a very bad state, and that I ascertained from my research in science, and study from my books of knowledge. If a person came to me and represented their case, I should not be governed by what he said, but should be governed by the rule of science and my books of knowledge. I could by searching those books ascertain more of their disease than any person could inform me. It is a very common practice with me to prescribe for persons I have never seen, nor yet had a description of their complaints. I neither want to know the name of the party, or where they come from, or any description whatever of their complaints, as I can always find every thing out by the rule of science, my study, and from my books of knowledge. If any person had come to me after the

death of Myhill, I could have stated the cause of his death, but the time is now so far gone that I cannot. He again repeated his powers of discovering the complaints of persons by the aid of his books, which was the cause of much merriment to the Coroner and the Jury, who looked with some suspicion upon the many cases [cures?] he pretended to have effected by his books, his science, and his study.

After this evidence, which put a very different aspect upon the inquiry, the surgeons, who had analysed the stomach, said that they had not been able to detect the presence of any metallic or vegetable poison; and, from the appearance of the lungs, were of opinion that the deceased died from natural causes. The Jury returned a verdict accordingly.—*Norwich Mercury.*

CHEMISTRY.

GUN.COTTON.

It was announced last summer by Prof. Schonbein of Basle, that he had discovered a method of producing a substance from vegetable fibre, more explosive and powerful than gunpowder, and much interest was excited at the late meeting of the British Association, by an exhibition of its wonderful effects. It has since been made by many persons in Europe and throughout our own country.

It is now well known that the "Gun-Cotton" is only a form of the Xyloidine discovered by Braconnot in 1833, and subsequently more fully described by M. Pelouze* in 1838. The Xyloidine is produced by the action of strong nitric acid specific gravity 1.5, upon starch or any form of vegetable fibre. M. Pelouze stated (in 1838) that it was very combustible, took fire at 360°, and burnt with vivacity. He also suggested that it might, from its extraordinary combustibility, prove valuable in artillery. Prof. Schonbein and his associate M. Bottger claim therefore only the application of this remarkable substance to useful purposes, for although the method employed by them in its production has not as yet been made public, there can be no doubt that it is chemically identical with the Xyloidine of Braconnot and Pelouze. The suggestion thrown out eighty years ago by M. Pelouze, regarding its possible application in artillery, seems to have escaped attention, and to have been productive of no useful result.

The complete conversion of cotton into Xyloidine is somewhat difficult, and requires the strongest nitric acid. In principle, it is immaterial whether the strong nitric acid be procured by distillation; by mixture of sulphuric acid with the aqua fortis of commerce; or by the mixture of equivalent parts of nitre and sulphuric acid. The best action of the nitric acid is produced by mixing with it nearly its own volume of strong sulphuric acid, which by its attraction for water renders the nitric acid of the greatest strength without interfering with the result. If 100 grains of clean carded cotton are immersed for four or five minutes in a mixture of 1½ fluid ounces of strong nitric acid (Sp. Gr. 1.45) and an equal measure of strong sulphuric acid, it will be converted into Xyloidine. It is then removed from the acid, pressed with a spatula, and quickly washed in an abundance of cold water until it has no longer an acid reaction, when it may be carefully dried at about 200° F., again carded, and it is fit for use. As thus prepared, it retains the appearance and fibre of common cotton, but is harsher and more wool-like to the touch. It inflames at a temperature of about 350° F., and, as is lately asserted,† it sometimes happens that it is spontaneously inflamed at 212° F. The greatest caution is therefore required in the preparation, to avoid its accidental combustion.‡

* Comptes Rendus, Oct. 15, 1838.

† L'Institut, No. 670, p. 367.

‡ It may not be amiss to mention in this place, that the writer and his assistant were both burned by the accidental combustion of about 1200 grains of gun-cotton, which they were drying over a hot-air flue where the temperature was probably very little above 212°. At the instant when they considered the mass as dry, it took fire and was dissipated in a large volume of brilliant yellow flame, without smoke or odor, and with so little noise as not to attract the attention of those in an adjoining-room, although the doors were open. No nitrous acid fumes were observed as others have asserted, nor was the presence of this gas detected in the

It burns with a voluminous yellow flame, very brilliant and rapid, produces no smoke or odor, and leaves little or no residue. If well prepared, the products of its combustion are only gaseous. It burns so much more rapidly than gunpowder, that the latter is not inflamed by it; and not the least inconvenience is felt by burning a flock of it on the naked hand. It detonates with some difficulty when struck with the hammer on an anvil, and only in the part receiving the blow, the remainder being scattered about. Wetting does not injure it, if it is again carefully dried. Its projectile force is much greater than that of gunpowder, and has been variously stated by different experimenters as from four to eight times more powerful.

Dr. Otto states that a charge of $1\frac{1}{2}$ to $\frac{3}{4}$ grain, propelled a ball through an inch board of hard wood; and with a charge of from 4 to 8 grains, balls were projected from a gun with the best effect at 45 paces distance.* Dr Samuel L. Dana, of Lowell, has made the most extensive experiments on the power of cotton-powder which to our knowledge have been made in this country.† His trials were made at the powder mills of Mr. O. M. Whipple, near Lowell, with an eprouvette, or proof-mortar, carrying a 24 pound iron ball, at an elevation of 45°. The projectile force of the gun-cotton was greatest when it was loosely packed in the chamber of the eprouvette, leaving the greater portion at the breech, on which the ball rested. "Two balls were used differing a little in their windage. Four qualities of gun-cotton were used; the first was immersed 25 minutes in the mixed nitric and sulphuric acids. No. 2, the same immersed, after drying, in fresh acids for 25 minutes more. No. 3, dipped 25 minutes, and then a new portion of fresh acids added, and the dip continued for the same time longer. No. 4, called 'blasting cotton,' dipped 35 minutes. Two discharges of Mr. Whipple's best rifle powder F F F F, were first made, each one ounce. No. 1 threw the ball 288 yards. No. 2 threw it 272 yards. Average 281½ yards. The chamber was then cleaned and charged with gun-cotton.

No. of discharges.	Quality of gun-cotton.	Quantity in ounces.	Yards projected.	REMARKS.
1	3	$\frac{3}{8}$	7	Charge loose in chamber, that not full, ball No. 2.
2	3	$\frac{1}{2}$	100	Chamber full, hard rammed, and small wad over cotton, ball No. 1.
3	3	$\frac{3}{4}$	175	Loose, and a little for a bed for the ball, ball No. 2.
4	2	$\frac{1}{2}$	272	As in 3d shot, but more bed, ball No. 1.
5	$\left\{ \begin{array}{l} \frac{1}{2} \text{ No. 2} \\ \frac{1}{2} \text{ No. 1} \end{array} \right\}$	$\frac{3}{4}$	453	$\left\{ \begin{array}{l} \text{Charge as in 4th, ball No. 1, buried} \\ \text{3 feet in the ground on falling.} \end{array} \right.$
6	1	$\frac{3}{4}$	100	Charge as in 4th, ball No. 2.
7	4	$\frac{1}{2}$	567	Charge as in 4th, ball No. 1.
8	4	$\frac{1}{2}$	50	Charge rammed hard home, ball No. 1.

No. 1. This charge was about one hour after the 7th, during which period it had been carried, wrapped tight in paper, in my hand, while searching for the ball of the 7th shot. It may have absorbed moisture.

