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U. OGDEN, M.D.,
R. ZIMMERMAN, M.D., L.R.C.P., Lond., } Consulting Editors.

A. H. WRIGHT, B.A., M.B., M.R.C.S., Eng., } Editors.
I. H. CAMERON, M.B., }

SUBSCRIPTION, \$3 PER ANNUM.

All literary communications and Exchanges should be addressed to Dr. CAMERON, 273 Sherbourne St.,
All business communications and remittances should be addressed to Dr. WRIGHT, 20 Gerrard Street East.

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Original Communications.

REPORT ON SURGERY.

(Read before the Canada Medical Assoc'n, Sept., 1882.)

BY FRANCIS J. SHEPHERD, M.D., C.M., M.R.C.S., ENG.

Demonstrator of Anatomy, and Lecturer on Operative and Minor Surgery, McGill University; Surgeon to Out-Patient Department, Montreal General Hospital.

MR. PRESIDENT AND GENTLEMEN,—I do not propose in this report to give an account of *all* the advances and discoveries made in surgery during the last twelve months, because I know from experience how tiresome and uninteresting such a recital of facts is. My intention is to touch on some of the more important and interesting points, so that they may serve as texts which may be elaborated in the discussion I hope will be aroused. The subjects I shall glance at will be as follows:—(1) Treatment of Wounds; (2) Cause of Inflammation; (3) Sponge Grafting and Bone Transplantation; (4) Surgery of the Kidney; (5) Treatment of Club-foot; (6) Surgery of the Joints. The list looks a formidable one, but remember that I only intend to furnish the texts, the sermons belonging to which I hope you yourselves will preach.

The Treatment of Wounds.—Within the last few years this subject has more than ever occupied the attention of surgeons, and has caused many acrimonious discussions. Old methods of treatment have been wholly discarded and new methods introduced, of greater or less value. Some of these are being constantly improved and modified, others flourish for a time, but when the *sum* of experience is turned

on them, like the seeds which fell on stony ground, they are scorched and wither away. At the present time, all methods, however much they differ in detail, aim at keeping wounds aseptic, and are in fact antiseptic methods of treatment. Listerism is only a phase of antisepticism, and does not differ as much from other methods as one would at first sight imagine. The great difference consists in the more gorgeous ritual and its obscuration by the clouds of incense (in the form of carbolic spray) which ascend heavenward as a propitiatory sacrifice to the great Æsculapius. The fundamental principles are, however, the same, viz.: cleanliness, asepticity, rest, support, and the accurate adjustment of cut surfaces; and to Mr. Lister principally we owe the universal recognition of the truth of these principles. He, in fact, by dwelling on their importance and evidencing their truth by the success of his own practice, has revolutionized the surgical treatment of wounds. He has shown that suppuration and the septic condition it leads to may be prevented. He has taught surgeons the necessity of thoroughly cleansing and disinfecting their instruments and hands before operation. At the International Congress held in London, the subject of the treatment of wounds was one of the most important that engaged the attention of the surgical section. From the papers read and the discussion which followed their reading, it was easily seen that the belief in the carbolic spray was on the wane, and that it was desirable that some form of dressing less complicated than Listerism should be employed. Mr. Lister himself spoke in qualified terms of the spray, and hoped at some future time to be

able to say "*fort mit dem Spray.*" Professor Esmarch's wonderful statistics aided greatly in confirming the confidence of surgeons in rest, support, and infrequent dressings. Much evidence was offered, and many opinions were given which supported the views of Mr. Sampson Gangee as to a dry form of antiseptic dressing. Since the Congress the dry method of treating wounds with infrequent dressings has made wonderful strides, and bids fair to supplant Listerism as a form of antiseptic treatment. Under dry dressings, wounds heal much more rapidly than under moist warmth, which encourages putrefaction. Iodoform dressings have been most generally used in Germany, but so recklessly that many cases of poisoning from it have been recorded. As much as 7 to 8 ounces have been stuffed into abscesses and excised joints at one time. No case of poisoning has been reported from Germany where less than 3 drachms was used. Wherever possible I have employed the dry form of dressing, and I think with success. My method of dressing a fresh wound (for which I claim no originality) is as follows: After all bleeding has stopped, and the wound has been accurately closed by cat-gut ligatures, and when necessary by wire ones in addition, I sprinkle over the wound a little iodoform, cover this with a strip of oil silk (to prevent adherence of the wool), and then over all place a pad of boracic cotton. This is kept in place by an accurately adjusted gauze bandage, which must be evenly and firmly applied, so as to get the amount of elastic pressure required. If necessary, as in a limb, a paste-board or other light splint (well padded) is applied. If the parts can be accurately adjusted by pressure, drainage is not required. The wound, if the patient complains of no discomfort, should not be disturbed for a week or more. When the dressing is taken down, the wound is generally found to be nearly or quite healed. In foul ulcers, this method I have found superior to every other. In some cases of accident, where the tissue is lost, or so much injured as to be beyond repair, I have generally employed the moist form of dressing till the slough has separated. Of late I have been using a solution of boroglyceride, as recommended by Mr.

Barwell. This antiseptic, as far as my experience goes, is superior to carbolic acid. It has no odour, and is perfectly innocuous.

With regard to *Inflammation*, and its connection with septic organisms. The theory that you are no doubt most familiar with is that inflammation is due to the introduction of atmospheric germs into damaged tissue, and that if this introduction be prevented, the wound heals without inflammation. Prof. Hueter, Mr. Lister, Mr. Watson Cheyne, and others, have been the most able and efficient advocates of this view. There is, however, another, and I think a more probable explanation of the origin and spread of inflammation, of which Dr. Burdon Sanderson has lately in his Lumllean Lectures given a clear and convincing account, viz., that "inflammation is the physiological effect of traumatism"; that the exudates of a normal inflammation are not infective; that no inflammation-producing organisms exist in the atmosphere; that whenever inflammation becomes infective it owes that property to chemical change in the exudation liquid which, in absence of any other better explanation, we attribute to the presence of septic organisms or bacteria or, in other words, exudative fluids which are infective owe that property to the exudative soil in which the germs grow, and that atmospheric germs are not *per se* a source of danger. Dr. Sanderson says these germs are not so much mischief-makers as mischief-spreaders—they have the power of developing what he calls a phlogogenic infection, and of conveying it to all parts of the body. I do not propose to discuss this question, but merely place it before you as a subject for discussion, in its bearing on antiseptic surgery. Before passing on to another subject, I should like to draw your attention to some recent experiments by Dr. D. J. Hamilton on *Sponge Grafting*, and their bearing on surgery. Dr. Hamilton some years ago showed that the vessels of a granulating surface are not newly formed, but are simply the superficial capillaries of the part that have become displaced: that the granulation loops are thrown up by the propelling action of the heart. Whilst pursuing these investigations, Mr. Hamilton was struck with the similarity

of the process of vascularization, as seen on a granulating surface, and that which occurs when blood-clot or fibrinous exudation is replaced by vascular cicatricial tissue. He states that blood-clot or fibrinous lymph plays merely a mechanical and passive part in any situation, and that vascularization is not due to the formation of new vessels, but rather to a displacement and pushing inwards of the blood-vessels of the surrounding tissues. He looks upon blood-clot and fibrinous exudation as so much dead matter, which affords merely a framework for the capillaries to ramify in, and proves that it is so by employing sponge to replace it. This sponge is prepared in a special way, and when placed on old ulcers he succeeded in organizing it—or rather filling its interstices with blood-vessels and cicatricial tissue, the sponge in the meantime disappearing by absorption. Many other experiments were made which fully proved his theory. Dr. Hamilton noted a significant phenomenon, supporting the theory that blood-vessels were pushed into the sponge in loops, when the convexity of a loop came in contact with the sponge framework, instead of one of its pores, a curvature formed on the vessel at the opposing point, and on each side of the obstacle there was pushed a secondary loop similar to that from which both had arisen. These blood-vessels, according to Mr. H., bear with them great numbers of the actively proliferating connective tissue corpuscles from neighboring connective tissue, and these, and not the leucocytes, are the tissue-forming cells. Sponge Grafting, he says, is excellently suited for growing new tissue where that is insufficient to cover a part. Instead of sponge, charcoal or calcined bone might be employed in certain cases, as, for instance, where the formation of new bone is needed.

The *Transplantation of Bone* has been successfully accomplished both by Dr. MacEwen, of Glasgow, and Mr. McNamara, of Westminster Hospital, London. They had been pursuing their investigations on this subject at the same time, unknown to one another. Dr. MacEwen placed his case first before the public. He remade a humerus which had been destroyed by necrosis, by placing small fragments of bone

(removed from patients with curved tibiae) in a groove made in the soft tissues in the position of the humerus. Mr. McNamara successfully replaced a tibia which had become deficient from acute necrosis. He used portions of bone from an amputated metatarsus. The necessity for transplanting bone is necessarily rare, as nature is so skilful in the repair of bone, that the interference of the surgeon is seldom needed. These experiments carry out Mr. Hamilton's theory of organization, and are interesting from a surgical point of view.

The surgeon looks upon no organ or region now as sacred. Operations are at present daily performed successfully which, if even suggested a few years ago, the suggester would have been looked upon as mad. The lung has been partially excised, the liver has been cut into, and parts of it removed successfully. The whole stomach has been excised, and the œsophagus stitched to the duodenum, and many feet of intestines have been taken away, and the cut ends stitched together, patients making good recoveries. The renewed attempts at removal of the spleen have not been so successful as of old, but the whole uterus has been excised, even when pregnant, and the patient has survived, but this now belongs to the realm of gynæcology. The surgery of the organ which I am going to notice has, as yet, escaped the upward tendency of the gynæcologist, but how long it will remain in the domain of pure surgery I know not, as already one of its dependencies (the bladder) has been annexed in the female.

The *Surgery of the Kidney* has greatly engaged the attention of surgeons during the last twelve months. At the International Congress it was the subject of several papers, and caused much interesting discussion. Since then it has occupied considerable space in the Medical Journals, and the operations of nephro-lithotomy; nephrotomy, and nephrectomy have become recognized operations. It has been established beyond doubt that *nephro-lithotomy* is a most successful operation in properly selected cases, viz., where the stone is of moderate size and single, and the kidney has not become disorganized. It is a most scientific procedure to perform this operation where stone has been

certainly diagnosed by needle exploration, or where the pain and other symptoms lead one to believe there is a stone present. If left, the stone is certain to disorganize the kidney, cause much suffering, and probably death. The operation of incising the kidney (*nephrotomy*) has not proved a dangerous one, and it has been frequently demonstrated that the kidney can be easily explored through a lumbar incision, and even cut into with great safety. In cases of strumous or calculous pyelitis, the sacculated kidney can be drained through a wound in the loin and the patient freed from the danger and pain of retained matter. Nephrotomy, as an operation, is merely palliative, and, nephrectomy, or removal of the kidney, is a much more formidable operation than the foregoing. The dangers are greater, and many cases have been followed by suppression of urine. It has also proved fatal from hæmorrhage, and wounds of neighbouring organs, as lung and pleuræ. As yet it has not been positively determined in what cases, or at what period, it should be performed. It has been done for tumour, cancerous diseases, and strumous and calculous pyelitis. It is a question whether before nephrectomy is performed, a preliminary nephrotomy should not be tried. Now the loin is the most favourable position for nephrotomy and, perhaps, the most difficult incision for nephrectomy, so this would be an objection. Some hold that if a preliminary nephrotomy is performed, it much increases the difficulty of a subsequent nephrectomy. Again, it is important, in considering the advisability of performing nephrectomy, to find out whether the pyelitis is confined to one kidney, or, rather, whether the other kidney is healthy. Strumous pyelitis is rarely confined to one kidney, and, therefore, excision of the kidney must be a defective operation, as the pyelitis is only a small part of a general disease.

Th. Gluck has lately suggested a method of pointing out which kidney is diseased. He advises cutting down on the ureter of the supposed morbid kidney, and obliterating its lumen with ligature or clamp. A solution of some salt, rapidly excreted by the kidneys, is then injected subcutaneously, and its presence

after a short time ascertained in the urine by means of tests; if none is found, then the other kidney is diseased, and the ligature should be removed and the wound sewed up; but if found readily, the operation of excision is proceeded with.

