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CANADA

MEDICAL & SURGICAL JOURNAL

SEPTEMBER, 1879.

Original Communications.

AN ADDRESS UPON MEDICAL EVIDENCE BEFORE THE LAW COURTS.

(Read before the New Brunswick Medical Society)

By WILLIAM BAYARD, M.D., President of the Society, etc.

Gentlemen,—I have selected for discussion this evening the subject of "Medical Evidence before the Law Courts," not with the view of bringing forward anything new, but for the purpose of directing your attention to a subject, the importance of which, I cannot help believing, is not recognized by all of us with the weight that attaches to it.

I need only to remind you that the responsibility assumed by a medical man when he enters the witness box for the purpose of recording his testimony is great indeed, inasmuch as the guilt or innocence of the accused too often rests upon his evidence, and upon his deportment in that box will he be judged for better or for worse.

The position is often a trying one. Barristers are intrusted with almost unlimited powers of interrogation,—they may insist upon answers to the most painful questioning. There are no *medical secrets* in a court of law; a medical witness must answer every question that is relevant to the case, and its relevancy is a matter to be decided by the presiding judge. But no man is bound to answer any question that would in any way criminate himself.

All barristers are not gentlemen, and oftentimes the privilege allowed them is abused by irrelevant questions being put in an impudent and insulting manner, justifying the severe reprimand given to a learned sergeant by Chief Justice Earle, who said: "The freedom of question allowed to the Bar was a public nuisance, and the barrister who made such an imputation ought to be prosecuted. If a question had relation to the truth, he was most anxious that it should be put, but to cast haphazard imputations at the suggestion of a person who might have no scruples as to what he did, was a degree of mischief that made him wish that a party should be prosecuted. He begged leave to say that in his experience he had seen counsel so abuse their privilege that he had cordially wished a power could be instituted that they might be prosecuted for a misdemeanor."

But, gentlemen, while we justly condemn such conduct in the barrister, may we not ask ourselves the question, does not the medical witness sometimes call forth such questioning by the character of his answers? Does he always go upon the stand possessing a thorough knowledge of the subject upon which he is to be examined? Is his judgment never warped by prejudice for or against one side or the other, or in favour of some hastily formed theory? I fear truth compels us to acknowledge that such exhibitions are occasionally observed in the witness box, that tend to degrade our profession in the eyes of the Court. For, believe me, the profession as a body are more or less judged by the short-comings of the individual member.

The variety of subjects upon which a medical jurist may be questioned would naturally make most men timid, unless they had previously given the subject that consideration I urge. While it is not expected that he should be so profoundly versed in all the principles of medicine and medical jurisprudence as to be able to solve every medical difficulty that may occur during the trial of a civil or criminal case, he is supposed to possess an average knowledge of his profession and of the duties and responsibilities of a medical witness. Of course the more profound his knowledge, and the more he has made himself

master of his profession, the better will he appear in the witness box.

Medical men are often found ranged on opposite sides, called for the purpose of contradicting each other—a degrading position, and one that should be avoided when possible. The attorney calls upon him, reports the case from his own standpoint; the medical man forms and gives a hurried opinion, based perhaps on partial information,—it suits the ideas or interest of the attorney, who books him as a witness; and when on the stand he finds himself led by subtle questioning to make unguarded statements, which, upon mature reflection and further information, he would wish unsaid. Another medical man is called, who, having made himself master of the subject, in the interest of truth and justice finds himself in the unpleasant position of being compelled to expose errors of opinion. Hence doctors get the credit of differing where no difference of opinion should exist.

The motto of the general practitioner "semper paratus" applies with force to this branch of his profession, for whether he resides in the town or country he cannot escape the risk of being suddenly called upon to give evidence. He may argue that a little time will be afforded him to look over his books; but let me assure him that a hurried glance at them, unless he has previously made medical jurisprudence his study, will not protect him from embarrassment when in the witness box. The accuracy of his statements may and probably will be tested by the strictest cross-examination. Let us suppose him summoned to attend a person labouring under the effects of poison. At the time he has no suspicion of the cause of the symptoms; as the case progresses, suspicion is aroused of poison having been given with criminal intent. In spite of treatment death ensues. Here the functions of the medical man end and those of the medical witness begin. He cannot now avoid giving evidence, or shift the responsibility on another; the law will insist upon his appearance at the coroner's court, and at the subsequent trial.

Therefore knowing that he must attend as a medical witness, he cannot be too particular in his observation of every thing

that can in any way throw light upon the subject. Circumstances of no interest in a medical or surgical point of view are often of the greatest importance in legal medicine. To enable him to meet questions that must arise during the progress of the examination, his observation must not be confined to the recognition and treatment of the case; it should take a wider range and embrace all the surrounding facts and incidences, which may, in the aid of his memory, be reduced to writing; but to make his notes or memoranda admissible in court, they should be taken on the spot and at the time the observations are made, and with accuracy, as they will be subject to the scrutiny of the bar.

Before any suspicious circumstances have come to light the witness may have been summoned to a person dying from the effects of a wound or poison, who may make a "dying declaration" of the circumstances. This declaration should be taken in writing, on the spot, at the time, and in the exact words made use of by the person. It has been thought necessary to prove that the person making the declaration had lost all hope of recovery, but under the difficulty of forming an opinion as to when the feeling of hope completely deserts a man, it is considered sufficient for all purposes, the man being dangerously ill, if he expresses his belief that he is dying. Such declarations are only admissible as evidence in cases of homicide, not in civil cases.

Now, gentlemen, having directed your attention to some of the points connected with the duties and responsibilities of a medical witness, the questions may be asked when, and under what circumstances is he compelled to give evidence? When may he refuse his testimony?—having given it, is he entitled to remuneration? and how should he deport himself when in the witness box?

Every individual of ordinary understanding is bound, when called upon, to testify before a court of law, to what he sees and what he hears.

A privilege has been claimed by medical men, that they should not divulge statements made to them in confidence by

patients. This is recognized in the States of New York and Missouri, where it has been enacted that "no person authorized to practice physic or surgery shall be allowed to disclose any information which he may have acquired in attending any patient in a professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon." But under the English law this privilege is not acknowledged. A witness would render himself liable to imprisonment for contempt should he persistently refuse to divulge such information. It is not required of him, and he would be wrong in doing so, to voluntarily communicate professional secrets in court, and it would be highly improper for him to do so to counsel before the trial.

The propriety of the English decision may be questioned, inasmuch as the patient, knowing that his confidential statements may be retailed in court, might withhold information necessary for the proper treatment of his disease.

This question of privilege has presented itself in another form. A medical man may be in attendance upon a patient, and from the nature of the symptoms, and the absence of any natural cause for the illness, he suspects that poison is being administered,—should he remain silent? or make his suspicions known? While undoubtedly his first and paramount duty is to protect his patient, he should be very careful not to make so grave a charge upon loose suspicions. Before he acts, he should, without delay, have his suspicions confirmed by the most careful chemical tests on the food and drinks, and on the urine and other excreta of the patient. I may here observe that all tests should be made in the presence of a witness. Having discovered the existence of poison in them, he should, as Dr. Christison advises, communicate his conviction to the patient, or place the matter in the hands of a magistrate.

The law requires that a preliminary examination in the form of an inquest shall be held upon the body of persons dying from the effects of any criminal act. We will suppose a medical practitioner to have been in attendance upon such person. It is the duty of the coroner to issue a summons requiring his evidence

at the inquest, and for disobedience of this summons, without sufficient cause, he will be subject to a penalty of "twenty dollars." If no medical man shall have been in attendance upon the deceased, the coroner may issue his summons to any legally-qualified practitioner at or near the place where the death happened, and for his attendance and evidence he is entitled to the sum of "four dollars"; and if he performs a *post-mortem* examination, an additional fee of four dollars is allowed. He also is allowed 5 cents per mile for his travelling expenses—not much over the cost of his weight in potatoes per rail. With such fees, such work, and for assuming such responsibility, the wonder is that educated medical men can be found who would not rather pay the penalty than perform the duty. And as a rule, medical men, who value their time and their opinions, do not perform the work, justifying the remarks of Mr. Rumsey, who, in his essays on State medicine, says that "it is no discredit to a practitioner engaged in the toilsome routine of ordinary medical duties if he should feel himself at a loss when called upon for a decisive opinion in some obscure case of poisoning or infanticide. His scanty opportunities for the study of these subjects and for making *post-mortem* examinations cannot suffice to qualify him for answering the delicate and important questions which he must answer before a jury can find a proper verdict. The custom of indiscriminately summoning medical practitioners of all sorts, and of all degrees of pathological knowledge and forensic skill, has sadly depreciated the value of medical evidence in courts of justice. Public confidence in the profession has been shaken, and the appearance of a doctor in the witness-box is but too often a signal for sport among gentlemen of the long robe."

Medical men too often give an opinion as to the cause of death without an inspection of the body. Such an opinion, given, as it must be, on insufficient data, is conjectural, and of little value.

It is the duty of the coroner to record all testimony taken before him, to bind the witnesses under recognizance to appear when called upon, and to transmit the evidence to the court.

Bearing this fact in mind, and the fact that he may, and probably will be, required to repeat his statement before a magistrate, then before the grand jury, and finally before the assizes, he cannot be too particular in making them, for any discrepancy would injure their value and damage his character as a witness.

A physician, before entering the witness-box, should clearly understand in what capacity he is called. For he may appear before the courts in a two-fold capacity,—as an *ordinary witness* to state facts within his own knowledge, or as a *skilled witness* to interpret facts, though both capacities are occasionally so blended that it is difficult to draw the line between them.

He should also bear in mind that he has no proper concern in the issue of the trial,—that while he may be called by the plaintiff or defendant, he is in no wise the witness of either side, but the adviser of the court.