It appears from the 4th, 5th, and 7th shots, that the distance projected increases faster than the quantity."

Dr. Dana also tried the gun-cotton in blasting rocks, in the line of a new canal now excavating in Lowell. The first trial was on a ledge of argillo-micaceous slate, very hard and tough. The portion selected was imperfectly stratified in an almost vertical direction, with a perpendicular face about 9 feet high. Two holes each $1\frac{1}{2}$ inches diameter, were drilled into this rock $5\frac{1}{2}$ and 6 feet from the face, 12 feet asunder, and about 9 feet deep. Gun-cotton (No. 4) was enclosed in cartridges of cotton cloth, $1\frac{1}{2}$ inches diameter, and respectively 2 feet 10 inches, and 5 feet long, holding 9 and 11 ounces. The holes were filled with dry sand over the cartridges, (5 feet over one, and 6 over the other,) which were then fired by an attached fuse. The explosions occurred within a few seconds of each other, with a sharp but not loud report, and

small apartment. Later experiments have convinced us the cotton-powder is sometimes inflamed at a temperature even lower than 212°.

B. S., Jr.

* L'Institut, No. 670, p. 366.

† Lowell Daily Courier, Dec. 8.

very little smoke. The result was highly satisfactory to the engineer and contractors under whose inspection the experiment was tried. The mass of rock was 25 by 5 by 9 feet = 1125 cubic feet, or about 90 tons weight, moved by 20 ounces of gun-cotton! The contractors declared that 10 or 12 pounds of ordinary powder would have been required to do the same work, or eight times as much as was used of gun-cotton. In the second experiment, 78 ounces 6 drachms of gun-cotton were fired in a hole 5 inches diameter and 9½ feet deep, and moved a mass of 45 by 10 9½ feet = about 350 tons. The gun-cotton used in these experiments was prepared by Dr. Dana after the method proposed, and successfully employed by Mr. A. A. Hayes, of Roxbury, which is substantially the same as that already described.

Some experiments on the cotton-powder in mining have been made in Cornwall by Prof. Schonbein and Mr. R. Taylor,* and with the most satisfactory results. It was found practicable to enter immediately after explosion into a narrow adit 600 or 700 fathoms from day, where it would not have been possible to have entered under three quarters of an hour, if a like amount of common powder had been burnt there.

The action of nitric acid in producing a highly inflammable substance, is by no means confined to cotton. M. Pelouze, in 1838, observed that common unsized paper, after similar treatment in strong nitric acid, became remarkable tough, quite impervious to water, transparent, resembling vellum, and very inflammable. He has lately informed the Académie des Sciences at Paris, (Nov. 2d,) that he has prepared an explosive paper, one and half grains of which was as powerful in a pistol, as the common charge of best gunpowder. Flax and other fibres have been prepared in the same way.

The analysis of Xyloidine, by Pelouze, gives for its composition $C_6 H_4 NO_3$, or doubling the formula $C_{12} H_8 N_2 O_{18}$. Cellulose, starch, or clean cotton fibre, may be expressed by the formula $C_{12} H_{10} O_{10}$. Xyloidine may then be considered as cellulose, in which a part of the hydrogen is replaced by nitrous acid. Substitutions of this sort have been fully established by the late researches of Laurent, Hoffman and Muspratt, which have shown that the elements of nitrous acid may, like chlorine and bromine, replace the hydrogen in many organic compounds. In conformity to this view, the formula of Xyloidine will be $C_{12} H_8 N_2 O_4 O_{10}$, in which the elements of two equivalents of nitrous acid are substituted for two of hydrogen in cellulose.

The arrangement of its elements is such as to produce in its combustion an immense volume of permanent gases and elastic vapor, on whose instantaneous evolution the force of the gun-cotton depends. In the production of the gun-cotton by the process described, two equivalents of hydrogen from the vegetable fibre react with two of nitric acid to form two of water and two of nitrous acid; the latter enter into the constitution of gun-cotton, while the water formed remains in the acid mixture, and so far dilutes it as soon to render it unfit for use. Hence the necessity of changing the acid liquor. In dilute nitric acid the Xyloidine dissolves, forming oxalic acid. When, in its preparation, the gun-cotton is seen to become gelatinous and semitransparent, it is a sign that the acids are no longer of a sufficient strength to produce the explosive compound.

MAGNESIA AS AN ANTIDOTE TO ARSENIC.

By Dr. CHRISTISON.

Dr. Christison's attention was lately turned to this subject by a case of poisoning, with arsenic, having come under his notice, in which magnesia seemed to prove very serviceable. Immediately afterwards, he observed it announced in a French scientific newspaper, 'L'Institut,' May 20, that a paper had been read before the French Institute two days before, by M. Bussy, to prove "That magnesia, not strongly calcined; removes arsenic entirely from a state of solution in water; that this is effected still more completely by magnesia in the gelatinous state; and that animals which have taken arsenic are invariably saved if made to swallow magnesia." While waiting for the details of M. Bussy's inquiries, Dr. Christison made a few experiments to ascertain the amount of the action of magnesia; and he found that the dense magnesia of the shops exerts very little action in removing arsenic from solution in water; that a very light magnesia, now largely

* Chemical Gazette, London, Nov. 1, 1846.

manufactured at Belfast, and quite free of carbonic acid, will remove about a twenty-fifth of its weight of arsenic from solution in water, when agitated with the solution for a few minutes; so that even ammoniacal nitrate of silver does not any longer indicate the presence of arsenic; that the same magnesia will remove about a twelfth of its weight of arsenic if agitated occasionally for a period of 8 or 12 hours; that this proportion is removed entirely in less than 3 minutes if the mixture of magnesia and water be previously near the temperature of 312°; and that the same proportion is removed with as much speed at ordinary temperatures, if the magnesia be used in the form of gelatinous pulp, as thrown down in a cold solution of sulphate of magnesia by solution of caustic potash, and washed with cold water.

It is well known that magnesia was proposed many years ago by Mr. Hume of London as an antidote for arsenic, and that several cases have been published in which it appeared to have been of service; but that its general utility has been doubted or denied on account of the apparent want of chemical action between oxide of arsenic and magnesia. M. Bussy's inquiries will probably clear up these difficulties. Meanwhile it appears probable, from the experiments described above, that the general belief in the want of action between magnesia and oxide of arsenic has arisen from the circumstance that for a long time no other magnesia has been in current use in medical practice in Britain except the dense variety, which appears to exert very little action on arsenic in solution on account of its great density.

Dr. Christison promises more accurate experiments and a statement of the successful case hereafter. Meanwhile it appears advisable that, when magnesia is used as an antidote, and cannot be promptly obtained in the gelatinous state, the light calcined magnesia should alone be employed, and in the proportion of between 33 and 50 parts to 1 of arsenic.—*Chem. Gaz.* August 15th, 1846, p. 316.

AMMONIA AS A VESICANT.

(*Chemist*, Oct., 1846, p. 467.)—Formula of Pommade de Gondret:—In summer take lard, 6 drachms; oil of sweet almonds, 2 drachms; tallow, 4 drachms. Melt by a gentle heat, and pour into a wide mouthed phial with a glass stopper. Then add 12 drachms of liquid ammonia at 27° or 28°; put in the stopper and shake it up. It should be kept in a cool place; but as the temperature gets lower, put two drachms less tallow, and 2 more of lard. This pommade produces vesication in three, four, or five minutes.

CITRATE OF IRON AND AMMONIA.