These are some of the difficulties in the way which make one hesitate to perform nephrectomy. Having, however, decided on the operation, which is the best incision, through the loin or abdomen? Certainly the abdominal incision gives the operator more room, and the surgeon sees what he is doing. Removal through an incision in the loin is very difficult, especially the ligaturing of the vessels entering the pelvis of the kidney, besides, in some people, the distance between the last rib and crest of the ilium is very short; in these cases, of course, the 12th rib has to be excised, or a **T** incision made, both of which procedures increase the risk of the operation. The only objection to the abdominal incision is that two layers of peritoneum are wounded; but nowadays we are not so fearful of wounding that structure as formerly. I leave the further discussion to you as to when and how we should perform nephrectomy.

Treatment of Club-foot.—As long as these deformities occur, so long will the remedying of them engage the attention of the surgeon. Ordinary simple cases may be successfully treated by bandaging and manipulating, or the use of elastic springs. More severe cases by tenotomy, and afterwards with the proper apparatus, plaster-of-Paris, splints, &c. I should like to hear from the members of this Association their opinion as to the performance of tenotomy, whether, for instance, in a case of talipes equino-varus (the most common form of club-foot), the tibial muscles and tendo-Achillis should be cut at the same time, or whether two operations should be made of the tenotomy. I feel inclined to favour the latter method, following in the lines of the older authorities,—first, to remove talipes varus by tenotomy, and after application of a splint, and later on, say in two or three weeks, to cut the tendo-Achillis, and place the foot in good position in a plaster boot or Scarpa's shoe. It seems to me that if the operation be thus performed in stages, the

necessity for the more severe operations may often be avoided. I should also like to hear the opinion of the members as to the tendency to relapse. In my limited experience this tendency is great, if the after treatment by manipulation and splint is not for a long period continued.

Mr. Davy, of London, advocates in severe cases with tendency to relapse after tenotomy, that a wedge-shaped block of the tarsal arch should be removed by a fine saw or chisel; the base of the wedge is outwards, inwards, or upwards, according to where there is the greatest deformity.

Dr. Phelps, of Chateaugay, N. Y., has lately introduced a new operation for club-foot. He makes an incision across the sole of the foot, and divides all the resisting structures down to the bones. The foot is then brought into position on a special splint, and the wound left open. By brushing a stick of nitrate of silver through the bottom of the wound the granulations are prevented from springing up too rapidly, and the wound is induced to heal from the sides, and so contraction is avoided. I am afraid that I have already almost exhausted your patience, and so shall conclude this report by touching lightly on the *Surgery of the Joints*. Now-a-days, joints are opened fearlessly, and often recklessly and unnecessarily. This, no doubt, is due to the success of antisepticism. At the International Congress this subject was very fully discussed, and the feeling among English surgeons, at any rate, was that most cases of joint disease could be cured by rest. They deprecated the early excision which was advised by continental surgeons, and thought excision should only be resorted to in extreme cases, and that in private practice it was rarely necessary. Since the Congress, a method of treating diseased joints by *Erasion* has come into vogue. Where the disease is confined to the synovial membrane, an incision is made in the side of the joint, an instrument introduced, and the diseased parts of the synovial membrane scraped away. The wound is then stitched up and a drainage tube inserted. Cases are reported where, after healing of the wound, passive movement was commenced, and the patients re-

covered, with easily-movable and almost perfect joints. Where the disease commences in the bone, trephining and scraping out the diseased bone has been successfully accomplished, the patients recovering with perfect joints.

König, of Göttingen, in a paper on the tuberculosis of bone and joints, says the synovial membrane is rarely the primary seat of disease in tuberculosis cases, and that not even in the most favourable cases can any cure be expected from any therapeutical measure short of a surgical operation. The surgeon should aim at removing the primary morbid deposit in the bone, and then extirpate the diseased parts of the synovial membrane. In his after treatment he finds Iodoform of the greatest service. In cases where it is used the discharge is usually scanty, and the first antiseptic dressing may remain on for many days. He lays great stress on the point that the disease in the articular ends of bones should be removed before the joint is affected, and where it has already reached the joint, if the joint is opened early, the disease may be removed before the synovial membrane is affected.

I know that our worthy President is rather sceptical about these cases, and so great has been his success with excision, of the knee especially, that he prefers to adhere to the practice for which he is so well known. I merely present these methods of treatment to you for discussion, trusting that some new light may be thrown on the subject.

And now, Mr. President and gentlemen, I have come to the end of the subjects I proposed in the beginning of the report to touch upon. I feel that I have but poorly accomplished the task I set myself to do; still, I shall feel amply satisfied if you, with your matured wisdom and experience, will add your quota to the knowledge we already have of these subjects.

Dr. Frisch, in *Wien. Med. Woch.*, on the cause of "chronic thickening of the mucous membrane of the nose," states that in twelve examples which he examined, staff-like bacteria were found. These organisms penetrated the cells of the lining membrane, and in this way excited persistent inflammation.

REPORT OF THE COMMITTEE ON MEDICINE FOR 1881-82.

(Read before the Canada Medical Assoc., June 8, 1882.)

Two events have occurred during the past year which will cause it to be long remembered by the medical world. The first is the meeting of the International Congress in London last summer, and the second—and in many respects the more important—the recent publication of the discoveries in tuberculosis made by Koch, of Berlin. With regard to the Medical Congress, little will be said more than that in every respect it was a grand success, worthy of the city in which it was held, and of the men who most actively promoted the scheme. The reports of the Medical Department alone are altogether too voluminous to be epitomized, and your Committee can only refer the members of this Association to the volumes already published, being assured that they will well repay perusal.

In this paper, however, the reader will confine himself to the second great event of the year, viz., Koch's discoveries in tuberculosis, preferring to trace the progress of our knowledge with regard to one disease, rather than to go over the whole field of medicine. In our opinion the latter is given so fully in the annual reports of the *MEDICAL JOURNAL* as to render the reiteration unnecessary.

Tuberculosis is a disease which for many reasons is well worthy of our attention. It is by far the most fatal of all, not excluding cholera or plague. From statistics it has been shown that one-seventh of the world's mortality is due to it. Any new light, then, which may be thrown on its causation, or any new points as to treatment, are hailed with satisfaction by the practising physician.

In order to obtain a more correct idea of the present state of our knowledge, it is necessary to make a study of the literature of the disease from the beginning. To do this, one might begin with Laennec, whose treatise is a very remarkable one, considering the slim advantages he possessed compared with the pathologists of the present day. Many of his ideas, which for years had been departed from, have again been accepted, an ample proof of their correctness.

He included under the head of tubercle both the grey miliary bodies and the yellow cheesy matter, the result of inflammatory exudation, thus giving two forms of tubercle, the grey and the yellow.

Virchow, who commenced his investigations of the disease in 1850, limited the true tubercle to the grey miliary bodies, considering the yellow masses to be simply the result of a peculiar transformation of an inflammatory exudation. According to his teaching, in the earliest stages the tubercle is a small body, about the size of a pin's head, composed of lymphoid cells in a very fine stroma. This body unites with others to form nodules the size of millet seeds. These latter shortly undergo a peculiar form of degeneration which he styled caseation. This process is marked first by a drying, and afterwards a fatty change. This is speedily followed by necrosis and softening. Other morbid conditions exhibit the form of degeneration as simple inflammation, carcinoma, &c. In none, however, does it occur so constantly or come on so early as in tuberculosis.

Our present ideas of tubercle do not materially differ from those of Virchow, except that in the centre of tubercles large epithelioid cells have been discovered, which are called giant cells. Our knowledge, then, of the pathological histology of this condition may be summed up as follows:—Tubercles are small nodules, the result of an inflammatory process, which are made up of giant cells surrounded by lymphoid cells contained in a very fine stroma. These bodies present the peculiar characteristic of early caseation. When we combine the two characteristics, first, that of possessing giant cells, and, second, early caseation, we have a form of disease which differs from any other, although either characteristic may be shown to a greater or less extent in other morbid conditions.

We will now pass on from the minute morbid anatomy to the etiology of tuberculosis.

Several years ago Villemin established by experiment the fact that lower animals when infected by tuberculous matter would themselves suffer and die from tuberculosis.

I need not give the experiments in detail, as

they are no doubt familiar to most of you. It was demonstrated (1) that infection could thus be carried; (2) that the disease always followed the natural channels, affecting first parts near the point operated on; (3) that tubercular matter produced the same result, no matter from what organ or part of the body it was taken, whether from the lung, liver, testicle, &c.; (4) all animals were not equally susceptible—Guinea pigs and rabbits were easily affected, dogs, on the other hand, with difficulty; (5) the infection was successfully carried in several different ways—by inoculation, by the breath, and by feeding.

Prof. Cohnheim, in an address published in 1880 on tuberculosis, from the standpoint of the contagion theory, proceeds to explain the many forms of the disease found in the human subject according to this doctrine. In adults, the lungs are the organs by far the most frequently affected primarily. The virus in minute particles is easily breathed in. In children, the bowels are most frequently affected, a fact which is probably owing to the presence of the virus in the food, perhaps in the milk of affected cattle.

The spread of the disease from one organ to another is also an evidence of the presence of virus. For instance, the lungs are first affected, then the bronchial glands, then the larynx is attacked from the infected matter passing over it. The pharynx follows in order. The œsophagus escapes as the matter passes through with rapidity into the stomach. The latter organ escapes, owing to the antiseptic character of the gastric juice. When, however, a catarrh of the stomach takes place from the presence of so much irritating matter, the gastric juice loses its properties, and the virus passes through into the intestine, affecting first the mucous membrane and afterwards the neighbouring lymphatic glands and the peritoneum. There is no doubt but that the virus can also be carried by the blood to distant organs, the brain, for instance.

There are many points in connection with the hereditary character of tuberculosis, and of the manner in which the disease may remain dormant in the system, which might at first present serious difficulties to the doctrine of

contagion. When, however, one compares the disease with syphilis, which is accepted on all hands to be contagious, many of these difficulties disappear. In the same way as the virus of syphilis is carried over from one generation to the next, may not the virus of tuberculosis be so carried, through the semen or ovum? As syphilis may be apparently cured, and suddenly break out again after years of freedom from it, does not tuberculosis also remain dormant, and from some sudden irritation again commence its ravages?

The very sudden outbreak of tuberculosis by which patients are sometimes carried off in a few days or weeks, is in all probability produced by the virus passing into the general circulation, from some caseous gland in which it may have existed for years. The writer has himself recently seen a case of tuberculosis in which the patient was carried off after nine days' illness, and in which almost every organ of the body was found to be affected with tubercle. An old caseous gland was discovered near the root of the lung, which had no doubt been for months or years in existence.

When it is considered that Prof. Cohnheim collected and gave to the profession all these facts and inferences in an address made over two years ago, an address in which he prophesied the certain discovery of the virus, one is not surprised that the whole medical world should be moved with the deepest interest when Koch, of Berlin, demonstrated the presence of the bacteria, which, according to his ideas, are the cause of the disease. He, after two years of the most painstaking work, succeeded by a certain process of staining in bringing into view certain bacteria, which he could only find in tubercular tissue or sputa, and which he could readily distinguish from all other forms of bacteria. These bacilli, which will be demonstrated to you, are small rod-like bodies, about a third the length of the diameter of a blood corpuscle, and have a curved shape. They appear to be made up of spores.

Koch, in his investigation of tuberculosis, in both men and animals, scarcely ever failed to find the bacilli. He found them both in cases where the disease was produced by infection,

and also where the disease was, so to speak, of spontaneous origin.

He made also experiments in which he inoculated animals with bacilli which he had cultivated in serum. The disease was produced in the same way as in his previous cases. It is not necessary to go further into the details of this paper, as you no doubt have all read it. One cannot read it without being convinced that if he has made no mistake in his manipulation, he has discovered the real cause of the disease. That he has made such a mistake is not likely, as he is a most careful and painstaking enquirer. He has spent eight years in the investigation of bacteria, the last two of which were entirely devoted to the pathology of tuberculosis.