A medical man in the capacity of an *ordinary* witness stands in the same position as all other persons. He is called for the purpose of testifying to facts which must have come to him through his own personal observation. But it is quite different when he appears as a *skilled* witness or *expert*. The character and value of his testimony is hereby entirely changed. He is expected to explain the relations of cause and effect in certain facts before the court, which relations require professional explanation in order that due weight may be given to the facts out of which they arise. The truth of the facts are not for his consideration. It is therefore indispensably necessary that he should possess the greatest amount of proficiency in those matters about which he is called to testify.

When giving his opinion, it is the duty of the expert to state the data upon which it is formed; by so doing he places the court and jury in a position to judge whether all the facts placed before him have been taken into consideration.

The next question for consideration is, *If a subpœna is served on an ordinary or skilled medical witness, is he bound to obey it?* The rule in relation to *ordinary* witnesses is that a subpœna duly served is a peremptory command from the sovereign authority to attend before a Court and cannot be

disobeyed with impunity. But inasmuch as an expert is not an ordinary witness, does he stand on the same footing? Lord Campbell is reported to have said that "A scientific witness was not bound to attend upon being served with a subpœna, and that he ought not to be subpœnaed." This dictum has been disputed, and I think properly so, as it ignores the fact that the subpœna is a command not to be construed by the expert. It is an order for a personal attendance at court, and must be obeyed if possible.

But, as Professor Ordronax observes, "Once put upon the stand as a *skilled* witness, his obligation to the public now ceases, and he stands in the position of any professional man consulted in relation to a subject upon which his opinion is sought. It is evident that the skill and professional experience of a man are so far his individual capital and property, that he cannot be compelled to bestow it gratuitously upon any party. Neither the public, any more than a private person, have a right to extort services from him in the line of his profession, without adequate compensation. On the witness stand, precisely as in his office, his opinions may be given or withheld at pleasure, for a skilled witness cannot be compelled to give an opinion, nor committed for contempt if he refuses to do so.

The expert should make his claim for compensation, *after* having been sworn, but *before* the opening of the examination *in chief;* it will not avail if delayed until the cross-examination.

In connection with this subject, Maule, J., said: "There is a distinction between the case of a man who sees a fact and is called to prove it in a court of justice, and that of a man who is selected by a party to give his opinion, on a matter with which he is peculiarly conversant from the nature and employment of his life. The former is bound as a matter of public duty, to speak to a fact which happened to have fallen within his knowledge—without such testimony the course of justice must be stopped. The latter is under no such obligation. There is no such necessity for his evidence, and the party who selects him must pay him."

The same rule applies to *personal services* demanded from

an expert, who may decline to make a post-mortem examination or chemical analysis, when summoned to do so by the coroner.

The last question for our consideration this evening, is the deportment of a medical man in the witness box.

His demeanor should be that of an educated gentleman, understanding his subject, and the responsible position in which he is placed, ever bearing in mind the fact, that, like a faithful microscope, he is there to enlarge the field of vision of others, and to enlighten the minds of the court and jury upon points requiring this special knowledge, and having no concern whatever in the issue, his brain is being consulted, not his heart.

To convince those who listen to him that he is master of his subject, he must make his opinion *clear* and give *satisfactory reasons* for this opinion. Dr. Elwell's remarks upon this point are worthy of observation, he says,—"Take almost any one of the important scientific questions upon which a professional witness is called to pass an opinion, and unless he has *looked at the subject before with a purpose to understand it*, comprehending its extent, weight and relations, he will find it to have suddenly assumed an importance he had not suspected, just at the time when the discovery will add to his confusion. It is better to make this discovery in the quiet stillness and security of solitude, than under the eye of a judge and the severe scrutiny of counsel. A man whether learned or not—whether in court or out of court—will talk clearly upon a subject he well understands, whether it is scientific or otherwise, but *unless it is clear in his own mind his account of it will be confused and unsatisfactory.*"

A barrister, in his zeal for his clients, makes use of all fair means, and sometimes means not quite fair, to destroy the value of testimony that may be adverse to his allegation or theory; consequently the medical witness may expect to have his professional qualifications, his experience, his means of knowledge, the accuracy of his judgment, the time during which he has been in practice, or the grounds of his opinion, closely investigated. He should be on his guard and never

allow himself to be irritated by such questioning. Better meet any attempt to involve him in contradiction with good humour, and disarm his questioner by shewing that he understands the responsibility of his position,—that his opinion is not given without due consideration, and that his only object is to tell the truth regardless of consequences.

I need not say that straightforward answers should invariably be given to all questions. His replies should be made audibly, concisely, without hesitation, and with as *few technicalities as possible*, for counsel, as a rule, are unacquainted with medical terms, and often misapply them. He should avoid being drawn into an argument with counsel, for argument is not evidence; he is there to state facts and draw inferences from them.

Categorical replies are often insisted upon by counsel to questions that cannot be properly answered in the affirmative or negative. If, from the mode in which the question is framed, the witness should feel that the simple answer, "yes" or "no," would not convey his meaning, or might mislead the court, he should appeal to the judge to allow him to explain his views more correctly.

Counsel during the examination of a medical witness often refer to the writings of professional men. The authority and passage being quoted, the witness may be asked whether he agrees or differs with the opinion of the author. Before giving his answer, he should examine the book and see that the passage is correctly quoted. While he cannot read from professional books in court, he may refer to them.

A medical witness cannot express opinions upon the opinions of others, nor upon the merits of the case, nor upon facts that are controverted. He may express an opinion upon an hypothetical statement of facts.

Now, gentlemen, I must conclude this paper, acknowledging its many imperfections, and ask you to accept it "for better or for worse." If I have succeeded in enlisting your interest in this important subject, I shall feel that I have done some good.

St. John, N.B., Aug. 23, 1879.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Chronic Synovitis.—Abscess of Thigh-in communication with Joint.—Under DR. FENWICK.

(Reported by Mr. G. T. Ross.)

On the 14th May, 1879, there was admitted on the Surgical side of the Montreal General Hospital, R. H. M., a lad seventeen years of age, below the average height, and ill-nourished. His right knee, leg and foot were swollen and red, and over his great toe and upper part of shin some superficial sores existed. The history of patient's family points to tubercular disease; his own speaks of exposure and harsh treatment on the part of his master, in proof of which he carries numerous scars, chiefly about his head. Had the great toe of right foot frozen about six years ago; since that time, during each cold season, he has had a weak ulcer on its upper surface, (where one of those now present exists) and often others further up the same member. These sores healed when the weather moderated.

History of Case, May 14th.—Four weeks ago, patient states, his right knee, leg and foot became swollen and flushed, with no known injury or unusual exposure as a cause. A few days later the sores on his shin and great toe appeared. His knee had increased rapidly in size, and about ten days since a small opening was formed just to inner side of the tuberosity of tibia, from which a clear, thin fluid has since flowed freely on pressure of the affected joint. Patient has had no pain in the knee, but has continued to use it, though lately it has become somewhat stiff; the joint is slightly tender on pressure, and measures two inches more in girth than its fellow. There is marked œdema of whole leg and foot; limb is held in a semiflexed position. Patient has a dirty, sallow skin, hair falling out, appetite good, digestion fair, circulatory and respiratory systems in a healthy

condition, urine pale, fair in quantity, normal spec. gravity, acid reaction, free from albumen and sugar.

May 20th.—The sores on shin and foot nearly healed. The fistulous opening at inner side of knee discharges freely; fluid clear. Patient has been upon the iodide of iron, with nourishing food. Limb extended, a weight of seven pounds being attached to foot.

May 26th.—The swelling in leg and foot diminished. Knee remains enlarged, red and œdematous, and has become somewhat more tender upon pressure; the opening at its inner side still discharges; character of fluid unchanged. Patient's general condition improved; he is cheerful, has a good appetite, and feels well. Temperature usually normal, but sometimes goes up to 101°.

May 28th.—Knee diminished in circumference nearly two inches; middle part of thigh has become enlarged and painful, a fluctuating bulging existing at its outer side. This was incised by Dr. Fenwick, and discharged ten to eleven ounces of a sanio-purulent fluid, mixed with a large quantity of apparently altered synovia, which flowed freely upon compressing the knee. This fluid is yellowish, of the consistency of treacle, and deposits albumen freely on boiling. Patient continues to get the iodide of iron; linseed poultices to be applied to thigh. Temperature 100° F. last evening; 98° F. this morning.

June 3rd.—Abscess in thigh discharges freely; opening at knee closed; joint diminishing slowly in size; extension continued.

June 15th.—A small amount of fluid escapes from thigh. The patient's appearance improving. Temperature normal.

July 1st.—The knee has reached the size of that opposite, the opening in thigh discharging a very small amount of thin pus; fair motion has returned to joint without pain.

July 15th.—Incision in thigh closed; extension removed, and a plaster casing put about the limb, which had the knee joint first covered with Scott's dressing.

July 28th.—Patient discharged wearing plaster stocking, and his general condition very greatly improved.

Medical Cases under Dr. Ross.

Gonorrhœal Rheumatism—Affection of Jaw and Costal Joints.