By M. BERAL. (*Jour de Chimie Medicale*, Aug., 1846, p. 498.)—The citrate of iron and ammonia, and its compounds are tonic; they are recommended to physicians for the treatment of all diseases which require the martial preparations. The following is the formula for preparing the citrate of iron and ammonia:

- Distilled water, 5 lbs.
- Crystal. citric acid, 2 "
- Liquor ammonia, 1 "

Dissolve in a platina vessel and place the mixture on the fire; when boiling add by degrees fifteen lbs. of the moist hydrated peroxide of iron. When the oxide is dissolved, cool it for filtering; make it of the consistency of syrup; spread the product on plates of glass, and dry by the heat of a stove so as to obtain the citrate in transparent scales, of a fine garnet colour. The quantity of hydrated peroxide should be equal to 1½ lbs. of dry peroxide. Thus prepared, the citrate of iron is soluble, uninjured by air, always identical and free from the styptic taste common to other preparations of iron.

Formula for the Syrup of Citrate of Iron:

- Simple syrup, 7 drs.
 - Citrate of iron and anhydrous ammonia, 15 grs.
 - Sugar of cloves and vanilla, of each,
- Mijx and dissolve.

Formula for Pills of Citrate of Iron:

- Sugar in powder, 3 drs.
 - Citrate of iron and anhydrous ammonia, 1 "
 - Mucilage gum arabac, a sufficient quantity.
- Divide into pills of 3 grs. each.

ON THE NOURISHING QUALITY OF DIFFERENT VEGETABLE SUBSTANCES.

Reckoned from the amount of Nitrogen contained in them.

By E. N. HORSFORD, of Albany, U. S.

(*Annal. der Chem. and Pharm.*, vol. lviii, p. 166.)—This is a very able research conducted in the laboratory of Prof. Liebig by the author, who appears to have devoted much time and care to the analysis. Besides simply estimating the amount of carbon, hydrogen, nitrogen, oxygen, sulphur, and ashes in the various vegetable substances that passed through his hands, the proportion of vegetable azotized substances contained in each one is also laid down; this is calculated from the amount of nitrogen and the known composition of these principles as made out by Milder, Scheerer and others.

The following is the statement of the nutritive value of some of the substances alluded to in the extensive table accompanying the memoir. Wheat is taken as the standard, and the numbers in the table represent how many parts of the corresponding vegetable are equal to 100 of wheat.

	Theory.		Experiments on animals by Boussingault.
	Dried at 212° F.	Fresh	Fresh.
Wheat	100	100	94
Rye,	98.8	97.6	97.6
Corn,	115	113	103
Rice,	220	225	
Buckwheat,	170	166	122.7
Pease,	57	60	90.7
Lentil,	55	58	
Potato,	220	596.3	429
Yellow Beet,	182.7	919.4	589.7

L. L. S.

—*American Journal of Science and Arts.*

THE
British American Journal.

MONTREAL, FEBRUARY 1, 1847.

THE MONTREAL SCHOOL OF MEDICINE AND SURGERY AND ITS DIPLOMAS.

If there is one thing which more than another tends to render unpleasant the duties which devolve upon the editors of public journals, it is the animal diversions which they are occasionally called upon to make on the public acts of public bodies. In the discharge of functions appertaining to such bodies, it is the mode which most usually furnishes the material for remark, for it seldom occurs that the powers with which they are invested are transcended, or that prerogatives are arrogated which are not actually possessed. It may, and does not unfrequently happen, that these powers are pushed to

their utmost, their extreme limit, but excesses beyond this point are generally as carefully avoided, as their occurrence would be certainly visited with severe reprehension. It has been our unpleasant duty, on more than one occasion since our editorial career began, to animadvert on the course of policy pursued by the members of the corporation constituting "the School of Medicine and Surgery of this city;" a course which had for its object the attainment of their own ambitious views, at the expense of the interests of the Profession at large, and which we flatter ourselves we were in some degree instrumental in frustrating; but it now devolves upon us to execute, what certainly is the most unpalatable task which has yet been assigned to us, the still more unpleasant duty of arraigning them before the Profession for having issued diplomas or certificates of qualification, without the slightest authority or warrant, thus transcending the power with which they were invested by their act of incorporation.

It will be fresh in the memory of most of our readers, that in the first session, of the second parliament, held in this city during the winter of 1844, '45, a petition was presented to the house by the lecturers of the School of Medicine and their students, praying for an act of incorporation for the said School, and among other matters stating "that with a view to place the said College of Medicine and Surgery upon a proper and respectable basis, your petitioners humbly pray that the act of incorporation now sought for, do provide *that the students who shall have passed their examination, after having conformed with the statutes of the said College, may be entitled to present the certificate of having been approved of after the said examination* to the proper authorities, so as to obtain the necessary license to practice, in such branches as the said certificate may set forth." The petition having been laid before the House, a bill based upon it was accordingly introduced by Mr. Scott, the hon. Member for the county of Two Mountains, which contained the following most significant clause:

IV. And be it enacted, That no Diploma, Certificate or Testimonial of ability shall be given by the said Corporation to any pupil, except after a public examination of such pupil, at some place in the City of Montreal, and between the fifteenth day of April and the fifteenth day of May, after public notice of the day, hour and place of examination, given in the manner to be prescribed by the By-Laws of the Corporation.

We have only on this point further to remark, that the Bill containing this clause was carried in the Legislative Assembly by a large majority, but was fortunately arrested by the Legislative Council, and returned by the latter to the former deliberative body, amended in such a manner as completely to deny to the corporation any such privilege as the one to which we have been alluding, by expunging from it all those clauses, and parts

of clauses, which conceded or admitted to them the power, as will be seen by a reference to the Act, as it afterwards passed the two Houses, and received vice-regal sanction, and which we have published on another page for the benefit of the Profession at large, that they may be cognizant of the actual extent of power with which that School has been endowed.

After the remarks which we have made, it will, we think, be conceded, that the members of the School of Medicine did not consider themselves authorized to grant Diplomas, without the special permission and sanction of the Legislature, and as their specific demand for this power was emphatically refused to them, their authority to do so now, apart from the legal or even ethical bearings of the question, is a point upon which we think there can not be two opinions.

But the power has been arrogated by the School of Medicine, and DIPLOMAS OR CERTIFICATES OF QUALIFICATION HAVE BEEN ISSUED. The only circumstance of which we have no evidence, and it is a matter of no importance as affecting our argument, or the position of the School, is the fee exacted for their parchments.