Since the appearance of his paper in the *Berliner Klinische Wochenschrift*, the attention of pathologists throughout Germany has been directed to this subject. Baumgarten, of Königsberg, claims to have made the discovery before the publication of Koch's paper. He made a number of experiments which forced him to the conclusion that the disease was infectious, and that the real cause could be discovered. Not the least interesting are the experiments in which he infected animals with a number of fluids, as ordinary pus, fluid of sarcomata, and carcinomata, decomposed pus, old dried blood, &c., without in any case producing tuberculosis. Ehrlich has in his investigations instituted a method of staining much simpler than that of Koch, and quite as effective. Take a test tube half filled with distilled water, add to it aniline oil until there is a slight cloudiness, then filter. To the filtered solution add fuchsin, an aniline colour, until there is a slight cloudiness. Care must be taken not to add too much fuchsin, as the liquid will become clear again. In this way the colouring fluid is made. Now take some tubercular sputa, place a small drop on a cover glass, press another cover glass over it, so as to leave only a thin layer, and allow them to dry. When dry, pass them through a Bunsen flame, and place them with the sputa side downwards in the colouring fluid, and allow them to remain in a half an hour in a warm temperature. If the solution is cold, the glasses must be

allowed to remain much longer. Now take them out and pass them through a solution of nitric acid in proportion of ten to twenty-six, wash out with water, dry, and mount in Canada balsam. I am indebted to Dr. Councilman, of Baltimore, for the minute particulars under whose direction, in Prof. Chiari's laboratory, the reader of this report has several times made the experiment. The rationale of the process is as follows:—(1). The heating in Bunsen flame fixes the albumen on the glass, so that it is not removed by repeated washings. (2). After the staining, it is passed through a nitric acid solution, so as to decolorize the surrounding elements. The bacilli appear to retain the staining notwithstanding the strong acid. In this way one can almost always find bacilli in tubercular sputa, and they are never found in that of any other disease. As a means of diagnosis this may be a matter of great importance. There have been instances in which bacilli were found in the sputa of persons supposed to be suffering from typhoid fever, but when the *post-mortem* was made they were shown to have died of miliary tuberculosis. In our opinion, many cases have been put down as typhoid which have really been tubercular.

After describing the discovery of these germs, and the manner in which they appear to convey the disease, Koch goes on to explain the phenomena of tuberculosis according to this theory. That the disease appears so frequently in the lungs is readily explained, as the germs are easily taken in in respiration. These bacteria appear to be effective in producing the disease after long exposure. Koch succeeded in producing the disease by the inoculation of sputa four weeks' old. Patients are not easily affected when the epithelium is intact, but when erosions or congestions take place, the germs find a ready entrance into the body. In children the bowels are most frequently affected, on account of the contagious matter introduced with the food. It is difficult to explain the hereditary nature of the disease by means of this theory. It is quite possible that individuals born with a weak constitution, and possessing a tendency to low inflammation, and cheesy degeneration, should be very susceptible

to the virus of tuberculosis. The caseous matter appears to be an excellent nucleus for the development of bacteria. It is difficult to say whether the virus in some different form might not be carried over from one generation to another through the ovum or semen, in the same way as in syphilis.

From the experiments made, there is no doubt that bacteria exist in tuberculosis. So far as yet known they do not exist in any other form of disease. That they are the cause of the disease seems probable. No authority has yet been able to contradict Koch's assertion. In fact, the results of the investigations so far go still more strongly to confirm it. If after thorough investigation it should be finally confirmed, a great advance will be made towards the prevention of this frequent and fatal disease.

ANTISEPTIC TREATMENT OF PHTHISIS.

(Read before the Ontario Medical Assoc., June 8, 1882.)

BY D. L. PHILIP, M.D., C.M., BRANTFORD, ONT.

Phthisis is now being treated, with reported success, by the continuous inhalation of the vapour of carbolic acid or other antiseptic agents, by means of an almost constantly-worn respirator.

"It is fair to infer," says the *British Medical Journal*, "that the application to internal suppurating surfaces of an agent which has been used in similar cases externally with such benefit, will be equally efficacious in checking the growth and development of morbid germs, and thus allowing tissues to be reconstructed."

Recent researches on tubercular disease, and the nature of tubercle, have excited great attention, and the teachings of some of the German pathologists, notably Virchow, are subversive of what we have been taught regarding its existence, and especially with regard to the relation which it sustains to inflammatory processes, some of the leading pathologists maintaining the view that the inflammatory process is primary to tubercle, and utterly denying the tubercular nature of many of the processes engaged in phthisis

pulmonalis. Without attempting to give the views recently enunciated by them in this extensive field of enquiry, I would like to draw the attention of the Association to a comparatively new method of treatment with which general practitioners are more immediately concerned, and which has been used during the past two years, with a considerable degree of success, by Dr. McKenzie, of Edinburgh, Dr. Williams, of London, and others. They were probably led to adopt this method of treatment from the views recently set forth as to the septic and eminently contagious character of tubercle,—I allude to the inhalation of the vapour of carbolic acid or other antiseptic agents for lengthened periods, as practised by Dr. McKenzie with apparently highly beneficial results. The inhalation of vapours in lung diseases has long been practised, but the mode of administration has been so defective that the practice has to a great extent fallen into disuse. It has also been adopted by advertising charlatans in an imperfect way, and has thus helped to bring it into undeserved disrepute with the profession. It is now, however, as a rational method of treatment extensively employed by leading and eminent medical men with no doubt the happiest results.

Late investigation goes to show that phthisis pulmonalis is eminently contagious, and may be propagated by direct infection from man to man.

Dr. Reich observed "in the Village of Neienburgh, situated on a high bluff of the Rhine, and enjoying excellent hygienic conditions, from July 11th, 1876, till Sept. 29th, 1877, ten deaths from tubercular meningitis in children born between April 4th, 1876, and May 6th, 1877. No hereditary disposition could be established. All these children were attended by the same midwife, suffering from lung disease (caverns, and sanio purulent sputa). She died July 23rd, 1877. She had the bad habit when a child was born of removing the phlegm from the respiratory passages by aspiration with her mouth, and in slight cases of asphyxia of blowing air into the child's mouth."

Schuler, of Grietswald, has proved that animals in which artificial tuberculosis has been induced by injection, die without exception,

with the usual phthisical symptoms, viz., emaciation, loss of heat, and afterwards general miliary tuberculosis. Amongst others who have given the weight of their authority to the belief that tuberculosis is contagious are Mr. Simon and Dr. Greenfield, such contagion being frequently spread by the milk of high-class cows, which are very subject to the disease. It is important to note that whilst the lower animals may communicate the disease to man, man may in return infect the lower animals. In proof of this, is the case recorded by Dr. Cullimore (*British Medical Journal*, May 22, 1880), where a strong healthy dog lapped up the sputum of a tuberculous man, and died in a short time of pulmonary phthisis. In connection with this must be mentioned the spread of infection within the same individual from one organ to another. Virchow maintained that tuberculosis spreads from organ to organ as if by infection. The tubercular virus enters the organism most commonly through the air passages, and thus in the first instance is capable of favoring pulmonary tuberculosis. From here it spreads on to the bronchial glands, and further enters the general system, or by swallowing of tuberculous sputa produces secondary tuberculosis in the intestines, mesenteric glands, &c. Or the virus enters primarily through the digestive organs with the food, notably the intestine, and from here the infection spreads on to the mesenteric glands, peritoneum, and, further, the general system.

Dr. Pollock, Senior Physician to the Hospital for Diseases of the Chest, Brompton, in writing upon phthisis in relation to modern pathology, says:—"Tubercle is, then, not an essential element in the disease, but where found, is a secondary superadded result arising from infection, or the resorption of inflammatory results in the individuals themselves. Tubercle is a short-lived product, arising from inflammatory residues which have undergone degeneration—caseation—and been conveyed into the system, or to distant parts of the lungs or other organs, by the blood-vessels and lymphatics, or even directly by the air-tubes. Tubercle probably lives but some weeks or months, but the changes in the lung formerly ascribed to tubercle may last for years." Charcot, in his

study of the thermometry of the disease, says: "The thermic curves are not those of inflammatory action, but of putrid infection, and in the pyrexial form of phthisis the exacerbation (of temperature) is due, not to a pneumonic process, but to resorption of softened material."

With these considerations in view, the practical part of the question, viz., treatment, may be considered, and if we regard phthisis as a disease of a septic parasitic origin, and readily infectious, as modern pathological research would lead us to believe, then the antiseptic treatment is a highly rational one. And indeed the success already met with in the treatment of certain forms of phthisis by this method, by Dr. McKenzie, Dr. Yeo, Dr. Coghill, and others, should secure for it respectful consideration and an extensive trial. In order to carry it out effectually, Dr. McKenzie has devised a very ingenious little instrument, which he calls the *naso oral respirator*, which covers both the mouth and nose, and can be worn for hours at a time without the least inconvenience. The perforated lid upon the lower part of the instrument can be removed at pleasure, and a sponge saturated with carbolic acid, creasote, or other volatile antiseptic agents, placed within. The air in the respiratory process passes through the sponge saturated with the vapor. It is provided with inspiratory and expiratory valves, and is not liable to get out of order.

The following are the brief notes of a case which I have recently treated by this method: Miss S., age 24, of good family history, consulted me about six months ago, complaining of general debility, cough which had been troubling her for some time, slight progressive emaciation, loss of appetite, shortness of breath upon exertion, &c. I did not make any physical examination of the chest at the time, but prescribed for her cod-liver oil with hypophosphites, which she continued to use for some weeks with benefit. I did not see her again until the 2nd Sept. last, when I was sent for, as she had on that morning an alarming hæmoptysis. She must have got up fully a pint of blood. I at once ordered her to bed, enjoined perfect quietude, and gave her fluid extract ergot and iced drinks. Upon visiting

her the same evening I found that the sputum had been occasionally tinged with blood. Pulse 112, temperature 102. Upon examination of the chest I found a diffused crepitant *râle* over the left apex, which led me to infer that the hæmorrhage had come from this portion of the lung. The history of the case for the next fortnight was unfavorable—afternoon exacerbations off ever, cough troublesome, sputa now and then tinged with blood. I now caused her to inhale, as continuously as possible, the vapor of carbolic acid and creosote, equal parts, by means of the respirator, which I had some time since procured from Edinburgh, and after the manner prescribed by Dr. McKenzie. On an average, she continued to use it from eight to ten hours a day for the next two months, with, I think, markedly beneficial results. Her improvement appeared to go on from the period when she began using it, and at the present time, though not strong nor robust, she is in a better condition of health than she was formerly—appetite good, very little cough, and the only abnormality I can detect upon auscultation is a slightly prolonged expiration over the left apex. She can take a good long walk without fatigue, and says she feels better than she has done for months back. She still continues to use it for a couple of hours morning and evening each day. The antiseptic treatment is, of course, to be employed with appropriate constitutional remedies. In this case, however, I used none, partly because she had previously taken a considerable quantity of cod-liver oil, and had a very decided aversion to its use in any form, and I also wished to observe the effect of the antiseptic *per se*.

Whether the beneficial effect resulting from the inhalation of these antiseptic vapours is due to its destructive action upon the germs to which the formation of pus is attributed, or to its action as a preventative of septic poisoning from the local centres in the lungs, it is evident that their use has a decidedly curative action in diminishing expectoration, and with it the cough in the various forms of phthisis, during the resolution of pneumonia, and in the purulent stages of bronchitis.

Should the employment of the antiseptic be local or constitutional? Dr. McKenzie says:

“My therapeutical experience leads me to believe that, as shown by Matthews Duncan to be the case in some examples of puerperal fever, it is more frequently a condition of *sapremia* than *pyæmia*, which obtains in phthisis; that the toxæmia is rather attributable to the chemical factors which putrefaction engenders than to the presence of micrococci in the tissues and blood. I, therefore, think that it is only by the local application of the antiseptic that good results can be obtained.

TUBERCULOSIS.

W. H. AIKINS, M.D., L.R.C.P., LOND., VIENNA.

(The following cases have been reported by Dr. W. H. Aikins from Prof. Chiari's Laboratory, Vienna. The first is not an unusual instance of confirmation of the clinical diagnosis by the absence of bacilli. In the second, the presence of bacilli was demonstrated in a tubercular nodule far from the respiratory system, and in a situation where tubercle is rarely found.—J. E. G.)

John P., aged 29, piano-maker.

Clinical diagnosis: Pleuritis. Body medium size, slightly built. Emaciated, pale. Immediately on the left side of the sternum, corresponding to cartilage of 3rd rib, was an abscess the size of a hazel-nut. In the trachea a slight quantity of mucus; the mucous membrane of both larynx and pharynx pale. The left lung in its whole extent adhered to the pleura; both its parietal and visceral layers thickened into cartilage-like bands. The left lung in its whole extent shrunken; volume one-third that of a normal lung. Lung traversed by dense bands of fibrous tissue. In the shrunken and compressed parenchyma of the lung no air was present, in the apices several cavities due to bronchiectasis the size of hazel nuts. In other parts of the lung were several partially calcified partly caseous nodules. The right lung vicariously enlarged, œdematous, and containing numerous old caseous partly calcified nodules, none larger than a pea. In the pericardium about 200 c. c. cloudy serum, both the visceral and parietal surfaces covered with a fibrous exudation; heart, ordinary size, valves soft:

liver, slightly fatty; spleen, normal size; kidneys, granular; bronchial glands, enlarged and slightly caseous; supra-renal capsules showed no changes.