J. M., æt. 20, admitted 4th December, 1878, complaining of rheumatic pains and swelling in the joints. Three months ago patient contracted gonorrhœa. There has been very considerable discharge, but the inflammatory stage was slight—very little heat and smarting at any time. He has never had the disease before, nor any other venereal affection. Never had rheumatism. Four weeks after, he was suddenly seized with violent pain in the left knee, which, the following morning, was swollen and hot. Four days later the right knee became similarly affected. The excessive pain gradually diminished in proportion as the joints became swollen. There was considerable fever at first, but this soon subsided; he was also relieved of pain to such an extent that he got up and around for some days. With exercise, however, this returned as badly as ever, and is now as great as at first. Both knees are much swollen, the left rather more than the right. They are also quite tender; there is no redness, and hardly any perceptible heat of surface. These are the only large joints which are affected, but several smaller ones are also involved, viz., the metacarpo-phalangeal articulations of both thumbs and the corresponding joints of both great toes, and the temporo-maxillary articulation of the right side,—the last-named causes great complaint upon movement of the lower jaw, and the joint is very tender upon pressure. He also complains of a pain in the back, near the point of the scapula, and on examination it is found that there is a small spot about an inch and a half to the right of the spine, and corresponding with the attachment of the fifth and sixth ribs, to the transverse processes, which is very sensitive upon deep pressure. Heart and other internal organs were examined and found healthy.

He was treated by iodide of potassium and iodine locally, with flannel bandages. Improvement soon began. The smaller joints recovered first, and after pain had left the knees, swelling still obstinately remained in them. Just as he was about recov-

ered from all the original trouble, pain set in in the soles of the feet, and a troublesome plantar rheumatism necessitated his longer stay in Hospital. He was discharged well on the 25th January, 1879.

Patient was cautioned against contracting gonorrhœa a second time, as it would almost certainly be accompanied by a renewed attack of the painful rheumatic affection.

Gonorrhœal Rheumatism.—Second attack, involving several Joints, including temporo-maxillary and sterno-clavicular.

E. M., æt. 24, admitted 30th Dec., 1878, with rheumatic pains in joints. Had gonorrhœa three years ago, which was accompanied by pains in the right knee and in all the phalangeal joints of the left foot. For this he was treated in a Liverpool hospital, the attack lasting in all nine weeks. On 30th October last he again contracted gonorrhœa, the discharge still remaining. On the 16th November his present rheumatic troubles began—first with severe lumbar pain, then pain and tenderness over both tubera ischii. Subsequently the following joints became also involved: the left temporo-maxillary, the right shoulder, and ankle. There is but slight swelling at present in any, and no pain of consequence when at rest, except in the right ankle. For a week the right sterno-clavicular articulation has been very tender, and it is also somewhat swollen.

Rapid improvement followed a treatment with potass. iodid. and a local application of lotion of iodine and glycerine.

By the 30th January all the joints were well, except the jaw, which was still tender, and the right ankle, which was pretty stiff. He was then put upon iron and gentian. The remaining troubles soon disappeared, and he was discharged cured on the 8th Feb'y, with similar advice as that given to the last patient.

Remarks.—This disease, so entirely different from ordinary rheumatism, is well illustrated by these two cases. Its predilection for the knee joints, and the singular fact that the *left* knee is that most commonly first (and sometimes alone) attacked, is exemplified in the case of J. M. In both also is seen the

sub-febrile, or even entirely apyretic course frequently observed in this gonorrhœal arthritis. A peculiar feature of the complaint is to involve joints rarely affected in the ordinary disease. So here in both patients the articulation of the jaw was severely inflamed, and in one, the structures articulating the ribs with the vertebræ, and in the other, those articulating the clavicle with the sternum, were the seat of disturbance. The case of E. M. also shows the liability of patients to suffer from successive attacks of the joint-disease with each attack of gonorrhœa. The study of gonorrhœal rheumatism presents many points of interest, inasmuch as its pathology is not yet definitely agreed upon, especially whether it be of septic origin, or produced by nervous agency through the spinal cord. I incline strongly to the latter view.

Correspondence.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

To the Editor of The Canada Medical & Surgical Journal.

Sir,—The twenty-eighth annual meeting of this Society was held at Saratoga, under the presidency of Dr. Barker, of Philadelphia, beginning Aug. 27th. In the circular issued by the general secretary, it was stated that an effort would be made at this meeting to start a sub-section of Physiology and Anatomy, and it was in this hope that your correspondent attended; but, unfortunately, there was not a sufficient number of members interested in these subjects to justify its organization. This is greatly to be regretted, as the general section B, under which these branches have heretofore been included, is too extensive, embracing, as it does, Geology, Biology and Anthropology. A sub-section of Biology, even, would be a great gain, and gentlemen interested in human physiology and anatomy could readily arrange to have the papers on their special subjects come on a certain day. Under the present system there is no inducement

whatever for men to bring physiological or anatomical papers before the meeting.

The first day was taken up in the transaction of general business, the election of new members, and the introductory addresses of the chairman of the reception committee, and the reply by the president. The former, Dr. McEwen, made a very happy speech, and sketched the history of the celebrated Springs known for nearly a century, and whose virtues, he said, have been much more constant than those of the U. S. Congress, after which they were named.

On Thursday, in the general session, Mr. Scudder, of Harvard University Library, directed the attention of the members to the catalogue of scientific literature recently issued by the Library. It forms a book of 300 pages, with 50 pages of index, and will be of great service.

In the chemical section, an address by Prof. Remsen, of Baltimore, was read, in which he made a powerful appeal for the more extensive study of organic chemistry. Perhaps the ablest paper of the meeting, one showing great research and experimental talent, was by Mr. Michelson, one of the instructors at the Naval Academy, on the "Determination of the Velocity of Light." Certain sources of error in the older observations have been eliminated, and the result determined within 1-5000th of correctness, the velocity being 186,305 miles per second, the probable error not being more than three miles per second.

In a paper entitled "Consonantal Expression of Emotion," Dr. Clarence J. Blake, of Boston, editor of the *Journal of Otology*, broached an interesting and novel theory. The consonants of any language are of special value in the expression of emotions, particularly unpleasant ones, such as anger, and for the pronunciation of them a certain amount of force is needed. For the estimation of this force, the instrument known as the Logograph is employed. In the one used by Dr. Blake he has substituted the drum with the malleus and incus of the ear for the ordinary membrane. By means of a small pen-point the vibrations of the membrane are transferred to a plate of smoked

glass (as in the sphygmograph), and a comparison of the force necessary to be employed can in this way be obtained, and a comparative value fixed to all consonant sounds. According to Herbert Spencer, emotion is an excess of nerve force which must have peripheral expression, and naturally deep feeling finds its outlet in forcible sounds. The various "cuss words" in common use afford relief to irritated man, simply because they contain the consonants of the highest logographic value. This may be called the physical basis of swearing, and affords a physiological excuse for the use of bad language. In private conversation afterwards with Dr. Blake, it was suggested that he invent a new "swear-word" of the highest possible logographic value, and with no moral significance. This might be sanctioned, very appropriately, by the American Association, and be recognized henceforth as the scientific "damn."

In the evening, Prof. Marsh, of Yale, gave an interesting address on the "History of Palæontology," showing how different periods in the study of fossils could be recognized. He told an exceedingly good story about an old German Professor, in the first quarter of the last century, who taught his students that fossils were mere 'sports of nature.' Some of them thought they might follow nature's example, so they carved fantastic forms from the soft limestone and buried them in the Professor's favourite hunting ground. They were soon found, and the delight shown at the new treasures stimulated the wicked students to fresh efforts, so that before long the Professor had a large collection of unique fossils, the like of which had never been seen. After an immense amount of labour and time spent upon them, he published a work with twenty folio plates, figuring the new fossils. His fame was apparently secure. The joke was, however, too good to be hid, the deception became known, and the unfortunate Professor was overwhelmed with ridicule. He bought in all the volumes he could, but as they became scarce the price rose, and he finally died in great poverty. The widow, a woman of enterprise and of a practical turn, retrieved the fallen fortunes of the family by the issue of a second edition.

Among the 125 papers in the list very few were of medical interest, the great majority being on chemical and geological subjects. Some of the titles speak for themselves and should have excited suspicion in the standing committee. Thus, "Animal Architecture and the Law for circulating its fluids, inclusive of the blood, the juices and the pulmonic air." "The trunk or body of the higher animals, one organ; the architecturo-Cardiac Respiration, its rythmic movements," by the same author, and each put down for 60 m. They tell their own tale —a physiological crotchet,—a few imperfect data, sweeping general conclusions. So far as I know there is yet to be written a series of papers on "Types of Professional Character," but when it is one of the most interesting will be on the half educated, often original character, whose mind has grasped an idea, perhaps a true one, and round it he will make all the facts of physiology and pathology cluster in a manner satisfactory to himself, most painful to others, who see nothing but crudities in his badly observed facts and ill concocted theories. In all large gatherings such a specimen is sure to be found, and he is generally quite irrepressible. George Eliot says, "Blessed is the man who, having nothing to say, abstains from giving us wordy evidence of the fact, from calling upon us to search through a heap of millet seed in order to be sure that there is no pearl in it." But what about the man who does?

A Paper by Dr. C. S. Minot, of Boston, on the "Conditions to be fulfilled by a Theory of Life," showed considerable research and originality, and the author criticised very ably the mechanical or physical theory so commonly accepted by advanced thinkers.

Among the notables at the gathering, few attracted so much attention as Edison—the bogie of gas companies. He is a man of medium size, about forty years of age, and not at all striking in appearance. His manner is very simple and unaffected, and he talks in pleasant, easy style. He is not a success on the platform, and said that his electro-chemical telephone could face an audience much better than himself, as he was deficient in native brass. In conversation he mentioned

many interesting matters in connection with his work; some of his notions are very odd—thus he believes it will be possible to illuminate the interior of the body by passing a small electric burner into the stomach. He said that so far his experiments on the subject had been neither numerous nor encouraging, as he had nearly choked the man on whom he first tried it. There can be no doubt that he is a man of great originality and of wonderful tenacity of purpose. With the unlimited means now at his command for pursuing electrical studies, the question of the practicability of bringing the new light into general use must soon be settled. By means of his new electro-chemical telephone, vocal sounds transmitted by it can be heard all over a large hall, instead of, as in the ordinary instrument, only close to the receiver.