Little did we think that the four public examinations which were held at the rooms of the School of Medicine and Surgery, in the month of April last, and which called forth, and for ought we know justly, the encomiums of the city press generally on those who, it was said, so admirably acquitted themselves on the occasion,—little did we think that these public examinations, of themselves unwarranted, except so far as a voluntary submission to them may be supposed to operate, were but the prelude to an act, the exhibition of a Diploma, which, we have no hesitation in saying, is unparalleled in medical history, unless an analogy may, perchance, be found in the acts of the representatives of a certain American self-styled University, which existed but on paper, and whose Diplomas became an object of peddling traffic. We beg to assure the members of the School of Medicine, that we are not willingly finding fault; but when we discover that in their circular for '45, '46, which has only recently fallen into our hands; (a place which it was doubtless intended it should never have reached, from the fact that we have not been directly honoured with one, though they have been generally distributed over the Province,) the lecturers, after "*the natural expression of a pardonable vanity*" on account of the success of their school, go on to state, "that of this number four underwent successful and highly meritorious public examinations, and received the *certificates of qualification of the corporation*;" and further, that "Brock Carter, Ammi P. Barber, Charles Brown, and Wm. H. Ellsworth, are the gentlemen who received the *Diploma*."

of the School," we naturally looked into their authority for such a procedure; and in thus noticing the matter, we consider ourselves but discharging a simple act of duty to the School of Medicine itself, the students who may be in attendance on their lectures, to the Profession of the Province, and the no less interested public in general. To the two first, that they may the better understand their relative positions and the full extent of power possessed by the school; and to the latter that their interests may not suffer at the hands of parties whose zeal, prompted by ambitious views, far outstrips their discretion or their judgment, in foisting upon it documents pretending to every mark of genuineness, but which are in reality not worth in value the parchment upon which the manuscript is written.

We do not anticipate that our present observations on the School of Medicine will pass unnoticed by that body. We hope they will not, and we will with pleasure open our columns to any reply they may see fit to make. Our duty to the Profession and the public at large is in the mean while discharged, by noticing the offence committed against their interests. We forbear, for the present, any further remarks, concluding by laying before our readers the following copy of the Diploma, which is written on parchment, the seal of the corporation, inclosed in a tin box, being appended to it by a blue ribbon. It will be found to be, in reality, a Certificate of qualification or a Diploma; a document which the "School" possesses not the shadow of the shade of an authority for granting to persons, either qualified or unqualified, or with or without the formality of a public or even private examination.

SCHOLÆ MEDICINÆ ET CHIRURGÆ
MARIANOPOLI

A.D. 1849 Instituta, Senatu Canadensi Confirmata A.D. 1845

(L.S.) TESTIMONIUM.

Nos Praeses et Praeceptores, Scholae Medicinæ et Chirurgiæ, dilecto nobis in Christo, S. B. intra Scdam praedictam succiso, salutem, in Domino sempiternam.

Cum omnia nostra studia, consilia, et actiones ad Dei gloriam et fratrum salutem referri debeant; Cumque Medicina ad haec, inter reliquas Facultates, plurimum conferat, hinc est quod Nos Praeses et Praeceptores auctores* te, praestitis piis omnibus exercitiis, publicae ex-

aminationi, in Medicina et Chirurgia subisse, et nobis satisfacisse, te in omnibus rebus, quae ad Medicinam et Chirurgiam necnon Partem Obstetricam exercendam pertinent, parum esse visum. In cujus rei fidem his literis communi Scholae auctores sigillo munitis, nos Chyrographa nostra apposuimus.

Marianopoli,
Aprilis 18mo, 1846.

(Signed)

FRANCISCUS C. T. ARNOLDI, M. D., Praeses }
Prælect. Arte Obstet.

GULIELMUS SUTHERLAND, M. D. }
Chimie et Pharmaciae Praeceptor.

J. G. BIBAUD, M. D. }
Materia Medica Praeceptor.

FRANCISCUS BADGLEY, M. D. }
Medicinae Theoret. et Practic. Praeceptor.

P. A. C. MUNRO, Chirurgia Practicaeque. }
Praeceptor.

HORACE NELSON, M. D. }
Anatomia Physiologie Praeceptor.

AN ACT TO INCORPORATE THE MONTREAL
SCHOOL OF MEDICINE AND SURGERY.

Whereas Francis C. T. Arnoldi, Francis Badgley, Pierre Munro, William Sutherland, and Horace Nelson, all of the City of Montreal, Licensed Practitioners of Medicine and Surgery, and divers others, under their tuition, have, by their Petition to the Legislature, represented, that the persons above named have, for the last two years, been engaged in giving Public Lectures and instructions in the various branches of science connected with the exercise of their profession, and have for that purpose established a Public Medical School, with suitable apparatus and conveniences, and have commenced the formation of a Library and Anatomical Museum, which they are willing to appropriate for the purposes hereinafter mentioned; and that the said Petitioners believe that if the said persons, and their successors, were incorporated and invested with the powers hereinafter mentioned, they would be able still further to increase their means of affording adequate instruction to their pupils, and would be enabled to place within their reach such means of acquiring medical knowledge as would render it unnecessary for them to spend any portion of their period of study out of this Province, and frequently out of Her Majesty's Dominions, as many are under the necessity of doing at an expense which they can ill afford, and to their disadvantage in other respects; and whereas it is expedient to grant the prayer of the said Petition: Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and of the Legislative Assembly of the Province of Canada, constituted and assembled by virtue of and under the authority of an Act passed in the Parliament of the United Kingdom of Great Britain and Ireland, and intitled, *An Act to Re-unite the Provinces of Upper and Lower Canada, and for the Government of Canada*, and it is hereby enacted by the authority of the same, That the said Francis C. T. Arnoldi, Francis Badgley, Pierre Munro, William Sutherland, and Horace Nelson, and their successors, and those who may be associated with them or their successors in the manner hereinafter mentioned, shall be and are hereby constituted a body politic and corporate by the name of "The Montreal School

* There is a verb wanting in this sentence, which we supply by the word "declaramus." It is copied, however, verbatim.

of Medicine and Surgery," and by that name shall have perpetual succession and a Common Seal, with power to break, alter, or make anew the same, and may by that name sue and be sued, plead and be impleaded in all Courts of Law or Equity in this Province, and may purchase, take, and hold real and personal property, provided the real property so held by the said Corporation do not at any time exceed the value of five thousand pounds, currency, and may alienate the same and acquire other property instead thereof.

II. And be it enacted, That whenever any of the members of the said Corporation shall die, or shall become permanently resident out of the City of Montreal, or shall resign, (and any members shall be at liberty so to resign,) or it shall be deemed advisable by the Corporation to increase the number of members thereof, (which the said Corporation may always do, provided the number of the members shall never at any time exceed ten,) then the said Corporation shall give public notice of such vacancy in the manner to be provided by the By-Laws of the Corporation, and that, on a day to be appointed in such notice, a member (or members as the case may be) will be chosen by public competition; and on the day so appointed the candidates shall attend at the place where the meetings of the Corporation shall be held, and shall then and there be examined as to their qualifications as public teachers of the sciences they will be required to teach, in such manner as shall be appointed by the By-Laws of the Corporation then in force; and the name of the candidate whom the Corporation shall deem in all respects best qualified to fill the vacancy shall be submitted to the Governor of this Province for his approval, or if the Corporation shall be of opinion that none of the candidates are qualified to fill such vacancy, and the vacancy cannot be filled, then a new competition shall be had as aforesaid.

III. And be it enacted, That the said Corporation shall yearly and every year cause to be delivered at least one hundred and twenty lectures, of at least one hour each, in the English language, and the like number of the same duration in the French language, on the following branches of Medical Science, to wit: Anatomy and Physiology, Chemistry and Pharmacy, Materia Medica, Theory and Practice of Physic, Principles and Practice of Surgery and Midwifery, and Diseases of Women and Children, to be given by competent Lecturers at some place in the City of Montreal, between the first day of October and the last day of April.

IV. And be it enacted, That the fee to be demanded of any Pupil on his entry or matriculation in the said School shall not exceed ten shillings, currency, to be applied by the Corporation to the purchase of books, specimens, and the improvement in other ways of their Library and Museum, which shall be open for the use of their Pupils on all days except Sundays and Holidays, and an account of the sums received for such fees, and of the expenditure thereof, shall be rendered yearly to the Governor of this Province.