N. B.—The sputa of this man were examined three days before his death with a view to ascertaining whether or not tubercular bacilli were present—none were found.

TUBERCLE OF THE OVARY, IN WHICH BACILLI WERE FOUND.

Marie D., aged 39, housemaid.

Clinical Diagnosis: Tuberculosis pulmon. Body small, weakly built, and poorly nourished; brain and meninges pale; a quantity of mucopurulent matter in the trachea. The right lung compressed to half its normal size owing to a pneumothorax. From a large cavity in the lung there was a perforation leading into the pleural sac. In the apices of lungs were numerous cheesy masses, and several large cavities. Bronchial glands, increased in size and filled with tubercles. Spleen, enlarged, contained many caseous nodules. In substance of liver and kidneys were also numerous small nodules; surface of diaphragm covered with miliary tubercles. In the left ovary was a sharp, well-defined, yellowish coloured mass, about the size of a pea, surrounded by a zone of hyperæmic tissue. Not being certain, at the time the *post-mortem* was made, what the character of the nodule in the ovary was, it was examined under the microscope, and appeared to be distinctly tubercular. Caseation had commenced in the centre of the mass; no giant cells were to be seen. I then examined it for tubercular bacilli, and found them present in large numbers at the edge of the tubercle, where the active progress was taking place.

ON THE CONTAGION OF APHTHOUS FEVER IN THE HUMAN SPECIES.

BY P. H. BRYCE, M.A., M.D. SECRETARY PROVINCIAL BOARD OF HEALTH.

(From the *Journal d'Hygiène*)

The *Nice Médical* having lately published an interesting article on the transmission of apthous fever from animals to man, Prof. Lussana of Padona, gives us pleasure through

the communication of facts which he has observed since 1851 among the plateaus which surmount the high mountains of Gaudino (Lombardy).

An epidemic of apthous fever had broken out among the numerous herds (more than a thousand animals) scattered over these magnificent pasturages. The epizootic had infected about seven-eighths of the bovine and two-fifths of the porcine species.

On all were found characteristic apthous eruptions at the bifurcation of the hoofs, in the mouth, on the snout, at the opening of the nasal fossæ, and on the teats; never anywhere else. It was evident that the virus secreted by the interungueal vesicles had polluted the herbs of the field trodden upon by the feet of the animals, and that these herbs had thus borne the contagion to the buccal mucous membrane and the udders. Nevertheless, the progress of the epizootic was very mild, and the sickness resulting from it very slight.

The diminution of the production of milk from milch cows became apparent only in the course of the second week of the disease, and all the milk, as well as all the butter, was used without affecting the amount consumed throughout the country.

As to the fact of the transmissibility of the disease, these are his observations:

One of the herdsmen presented a characteristic apthous cicatrix, on the gum, at the base of the roots of the two upper incisors. Also a characteristic alteration on the internal mucous membrane and middle of the lower lip. Recovery took place at the end of two weeks, without marked injury to the general health.

M. Lussana had inoculated himself by means of a vaccine needle, on the left fore-arm, with a portion of the ichorous humour obtained from the udder of a sick cow; there followed no eruption and no *malaise*. The virus of the apthous epizootic is not transmissible by skin, (except the interungueal tissue in cloven-footed animals), but it is transmissible by the mucous membranes of these animals, as well as those of man.

The cows have always been milked by hand without the persons doing this pre-empting the least eruption.

Selections: Medicine.

SUB-CLAVICULAR TYMPANISM.

M. J. Grancher concludes a very interesting communication to the Medical Society of the Hospitals upon Sub-clavicular Tympanism as follows:—

Being given an acute or subacute pleurisy in a healthy man, accompanied with a medium effusion we may find out by the physical signs the part taken by the lung in the pathological process.

All clinical methods heretofore employed seek to determine the condition of the lung behind the effusion, that is to say at the base; none allows us to determine, what is most important as regards the distant prognosis of the pleurisy, the condition of the apex above the effusion.

The healthy or pathological condition of the upper lobe, may be deduced, not from such or such a sign considered alone, but from the relation of the three principal physical signs, viz., resonance, vocal vibrations, and respiration.

Three capital circumstances may be met with, and each of them corresponds to a particular condition of the apex:

1st. The sub-clavicular tympanism coincides with an increase of the vocal vibrations and increased respiration.

This association of physical signs indicates that the superior lobe is healthy, that it is resonant, that it vibrates, and that it respire in a supplemental manner.

This is a particular case of a general law called the law of compensation and the schema which corresponds to it may be designated under the name of *schema or tympanism of compensation*.

2nd. The sub-clavicular tympanism again is accompanied with an increase of the vocal vibrations, but there exists at the same time an abnormal respiration.

This second variety of tympanism is the most common of all.

All the abnormal respirations described by authors may be observed, but by far the most frequent is *weak* respiration.

This combination of physical signs may be called *schema or tympanism of congestion*.

This congestive condition is most often, though not constantly of tubercular origin. Its true nature may be deduced from later observation of the patient, from the study of his antecedents and the functional symptoms that he presents.

3rd. The sub-clavicular tympanism may be encountered with a diminution of the respiratory murmur and a diminution of the vibrations.

This third combination, rarer than the preceding, answers probably to divers pathological conditions. I have found it realised up to the present with compression of the bronchi and by œdema of the lungs. That is why I call it provisionally *schema or tympanism of bronchial compression and pulmonary œdema*.—*L'Union Médical*.

LOCALIZED ŒDEMA.—M. Guyot, at the Medical Society of the Hospitals, presented a patient with chronic localized œdema of the right upper limb. The patient was a woman, 59 years of age, syphilitic. The swelling was first noticed four years ago, and proceeded regularly until, at the end of a year, it attained its present size. This swelling succeeded the disappearance of a cutaneous exanthem, localized upon the same limb, which she had had for two years. This exanthem had coincided with the disappearance of the catamenia. The eruption was characterized by a series of vesicles which soon ulcerated, seated upon the back of the hand, and accompanied with *crevasses* at the articular folds. The eruption was continuous. She subsequently had an attack of right hemiplegia which had no influence upon the œdema. Movement slowly returned. Under the influence of iodine the œdema became softer, and there was some amelioration. The right upper limb is the seat of a white, soft œdema, occupying the hand and forearm, but extending to the arm. This limb is more sensitive to cold than the other. The mobility is diminished. Disagreeable tinglings are occasionally felt in the tips of the fingers. The palm of the hand is continually damp, and at times bathed with an abundant perspiration. Neither obliterat-

ing clot nor compressing tumour can be felt in the veins. No central, arterial, or nervous origin could be discovered for the œdema. The inferior limb, which was paralysed, is not œdematous.—*L'Union Médicale*.

PORK MEASLE IN MAN.—M. Troisier exhibited lately to the members of the Paris Hospitals Medical Society a man, 36 years old, a Parisian, who for a year past had noticed small swellings arise on the cheeks, arms, legs, and abdominal wall. These proved to be due to cysticerci, and, curiously enough, the patient had passed a *tœnia solium* whilst bearing these larvæ in his body. M. T. suggested two hypothetical explanations of this coincidence; either that the man had swallowed the ova of his own tapeworm, or that cysticerci and tapeworm were derived from the same external source. He asked what treatment should be followed. No one could dream of removing them one by one, but some such simple method as puncture with the hypodermic syringe might suffice to kill them.

HÆMORRHOIDS. EQUITATION AS PREVENTIVE AND CURE.—In the *New York Medical Record*, for 26th August last, Dr. William Bodenhamer writes favourably of horseback exercise as a potent preventive and treatment for hæmorrhoids, especially internal. He also refers to a gymnastic exercise practised in Bethune Hospital with success in this affection. "It consists simply in trying to touch the toes with the fingers without bending the knees. This movement though difficult at first, soon becomes easy; it not only strengthens and develops the muscles of the abdomen, but also those of the legs and thighs." Perhaps, too, the posture and the aspiration exercised on the contents of the abdomen may be one factor in the amelioration.—ED.

HYDATID CYST OF THE HEART.—M. Arnold reports the case of a young man, 21 years of age, who had been subject to fainting spells—heart's action energetic but the pulsations regular and normal,—cyanotic condition of skin, without true respiratory embarrassment, gene-

ral and confluent urticaria, manifest tendency to algidity. The autopsy discovered three hydatid cysts at the apex of the left lung; in the pulmonary artery numerous free hydatids of all sizes, still more hydatids in the right ventricle. In the right auricle a cystic tumor semi-collapsed with an enlarged slit-like opening towards the tricuspid orifice and filled with hydatids; the liver and spleen contained no cysts.—*Gazette des Hôp.*

ILEUS, CAUSED BY CONCRETIONS OF GUM SHELLAC.—C. FRIEDLANDER.—The calibre of the small intestine was completely occluded at 30 centimetres above the ileo-cæcal valve by spherical and cylindrical concretions. Some, of large size, were even found in the stomach. Some of them were as large as a goose's egg. The total weight of the concretions was about 960 grammes. They are of a brown colour and vitreous fracture. The history was that of a furniture polisher addicted to alcohol. He satisfied his passion by consuming an alcoholic solution of gum shellac which was used as a varnish in his business.—*L'Union Médicale*.

M. Duboué recommends in a paper addressed to the Academy of Medicine, the administration of ergot of rye in typhoid fever. He advises it be given in substance, before eating, in doses, from $1\frac{1}{2}$ to 3 grammes for adults, in divided doses per diem, and from 0.40 to 1 gramme to children. The quantity to be regulated by the temperature or general condition of the patient. He states that the remedy is applicable at all periods, and in all forms of typhoid fever, without exception. In 51 cases he had 3 deaths or 6%.—*L'Union Médical*.

M. Gentilhomme, of Rheims, recommends as a cure for a cold in the head one quarter of a milligramme of the sulphate of atropine. It should be taken as soon as possible after the symptoms declare themselves. In quarter of an hour after taking it the distressing symptoms begin to abate. If necessary in a few hours the dose may be repeated.—*L'Union Méd. et Sci. du Nord-Est*.

Surgery.

THE USE OF OXYGENATED WATER IN SURGERY—PEAN.

The researches of M.M. Paul Bert and Regnard on the effects of oxygenated water have induced Drs. Péan and Baldy of the St. Louis Hospital to investigate its applicability to surgery.

The oxygenated water made use of was prepared by Mr. Baldy, and was perfectly neutral and contained from two to twelve times its volume of oxygen, as required.

First of all it was applied externally for the dressing of great traumatisms and divers ulcers. It was also administered internally in certain diseases as anæmia, septicæmia, diabetes, tuberculosis, and more particularly tubercular operation cases.

Externally oxygenated water was applied by means of compresses of tarlatan, covered with sheets of oil silk to prevent evaporation, and retained with bandages. These applications were renewed once or twice a day according to the indications, also whenever there was a discharge requiring the use of a drainage tube, injections of oxygenated water were made at each dressing thro' the orifices of these tubes, until the fluid returned clear and frothing.

So far the results have proved most satisfactory—they have been favourable not only in the minor amputations and resections which are daily performed in an important service such as that of M. Péan at the St Louis, but even in the great amputations of limbs (thigh, leg, arm, and fore-arm). Oxygenated water has also been applied after the ablation of large tumours whether taken from the soft parts or the hard parts of the limbs and from the trunk, in incisions of multiple, long and deep fistulous tracts, and in grave accidental wounds complicated with severe lacerations. Throughout the entire period of the dressings, the atmosphere of the wounds has been modified by vaporisations of oxygenated water.

Under the influence of these applications, the wounds, those recently made with bistoury or thermo-cautery, as well as those of older date, covered with sphacelated portions which

had induced a certain degree of lymphangitis or erysipelas, have quickly assumed a healthy aspect and become covered with rosy granulations, which have furnished a pus relatively abundant, but creamy and without odour. There had been exceptions at first only in those covered with sphacelated portions, and even in these cases the odour appeared less than with dressings made with other substances. We have also noted a favourable tendency towards union by first intention of amputation wounds and rapid cicatrizations of old wounds and chronic ulcers.