The only eminent visitor at the meeting was Prof. Struve, the Astronomer-Royal of Russia, a fine-looking old gentleman, who was introduced to the assembly by the President in true "spread-eagle" style, which seemed rather out of place in a scientific gathering. He was commissioned by the Emperor to procure the finest telescope in the world. After searching Europe, he decided to try America, and found that he could get the best glasses from Clarke & Son, of Cambridge, Mass. This is quite a feather in the cap of American opticians, and when the announcement was made by the Professor, the prolonged applause which followed showed how greatly this compliment to American skill was appreciated.

The central position, and the ample accommodation which its unrivalled hotels afford, make Saratoga a particularly suitable place for large gatherings. This year, in rapid succession, the Bankers, the Unitarian parsons, the Scientists and the Politicians have followed each other. There is not a large local population in the town, and the social element, so common at these meetings, was absent; and this, perhaps, is not to be regretted, for more time was available in the evening for the addresses by the chairmen of the various sections.

The numerous springs for which this place is famous are alkaline and chalybeate, and strongly charged with carbonic

acid gas. The salts vary in amount, and are different in many of the springs, even those which are close together. Thus the Congress Spring contains very little iron, while the Columbian, 100 feet away, tastes like ink, so strongly is it impregnated with chalybeate salts. The water of the former spring is bottled in large quantities, and is by far the most pleasant to drink. It is mildly aperient. There are no sulphates in any of the springs. The virtues of the waters are highly extolled by the proprietors, some of whom do not hesitate to falsify the statements of the State Analyst. Thus the amount of iodide of sodium was advanced from ⅛ of a grain to 20 grs. by one enterprising bottler, of elastic conscience and great faith in iodides.

The next meeting is to be held at Boston, which not only presents unrivalled facilities for the reception of the Association, but is specially adapted for it as the representative city of the Union in literature, science and the arts. W. O.

Reviews and Notices of Books.

Health and how to Promote it.—By RICHARD MCSHERRY, M.D., Professor of Practice of Medicine, University of Maryland, President of Baltimore Academy of Medicine. 8vo. pp. 185. New York: D. Appleton & Co.

It is quite unnecessary, at the present day, to dilate upon the importance of a knowledge of hygiene, not alone on the part of medical men, but also the general public. Numerous as are the works which have appeared on this subject, yet it is one of such great extent that there is always either more to be said or some new way of presenting the various points connected with the preservation of health. This volume is professedly non-technical, and will therefore commend itself to many readers outside of the medical profession. It avoids all purely medical expressions and arguments, and is therefore quite readable for any intelligent layman. Moreover, it deals exclusively with individual hygiene, not touching at all upon the equally wide domain of public hygiene. The measures suggested, therefore,

are those which are under individual control, and can be carried out by him for the preservation of his health. Its teachings are sound and practical. It gives many useful hints which it would be well for heads of families to be acquainted with and to carry into effect. The book is divided into two parts. The first presents to us the individual human being, and traces his development to full adult condition and then subsequent decline, explaining the circumstances under which this will best take place in a purely physiological way—that is to say, without deviation from the standard of health. The second treats of "Hygienics in some detail," and discusses, amongst many, the following: Race, Air, Water, Occupation, Food, &c., and has good chapters upon the use and abuse of alcohol and tobacco. It is written in an agreeable style, and contains much condensed useful information.

Demonstrations of Anatomy: being a guide to the knowledge of the human body by dissection.—By GEO. VINER ELLIS, Emeritus Professor of Anatomy in University College, London. From the eighth and revised English edition. Illustrated by 249 engravings on wood. 8vo., pp. 716. Philadelphia: Henry C. Lea.

This work, long recognised in England as one of the leading standard authorities on practical anatomy, has now reached its eighth edition. This fact of itself of course fully attests the estimation in which it is held. In each succeeding edition progressive improvements have been made. Of late years especially, owing to the advances made in our knowledge of the histological structure of parts and organs, it has become necessary for these anatomical works to contain all the later developments. This has been carried out in Professor Ellis' admirable book, so that in this edition it will be found that the descriptions of the textural anatomy of the various portions of the body are based upon the most recent facts established by microscopical observers.

The illustrations are one of its best features. They are clear, sharp and accurate. They are not the hackneyed ones

which serve works of the same kind, but on the contrary those not original are taken from Henle and others of the more modern authors.

The plan adopted of grouping together in the text the description of all the structures met with in each anatomical region is that which must of necessity be most convenient, and is certainly most instructive to a student. Every student, therefore, of practical anatomy, whether possessed of one of the systematic text-books or not, should have a guide to his dissections founded on this plan. We know of no better work of the kind than the demonstrations of Ellis.

First Lines of Therapeutics.— By ALEXANDER HARVEY, M.D., Emeritus Professor of Materia Medica in the University of Aberdeen; pp. 278. London: H. K. Lewis.

The author states that "these lectures are submitted to the profession, and particularly the younger members of it, in illustration, on the one hand, of the working of the Vis Medicatrix Naturæ, on the Modes and the Processes of Healing and Recovery, as occurring spontaneously in disease; and, on the other, of the Modes and Processes of Dying, as resulting naturally from disease, or of the Modes of Fatal Termination of Diseases." He regards the first great lesson in the science of therapeutics to be: Instruction in the inherent tendencies of diseases to a favorable termination and in the curative powers of the organism. The pertinent question is asked—Where is this lesson taught? Certainly not in our text-books, from which the student will most assuredly gather that drugs alone cure disease. The second great lesson is: Instruction in the fatal tendencies and modes of termination of diseases. These are the author's texts, and they form the basis of twenty-four well composed and most instructive professional sermons.

The science of the Vis Medicatrix Naturæ, "the department of natural therapeutics, in contradistinction to what may be called applied therapeutics, or the therapeutics of art," must form the basis of any rational system. "We must know in detail how nature works in effecting the spontaneous decline

and cure of diseases, what provisions there are in the living body for bringing about that result in every kind and variety of disease." But nature will sometimes be taken aback, and even in cases which naturally admit of a cure, "there may be from circumstances, or there may arise a tendency, more or less strong, to an unfavorable issue, nay, to a fatal issue." Here art may triumph; hence it is so necessary to study the modes of fatal termination of diseases in order to be able to meet complications and avert impending danger. Nature and art are the factors engaged in the treatment of disease, and they run in the same grooves, but in this very co-operation of nature with art "lies the difficulty that constantly besets us—the difficulty of discriminating between a cure and a recovery, two widely different things, and of drawing the line between *post hoc* and *propter hoc*."

One other quotation will illustrate our author's position. "The main objects we have in view (speaking generally) in the treatment of cases—in all, at least, that are serious or severe—are: *first* and foremost, to have an eye to the danger signal, to the tendency to death, either in sight or impending, or (as judged of by the known history of the disease) to be looked for some time in the sequel, and this in order to be prepared to meet and counteract it; and *secondly*, to have an eye to the curative processes of nature in the working out of the spontaneous cure of the disease, and this in order to help her in it. Other objects of practice there are, no doubt, in many cases; but they are all of them subordinate to these two." Such rules will be ever present in the mind of the scientific practitioner, and "in as far as they fail him, or are inapplicable, he will then fall back on the teaching of experience."

Very just criticisms are made on the present method of teaching therapeutics, usually with Materia Medica during the first two sessions, when the student is "quite incapable of taking in even the simplest elements of it." And what is taught is applied therapeutics—the use of drugs; the principles of natural therapeutics find no place in the curriculum.

Among some of the subjects of the lectures are "Popular

and professional views as to nature and art in the cure of disease"; "Causes that have retarded the progress of therapeutics"; "Proper sphere of art in the cure of disease"; "Health and disease only relative states of one living organism." The last seven lectures are on the "Modes and processes of healing and of recovery as occurring spontaneously in disease," and on the "Modes and processes of dying as resulting naturally from disease."

We would earnestly commend to our readers the study of this work; the principles advocated in it lie at the foundation of a rational practice of medicine. The author says that "all through, my great object has been to show you the *actual* footing on which our science of therapeutics stands,—that you may neither overrate it on the one hand, nor, on the other, underrate it." This object has been well accomplished, and we are confident that the readers of this volume will feel, as the writer does, a debt of gratitude to Professor Harvey, and will date from its perusal the origin of clearer views and sounder conceptions of the art of healing.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Injection of Ammonia into the veins AS A MEANS OF RESUSCITATION IN ALCOHOLIC AND NARCOTIC POISONING.—The idea that the ammonia generated in the blood in the process of nutrition is for the purpose of acting as a solvent —that is, for the holding together the other constituents—seems probable from the fact that the rapid escape of ammonia by evaporation from freshly drawn blood, and its dissipation in the atmosphere, proceeds *pari passu* with the coagulation of the blood. It seems to show that they stand in the relation of cause and effect.

The immediate tendency of the blood to coagulate as soon as it is withdrawn from the body—that is, for its component parts to separate—certainly leads to the conclusion that its several constituents are only very lightly held together, even when

within the body. That temperature, motion, and the exclusion of air, either separately or in conjunction, are the chief agents in sustaining the fluidity of the blood is very doubtful; for when we see the wide range of temperature, with the sometimes sudden alternations to which the blood is subjected, and when, again, we find it can also more than double its speed without influencing its consistence, we can hardly think that these two —motion and temperature—are the controlling powers sustaining its fluidity.

Then, as to the exclusion of air, that cannot of itself be the cause, as the following experiment shows: The jugular vein of a dog was tied, and a ligature passed round it in two places. The blood enclosed between the two ligatures was found in less than an hour to have undergone decomposing changes, for, on a slit being made in the vein, an escape of air and partly coagulated blood followed.