V. And be it enacted, That the said Corporation shall have power to make such By-Laws as may be necessary for the conduct of its affairs and business, the government of its Pupils, and for carrying into effect the provisions of this Act, as to the members thereof shall from time to time appear expedient, and as shall not be in any wise repugnant to or inconsistent with this Act or to Law; and such By-Laws, being first approved by the Governor of this Province, shall have force and effect, and shall bind the Members and Pupils of the Corporation, and all others whom they may concern; and may in like manner be altered, amended or repealed, and others made in their stead as need shall be: Provided always, that no such By-Law shall impose any fine or penalty exceeding twenty-five shillings for any one offence: And provided also, that a fair copy in both languages of the By-Laws then in force shall be at all times publicly posted in some conspicuous place in the Lecture Room; and any copy of such By-Laws under the Seal of the Corporation and certified by the Provincial Secretary, shall be deemed authentic, and shall be received in evidence as the By-Laws in force at the date of such certificate.

VI. And be it enacted, That on the presentation by any pupil of the said Medical School of his certificate of attendance from the said Corporation, to the body or persons appointed to examine Applicants for Licenses to practice physic, Surgery, Midwifery or Pharmacy, they shall examine the said certificate, and having done so, and having ascertained in what capacity or department the Applicant is therein certified as having attended such lectures,

and having duly examined him, shall themselves certify accordingly to the Governor of this Province, a License to practice may accordingly be issued to such Applicant in the usual manner and on payment of the usual fees.

VII. And be it enacted, That all the property real or personal immediately before the passing of this Act held by the persons herein first above named and incorporated, as appertaining to and being for the use of the said Medical School, and more especially the Library and Museum aforesaid, shall be vested in and held by the Corporation hereby created for the purposes aforesaid: Provided always, That if, by reason of any failure to comply with the provisions of this Act, the privileges hereby granted shall be declared forfeited by any competent tribunal, then the property of the said Corporation shall be forfeited to Her Majesty, and (the debts of the Corporation being first paid out of the same) may be assigned by the Governor in Council to such Public Institution in this Province as he shall nominate for that purpose.

VIII. And be it enacted, That each and every Member of the said Corporation shall, in his private capacity, be liable for any debts or obligations of the Corporation.

IX. And be it enacted, That all the power of the said Corporation may be validly exercised by any majority of the Members thereof for the time then being; and that any deed or instrument under the Seal of the Corporation, and signed by any such majority of the Members for the time being, or by such person as shall be appointed by such majority as their Attorney for that purpose, shall be held to be the deed of the Corporation, and any service of process or otherwise, made at the place at which the said Medical School shall be kept, and (if in such case personal service be required but not otherwise) on one of the Members of the Corporation, shall be deemed a valid service upon the said Corporation.

X. And be it enacted, That the said Corporation shall lay before the Governor of this Province, at such times and in such manner and form as he shall direct, any statement by him required as to the affairs of the Corporation or their doings under the authority of this Act, and shall submit to such inquiry into and concerning the same as he shall direct to be made by any person or officer he may nominate for that purpose.

XI. And be it enacted, That this Act shall be a public Act, and shall be judicially noticed as such by all Judges and Justices of the Peace and others whom it may concern without being specially pleaded.

LA LANCETTE CANADIENNE, JOURNAL MEDICO-CHIRURGICAL.—This is a new semi-monthly Medical periodical, issued, in this city, from the press of Messrs. Lovel and Gibson, and edited by J. E. Leprohon, M. D. It is published in the French language, and consequently addresses itself more especially to the practitioners of French origin of the Province, who, if disposed, have now an opportunity of familiarizing themselves with the progress of the Medical Sciences in their own language. This journal is printed on a half sheet of double crown paper, and is furnished to subscribers at the price of \$4 per annum. We hail with pleasure the advent of our contemporary, and will be most happy to exchange with him, in accordance with his request. Our own Journal possesses but a very limited circulation among the practitioners of French Canadian origin practising in this Province. A field worthy of culture is undoubtedly open to our contemporary, and equal in extent with it is the responsibility which now attaches to the attempt. From long personal acquaintance with the Editor, we think the management of the journal is in excellent hands.

The University of Edinburgh and the Extra-Mural Lecturers.—At a recent meeting of the town council of the city of Edinburgh, a report from the college committee was unanimously agreed to, by which a considerable change has been effected in the rules guiding the senatus of the university in the reception of tickets qualifying for graduation in medicine. Students are now permitted to take one-third of the required classes out of the university, from extra-mural lecturers, but no such lecturers are recognised whose fees for their classes are below the university standard. The principle which has guided this act is perfectly equitable; and a number of the most eminent of the extra-mural lecturers have acceded to it, among whose names we find the following: Drs. Douglas MacLagan, Skae, Wilson, Bennet, and Campbell. In thus extending to the extra-mural lecturers university privileges, the town council have exhibited a praiseworthy care of the interests of their own professors.

Convocation at McGill College.—At a Convocation held at the University Hall, on the 29th instant, Mr. George Augustus Fenwick, was admitted to the degree of M. D.

BOOKS, &c., RECEIVED DURING THE MONTH.

- Dublin Quarterly Journal, November, 1846.
 Boston Medical and Surgical Journal, December 30, January 6, 13, 20, 27.
 New York Medical and Surgical Reporter, January 2, 9, 16.
 Medical Examiner, January, 1847.
 Missouri Medical and Surgical Journal, December, 1846.
 Wiley and Putnam's News Letter, January.
 Southern Medical and Surgical Journal, January.
 Buffalo Medical Journal, January.
 New York Journal of Medicine and Collateral Sciences, Jan.
 American Quarterly Journal of the Medical Sciences, Philadelphia, January 7.
 Southern Journal of Medicine and Pharmacy, January.
 American Journal of Science and Arts, January.
 Lecture Introductory to the Course in the Theory and Practice of Medicine in the Medical Department of Pennsylvania College, by W. Darrach, M. D. Philadelphia. Session, 1846, '47.
 Barker's Canadian Magazine, January.
 American Journal of Insanity, January.
 Dublin Medical Press, December 9, 16, 23, 30.
 New Orleans Medical and Surgical Journal, January.
 The Medical News and Library, January.
 An Introductory Lecture, delivered before the Class of the Baltimore College of Dental Surgery, Session 1846, '47, by A. Westcott, M. D., Baltimore.
 Provincial Medical and Surgical Journal, December 23.
 Manuel de la Societ  du Temp rance, d di    la Jeunesse Canadienne, par le R v. P re C. Chiniquy, Pr tre. 2d Edition. Montreal, Lovell and Gibson. 1847.
 La Lancette Canadienne, January 4, 15. Montreal.
 The Annalist, a record of Practical Medicine in the city of New York, January 15. No. 8. We would be thankful for the back numbers.

REPORT OF THE MONTREAL GENERAL HOSPITAL FOR NOVEMBER AND DECEMBER, 1846.