At the same time in patients who had been treated by other methods and who were threatened with septicæmia, at the moment we began these dressings we began its internal administration.

The effects have appeared to us most satisfactory, not only in view of the local condition but as regards the general state. The fever which is declared after great traumatisms has been moderated, most often at the end of three to four days it has completely subsided and we have been struck with the slight elevation of pulse and temperature.

All these results have appeared at the least as satisfactory, if not more so, as those from alcohol simple or camphorated and carbolic acid. In this respect should we not prefer the oxygenated water to the last since it has neither the toxic properties nor the vile odour of carbolic acid.

As to tubercular ulcerations they have been happily modified. In epithelial or sarcomatous ulcerations this mode of dressing has not been sufficiently tried to base an opinion of its definitive action. But there is reason for thinking that it may produce some modification.

We now replace the carbolic spray with oxygenated spray in all large operations such as gastrotomy.—*Gaz. des Hôp.*

Dr. Gustav Krehbiel, (in *Wien. Med. Woch.*) records the case of a man, aged 54, who was shot through the hand. The wound was washed with a 5% solution of carbolic acid. The canal formed by the bullet was then filled with iodoform. Healing took place with scarcely a trace of inflammation.

M. Pierre Vigier finds from experiments upon himself and upon his pupils that substances incorporated with glycerine are not absorbed by the skin, therefore, he advises as a parasiticide the substitution for blue ointment which stains the linen and is absorbed, a glycerine thus composed: Corrosive sublimate, 5 gr., glycerine (English or Princes') 100 gr. In spite of the causticity of the bichloride the skin is not irritated by this mixture, and after extensive applications to the skin no mercury is found in the urine.—*L'Union Médical.*

BORACIC ACID AS AN ANTISEPTIC IN SKIN DISEASES.—Messrs. Savoy and Moore's chemist recommends that boracic acid should be dissolved in glycerine, and this solution incorporated with fatty bases of white wax and almond oil (not vaseline) to produce a soft, homogeneous, creamlike compound, free from all the usual sharp-edged, irritating, crystalline plates of boracic acid, which are so hard to reduce to an impalpable powder.—*Practitioner*—*Archives of Dermatology.*

GYNOCARDIC ACID AND CHAULMOOGRA OIL.—Wyndham Cottle prefers the acid to the oil wherever there is malnutrition, as in gout and rheumatism, late syphilis, &c. He gives half grain dose of the acid with extract of gentian, hops, or conserve of roses several times a day; and has exhibited 3 grains daily for four months. Locally in eczema the following is a very useful ointment: R. acidi gynocard, gr. xv-xxv; vaseline, ʒj.

Winiwarter, in *Wien. Med. Woch.*, gives the history of a case where the ductus choledochus became obliterated. In three weeks the gall bladder had attained an enormous size, and there was intense jaundice. Aspiration of the contents of the gall cyst failed, and he determined to establish a fistulous opening. This was successful, and the patient made a good recovery.

Dr. Markham, of Australia, in *Wien. Med. Woch.*, states the following treatment for fistula

in ano:—The fistula is first enlarged by sponge pressure, the sphincter is well stretched and opium administered to secure about five days rest. The fistula is then carefully plugged with charpie dipped in a mixture of carbolic acid and glycerin one to eight. Healing took place in his cases in from three to six weeks.

HIP-JOINT AMPUTATIONS.—Within a month three striking instances of the value of Mr. Davey's lever in this operation have occurred in England. A case operated on by Mr. McLaren, of Carlisle, lost only two ounces of blood; one under Mr. Cowell's care at the Westminster Hospital lost three ounces; and a third operated on by Mr. Paul Swain, of Plymouth, lost but one ounce and a-half.

AMMONIO MERCURIC PEPTONE IN SYPHILIS.—M. Martineau, says the *N. Y. Medical Record*, has treated 600 syphilitic patients by subcutaneous injections of ammonio-mercuric peptone. He has made 11,000 injections in all, and has never had any accident: neither abscess, stomatitis, salivation, nor intestinal disorder.

Midwifery.

TARNIER'S METHOD OF PREVENTING PUERPERAL INFECTION.—“Even in 1856, when I was Interne at the Maternité Hospital, the mortality was five per cent., this is now reduced to two per cent. in hospital, and three quarters of one per cent. in the pavilion I had constructed a few years ago. Each patient there has a separate room, entered from without, so that a nurse can only pass from one to another by going outside into the open air. The furniture is of japanned iron; the floors, walls, and ceilings are of impermeable concrete. The mattresses and pillows are stuffed with cut chaff, which is burnt after use in every single case. Instead of McIntosh sheets, one of brown paper made impermeable by pitch, is used; this is burnt after use.” For the washing of the genitals he uses weak solutions of bichloride of mercury, being the best and most powerful germicide,

THE CANADIAN
Journal of Medical Science,

A Monthly Journal of Medical Science, Criticism,
 and News.

TO CORRESPONDENTS.—*We shall be glad to receive from our friends everywhere, current medical news of general interest. Secretaries of County or Territorial medical associations will oblige by forwarding reports of the proceedings of their Associations.*

TORONTO, OCTOBER, 1882.

MEETING OF THE CANADA MEDICAL
 ASSOCIATION.

The meeting of this Association, held in Toronto, on the 6th, 7th, and 8th of September, was both a pleasant and a successful one. A reunion of medical men who take a deep interest in both the scientific and practical departments of our profession is always very enjoyable, and this year's congress was no exception to that rule. The words quoted by our worthy and respected President, "happy to meet, sorry to part, happy to meet again," are literally true, and we can add but little to them. It is a real pleasure to see the old familiar faces, to grasp the friendly hand, to recall many pleasant reminiscences of the past, and at the same time to form new friendships, which it is hoped, will be as pleasurable and profitable in the future as those gone by.

Apart from these considerations such gatherings are a source of great profit, both directly and indirectly, to those who have the privilege of attending them. From such intercourse with friendly and zealous peers we must of necessity get some new ideas and inspirations which will do much to prevent us from getting into the wretched groove of an unscientific and almost mechanical routine which is oftentimes disastrous for both practitioners and patients.

The interest of this meeting was well sustained from beginning to end. The large number of papers created a necessity for division into sections, medical and surgical, and there was ample work for both. The reports of committees were unusually able and interesting. In all cases special subjects of interest

were treated, and the readings generally elicited free, and sometimes, rather racy, discussions. We take pleasure in publishing two of them, "Medicine," and "Surgery," in this issue, and hope to give others hereafter.

THE REPORT ON MEDICINE.

Dr. Graham, just returned from the *land of Pathology*, read this report in which he dealt principally with the subject of tuberculosis. A short account was given of the various discoveries made in this subject, from the time of Laennec up to the present. A description was then given of the bacilli of tuberculosis as discovered by Koch, as well as of Ehrlich's improved method of staining. Some specimens of the bacilli were shown in the museum stained according to Ehrlich's method.

THE REPORT ON SURGERY

Was read by Dr. Shepherd who took up the following subjects:—Treatment of wounds, inflammation, sponge grafting, bone transplantation, surgery of the kidney and join's, and treatment of club foot. His remarks on the treatment of wounds gave rise to an able discussion. He showed clearly the proper relations existing between Listerism and the broad subject of antisepticism, and while giving due credit to Lister, for the wonderful work he has accomplished, expressed his own preference for treatment by rest, support, and infrequent dressings, together with the use of iodoform. We consider this method of treatment to be, at least, equally efficacious, although less brilliant, less impressive, and less troublesome, while at the same time it possesses the unspeakable advantage of being always available, always practicable, whether in the largest and best-ordered hospital, or in the smallest cabin in our backwoods. And so apparently thought the majority of the members present.

THE RECEPTION BY THE PROFESSION
 OF TORONTO.

We were glad to see such an unanimous effort on the part of the Torontonians to entertain our guests as hospitably as time and circumstances would permit. The formal reception took the shape of a *conversazione*, which was held in the rooms of the Education Depart-

ment, on the evening of the second day, and was in every respect one of the most successful entertainments of the kind ever given in Toronto. As indicated in our last issue the address of welcome was delivered by Dr. Workman with his usual felicity, to which a happy reply was made by the President of the Association, Dr. Fenwick, of Montreal. Those present had also the unexpected pleasure of listening to a short address from the distinguished scientist, Dr. W. B. Carpenter. The music was all that could be desired, and the songs of the Misses Hillary, Miss Berryman, Mons. Pernet, together with the performance on piano and violin, by the Drs. Geikio, were highly appreciated.

In speaking of the work done by the Committee of Arrangements, we must refer especially to the untiring efforts of its able and energetic Chairman, Dr. Canniff, in whom was combined the wisdom of the experienced, with the zeal of the youngest enthusiast. In making the preparations for the conversazione, he was ably assisted by Dr. May, of the Education Department and others

Dr. Daniel Clark entertained the members of the Association at a most *recherché* luncheon on the third day. It happened, unfortunately, that many were unable to remain, although very anxious to do so. A goodly number, however, were present, including a few ladies, and enjoyed themselves immensely in inspecting and discussing both the admirable arrangements and working of the institution and the good things provided on the table. Mr. Attorney-General Mowat, Dr. W. T. O'Reilly, Dr. Workman, Dr. Daniel Clark, and Dr. Grant, each made an appropriate and happy speech, and the gathering dispersed with the conviction that the last was by no means the least enjoyable feature of the meeting of 1882.

Prof. Chiara, of Milan, has succeeded the renowned V. Ballochi in the Chair of Obstetrics at Florence. Porro, of Pavia, has taken Chiara's place; and the latter's assistants, Mangiagalli and Negri, have been appointed to the Obstetrical chairs in Sassari and Novare, respectively.

Dr. Henry H. Reeve, of Minesing, has purchased the practice of Dr. Lund, of Churchhill, and the latter has removed to Guelph.

THE INTERMEDIATE EXAMINATION AND MATRICULATION FOR THE MEDICAL COUNCIL.

We find by the circular recently issued by the Minister of Education, that important changes are to be instituted in the Intermediate Examinations, which will materially lower its standard; but the Executive Committee of the Council, after conferring with the Head of the Department, received the assurance that the programme would be so arranged that candidates for matriculation may be examined in all the subjects required by the Council. The Registrar has, therefore, issued the following circular:—"The Intermediate Examination referred to, * * * as the Matriculation Examination, includes the following subjects, all of which are compulsory:—English Grammar, English Literature, Composition, Dictation, Arithmetic, Algebra and Euclid, History, Geography, and Latin."

As will be seen by reference to the circular in question, Algebra and Euclid, History and Geography, have been removed from the list of compulsory subjects, and placed among the optional, with Latin and other subjects.

We believe the Profession of Ontario will almost unanimously feel both surprised and disappointed at this sudden and unexpected change, which makes the intermediate simply the examination for graduation in the common schools, and places matriculation in medicine on a par with *entrance* into the high schools. It will become the duty of the Council to seriously consider the question, and we see no course open except at once to cut all connection with an examination which practically includes in its compulsory list only English Grammar, and Arithmetic. The one would of course enable a Medical Practitioner to write out the directions for the preparation and application of a slippery-elm-bark poultice, while the other would make him competent to give back the right change when settling with his paying patients, but taken together they scarcely come up to the high standard of preliminary education for our Profession which so many are contending for.

Dr. Pirrie, Professor of Surgery, at Aberdeen, has resigned after 52 years' service, 9 spent in the Chair of Anatomy and Physiology, and 43 in that of Surgery. Dr. Alex. Ogston is spoken of as his successor.

ADDRESS TO STUDENTS.

(From London Lancet.)

THE MEDICAL CURRICULUM.

The conjunction of a sound mind with a sound body is an indispensable condition of the successful study and practice of medicine. A clear intellect and a quick understanding are indeed necessary, but they will not suffice. The study of medical science requires considerable mental powers; but medical practice has heavy bodily tasks that none but strong men can perform, and none but strong men should attempt. Without a sound constitution and robust health, the medical student and practitioner will sooner or later find they must narrowly circumscribe their spheres of activity. The health-qualification is not sufficiently considered by some of those who enter the ranks of the medical profession. It is only when the constitution is undermined, the health broken, and the energies exhausted by the hardships, the exposures, the anxieties, and the constant application of mind and body under unfavourable and depressing conditions that its importance is fully appreciated. It is then often too late to correct the error. The whole life, training, aspirations, and interests are staked in the enterprise, and to be compelled to withdraw is an acknowledgment of defeat and failure. Those who are now contemplating starting on the medical career should assure themselves they are endowed with bodily strength and activity commensurate with the demands that are likely to be made upon them in after-life.