To what extent the impairment of this essential condition for carrying on life—namely, the perfect fluidity of the blood,—occurs, and under what circumstances, have not been made the subject of investigation; but that there are some forms of dying whose *modus operandi* is through a gradual thickening of the blood, producing a slow and yet slower circulation until complete stoppage occurs, is probable, although an examination of the bloodvessels after death does not reveal it. It is no sufficient answer to this supposition to say we ought to find them choked and full of clotted blood. Arguing from the fact that two minutes suffice for the complete coagulation of freshly drawn blood from a living subject, and that the subsequent steps in the process of disintegration of that blood are equally rapid, we ought rather to conclude that the condition of the blood in the veins and capillaries of a person who has been dead but an hour is probably very considerably altered from what it was at the moment of death, and that the arteries being empty, and viscid blood being found in the veins, are no evidences of what was the actual condition of the circulating fluid when the heart ceased to pulsate and the lungs to respire.

In the beginning of 1878 I was making some experiments

with fresh animal blood, and repeated many of those of Dr. Richardson's. The power of ammonia to suspend coagulation was fully confirmed in these experiments. It suggested the thought that the elimination of latent ammonia, by its ready volatility, was the first step in the process of disintegration of the blood. But it was not until the following case occurred that the further thought arose that possibly the action of some poisons when taken into the system was that of stiffening or thickening the blood, if such a term might be applied to a diminished fluidity, the result of an arrested vital force leading to an arrested supply of an ingredient necessary to the maintenance of fluidity. Might not that ingredient be ammonia?

In apoplexy and in fractures of the skull with effusion of blood, where it was formerly thought that the clot of blood was by it pressure alone the cause of death, it is more probable that a progressive clotting of the blood in all the vessels in the neighbourhood sets in, and the circulation of the blood becomes arrested from this cause over an ever-widening area, until death ensues. The engorged state of all the bloodvessels of the brain found after death favours this view. In such cases death has occurred too soon for the further disintegration of the blood and the escape of its serum, but there are numerous other diseases where the arrest of the circulation or an impediment to it leads to a separation of the fibrin and serum and the infiltration of the latter into the tissues or into cavities. Serous apoplexy, ascites, and anasarca, are familiar instances.

The property of holding together in uniform admixture the constituents of the blood must be lodged in certain elements which are themselves the product of nutrition. This being so, we may go further, and assert that there occur certain conditions of the blood as the result of abnormal nutrition or of blood-poisoning where these necessary elements are deficient, or at least not present in sufficient quantity to hold intermixed the other constituents. Is this what happens in alcoholic and narcotic poisoning? Are nitrogen and hydrogen, combined in the form of ammonia, the elements wanting? If they are, it affords

an explanation of the good effect of the introduction of the latter directly into the blood in the case now to be related:

S. C——, aged fifty-two, living in a neighbouring street. I was called to her on March 6th, 1878, at 7.30 A.M. I found her lying on a sofa insensible, having all the appearance of stupor from drink. Her history was that of a confirmed drunkard. Her face had a very bloated appearance. She had risen an hour or two before, and gone to an adjoining public-house, and been supplied with drink—rum or brandy,—had come home and laid down on the sofa, and the children after a time being unable to rouse her, sent for me. There were contusions on various parts of the head and face, which gave rise to a suspicion of ill-usage as well. By shaking and shouting to her she would partly open her eyes. Mustard plasters were applied to neck and calves, and attempts made to get her to swallow a little coffee, but without success.

I then had her removed to the hospital, to which she was conveyed perfectly insensible in a cab. Here galvanism and the stomach-pump were freely used, without rousing her in the slightest. She was then removed to bed in a private ward.

At 11 o'clock I saw her again. She was quite comatose, pupils contracted, pulse feeble and flickering, and skin moist and perspiring. All attempts at rousing her failed.

At 1 p.m. I saw her again. The pulse had now become so feeble as to be scarcely perceptible; her lips and tongue were livid and cold; there was a frothy secretion of mucus from the mouth, and peculiar changes of colour passed over her countenance, which seemed to indicate the nearness of the end. I left her with the impression that in a few minutes pulse and breath would stop. Going down stairs with Mr. Gwatkin, the senior house-surgeon, discussing the case, he threw out the suggestion to try the injection of a little ammonia into one of the veins, a proposal to which I gladly acceded, and having obtained some strong solution of ammonia from the dispensary, I returned to the ward and injected with a hypodermic syringe ten drops into the medio-cephalic vein of the right arm. The effect was striking. In a few moments she moved slightly—an

uneasy, restless motion, and soon after, on being shaken and spoken to, partly opened her eyes and turned her head. The most marked change was in the pulse and mouth. The former, which was not to be felt just before the operation, could now be detected, and after a time counted, whilst the mucous membrane of the mouth and tongue became almost immediately of a natural colour.

She slowly recovered consciousness. In the evening, when I saw her again, she had so far rallied as to be able to swallow. She complained much of her arm. The skin over the injected vein subsequently sloughed. Her recovery was slow, due to the intemperate life she had led, and to the ill-usage of a brutal husband, every part of her body being covered with bruises and contusions.

I have delayed the publication of the above remarks for several months with the hope of being able to give further illustration of the effects of ammonia injection. Quite recently a woman was brought into the hospital poisoned by drinking carbolic acid. The case was apparently hopeless, when the house-surgeon injected solution of ammonia into the veins of her arm, and the woman recovered.—*Lancet*, Aug. 2, 1879.

Self-Limitation of Phthisis.—Dr. Austin Flint read a paper before a recent meeting of the New York Academy of Medicine, giving the result of his observation in cases of phthisis that had completely recovered or ceased to advance. He held that the favourable course of certain cases was due to self-limitation of the disease, as was claimed by him twenty years ago, when he reported twenty-four cases of recovery. During thirty-four years of observation he had collected a sufficient number of cases, ending in recovery, in which there had been either no treatment or treatment that could not be considered of a curative character, to prove that the disease in certain instances might be either self-limited or non-progressive after a period. He excluded cases of acute tuberculosis, cirrhosis of the lungs, and interstitial pneumonia. Of 670 cases of phthisis, occurring during thirty-four years, 44 ended

in recovery. In 31 cases the disease ceased to progress for varying periods, ranging from several months to several years. He considered the non-progression as proving that the disease ended, although recovery from the lesion did not take place, and felt justified in adding both together, making in 75 cases out of 670. Of the 44 cases of recovery practically no treatment was pursued in 23; of 31 cases of arrest, in 15 there was no treatment. In several cases of both groups there was no change in the method of life, and in a considerable number the change was not of such a character as to be important. In regard to prognosis, the symptoms indicating a favourable issue were slight increase in pulse and temperature; small amount of loss of flesh, and a fair appetite; in other words, tolerance of the disease. In regard to the lungs, the more limited the lesion the greater the tendency to limitation; and, although there was limitation in cases of large lesions, the amount of diseased tissue did not admit of restoration.

Iodide of Starch as an Antidote.—Dr. Bellini, in a paper read before the Medical Society of Florence, recommends the iodide of starch as an antidote to poisons generally. It is free from any disagreeable taste, and has not the irritating properties of iodine, so that it can be administered in large doses. He has made numerous experiments, and states, as a result of these, that at the temperature of the stomach and in the presence of the gastric juice the iodide combines with many of the poisons, forming in some cases insoluble compounds, in others soluble compounds, which are harmless so long as they are not in too large quantity. He recommends it as safe in all cases where the nature of the poison is unknown, and as especially efficient in case of poisoning by sulphuretted hydrogen, by the alkaloids and alkaline sulphides, by caustic alkalies, by ammonia, and especially those alkaloids with which iodine forms insoluble compounds. In cases of poisoning by salts of lead and mercury it aids the elimination of these compounds. In cases of acute poisoning an emetic should be employed soon after its administration.—*Lond. Med. Record.*

Toxic Effects of Tea.—Dr. Wm. J. Morton describes, in *Neurological Contributions*, No. 1, a case of considerable interest. The patient was a tea broker, aged about thirty years, sallow and thin in flesh, but apparently in good health. He was also a "tea taster," as his business required.

"Tea is 'tasted' in form of a simple infusion. An amount of the tea to be pronounced upon, equal in weight to a silver five-cent piece, about 15 grains, is put into a small cup, and hot water is turned on to it. Having noticed the behaviour of the leaf in water, the aroma in the steam, and a few minor particulars, the 'taster' takes a full mouthful of the liquid and holds it in his mouth, repeating the process until his opinion as to its quality is formed. Some tasters swallow the tea and some spit it out." The patient in question thinks he takes about half a pound of tea each day, and has been engaged in the business for about eight years. The immediate effects upon him are as follows:

"In about ten minutes the face becomes flushed, the whole body feels warm or heated, and a sort of intellectual intoxication comes on, much the same in character, it would seem, as that which occurs in the rarified air of a mountain. He feels elated, exhilarated, troubles and cares vanish, everything seems bright and cheerful, his body seems light and elastic, his mind clear with a great flow of ideas, and he has found from experience that the workings of his intellect are really more clear and vigorous than at any other time. This is not a delusion on his part, for at this time he can 'talk a man over,' and make a more advantageous bargain than at others. At the end of about an hour's tasting a slight reaction begins to set in, some headache comes on, the face feels wrinkled and shrivelled, particularly about the eyes, which also get dark around the lids. At the end of two hours this reaction has become fully established, the flushed or warm feeling has passed off, the hands and feet are cold, a nervous tremor comes on accompanied with great mental depression, and he is so excitable that every noise startles him; he is now in a state of complete unrest and mental exhaustion. He has no courage to do any-

thing, he can neither walk nor sit down owing to his mental condition, and he settles into a complete gloom. His body in the meanwhile does not feel tired. Copious and frequent urination is always present, as also certain dyspeptic symptoms, eructations of wind, sour taste, etc."