DR. CAMPBELL AND DR. CRAWFORD, Attending Physicians.			
Remained,	106	Discharged cured,	197
Admitted,	192	Irregular,	1
		Died,	8
Total treated,	298	Remaining,	92
		Total,	298
IN-DOOR PATIENTS.		OUT-DOOR PATIENTS.	
Belonging to Montreal,	133	Belonging to Montreal,	315
Immigrants,	50	Immigrants,	72
Seamen,	9	Seamen,	2
Total,	192	Total,	389
Males,	100	Males,	228
Females,	92	Females,	161
Total,	192	Total,	389

DISEASES AND ACCIDENTS.			
Abscessus,	1	Lepra Vulgaris,	1
Amaurosis,	1	Melancholia,	1
Ambustio,	2	Morbus Cordis,	1
Amenorrhœa,	4	Ophthalmia,	2
Ascites,	3	Paralysis,	3
Bronchitis,	13	Paronychia,	1
Bubo,	1	Peritonitis,	1
Cataract,	1	Pleuritis,	2
Catarrhus,	3	Pleurodynia,	2
Cephalalgia,	1	Phthisis,	6
Conjunctivitis,	1	Porriago,	1
Contusio,	7	Pneumonia,	3
Cynanch Tonsillar,	1	Rheumatism,	9
Cornecitis,	1	Scirrhus,	2
Chlorosis,	2	Sciatica,	1
Diarrhœa,	10	Scrofula,	1
Delirium Tremens,	3	Strangury,	1
Dyspepsia,	2	Stricture Esophagi,	4
Eczeema,	1	Subluxatio,	4
Erysipelas,	2	Synovitis,	2
Febris Com. Cont.,	41	Syphilis,	9
" Intermit,	4	Tumor,	1
" Typhus,	4	Ulcus,	13
Fractura,	3	Variola,	1
Gestatio Uterina,	1	Vertigo,	1
Gonorrhœa,	3	Vulnus,	1
Hemiplegia,	1		
Hepatitis,	1		
Hysteria,	2		
		Total,	192

TO CORRESPONDENT'S.

Letters have been received during the month from Dr. Johnstone, Sherbrooke: Capt. Lefroy, of H. M. Observatory, Toronto. The remarks of the latter gentleman have received attention; but he will receive a letter from us in the course of a few days, along with copies of the report. We cannot say more at present. A letter has also been received from Dr. Holden, Belleville. The communication of Dr. McDiarmid, Prescott, has been received. As also that of Prof. Croft, which has arrived as the Journal is going to press.

TO SUBSCRIBERS.

Mr. Wood, who is about to start on a collecting tour for the Herald, Gazette, and other Journals, will carry with him, also receipts from this office for the subscriptions due to this Journal by subscribers. Our subscribers will oblige us by meeting the call which will thus shortly be made on them. In our last number we observed that this service would be performed by Mr. Gemmill. The arrangements with the latter could not be perfected at the time he left this city, which will account to our friends for the change, of which we think it proper thus to advise them.

BILL OF MORTALITY for the CITY of MONTREAL, for the month ending DECEMBER 31, 1846.

DISEASES	Male.	Female.	Total.	Under 1.	1 & under 3	3 — 5	5 — 10	10 — 15	15 — 25	25 — 35	35 — 45	45 — 55	55 — 75	75 upwards
EPIDEMIC OR INFECTIOUS.....	Measles,.....	2	1	3	.	1	1	.	.	.	.	.	.	.
	Scarlatina,.....	.	1	1	.	.	.	1	.	.	.	.	.	.
	Small Pox,.....	.	3	3	.	3	.	.	.	.	.	.	.	.
	Fever,.....	10	11	21	2	3	4	1	1	3	2	1	3	.
DISEASES OF BRAIN AND NERVOUS SYSTEM,.....	Convulsions,.....	1	1	2	2	.	.	.	.	.	.	.	.	.
	Dentition,.....	2	2	4	1	3	.	.	.	.	.	.	.	.
DISEASES OF RESPIRATORY ORGANS,...	Consumption,.....	18	15	33	6	3	1	1	1	2	2	7	4	3
	Croup,.....	5	.	5	3	1	1	.	.	.	.	.	.	.
DISEASES OF AEDOMINAL VISCERA,	Dropsy,.....	2	3	5	.	.	1	.	.	.	.	1	2	1
	Inflammation,.....	10	8	18	6	2	3	.	.	1	2	2	.	2
OTHER CAUSES AND DISEASES, AND DISEASES NOT SPECIALLY DESIGNATED,.....	Still-born,.....	8	.	8	.	.	.	.	.	.	.	.	.	.
	Debility,.....	4	5	9	.	.	.	.	1	.	1	.	.	4
	Intemperance,.....	2	2	4	.	.	.	.	.	1	.	1	.	.
	Unknown,.....	3	3	6	1	2	.	1	.	.	1	1	.	.
	Accident. Poison,.....	1	.	1	.	.	.	.	.	.	.	.	.	.
	Scrofula,.....	1	1	2	.	.	.	.	.	1	1	.	.	.
	Scalded,.....	1	.	1	.	.	.	.	.	.	.	.	1	.
	Frozen,.....	1	.	1	.	.	.	.	1	.	.	.	.	.
Total,.....	69	56	125	29	18	11	4	4	8	11	13	10	10	9

MONTHLY METEOROLOGICAL REGISTER AT MONTREAL FOR NOVEMBER 1846.