Next to a sound body, the qualification for the successful pursuit of the science and art of medicine is a cultivated understanding. In some degree this is provided for by a preliminary examination, but this security is not enough. The general education should be the best attainable, both as regards thoroughness and extent. By this we do not mean the student should have an elaborate acquaintance with any particular form or department of learning, whether classical or scientific, but rather that he should be carefully trained and disciplined in every useful mental and moral exercise. Much has been said in favour of what is called "a university education" for all medical students; but experience has shown this is not an

unqualified benefit. While it is desirable that every medical man should be an accomplished gentleman, as well as a skilful practitioner, great scholastic attainments do not necessarily imply special aptitude for medical practice. Those who have obtained a degree in arts before they begin medical studies, have passed the time when they can readily apply themselves to the rudiments of their technical training, or have acquired an intellectual starchiness that prevents them from stooping to the fancied drudgery of such rudiments. Any youth of average talents, whose education is conducted by competent masters, may acquire an amount of general knowledge and mental discipline equal to the demands of any department of medical science.

It is, however, desirable that the student should have correct notions of the meaning and object of education. The medical education is almost wholly technical, though, unlike some other forms of technical training, it is capable of ultimately being transformed into culture. Despite the tendency of current opinions, it should not be assumed that education means mere knowledge, or learning, or the giving and receiving of instruction. It means, rather, in Milton's words, "that which fits a man to perform justly, skilfully, and magnanimously, all the offices, both public and private, of peace and war." The prevalence of the doctrines of the utilitarian philosophers has done much to foster false and erroneous opinions of the end and purpose of education. Knowledge, not wisdom, has become the approved end of education, and cleverness in examination rather than the skilful management of the affairs of life, the final test of success. The best minds have in all ages protested against this specious doctrine. Rabelais, Montaigne, Milton, Locke, and others, have denounced it. "The greatest clerks are not the wisest men," said Rabelais, and our Cowper differentiates the tendencies of these two schools in his lines:—

" Knowledge, and Wisdom, far from being one,
Have ofttimes no connexion. Knowledge dwells
In heads replete with thoughts of other men;
Wisdom in minds attentive to their own.
Knowledge is proud that he has learnt so much;
Wisdom is humble that he knows no more."

As education does not, therefore, consist exclusively or solely of the acquisition of knowledge,

but includes the complete and harmonious development of all the mental and bodily faculties, the exercise and training of the natural senses should not be disregarded. In this age, when progress in applied science depends chiefly upon the elaboration of apparatus and instruments, when the conquests of therapeutics over pathology depend mainly upon the perfection of the physical aids to diagnosis, there is some risk of ruining the natural senses by the exclusive use of instruments. Kant foresaw this danger more than a century ago, and uttered a note of warning against it. The stethoscope, the thermometer, the sphygmograph, the ophthalmoscope, and the laryngoscope, have enlarged our powers of diagnosis, but it is doubtful whether they have extended our usefulness as practitioners of the healing art in a corresponding degree. Without these aids the modern practitioner is often helpless, where his forefather, prompted by the dictates of a trained experience, would have struck boldly, and struck to good purpose.

However large the amount of instruction imparted in the medical curriculum may be, the medical student and practitioner who shall be worthy of their calling must be in a large measure self-taught. The student must see, hear, handle, think, and judge for himself. His knowledge and his experience must be organically assimilated, and not merely mechanically stored within his memory. Now, more than in any previous period, the student is in danger of too much didactic teaching, or, as Locke would say, "of being magisterially dictated to what he is to observe and follow." Nearly three hundred years ago Montaigne condemned excessive tutorship: "Tis the custom of pedagogues to be eternally thundering in their pupils' ears, as if they were pouring into a funnel, whilst the business of the pupil is only to repeat what the teacher has said." This "thundering in the ears of pupils" may secure success in examination, but it will never bring that Knowledge which is Power. While then the pupil must in many things deliver himself up to the influence of authority, he must ever remember that he can only know through his own understanding. Though lectures and book-reading will do much for him, they will not do

all; they will not do even enough. The rest he must accomplish for himself. He must meditate upon what he hears and sees; he must reflect, test, and verify continually. There is no better way than diligent attendance on well-conducted class-examinations, self-questionings, and discourse with judicious friends. On this matter, Locke, whose "Thoughts on Education" every one should read, has some wise words. "Reading," he says, "is but collecting the rough materials, amongst which a great deal must be laid aside as useless. Meditation is, as it were, choosing and fitting the materials, framing the timbers, squaring and laying the stones, and raising the building; and discourse with a friend (for wrangling in a dispute is of little use) is, as it were, surveying the structure, walking in the rooms, and observing the symmetry and agreement of the parts, taking notice of the solidity and defects of the works, and the best way to find out and correct what is amiss; besides that, it helps often to discover truths, and fix them in our minds as much as either of the other two."

* * * * *

There is one fact that the student should always bear in mind—that the great bulk of his duty in after-life will have reference to cases and conditions that cannot be considered heroic or sensational, but which are the chief care of general practice, as they constitute the bulk of human trouble. In regard to this great point we should say these two things: First, no case of disease, or feature of disease, should be despised for its commonness; and, secondly, that the more specific and definite the knowledge that can be gathered by a student on the common cases and facts of disease, the better practitioner will he turn out in the end. Nine students out of ten are destined not to be specialists. General practice is to be their field of labour, and there is no better field for usefulness, and even for distinction. No man is more valued in a community than the man who is helpful, and wise, and kind in all the emergencies of disease, from a toothache to a puerperal pyrexia. But though most students are to be general practitioners, their ultimate efficiency and success will depend very much on the amount of special know-

ledge which they can bring into general practice. Where one practitioner must be always sending his patients off to a specialist, another will be special enough in his knowledge to save his own credit and his patients' time and money. In order that the student may thus develop the greatest efficiency and credit as a practitioner, he must, after gaining a substantial knowledge of anatomy and physiology—without which all practice is a sort of quackery,—take the best opportunities of seeing common disease, and bring to its study unremitting attention. A cough, a rigor, a urinary deposit, a temperature in slight excess of the normal, a rash on the skin, the peevishness of a teething child, and remedies which a good practitioner uses in such cases, must have as much interest for him as a strangulated hernia, a glaucoma, or a case of myxedema. Happy the student who accepts gratefully and yet with independent and even critical intelligence the best teaching of the best practitioners, whether general or special. Medical practice to him will be a joy rather than a care, and if he be occasionally in trouble, like other men, it will not be that greatest of all troubles—conscious incapacity for common duties born of inattention to common cases and common, though passing, opportunities of education. His destination may be to practise in a remote hamlet or the distant colony of an extended empire. On an emergency he may find himself confronted in such a solitude, and at midnight, with a case of ineffectual labour, or the still more trying one of retention of urine, and in the happy and timely use of his forceps or his catheter, in the relief of an agonized patient, and in his own consciousness of serviceableness, he will have reward enough, to say nothing of the greater rewards which accrue to faithful and religious men.

PERSONAL.

Drs. W. T. Aikins and C. W. Covernton, of this city, return home from Europe in the beginning of the month. The latter gentleman represented the Provincial Board of Health of Ontario, at the International Congress of Hygiene held last month at Geneva.

Book Notices.

The Early Diagnosis of Chronic Bright's Disease. By T. A. McBRIDE, M.D., New York.

Life of John M. Briggs, of Bowling Green, Ky. By W. K. BOWLING, M.D. (Reprint from *Nashville Jour. of Med. and Surgery.*)

The Female Perineum. By T. G. COMSTOCK, M.D., M.O. Vien., St. Louis. (Reprint from *St. Louis Clinical Review.*)

The Maltum in Parvo Reference and Dose Book. By C. HENRI LEONARD, M.A., M.D. Detroit: The Illustrated Medical Journal Co.

Weekly Health Bulletins and Meteorological Reports for the Months of July and August. Issued by the State Board of Health of Michigan.

The Antiseptic Treatment of Wounds, after Operations and Injuries. By T. W. BRIGGS, M.D. (Reprint from *Nashville Jour. Med. & Surg.*)

On the Nomenclature and Classification of Diseases of the Skin. By L. DUNCAN BULKLEY, A.M., M.D. (Reprint from *Archives of Dermatology.*)

The Malignancy of Syphilis. With an analysis of 450 Cases. By L. DUNCAN BULKLEY, A.M., M.D. (Reprint from *Trans. Med. Soc., State of New York, 1882.*)

The Presence of the Micrococcus in the Blood of Malignant Measles: Its Importance in Treatment. By JOHN M. KEATING, M.D. (Reprint from *Phila. Med. Times.*)

The Prescription of Proprietary Medicines for the Sick: Its Demoralizing Effects on the Medical Profession. An essay. By C. A. LINDSLEY, M.D., New Haven, Conn.

On the Continuous Inhalation of the Vapour of Slaking Lime in the Treatment of Membranous Laryngitis. By E. F. CORDELL, M.D. Baltimore: (Reprint from *Maryland Med. Jour.*)

Ninth Annual Report of the Secretary of the State Board of Health, of the State of Michigan, for the fiscal year ending 30th Sept., 1881.

The first part of this volume contains the Secretary's Report of the work of the Board, its sessions, special reports, communications, &c., and the second, forty-eight addresses, papers, and reports on sanitary subjects, the majority read at Sanitary Conventions held at Flint and Battle Creek; the balance being special contributions. A large portion of the sanitary field is covered by these communications; and the volume, therefore, contains a vast amount of instructive matter, and constitutes an excellent ensample for our own and other local boards advantageously to emulate.

Popular Science Monthly. New York: D. Appleton & Co.

The October number of this delightful and well-conducted journal for the enlightenment of the masses and the popularization of scientific subjects, has come to hand. The subjects treated of, which are more especially interesting to medical readers, are:—Massage, by Dr. Douglas Graham; Literature and Science, by Matthew Arnold; Mozely on Evolution, by Herbert Spencer; the Utility of Drunkenness, by Matthieu Williams; Delusions of Doubt, by M. B. Bill; Physiognomic Curiosities, by Felix Oswald, M.D.; The Formation of Saline Mineral Waters, by M. Dieulafait; and a Sketch (with portrait) of Rudolph Virchow. We know of no periodical better suited for the delectation of a physician's family, or so much in place as on his table.

Essentials of Vaccination: A Compilation of Facts relative to Vaccine Inoculation, and its Influence in the Prevention of Smallpox. By W. A. HARDAWAY, M.D., St. Louis. Chicago: Jansen, McClurg & Co., 1882.

Dr. Hardaway has done good service in the publication of this little *brochure* of some 140 pages. As is asserted in the preface, the work is a mere compilation, but the profession should feel greatly indebted for much valuable scattered information thus brought together and rendered easily accessible. Chapter i. treats briefly of the History of Vaccination; chap. ii.

of Variola in Animals; chap. iii. of the Nature of Vaccinia, in which the conclusion favoured seem to be a plausible one, in view of recent knowledge, that the vaccine matter is merely the contagium of smallpox modified by transmission through the cow. Chap. iv. deals with Vaccinia in the Human Subject; chap. v. with Abnormal Modifications and Complications of Vaccinia; chap. vi. with Re-vaccination; the view is expressed that, under circumstances of exposure, Vaccination ought to be repeated at any time; under ordinary circumstances, the author accepts Trousseau's advice of regarding five years as the limit of safety. Chap. vii. discusses the merits of the different kinds of Vaccine Virus; and, on the whole, the bovine source is preferred. Chap. viii. details the Methods of Obtaining and Storing Vaccine Virus. Chap. ix. deals with the Operation of Vaccination, and insists upon thoroughness and care, pointing out, with Mr. Marson, that it is as bad to die from smallpox in consequence of badly-performed Vaccination, as from any other ill-done operation. The final chapter constitutes an "Examination of the Objections to Vaccination," and, of course, satisfactorily disposes thereof.

The Treatment of Diseases by the Hypodermatic Method. By ROBERTS BARTHOLOW, A.M., M.D., LL.D., 4th Ed. Revised and Enlarged. Philadelphia: Lippincott & Co., 1882.