The effect of Smoking upon the Teeth.—At a recent meeting of the Odontological Society of Great Britain, Mr. Hepburn read a paper on this subject; and the results of his investigations on the subject are contrary to what is, we believe, the popular notion. He considers that the direct action of nicotine upon the teeth is decidedly beneficial. The alkalinity of the smoke must necessarily neutralize any acid secretion which may be present in the oral cavity, and the antiseptic property of the nicotine tends to arrest putrefactive changes in carious cavities. In addition he is inclined to believe that the dark deposit on the teeth of some habitual smokers is largely composed of the carbon with which tobacco smoke is impregnated. It is this carbon which is deposited upon the back part of the throat and lining membrane of the bronchial tubes; and with whatever disastrous effect it may act in these situations, he thinks we are justified, from what we know of antiseptic properties, in concluding that its action upon the teeth must be beneficial. Moreover, this deposit takes place exactly in those positions where caries is most likely to arise, and on those surfaces of the teeth which escape the ordinary cleansing action of the brush. It is found interstitially, in all minute depressions, and filling the fissures on the coronal surfaces. It may be removed with scaling instruments from the surface of the enamel, but where it is deposited on dentine, this structure becomes impregnated and stained. Indeed, it is only where the enamel is faulty and there is access to the dentine, that any true discoloration of the tooth takes place; but it is remarkable, he says, how the stain will penetrate through even minute cracks, provided the necessary attention to cleanliness be not exercised. The staining power of tobacco oil may be seen when a deposit has taken place on the porous

surface of tartar collected on the posterior surface of the inferior incisors. In this situation a shiny, ebony appearance is occasionally produced. That tobacco is capable of allaying, to some extent, the pain of toothache, is, he thinks, true; its effects being due, not only to its narcotizing power, but also to its direct action upon the exposed nerve; and he is inclined to attribute the fact of the comparatively rare occurrence of toothache among sailors, in a great measure, to their habit of chewing. He has been struck, in the case of one or two confirmed smokers who have come under his notice, by the apparent tendency which exists towards the gradual production of complete necrosis of carious teeth, and the various stages of death of the pulp and death of the periosteum taking place without pain or discomfort to the patient. This condition may, of course, be brought about by a variety of influences; but in these special cases he is inclined to think that the presence of nicotine in the mouth has acted powerfully. The experience of other speakers in the subsequent discussion appeared to corroborate that of Mr. Hepburn, except that Mr. Oakley Coles thought the frequent changes of temperature probably injurious and tending to produce cracking of the enamel, and Mr. Arthur Underwood thought that smoking to the extent of injury to digestion tended to cause recession of the gums and otherwise to injure the nutrition of the teeth.—*Brit. Med. Jour.*

Dilatation of the Heart from Digestive Troubles.—(*Journal de méd. et de chir. pratique*, July, 1879) M. Potain frequently lays stress upon a cause of cardiac palpitation and even of dilatation which often passes unperceived or is misconstrued; this is simple dyspepsia or rather an affection of the liver and stomach. In fact, in dyspepsia the symptoms may be manifested in the way of the innervation of the pneumogastric, and determine dyspnœa and palpitation. The dyspnœa is often accompanied by the so-called gastric cough, and is, most often improperly, attributed to the distension of the stomach. The true causation belongs to a certain

degree of irritation of the pneumogastric which leads often to palpitation likewise. These palpitations of dyspeptic origin are, perhaps, those that we have occasion to observe most often; they are even sometimes accompanied by cardiac dilatation, a dilatation, in fact, that may be met with whenever the stomach or liver is affected. M. Potain has observed numerous examples of this. A woman is now in his service who has a persistent gastric derangement, she complains especially of palpitation and oppression. A considerable dilatation of the heart may be demonstrated to exist in this case, a dilatation that appears to be caused by the gastric trouble and which will probably disappear with the latter. This fact has a great importance, for the case ought to be treated as one of gastric derangement, while if we give digitalis we shall only aggravate it. In another patient the same symptoms are found related to hypertrophy of the liver; the heart being voluminous because of the dilatation of its right cavities; there is no valvular affection. On the other hand, the lungs are perfectly healthy and in no way connected with the cardiac dilatation. Hence, it must be admitted in these cases that the diseased liver, like the stomach, reacts upon the functioning of the right heart and operates in this way.

Dr. And. Clark on Medical Education.—Now, as respects this question of medical education it seems to me to be in a gravely unsatisfactory condition, and to require the immediate and earnest attention of the profession. Jostled on the one side by quackery, and on the other by science, it is failing in its true work of training students to be sound practitioners of the art of medicine. Medicine *is* an art, and its end is practice, and the worth or worthlessness of any system of education must be tried by the degree in which it helps or hinders this end.

Tried by this test, the present system of medical education is, for the following among other reasons, found wanting:

1. That, whilst it has added to the curriculum and enlarged the range of examination, it has left the time for study the

same. This is destructive of that thoroughness in learning which should be a prime object to education.

2. It has introduced into the curriculum, or it has left in it, subjects difficult to acquire, worthless as mental gymnastics, useless in practice, and speedily forgotten when acquired.

3. It makes no sufficient separation between the various stages of medical education; it permits the one to interfere with the other—the lowest with the highest, so that when the student should be in the wards studying disease and the effects of remedies he is somewhere else committing to memory botanical characters of plants or the complex formulæ of chemical compounds.

4. It does not enforce the regular attendance of students in the wards; it does not require them to take a personal share in the clinical work; and it does not insist upon a period of unencumbered practical study sufficient for the acquisition of that knowledge of disease and remedy which should never fail upon an emergency and be always ready for immediate use.

5. Its examinations are so constructed, or have acquired such a construction, that they determine the nature, character, and extent of the previous instruction, and that the student when he has passed them finds himself in posession of knowledge which he does not need, and lacking that which he should have acquired in the wards, and which, now leaving the hospital, he cannot afterwards obtain. Almost no future industry and almost no experience in private practice will ever fully compensate for defective clinical study and training in the hospital wards, when the mind is plastic, and the student learns disease as a child learns speech.

6. It sanctions imperfect and even vicious methods of teaching. The student is told, not taught. The teacher describes rather than demonstrates; and, instead of making the student follow him step by step in his methods of observing, collecting, comparing, testing and recording facts, and reasoning thereon, the teacher leaves them to be learned by being described, forgetful that they can be learned only by being practised.

7. Careless of the manner in which knowledge is acquired, and sceptical as to the permanent educational value of discipline, training, and habit, it makes examination the test of fitness, the answering of questions at intermittent periods an adequate guarantee of continuous practical work.

8. The main tendency, then, of the present scheme of medical education is to give students smatterings of scientific knowledge at the cost of that thorough knowledge of their art which is essential to its successful exercise.

It will doubtless, be objected to any scheme proposed for remedying the defects and correcting the errors of the present system that it will injuriously restrict the limits and degrade the character of medical education, and that it will hinder rather than help the development of scientific as opposed to empirical methods of inquiry. But such objections spring from misapprehension of the aims and end of science. Science is not a subject; it is not an object. It is merely a regulated method of inquiry in a certain attitude of mind into relative truth and its conditions, and is the same in its nature and its uses, whether dealing with the problems presented by sickness in man, or with the problems presented by catastrophes in the crust of the earth.

There is a cant in science as well as in religion, and both are alike base and baleful. Surely nothing can be more unscientific than discursive dabblings in many subjects. Nothing can be more scientific than the training of the mind to habits of minute, careful, methodised observation and registration of the phenomena of disease. Nothing is more ignoble than ignorance of the calling which we profess to know and are trusted to exercise. I, for my part, shall continue to believe that the physician, in investigating the phenomena of disease, and the laws which regulate their association, succession, and issue, may be as truly scientific, and may become as highly cultured, as any chemist in speculating upon the constitution of organic radicals, or any astronomer in calculating the times and distances of unknown stars, or any natural philosopher who, from his enquiries into matter and force, propounds conclusions opposed to the ineradicable instincts of the human race.—*Brit. Med. Journal.*

Proceedings of Societies.

CANADA MEDICAL ASSOCIATION.

The Association met as announced in London, Ont., on Wednesday, 10th September, 1879. The attendance of members was fairly good, but perhaps not as many arrived as had been confidently expected. One reason for this was probably the counter attraction of the festivities of the Viceregal visit to Toronto. The weather was very fine, the sun bright and clear, the air fresh and cool. The Victoria Hall, a very pleasant room of convenient size, had been secured for the meetings by the committee of arrangements. The number present at the opening session was small, but others kept on arriving through the day until about one hundred in all could be counted.

FIRST DAY.

Morning Session.—The President, Dr. MacDonald, of Hamilton, took the chair at 10 o'clock. The minutes of last meeting were read and approved. Dr. Brodie, of Detroit, was present as delegate from the American Medical Association. The following gentlemen were also introduced as visitors, and invited to seats upon the platform: Drs. Goodwillie and Leaming, of New York city; Dr. Dunlop, of Springfield, Ohio; and Dr. Noyes, of Detroit.

The Reports of Committees were then called for. The first presented was that of the Publication Committee, by Dr. Osler, of Montreal. He explained that after the Montreal meeting, two years ago, the transactions of the Association had been published in accordance with resolution then passed. The proceeds of the sale, however, had not met the necessary expenses, and it had been requisite to take the balance of the subscriptions of the Montreal profession to pay the printer. In fact, a small balance remains still unpaid. Last year another attempt was made to get a sufficient number of subscribers to warrant the publication of a second volume of transactions. The encouragement received had been, however, so limited that nothing further

had been done. The Committee therefore reported that they did not think the Association was yet sufficiently advanced to contemplate a continuance of the publication.