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,	+19	+27	+17	+23.	30.33	30.36	30.40	30.36	W.	W.	W.	Fair	Fair	Fair
2,	" 16	" 26	" 32	" 21.	30.34	30.11	29.86	30.10	N E by N	N E by N	N E by N	Fair	Snow	Sleet
3,	" 36	" 38	" 30	" 37.	29.56	29.57	29.66	29.60	S.	W.	W.	Foggy	Rain	Snow
4,	" 29	" 32	" 23	" 31.5	29.80	29.93	30.19	29.97	W.	W.	N. W.	Cloudy	Fair	Fair
5,	" 15	" 22	" 13	" 18.5	30.42	30.43	30.48	30.44	N W by W	W. N. W.	W. N. W.	Fair	Fair	Fair
6,	" 5	" 19	" 11	" 12.	30.57	30.56	30.55	30.56	N W by W	N W by W	N W by W	Fair	Fair	Fair
7,	" 7	" 21	" 30	" 14.	30.40	30.16	21.86	30.14	W.	W.	W. by S	Fair	Fair	Fair
8,	" 36	" 36	" 30	" 36.	29.62	29.67	29.75	29.68	S.	S.	S. by W.	Rain	Cloudy	Fair
9,	" 28	" 33	" 27	" 30.5	29.93	30.02	30.15	30.03	W.	W.	W.	Fair	Fair	Fair
10,	" 24	" 21	" 18	" 22.5	30.14	29.99	29.74	29.96	N. E.	N. E.	N E by N	Cloudy	Fair	Snow
11,	" 18	" 22	" 16	" 40.	29.75	29.82	29.94	29.84	N E by N	N E by N	N E by N	Snow	Snow	Snow
12,	" 16	" 20	" 16	" 18.	29.97	29.93	29.94	29.95	N W by W	W. N. W.	W. N. W.	Fair	Fair	Fair
13,	" 11	" 15	" 15	" 13.	29.92	29.88	29.97	29.93	W.	W.	W.	Fair	Snow	Fair
14,	" 12	" 17	" 10	" 14.5	30.00	29.96	29.96	29.97	N W by W	N W by W	N W by W	Fair	Fair	Fair
15,	" 8	" 16	" 12	" 12.	29.96	30.00	30.07	30.01	N. W.	N. W.	N. W.	Fair	Fair	Fair
16,	" 10	" 14	" 8	" 12.	30.12	30.13	30.12	30.12	N. W.	N. W.	N. W.	Snow	Fair	Fair
17,	" 6	" 15	" 12	" 10.5	30.14	30.04	29.92	30.03	N. W.	N. E.	N. E.	Fair	Fair	Snow
18,	" 19	" 24	" 24	" 21.5	29.66	29.51	29.40	29.52	N. E.	N. E.	N. E.	Snow	Snow	Snow
19,	" 22	" 26	" 22	" 24.	29.33	29.38	29.32	29.34	N. E.	N E by E.	N. W.	Snow	Snow	Snow
20,	" 21	" 24	" 17	" 22.5	29.54	29.60	29.74	29.63	W.	W.	W.	Fair	Fair	Fair
21,	" 10	" 18	" 13	" 14.	29.84	29.88	30.24	29.99	W.	W.	W.	Fair	Fair	Fair
22,	" 11	" 17	" 14	" 14.	30.29	30.39	30.30	30.33	W.	W.	W.	Fair	Fair	Fair
23,	" 10	" 16	" 11	" 13.	30.44	30.45	30.49	30.46	W.	W.	S. W.	Snow	Fair	Fair
24,	" 7	" 18	" 15	" 12.5	30.38	30.12	29.86	30.12	W. by S.	S. by W.	S. by W.	Fair	Fair	Fair
25,	" 25	" 30	" 20	" 27.5	29.68	29.56	29.83	29.69	S. S. E.	S. S. E.	S. E.	Fair	Snow	Fair
26,	" 5	" 14	" 16	" 9.5	30.18	30.11	29.80	30.03	W.	W.	W.	Fair	Fair	Snow
27,	" 24	" 24	" 34	" 21.	29.48	29.35	29.22	29.38	S W by W	S.	N. W.	Fair	Rain	Fair
28,	" 30	" 25	" 12	" 27.5	29.50	29.52	29.87	29.63	N. W.	N. W.	W.	Fair	Fair	Fair
29,	- 3	" 5	" 2	" 1.	30.33	30.43	30.29	30.35	N W by W	W. by N.	W.	Fair	Fair	Fair
30,	+ 2	" 14	" 17	" 8.	29.90	29.83	29.93	29.89	N. W.	N. W.	N. W.	Cloudy	Snow	Fair
31,	" 19	" 25	" 21	" 22.	30.04	29.98	29.88	29.97	W. by S.	W.	W.	Fair	Snow	Fair

THERM. } Max. Temp., +38° on the 3d.
 } Min. " - 2° " 29th.
 Mean of the Month, +18°. 9.

BAROMETER, } Maximum, 30.57 Inches on the 6th.
 } Minimum, 29.22 " " 27th.
 Mean of Month, 29.967 Inches.

MONTHLY METEOROLOGICAL REGISTER AT H. M. MAGNETICAL OBSERVATORY, TORONTO, CAN. W.—D. DECEMBER, 1883.
 Latitude 43°. 39'. 4. N. Longitude 79°. 21'. 5. W. Elevation above Lake Ontario, 108 Feet.