Like all of Dr. Bartholow's works this book is pleasingly written and well issued. It opens with a brief history of the subject, and a description of the method. Then follows a list of remedies administered by this method, and an account of the local and systemic effects of subcutaneous injections generally. A discussion of the preparation, dose, physiological action, accidents, and theory of each agent is then presented; the major part being occupied, of course by the alkaloids of opium and belladonna. But duboisia, strychnia, curara, physostigma, pilocarpine, chloral, caffeine, quinia, mercury, arsenic, &c., all receive due attention. We think there can be no doubt that the author must be mistaken in the assertion that the solution of apomorphia is spoiled when it turns green, which it does so rapidly. We had expected to find some allusion to the value of amyl nitrite locally administered in cramp or muscle spasm; and also to permanganate of potash in snake bite, but find none.

Meetings of Medical Societies.

CANADA MEDICAL ASSOCIATION.

The Association met in Toronto, on Wednesday, 6th September, at 10 a.m., when the President, Dr. G. E. Fenwick, took the chair. After the report of the Committee of Arrangements, past-Presidents D. S. Workman, Botsford, Canniff, and McDonald took seats beside the chairman. The minutes of last meeting were read and approved. It was decided that the President's address should be read at the evening session.

Drs. Brodie and Walker, of Detroit, Elsburg, and Goodwillie, of New York; Dr. Lough, of Bermuda, and Dr. Field, of Barbadoes, were elected members by invitation.

Dr. W. B. Carpenter, of London, England, was present by invitation, and at the request of the President delivered an address in which he took up the subject of general registration. He gave a history of vital statistics in the Mother Country, showed the great work which had been accomplished and urged the vast importance to the Dominion of inaugurating some such system.

Dr. Fulton presented the report of the Committee on Necrology, which announced the death of the following physicians throughout the Dominion during the past year:—Dr. Berryman, Toronto; Dr. T. Mack, St. Catharines; Hon. Dr. Brouse, Ottawa; Dr. N. Fleming, Mildmay; Dr. H. Parsley, Thornbury; Dr. J. A. Furney, Shelburne, N. S.; Dr. A. Robertson, Liverpool, N. S.; Dr. W. G. Middleton, Stella; Dr. N. Munro, Brucefield; Dr. McMichael, Gorrie; Dr. G. Cook, Norwich; Dr. J. Allen, Adolphustown; Dr. J. B. Smith, Jerseyville; Dr. G. Lount, Norwich; Dr. A. J. Whitehead, Toronto; Dr. W. Philp, Manilla; Dr. H. H. Bouller, New Hamburg; Dr. W. Wilson, Dorchester, N. B.; Dr. J. P. Lynn, Toronto; Dr. C. W. Heltz, Chester, N. S.; Dr. A. R. Lander, Frankville; Dr. W. Weir, Merrickville; Dr. H. Yates, Kingston; Dr. H. Orton, Ancaster; Dr. McCay, Blairton; Dr. Munro, Montreal; Dr. F. H. Wright, Toronto; Dr. H. Bingham, Manilla; Dr. A. McKay, Beaverton; Dr. G. W. Campbell,

Montreal; Dr. Maxwell, Bear River; Dr. McIlmurray, Toronto; Dr. H. W. Lloyd, Coldstream; Dr. H. E. Bissett, Hawkesbury; Dr. T. Blackwood, Pakenham; Dr. J. Salmon, Simcoe; Dr. A. Greenlees, Toronto; Dr. R. H. Wright, St. Johns, Que.

Dr. Graham, then read the report from the Committee on Medicine, which appears in this issue.

The following gentlemen were appointed a Nominating Committee:—Drs. Macdonald, of Hamilton; Kennedy, of Toronto; Sweetland, of Ottawa; Rodger, Cameron, and Robillard, of Montreal; and Botsford, of St. John.

AFTERNOON SESSION—MEDICAL SECTION.

Dr. Macdonald, of Hamilton, Chairman. Dr. Stewart, of Brucefield, Ont., Secretary.

ECHINOCOCCUS DISEASE IN AMERICA.

Dr. Osler communicated the results of an inquiry into the prevalence of the affection on this continent, and stated that he had been able to collect from the journals and private sources 61 instances. Drs. Temple and Graham each narrated a case.

AXIS TRACTION AND TARNIER'S FORCEPS.

Dr. Cameron, of Montreal, read an elaborate paper on this subject, illustrated by diagrams, etc. The head followed the axis, and the problem to be solved was the best means of assisting nature. Some advocated traction, some leverage, some compression, others a judicious combination. He exhibited different specimens of the forceps, and explained the difference between the *vis a tergo* exerted by nature and the *vis a fronte* of the forceps. There were three kinds of forceps, the straight, the pelvic curved, and the curved with tractors of Tarnier. The advantage of the straight forceps was that they did not interfere with the natural rotation of the head, but a great disadvantage was that when the head was high up the instrument could not fail to come in contact with the coccyx. There was also the liability to slip and injure the perineum and soft parts. The curved forceps were less liable to slip, but the line of traction was not in the axis of the pelvis, and if the instrument was

so adjusted as to bring the line of traction right, it would be sure to come in contact either with the symphysis pubis or the sacrum. To combine the advantages of these two kinds of instruments and eliminate their disadvantages, Tarnier had invented his double tractor, which had the advantage of action along the traction axis and at the same time permitting the natural rotation of head. The objections urged against Tarnier's instrument were its clumsiness and cost and the danger of injuring the internal cavity.

Dr. Holmes, Chatham, said he had been accustomed to use the forceps in the manner recommended by Dr. Albert Smith, both as a lever and as a tractor. He also found it advantageous to advise the woman to abstain from direct pressure, and he had thus been enabled to avoid laceration.

Dr. Temple remarked that he was not prepared to concede all said in favour of Tarnier's forceps; they have not had sufficient use for their universal adoption in all cases; they are expensive, cumbersome, complicated, and difficult to keep clean; the only advantage he thought they have over the double curved long forceps is in posterior occipital positions; in this position their traction is very similar to the long straight forceps, which are much more easy of application in this position than the curved forceps and less liable to slip. He was much in favour of simplicity in obstetric forceps.

Dr. Stewart, of Brucefield, could not see the advantage of Tarnier's forceps over the older forms. He had seen in Vienna cases of rupture of the vagina and death after the use of this instrument.

THE USE OF THE UTERINE SCOOP IN INEVITABLE ABORTION.

Dr. Alloway, of Montreal, gave his experience of the use of this instrument in twenty cases. He strongly recommended its use instead of the placental forceps. He criticised at length certain of the views on the treatment of abortion.

Dr. Tye, of Chatham, said he really thought they were passing through the iron age in the matter of obstetrics. After seeing all the for-

ceps and scoops and other iron instruments, he really congratulated himself that he was not a woman. In his practice he relied chiefly on the instruments provided by nature, and he found them very suitable.

Dr. Rodger, of Montreal, while he disapproved of undue multiplicity and complication of instruments, yet thought that the valuable assistance rendered by them could not be overlooked. He spoke in favour of the tampon and placental forceps in abortion. After their use, and twenty-four hours' plugging of the os, matters were found in a satisfactory condition.

— EVENING SESSION.

At the opening of the evening session, the President delivered the Annual Address.

SURGICAL SECTION.

Dr. Grant, of Ottawa, Chairman. Dr. Ross, jr., of Toronto, Secretary.

SPASMODIC TORTICOLLIS.

Dr. Roddick, of Montreal, exhibited a patient who had suffered for many months with a very painful spasmodic contraction of the muscles of one side of the neck. The man was obliged to hold his head in his hands if he wished to keep it steady, and this was only temporary. Electricity and many other remedies were tried in vain, and Dr. Roddick divided some of the muscles subcutaneously with but little benefit. The actual cautery was applied on several occasions to the back of the neck with the most satisfactory result. The man recovered completely.

REST AND TRACHEOTOMY.

Dr. Major, of Montreal, advocated rest in all diseases of the throat, and rather denied the harm sometimes attributed to over-rest, claiming that (unless under tracheotomy) perfect rest was not attainable in the larynx, as the function of respiration had to be carried on even if that of phonation were suppressed.

Dr. Ryerson entirely agreed with Dr. Major in regard to the value of rest in laryngeal troubles.

Dr. Elsberg, of New York, said he held that it was the duty of those who devoted them-

selves to special subjects to give the results of their special knowledge to their brother practitioners. He had some years ago had his attention drawn to the fact that the principle of rest in cases of inflammation applied to the throat as well as to any other part of the body. Under the influence of rest inflammatory conditions subsided, and, perhaps, gave way to renewed action. The larynx was moved in three functions, namely, in the production of voice, in breathing, and in swallowing. The first was a voluntary action, and it was possible, therefore, to secure complete rest. Breathing, though absolutely necessary for life, might be made easier, and by tracheotomy the larynx might be relieved from active participation in respiration. Was it advisable to practise tracheotomy for this purpose? He did not share in the opinion that it was a simple or harmless operation, but he considered it was valuable in appropriate cases. With regard to the third function, swallowing, tracheotomy did not afford complete rest, but other means might be taken to give partial rest.

CERVICAL RIBS.

Dr. Shepherd, of Montreal, read a paper on three specimens of this anatomical peculiarity. Two of them were exhibited to the Section. He also demonstrated his method of strapping "caked" breast.

ECZEMA OF THE NIPPLE AND CANCER OF THE BREAST.

Dr. Grant, of Ottawa, read the notes of a case of this kind, and referred to Sir James Paget's observations, which had proved a connection between this affection and the development of breast cancer.

SECOND DAY.—SEPTEMBER 7TH.

GENERAL SESSIONS.—After routine business, the

REPORTS OF COMMITTEES

were proceeded with.

Dr. Francis J. Shepherd, of Montreal, presented the report on Surgery. (Published in this issue.)

The report on Therapeutics was read by Dr. Tye, of Chatham, Ontario. It dealt largely

with the use of electricity in various affections, and the influence of different kinds of currents. In referring to the large number of new pharmaceutical preparations which had been introduced, he thought the majority of them were more beneficial to the manufacturer than to the patient.

Dr. Canniff presented an elaborate report of the committee appointed at the Halifax meeting to seek from the government improved legislation in respect to sanitation and vital statistics. It was arranged that the committee should meet and draw up resolutions to be communicated to the Premier.

The meeting then resolved itself into Sections.

MEDICAL SECTION.

A PECULIAR FORM OF FEVER.

Dr. Harrison, of Selkirk, Ont., read a paper descriptive of four unusual cases which presented the following features: The disease came on insidiously, as a remittent fever, with slight tenderness of the bowels, hemorrhage from the nose, pain in the head and back of the neck; changed to intermittent of the quotidian or tertian type; was entirely beyond the influence of quinia, was complicated with strabismus, arching of the neck, painful contraction of the muscles in various parts so as to cause screaming or sudden piercing shrieks; ran a course of from four to fourteen weeks, two of the patients dying, one in the thirteenth the other in the tenth week. No autopsy.

In the discussion which followed, most of the speakers regarded it as a form of cerebro-spinal fever. Drs. Holmes and Tye, of Chatham, referred to similar cases.

DIPHTHERIA.

Dr. Mullin, of Hamilton, Ont., reported two cases of diphtheria—one of diphtheritic croup, in which tracheotomy was followed by a successful result; in the other the membrane appeared on the left tonsil and uvula, and the case ended fatally through septicæmia. He referred to considerations showing that it was a constitutional disease, and that local applications could not remove it.

CHOLERA INFANTUM.

Dr. Holmes, of Chatham, Ont., read a paper on cholera infantum, from which the following conclusions were deduced: 1. Secure for every child proper sanitary conditions. 2. Only resort to artificial feeding when no other course can be adopted. 3. When obliged to feed a child artificially, regulate in the strictest manner the quantity and quality of the food, and persist in none that experience shows to disagree. 4. Maintain the child's temperature at or near the normal, by means of cold sponging. 5. Avoid astringents and opiates. 6. Rely upon laxatives combined with very minute doses of hydrargyrum, frequently repeated. The importance of carrying out the fourth indication was considered very great.

NERVE-STRETCHING IN SCIATICA.

Dr. Stewart, of Brucefield, Ont., read the reports of three cases of sciatica and one of painful stump treated by stretching the sciatic nerve. One case of sciatica was cured and the remaining two greatly relieved. The result in the case of painful stump is also very satisfactory. It was shown by tracings taken during the stretchings that ether has little or no effect, while chloroform has a marked influence in reducing the blood-pressure and rate of the pulse.

TUMOUR OF FRONTAL BONE COMPRESSING THE BRAIN.