Dr. Botsford read the Report of the Committee on Climatology and Epidemic Disease. It contained many points concerning the climate and healthfulness of various sections of the Dominion. The Report spoke highly of the labours of Dr. Larocque, Health Officer of Montreal, in this field of medical investigation, and Dr. B. exhibited a carefully-prepared colored Map of the City of Montreal, showing localities of mortality from zymotic disease.

The reading of papers was then proceeded with. The first was one by Dr. Bucke of London, on Alcohol, treating of its use both in health and in disease. The writer has made extensive experiments in the Lunatic Asylum of which he has charge. He gradually removed the supplies of ale, wine, and all spirits from the inmates, and since, about a year, ago these articles have been entirely discontinued. Dr. B. is convinced that his patients do better without than with alcohol in any form. He attacks the use of alcohol by physicians, even in weakly or delicate persons, and is very doubtful about its advisability in acute and adynamic diseases, in which cases it has constantly been most lauded. Sir Wm. Gull and Dr. B. W. Richardson were specially held up as prominent supporters of similar views. The discussion clearly showed that on the latter points there was much difference of opinion in the Association.

Afternoon Session.—This was opened at two o'clock by the President's address. The subject selected on this occasion was that of hospital accommodation. The view advocated by Dr. McDonald is the construction of plainer, less palatial edifices than those at present often in vogue, claiming that the important point to be attended to is the scientific construction of small one-storey pavilions, which can be thoroughly ventilated and easily managed. The importance was great of providing some real accommodation of this kind for almost all towns of any

size where sick poor must necessarily exist. Dr. McDonald quoted from his own experience to show how sometimes town authorities in emergencies availed themselves of old unsuitable houses wherein to treat persons affected with some epidemic disease, and had frequently to deplore the ill results consequent upon the insanitary conditions of such establishments.

Dr. Leaming, of New York, then read a paper on epidemic pleuro-pneumonia. The climatic conditions which have been considered to influence this disease were traced, the writer admitting, however, that in spite of many theories to explain such influences, yet but little is known with any degree of definiteness. Dr. Leaming would urge the advisability of sanitary and other medical associations devoting attention to this subject which may have great practical importance. For some years past there has been a tendency to outbreaks of epidemic pleuro-pneumonia through the Southern States. These visitations are known and dreaded by the inhabitants of these parts as much as that of yellow fever or other fatal epidemic. Dr. Leaming believes that although sometimes expectant treatment, with mild stimulation, may have been quite sufficient, yet that the depressing conditions then observed having disappeared, much more active measures should be followed up. Bleeding and calomel—the latter in full doses (℈i ℥ss *pro re nata*). With reference to the diagnosis of these cases, Dr. Leaming is strongly of opinion that a great majority of the râles (crepitant, &c.,) are produced within the pleura and not in the bronchioles or air-sacks. He bases this statement largely upon the conditions found at a large number of *post-mortem* examinations he had witnessed upon cattle suffering from the disease pleuro-pneumonia.

Dr. Goodwillie, of New York, came next on hindrances of respiration from disease of the nose. The importance to comfort of the physiological soundness of the vestibule and passage of the nose was dwelt upon, and the various abnormalities of these parts were described, such as warping of the meatus, exostoses, tumors, &c. In the former cases (warping) Dr. G. would recommend entirely excising the affected part by means

of a kind of punch. Several wax models were exhibited, shewing the results of treatment in various cases.

Dr. Burns read a short paper upon the value of vital statistics, with special reference to the estimation of the number of actual cases of disease in various localities (not *deaths only*) from week to week. He exhibited a table illustrating this point and explained his intention of sending blanks to a great number of practitioners throughout the Dominion, so that records might thus be preserved upon a large scale and ultimately be of some public service.

Dr. Workman was then heard on Placenta Prævia. The arguments of Sir Jas. Simpson for detachment of the placenta were criticised and exception taken against the invariable adoption of the general rules laid down by him.

Dr. Grant read the report of a case of Dermoid cyst which he had cured by incision and removal of the anterior portion of the sac.

Dr. Dunlop related a very interesting case of Dermoid cyst which he had operated upon by cutting open and leaving the posterior part of the growth adherent to the intestines, it being found impossible to safely separate these parts. Perforation of the bowel and gaseous distension subsequently occurred, but recovery ultimately took place after prolonged discharge of the bowel contents from the original opening.

Dr. Osler remarked upon the importance of the entire eradication of the lining membrane of the sac of such tumors, as, in the event of portions remaining, similar formations might recur.

Dr. Roseburgh then read a paper on Fibrous Tumors of the Uterus. It was of great length, but contained no new facts.

SECOND DAY.

Morning Session.—The nominating committee reported to the general meeting as follows:—That the next meeting be held at Ottawa on the first Wednesday of September, 1880. That the following be the officers for the ensuing year:

President, Dr. R. P. Howard. Vice-Presidents—Ontario,

Dr. Hill, sen.; Quebec, Dr. F. W. Campbell; New Brunswick, Dr. Atherton; Nova Scotia, Hon. Dr. Parker. Local Secretaries—Ontario, Dr. H. P. Wright; Quebec, Dr. Geo. Ross; New Brunswick, Dr. Allison; Nova Scotia, Dr. Wickwire. General Secretary, Dr. David. Treasurer, Dr. Robillard.—*Adopted.*

Dr. Osler then proceeded to demonstrate the medical anatomy of the brain, illustrating his subject by diagrams and also by beautiful preparations and sections recently made by himself after a novel method. The Doctor's remarks were listened to with great interest, and at their conclusion, Dr. Grant, in a few words, expressed the indebtedness of the Society to Dr. Osler for his most instructive demonstration.

Dr. Buller then read a short paper upon the treatment of Iritis by Pilocarpin. Several cases were related showing that Jaborandi is of much use in these inflammations. The paper will appear later.

Dr. Holmes' paper on the Antagonistic action of Cold applied externally in the treatment of the febrile state. The cold bath was highly spoken of in cases of continued fever and acute internal inflammations, and also especially in the febrile diarrhœa of children in the summer months, and in severe convulsions of children with high temperatures.

Moved by Dr. Grant, seconded by Dr. Bucke: That the following gentlemen be requested to prepare addresses for the next annual meeting at Ottawa, viz: Dr. Osler, on the progress of Pathological enquiry, Dr. Roddick, on Antiseptic Surgery, and Dr. Botsford, on Sanitary Science. Carried.

Dr. Playter read some remarks on Therapeutics and Mateira-Medica.

Dr. F. W. Campbell read the report of a very interesting case of Duodenal ulcer, the diagnosis of which had been satisfactorily substantiated during life—illustrated by colored plates of the pathological specimen.

Dr. Hingston then read a carefully-prepared and valuable paper upon Lithotrity. He alluded especially to the fact that

Lithotomy in its performance has made no particular advance for a great many years, but that, on the other hand, the operation of lithotrity has been successively improved upon until the range of cases to which it has become applicable has now been greatly extended. Special allusion was made to the prolonged sittings recently recommended by Dr. Bigelow, of Boston, and afterwards adopted by Sir Henry Thompson. Dr. H. remarked upon the frequency with which lithotomy is still performed in Canada, and urged the substitution of lithority for the greater operation in many of these cases.

At this stage of the proceedings, the Association adjourned and proceeded to the Provincial Lunatic Asylum, where Dr. Bucke, the superintendent, had had an elegant repast prepared

The meeting re-opened at 4.30 o'clock.

Dr. Fulton read a report on Necrology, alluding more particularly to the lamented death of Dr. Benjamin Workman. Thirty-one members of the profession had died during the year.

Dr. Tye read a paper on the arrest of post-partum hæmorrhage by topical measures. The writer recommends hot water injections, and has had some uncomfortable results from the use of per-chloride of iron.

Dr. Ross read the clinical report of a case of great dilatation of the stomach, treated by the stomach pump, and strongly recommended that treatment as calculated to relieve the suffering from many of the symptoms. A pencil drawing of the stomach *in situ* was also exhibited.

Dr. Roddick followed with a case of meningocele. It was treated by ligature, which, although the child did well for a time, ultimately proved fatal.

In the evening the members were entertained by the London profession at a sumptuous dinner, at the Tecumseh House. With this, terminated a very successful gathering.

CANADA

Medical and Surgical Journal.

MONTREAL, SEPTEMBER, 1879.

THE INSPECTOR OF ANATOMY AND THE ANATOMY ACT.

Canada is perhaps the only country in the civilized world where "body-snatching" scandals are of yearly, and in winter sometimes of monthly, occurrence. If the Anatomy Act were properly carried out, there would be no necessity for this unseemly and disgraceful state of affairs existing.

The Anatomy Act says that "the bodies of persons found dead and publicly exposed, or of those who, immediately before death, had been supported by *any* public institution receiving aid from the Provincial Government, shall be delivered to the persons hereinafter mentioned (Demonstrators of Anatomy, &c.) unless they be claimed within the usual period for interment by *relations not further removed than the third degree*, and such degree of relationship shall be established by the oath of the claimant." This Act certainly is strong enough, and could not be improved upon; but the misfortune is that it never has been fully acted upon, and "body-snatching" is still in vogue.

It is the duty of the superintendent of any institution receiving aid from the Provincial Government to notify the Inspector of Anatomy of the death of every person dying without relations in their institution. This, with the exception of two institutions has never, to our knowledge, been done. It is also the duty of the Coroner to hand over to the Inspector of Anatomy all unclaimed bodies on whom an inquest has been held; the present Coroner has never, as far as we are aware, observed this clause of the Act, but, on the contrary, has offered every obstruction

to the proper carrying out of the Act, and in spite of the existence of an Inspector of Anatomy, he has buried the unclaimed bodies at the expense of the country.