DAY.	Barometer at Temp. of 32°.			Temperature of the Air.			Tension of Vapour.			Humidity of the Air.			Wind.			Rain inch on surf.	WEATHER.							
	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.									
1,	30.111	29.955	29.602	29.902	13.4°	27.3°	31.6°	27.05	0.78	1.32	1.45	1.30	.91	.87	.81	.85	Calm.	E. N. E.	E. by N. E.	E. by N. E.	Caln.	0.440	Clear to 6 am. Overcast with haze fr 7 am	
2,	29.558	29.347	29.215	29.334	34.6	42.3	43.4	40.91	1.89	.247	.253	.229	.95	.93	.91	.89	ENE 2.0 lb	E. N. E.	E. N. E.	E. N. E.	Caln.	0.440	Density cold. Ring fr 2 30 am till 11 am	
3,	29.312	29.401	29.583	29.401	33.6	32.0	27.0	30.00	1.39	1.28	1.20	1.17	.72	.70	.80	.76	WSW 2.5	W. S. W.	W. S. W.	W. S. W.	Caln.	0.050	Density cold. Particles of snow pm	
4,	29.700	29.853	29.992	29.906	25.8	34.1	32.0	31.56	1.24	1.55	1.62	1.47	.87	.79	.90	.83	WSW 2.5	W. by S.	W. by S.	W. S. W.	Caln.	—	Generally clouded. Clear intervals.	
5,	30.125	30.092	30.110	30.043	29.4	28.9	30.1	31.83	1.44	1.65	1.36	1.49	.89	.79	.81	.83	Calm.	E. by N.	E. by N.	N. N. E.	Caln.	—	Density clouded. Dark and dull.	
6,	30.201	30.129	—	—	—	28.2	—	—	1.10	1.38	—	—	.83	.89	.81	.88	N. N. E.	E. by N.	E. by N.	E. by N.	Caln.	—	Lightly clouded all day.	
7,	29.721	29.434	29.217	29.398	34.4	38.6	39.1	38.09	1.61	1.67	.928	2.02	.75	.55	.96	.88	E. by S.	E.	E.	N. N. W.	Caln.	0.495	Into P. d. m. am. Den. cold. Ring fr 8 pm	
8,	29.312	29.381	29.308	29.404	37.6	37.0	32.4	32.8	1.92	1.65	1.53	1.61	.86	.75	.82	.80	Calm.	N. N. W.	N. N. W.	N. N. W.	Caln.	—	Clear fr 1 am. Dens. Overcast all day	
9,	29.603	29.746	29.744	29.704	32.0	32.0	30.5	31.09	1.44	1.44	1.39	1.44	.86	.78	.81	.82	Calm.	N. N. W.	N. N. W.	N. N. W.	Caln.	—	Density clouded all day	
10,	29.554	29.395	29.353	29.389	32.0	32.0	26.8	29.38	1.58	1.75	1.37	1.50	.88	.97	.93	.92	WSW 3.0	N. N. W.	N. N. W.	N. N. W.	Caln.	—	Density cold. S. P. snow 9 am to 7 pm	
11,	29.584	29.696	29.730	29.730	21.0	29.0	29.0	25.75	1.10	1.33	1.31	1.20	.83	.82	.81	.85	N. N. W.	N. N. W.	N. N. W.	N. N. W.	Caln.	—	Gen. clouded. Clear fr 8 am to 2 pm	
12,	29.889	29.871	29.851	29.894	17.6	20.4	17.4	18.14	0.94	0.92	0.88	0.90	.93	.81	.88	.87	Calm.	N. N. W.	N. N. W.	N. N. W.	Caln.	—	Density clouded. S. P. snow 7 to 10 am	
13,	29.892	29.885	—	—	18.8	20.2	—	—	0.90	0.87	—	—	.85	.77	—	—	N. N. W.	N. N. W.	N. N. W.	N. N. W.	Caln.	—	Clouded all day.	
14,	29.331	29.932	29.931	29.933	16.6	21.8	13.4	16.35	0.89	0.99	0.78	0.82	.92	.51	.91	.86	N. N. W.	N. N. W.	N. N. W.	N. N. W.	Caln.	—	Clear & unclouded. Very fine.	
15,	29.900	29.842	29.853	29.858	7.2	27.0	11.8	15.64	0.66	0.84	0.77	0.79	1.00	.56	.98	.85	Calm.	N. N. W.	N. W. by N.	N. W. by N.	Caln.	—	Clear & unclouded. Very fine.	
16,	29.789	29.686	29.572	29.657	13.4	26.8	23.8	22.77	0.67	1.15	1.19	1.07	.79	.78	.84	.84	Calm.	E. by N.	E. by N.	N. E.	Caln.	—	Light passing clouds generally.	
17,	29.538	29.509	29.463	29.486	22.4	27.6	29.1	21.19	1.13	1.30	1.01	1.03	.89	.85	.92	.85	N. E. by N.	N. E.	N. E.	N. N. E.	Caln.	—	Part. cold am. Clear from 6 pm	
18,	29.382	29.158	29.048	29.157	12.8	29.6	29.1	25.74	0.63	1.27	1.19	1.10	.80	.77	.78	.76	Calm.	W. by N.	W. by N.	N. N. E.	Caln.	—	Clear to 7 am. Mostly clouded from.	
19,	29.039	29.144	29.274	29.274	20.4	29.4	29.4	23.70	1.34	1.49	1.28	1.27	.81	.80	.80	.79	N. N. W.	N. N. W.	N. N. W.	N. N. W.	Caln.	—	Overcast all day. Slight snow 8 & 9 am	
20,	29.491	29.463	—	—	21.8	29.8	—	—	1.33	1.52	—	—	.98	.92	—	—	N. N. W.	W.	W.	N. N. W.	Caln.	—	Clear am. Clouded pm.	
21,	29.613	29.835	29.890	29.802	21.0	27.4	17.4	21.60	0.92	0.89	0.86	0.92	.80	.68	.88	.77	N. N. W.	N. W.	N. W.	N. W.	Caln.	—	Slight snow on to 3 am. Uncl'd from 11 am to midnight	
22,	29.802	29.964	30.069	29.993	20.4	23.8	22.9	20.23	1.04	1.08	1.18	0.95	.91	.75	.83	.83	N. E.	Calm.	Calm.	N. E.	Caln.	—	Den. cold. Rain fr 2 30 pm	
23,	30.180	30.186	30.097	30.136	4.4	23.8	16.4	16.10	0.58	0.96	0.85	0.86	1.00	.72	.88	.89	Calm.	Calm.	Calm.	Calm.	Caln.	—	Uncl'd till noon. Rem part clouded	
24,	29.841	29.584	29.496	29.653	27.9	34.1	35.2	29.85	1.41	1.58	1.69	1.42	.91	.79	.83	.84	S. S. E.	S. W. by W	S. W. by W	S. S. E.	Caln.	—	Density clouded all day.	
25,	29.312	29.400	—	—	36.2	35.2	—	—	1.96	2.02	—	—	.92	.99	—	—	Calm.	N. W. by W	N. W. by W	N. W. by W	Caln.	—	Rain am; snow pm; very high wind pm.	
26,	29.903	29.639	29.345	29.539	16.8	19.3	34.9	30.87	0.90	1.41	1.46	1.48	.92	.77	.72	.83	Calm.	S. S. W.	S. S. W.	S. S. W.	Caln.	0.135	Generally clouded.	
27,	29.040	29.930	—	—	41.8	49.3	—	—	3.52	3.96	—	—	.97	.85	—	—	N. S. W.	S. S. W.	S. S. W.	N. N. W.	Caln.	—	Lightly overcast. Very mild day	
28,	29.177	29.383	29.679	29.459	34.6	30.8	25.6	28.88	1.43	1.27	1.00	1.23	.70	.74	.71	.76	N. N. W.	N. N. W.	N. N. W.	N. N. W.	Caln.	—	Density clouded. Clear spaces 9 am	
29,	29.002	29.804	29.500	29.662	19.2	28.4	31.9	28.71	0.92	1.24	1.42	1.35	.85	.78	.83	.83	Calm.	E.	E.	E.	Caln.	—	Mostly cold. Rain fr 1 30 pm	
30,	29.254	29.453	29.610	29.477	36.8	28.3	34.2	36.25	2.10	1.93	1.86	1.99	.97	.84	.95	.93	E. by S.	S. W.	S. W.	S. W.	Caln.	0.095	Raining slightly 1 to 6 am. Dark & dull	
31,	29.657	29.440	29.399	29.453	33.9	40.1	36.8	37.32	1.86	2.07	2.07	2.05	.96	.84	.95	.93	Calm.	N. E. by N.	N. E. by N.	N. E. by N.	Caln.	—	Density clouded; dull; ring from 4 pm	
Mean	29.6657	29.6381	29.6257	29.6424	24.28	30.97	27.77	27.64	1.22	1.41	1.37	1.34	.87	.79	.86	.84							1.215	Toronto Bay frozen over on the night of the 14th and morning of the 15th.

* Snow, not appreciable on 1st, 4th, 19th, and 24th.—† Snow, on 10th, 0.1; 11th, 3.0; 12th, 0.1; 22d, 2.5; 23d, 0.3; total, 6.0.

Highest Barometer, 30.285 at 10 a.m. on 23d. } Range 1.318
 Lowest do, 28.920 at 3 p.m. on 27th. }
 Highest Temperature, 49° 4 on 2d, 11 p.m. } Range 46.5
 Lowest do, 3° 9 on 23d, 7 p.m. }
 Mean Daily Range, 10° 72 }
 Extreme Daily Range, 21° 8 from 23d, pm, to 23d, am.

Under the head of "Tension of Vapour," is given the elastic force of the aqueous vapour in the atmosphere at each observation, in decimals of an inch of Mercury; or the proportion of the barometric pressure due to its presence. Under the head of "Humidity of the Air," is given the proportion the aqueous vapour bears to the quantity the air is capable of sustaining at the existing temperature, saturation being represented by 1.00. The instruments are Standard Instruments. The Rain Gauge is 27 feet above the soil.—The Means entered are the Means by 24 hourly observations taken on Sundays are not included in any of the means. The observations entered at 7 a.m., on Sundays, are actually taken at 9 a.m.

Proportion of Wind from each Quarter—
 N.W. 166 } Total 423
 S.W. 95 } Winds, 423
 S.E. 60 } Calms, 201
 N.E. 102 }
 N.P. 102 }
 Mean force, 0.57 lbs; Max. force, 10 lbs; }
 on 25th, at the 4th pm. }
 Obs., 625 }
 Y. ant. 1845 }
 1840 }
 1811 }
 1812 }
 1813 }
 1814 }
 1815 }
 1816 }
 1817 }
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 1819 }
 1820 }
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 1840 }
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 1842 }
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 1844 }
 1845 }
 1846 }
 1847 }
 1848 }
 1849 }
 1850 }

Temperature for December.
 Mean, 21.9°
 Max., 42.1°
 Min., 8.9°
 Range, 43.0°
 No. Days, 3
 No. Winds, 7
 Calms, 6
 Mean force, 0.57 lbs
 Max. force, 10 lbs
 Min. force, 0 lbs
 Range, 10 lbs
 No. Days, 3
 No. Winds, 7
 Calms, 6
 Mean force, 0.57 lbs
 Max. force, 10 lbs
 Min. force, 0 lbs
 Range, 10 lbs
 No. Days, 3
 No. Winds, 7
 Calms, 6
 Mean force, 0.57 lbs
 Max. force, 10 lbs
 Min. force, 0 lbs
 Range, 10 lbs