When the Anatomy Act was first framed, a clause was inserted confining the post of Inspector of Anatomy to civic functionaries, and under this clause the present inspector was appointed. In 1875 an Act was passed which stated that the Inspectorship of Anatomy could be held by any person not a physician or surgeon. During the present session an Act was passed which allowed the post to be held by a physician not connected with any school of medicine, and it also stated that a coroner might hold the position; but a coroner might have held the position under the Act of 1875, and this addition was useless unless the coroner happened to be a medical man.

The present Inspector has many times expressed the wish that he might resign his post, and we believe did at one time send in his resignation, which was not accepted. He does not profess to attend to the duties of an office which he holds unwillingly. As the Act now stands, any one except a physician connected with a medical school is eligible for the appointment. Why do the Government not appoint some active individual who is both able and willing to attend to the duties of the office properly? If such a person were appointed, we venture to assert that "body-snatching" would soon be one of the lost arts, and that there would be no scarcity of material for dissection. The jails, lunatic asylums, and numerous charitable institutions receiving aid from the Provincial Government, with but two exceptions, have, to our knowledge, heretofore totally ignored the Anatomy Act, and the Inspector of Anatomy has never brought any pressure to bear on these institutions, so that the law *could not* be evaded.

The only remedy, we repeat, that can ever abolish from our midst this immoral, disgraceful and dangerous condition of things is the appointment of an Inspector of Anatomy who will carry out this law to the letter, irrespective of creed, nationality, and personal feeling. This appointment should be made as soon as possible, so that the Inspector could be at his post on the open-

ing of the Medical Schools in October. We should also suggest that the appointment be made for the City and District of Montreal, instead of for the city alone.

BRITISH MEDICAL ASSOCIATION.—The annual meeting was held at Cork on the 5th and three following days of August. It appears to have been one of the most successful, judged both from the character of the addresses and papers, and from the abundant social entertainment provided for members. The address in medicine was delivered by Dr. Hudson, Regius Professor of Physic in the University of Dublin. The subject chosen was "Lœnnec: his labours and their influence on medicine." It takes us back to the days before the stethoscope, and eloquently shows the marvellous influence of Lœnnec's great discovery of the principles of auscultation upon medicine ever since his day. The address in surgery was by Mr. Savory, the well-known surgeon of St. Bartholomew's Hospital. It must have come, as the *Lancet* observes, as a very disagreeable surprise to the advocates of the antiseptic system of surgery. It deals in the most vigorous manner with the entire doctrine of blood-poisoning, and opposes strenuously the truth of Listerism. Mr. Savory furnishes remarkable statistics from St. Bartholomew's Hospital, shewing the wonderfully small mortality from the results of septicæmia after wounds and injuries, without any so-called antiseptic precautions, but simply fresh air and clean water. He challenges the supporters of Lister's mode of dressing to publish their statistics, and prove, if they can, that they can do better. The other addresses were on Public Medicine, by Dr. And. Fergus; on Medical Education and other topics in the medical section, by Dr. And. Clark; and on Surgery, in the surgical section, by Dr. Tanner. We give elsewhere an extract from the able and spirited address of Dr. Clark. Many who had the pleasure of meeting Dr. Clark on his visit to Canada last Fall will remember what interest he took in all appertaining to medical education in this country, and with what a forcible manner he addressed us on the subject at the public dinner given him in this city.

MEDICO-LEGAL PATHOLOGISTS.

Dr. Bayard, of St. John, N.B., has recently given an interesting address to the Medical Society of that city, which will be found elsewhere. It contains many points which it is of use to the profession to be occasionally reminded of. There is one to which we would specially draw attention. The writer very justly shows what a difficult position the ordinary general practitioner is placed in when suddenly called upon to give a professional opinion in some important case—say of supposed infanticide, or homicide by poison or other means. Most—in fact we ought to say all, except a very few—practitioners possess nothing more than a knowledge of the general principles upon these subjects, and, when points of doubt or difficulty arise, have no previous experience of their own to fall back upon to assist them in arriving at a solution. In a great number of medico-legal cases, the chief interest attaches to the performance of an autopsy and a correct interpretation of the morbid appearances then witnessed. Probably there is no department in which larger practical experience is absolutely essential for acquiring anything like complete acquaintance therewith than morbid anatomy. To be able to give a reliable opinion in any given case as to what appearances are the result of disease—or only produced by *post-mortem* changes—or simply from accidental circumstances, such as position of the body, &c—or, being really normal, from peculiar conditions actually simulate disease. To be able to decide each of these points with intelligence, and in a way to be really reliable in judicial cases, the physician should be one who is known to be in the constant habit of conducting *post-mortems*, and to have thus acquired the necessary degree of special skill and knowledge. As it is now, any and every doctor's opinion is accepted as all that is required to substantiate the cause of some obscure death.

At the meeting of the Canada Medical Association, held two years ago in Montreal, Prof. R. P. Howard brought this matter up, and urged the Association to take some steps to represent in the proper quarter the necessity that existed for remedying

this evil. From the discussion which followed, it was clear that the members were strongly of opinion that it would be advisable, in the interests of the profession, of science, and of justice, to have autopsies for judicial purposes performed as far as possible—that is to say, particularly in the cities and towns—only by such persons as should be recognized as fully skilled and competent for that special work.

We are not aware that the Association has acted further in the matter. It would be well if it could be pushed to a conclusion. Many cases have occurred in Canada where much disatisfaction has been felt owing to the discredit thrown upon the medical evidence concerning *post-mortem* indications. We need only allude to a recent case in Montreal, where the effects of some poisonous substance in meat was strongly suspected, and where the scientific evidence submitted as to cause of death was opposed to the common sense of the whole community; and, further, to that other notorious case in which an individual is now undergoing sentence in the Penitentiary, the verdict having been given mainly upon the results of a *post-mortem* performed in a most inefficient manner, and, in the opinion of the best judges, utterly incapable of supporting the conclusions based upon it.

Medico-legal evidence involving questions of pathology will never receive the weight it is properly entitled to until some means are taken to ensure the services of *experts*, and not, as now, any local physician.

Medical Items.

The death of Mr. Maunder, the well-known surgeon of the London Hospital, is announced in the latest English papers.

College of Physicians and Surgeons, Prov. Quebec.—The preliminary examination of candidates for the study of medicine and surgery will take place at Laval University, on Thursday, 18th September. The semi-annual meeting of the

Provincial Medical Board will be held also at Laval University on the 23rd inst.

UNIVERSITY COLLEGE HOSPITAL.—We notice that Dr. Crocker, Assistant Medical Officer to the skin department of the above Hospital, and Assistant Physician to the East London Hospital for Children, has been appointed physican to the skin department, at University College Hospital, to fill the vacancy caused by the much-regretted death of Dr. Tilbury Fox. For many years Dr. Crocker has specially devoted himself to the study and practice of dermatology.

SAYRE'S SPINAL SPLINT.—Prof. Sayre, whilst recently on a visit to Dublin, gave a demonstration at the Orthopœdic Hospital, in that city, of his method of treating spinal disease. A vote of thanks on behalf of the profession present having been tendered, Professor Sayre, in acknowledging the compliment, stated that in his own practice, out of 109 cases treated by him, 63 had resulted in complete cure, whilst in all the other cases there had been a marked improvement.

REMARKABLE MENSTRUATION.—Dr. Rodsewitch relates the following curious history:—The widow of a peasant in the Province of Nijvi-Novgorod menstruated for the first time at the age of 36. She was married in her 15th year, without ever having menstruated. From that time, and throughout all the years of her married life, she was continually either pregnant or nursing, and never saw her monthly periods. Her husband died when she was 36 years old, and her courses soon after appeared, and continued with great regularity. She had twins at the second, fourth, and eighth confinement; so that she bore 16 children in all.

BLOOD-POISONING AFTER OPERATIONS.—The following statistics of St. Bartholomew's Hospital are interesting in the present state of the surgical mind as regards antiseptics. They are taken from Mr. Savory's address at the Cork meeting of the British Medical Association. In all these cases no approach to Listerism was made. In 1876, the absolute number of deaths from pyæmia after operation were 2, which is at the rate of .49

per cent.; or, including erysipelas in the common term of blood-poisoning, they were 5, at the rate of 1.24 per cent. In 1877, the deaths from pyæmia were 4, at the rate of .95 per cent.; or, including erysipelas, they were 6, at the rate of 1.43 per cent. In 1878, the deaths from pyæmia were 4, at the rate of .96 per cent.; with erysipelas, 7, at the rate of 1.68 per cent. During the three years there was thus a total of 18 deaths from blood-poisoning after 1,235 operations, and this is at the rate of 1.44 per cent.

Books and Pamphlets Received.

Remarks on Ovariotomy, with Relation of Cases. By Nathan Pryeman, M.D., New York, Surgeon to the Woman's Hospital of the State of New York, &c. From the *Medical Record.* New York: Wm. Wood & Co.

Manual of the Principles and Practice of Operative Surgery. By Stephen Smith, A.M., M.D., Surgeon to Bellevue and St. Vincent Hospitals, New York. Boston: Houghton, Osgood & Co. New York, 21 Astor Place.

Materia Medica and Therapeutics (Vegetable Kingdom). By Charles D. Phillips, M.D., F.R.C.S.E., Lecturer on Materia Medica, Westminster Hospital, London. New York: Wm. Wood & Co.

A Clinical Treatise on the Diseases of the Nervous System. By M. Rosenthal, Professor of Diseases of the Nervous System at Vienna. New York: Wm. Wood & Co.

Physiology and Histology of the Cerebral Convolutions, also Poisons of the Intellect. By Chas. Richet, A.M., M.D., Ph.D. Translated by Edward P. Fowler, M.D. New York: William Wood & Co.