Dr. Prevost, of Ottawa, reported the case of a man, aged 48, with a tumor projecting from the frontal bone on right side. It had produced exophthalmos, but very little cerebral disturbance. Coma and death ultimately supervened. The tumour had pushed back the dura mater and compressed the frontal lobe to a considerable extent.

Dr. Cameron, of Toronto, exhibited a boy with

PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS,

and commented upon the general features of the disease. He called special attention to the mode of arising from a kneeling, or recumbent posture, which was very well exemplified in his patient.

Dr. Temple, of Toronto, mentioned a case of this disease occurring in a man aged 64.

ECHINOCOCCUS OF LIVER, BURSTING INTO LUNG.

Dr. Black, of Uxbridge, read the notes of the case. The patient, a clergyman, had had an hepatic tumour for over four years. It had been tapped, and the diagnosis of a hydatid cyst made. Latterly septic symptoms supervened, and the spleen became greatly enlarged. Death was caused by bursting of the cyst into the lung, with the discharge of a quantity of pus. A large suppurating hydatid cyst was found in the liver; it had burst through the diaphragm. A huge single cyst existed in the spleen.

PHANTOM PREGNANCY.

Dr. H. P. Wright, of Ottawa, reported the case of a middle-aged woman who had borne two children; believed herself to be pregnant; thought she had quickened; and a month after the time she expected to be confined, presented an abdominal tumor and peculiar movements which simulated somewhat those of a child. It was thought at first that there might be an ovarian tumor; but on putting the patient under ether, the true nature of the case became evident.

CHEMICAL COMPOSITION OF THE MILK OF DISTILLERY-FED COWS.

Dr. Ellis, of the School of Practical Science, Toronto, together with Prof. Croft, had examined the milk of sixteen cows—eight of which were fed on distillery refuse and hay, and eight upon other kinds of food. No distinction could be made between the two classes of milk by microscopical observation, and no difference was observed as to keeping qualities. The specific gravity of the milk of the distillery-fed cows averaged 1,029, and in one case fell as low as 1,025. The specific gravity of the milk of the other cows averaged 1,032. In the milk from distillery-fed cows, the total solids averaged 14.64 per cent., and reached in one case 17.96 per cent. In the other milk the average was 12.82 per cent. The excess of solids in the distillery-fed cows is owing to an increased quantity of fat, which averaged 5.50 per cent. in the distillery-fed cows, and reached

in one case 8.49 per cent. In the other cases the fat averaged 3.27 per cent.

SURGICAL SECTION.

The Section met at 3 p.m., Dr. Grant in the chair.

OBSTRUCTION IN THE AIR-PASSAGES.

Dr. HINGSTON, of Montreal, related cases illustrating the effects of foreign bodies in the trachea and bronchi, the two most remarkable instances, being false tooth in the windpipe for over three months, and a pin in the trachea for eleven months.

POLYPOID FIBROMA OF THE BLADDER.

Dr. Fulton, of Toronto, described the case, which occurred in a child one year and eight months old. Symptoms of stone were present, but nothing was discovered with the sound. Pus occurred in the urine. The child died suddenly from rupture of the bladder. The specimen was shown to the Section.

POLYPUS NASI.

Dr. Ryerson, of Toronto, strongly urged the use of glacial acetic acid in these tumours, and preferred the snare to the forceps.

MODERN LITHOTRITY.

Dr. Walker, of Detroit, gave an account of several cases, with a summary of the advantages of this method of operation.

NEW OPERATION FOR HARELIP.

Dr. Goodwillie, of New York, showed an instrument for keeping the parts together, and advised the operation immediately after birth.

AFFECTIONS OF THE ORBIT AND FRONTAL SINUS.

Dr. R. A. Reeve read a paper on "Orbital Diseases," giving the features of some orbital affections, and, in view of the uncertainty often felt as to their nature, alluding to the utility of exploratory incisions as an aid to diagnosis. Malignant disease may start in the orbit proper, and it should, of course, be attacked without delay, but it not infrequently spreads to the orbital tissues from the eyeball, lids, &c., as in the case of glioma, sarcoma, and

epithelioma. The importance of an early correct diagnosis and of timely removal of the eye or other diseased parts was urged, albeit in some cases of long standing and far advanced the removal of the contents of the socket with the use of zinc chloride, &c., or again of the lids and other superficial parts had proved effectual. In the latter instance a plastic operation could be conjoined or be done later, in order to relieve deformity. Specimens of tumors and photographs of cases were shown.

EXCISION OF THE KNEE.

Dr. Fenwick, of Montreal, showed a series of photographs and specimens, illustrating his last series of excision cases. Of twenty-six excisions of the knee in the Montreal General Hospital, two had died, and in two cases subsequent operation was required. One of the deaths was due directly to heart disease.

Dr. Cameron, of Toronto, presented a patient who had sustained a fracture of the ischium and sciatic dislocation last February. Reduction of the dislocation could not be maintained, yet the man was able to get about fairly well, and had returned to work; also an ununited fracture of femur, patient being able to walk with a leather support; also an immense recurrent tumor of the face, in which for the primary disease the right upper jaw had been removed five years ago followed by a quiescent period of three years. General health still unaffected.

ECZEMA TREATED WITH VIOLA TRICOLOR, OR WILD PANSY.

Dr. Ferguson reported three cases successfully treated by the internal administration of this drug.

A paper by Dr. Mills, of Montreal, on

"MISTAKES TO BE AVOIDED IN TREATMENT OF AFFECTIONS OF THE NOSE AND THROAT," was taken as read.

THIRD DAY.—SEPTEMBER 8TH.

After routine business Dr. Worthington, of Clinton, Ontario, read a paper on

CLIMATOLOGY,

dealing chiefly with the subject of malaria in

the Ontario peninsula. In the portion of the Province bordering upon Lake Erie, the St. Clair district, and the southern end of Lake Huron, malaria still abounds, but the general opinion, obtained in answer to certain queries, is that it has lessened with the increased cultivation and better drainage. The poison seems more active after July, and a long dry period after a wet one renders it particularly prevalent.

It was suggested that, in addition to more thorough drainage and the removal of superfluous dams in the streams, the eucalyptus tree might be planted in certain districts.

In the discussion which followed, Dr. McDonald, of Hamilton, referred to the general decrease of the disease with the better cultivation of the land. It had occurred every year in Hamilton for the past thirty years.

Dr. Osler referred to the increase of the affection in certain districts which had been hitherto almost free from it, or in which it had not been seen for some years. He believed it was spreading in the New England States and in parts of New York, about Montreal, and in this city, where malaria is almost unknown, cases originating in the district had become more frequent.

The report of the Special Committee on Sanitation and Vital Statistics, was then read by Dr. Canniff.

The following resolutions were adopted :

1. That for the present the sanitary statistics shall be confined to the cities and larger towns of the Dominion, such to be published monthly, and the deductions therefrom to be circulated in the various centres specified.
2. That for future guidance in sanitary matters a commission should be appointed by the Dominion Government, in order, in consultation and co-operation with the various Local Governments, to arrive at some common basis of action in carrying out such sanitary measures as may be necessary for the guidance of the Dominion Government.
3. That such commission shall consist of at least two or more medical men with a legal adviser, whose duty it shall be to examine carefully into the various requirements of such action in sanitary matters.

The Nominating Committee reported the following

OFFICERS FOR THE ENSUING YEAR :

President—Dr. Mullen, of Hamilton.

Vice-Presidents—for Ontario, Dr. Tye, of Chatham ; for Quebec, Dr. Gibson, of Cowansville ; for New Brunswick, Dr. Atherton, of Fredericton ; for Nova Scotia, Dr. Jennings, of Halifax ; for Manitoba, Dr. Kerr, of Winnipeg.

General Secretary—Dr. Osler, of Montreal.

Treasurer—Dr. Robillard, of Montreal.

Local Secretaries—for Ontario, Dr. Saunders, of Kingston ; for Quebec, Dr. Brunelle, of Montreal ; for New Brunswick, Dr. Coleman ; for Nova Scotia, Dr. Almon, jr. ; for Manitoba, Dr. Whiteford.

The report was adopted and the nominees were duly elected. In the

MUSEUM

Dr. Sutherland exhibited a series of twelve specimens illustrating some of the Modes of Termination of Aneurism.

Dr. Osler exhibited slides of the Bacillus of Anthrax, and the Bacillus of Tuberculosis.

Dr. Graham exhibited slides of Koch's Tubercle Bacillus and Ponfick's Actinomyco-sis.

After the usual vote of thanks, etc., the meeting adjourned at 12.30.

The next place of meeting is fixed for Kingston, Ontario, on the first Wednesday of September, 1883.

SANITARY CONVENTION AT ST. THOMAS.

The Convention opened September 19th. Mayor Van Buskirk in the chair.

Mayor Van Buskirk, M.D., delivered an address of welcome on behalf of the citizens of St. Thomas. He then referred to the immense field covered by sanitary measures, and felt convinced that it could not be gone over at a single convention. He recognized the wisdom of the Legislature in creating the Provincial Board of Health and dilated on the importance of the work undertaken by it. Letters of regret at inability to attend were read by the Secretary, from Dr. Bray, President of College of Physicians and Surgeons,

Ontario; Dr. Harris, Secretary of State Board of Health, N. Y.; Dr. Baker, Secretary of State Board of Health, Michigan; Dr. White, Chief Officer of Health, Detroit; and Dr. Edwards, London. The President's Inaugural address was postponed till the evening. Judge Hughes, of St. Thomas, then read an excellent and instructive paper on food adulteration which elicited considerable discussion in which Drs. Oldright, W. H. Ellis, Yeomans, Wilson, M. P., Mr. Emerson Coatsworth, and others, participated, and the following resolution was passed: "That the Chairman appoint a committee to consider and report on desirable amendments to the Inspection of Food Act, with a view to secure prompt inspection and analysis of suspected commodities at the instance of private consumers. Drs. Yeomans, McLarty, Coyne, and Messrs. Farley and Casey were named. Drs. Oldright, McLarty, and Luton, were nominated a Committee to inspect and report on Sanitary Apparatus. In the evening a letter was read from Prof. W. B. Carpenter, C. B., M. D., regretting his inability to be present, and making some valuable suggestions in reference to sanitary matters.

Dr. Oldright then delivered the Inaugural Address, in which he dealt broadly with various topics of Sanitary Science and Practice, and enforced the value, particular and general, of Sanitary Conventions. Dr. W. H. Ellis, then read a valuable paper on the Impurities of Water, which elicited much general discussion, and judging by the number of questions the Doctor was called upon to answer, must have been a source of interest and instruction to many. Dr. R. W. Bruce Smith, of Sparta, and the Rev. Prof. Austin, of Alma College, St. Thomas, then followed with two valuable papers, the former on the subject of Contagion, and the latter on that of Public Schools and Health, after the discussion of which the meeting adjourned.

September, 20th.

The committee appointed to examine sanitary apparatus reported. They had examined the earth closets of the Earth Closet Company, 13 Jarvis Street, Toronto, and of John Cameron, No. 1 Victoria Street, and were very much

pleased with them. Their great advantage was their automatic action, which was very good and not liable to get out of order. They recommended the substitution of the dry earth system instead of the use of privy pits and cesspools, now so common. The committee had also examined the diagram of a patent trap, styled an "airsyphon trap," by Mr. J. Caldwell, of Edinburgh, Scotland, and staying at 75 Richmond Street, Toronto. On this they expressed a qualified opinion. The report was adopted.

Registrar McLaohlan, of St. Thomas, in supporting it, made some remarks as to the adoption by municipalities of the earth-closet system.

Dr. J. Coventry, of Windsor, read a paper on the prevention of small-pox. He said that the following diseases were, to a large extent, preventable, viz., cholera, yellow fever, typhoid and scarlet fever, small-pox, diphtheria, measles, and whooping-cough. These diseases might all be circumvented by isolation and disinfection. He gave an account of the restriction of scarlet fever in Windsor during the present year. The physicians were required to report all cases within twenty-four hours after discovery. The house was at once placarded with the name of the disease, and where possible one large room was selected as a hospital, and carpets, window hangings, and upholstered furniture removed. The members of the family attacked were taken to this room and kept there until all shedding of the skin had taken place. No members of the family were allowed to leave the premises except those who did not come in contact with the infected members. After recovery and exfoliation strong sulphurous soap was used to wash with, and all clothing was thoroughly disinfected by means of sulphurous acid gas. No public funeral was permitted; interment was urged without delay, and the hearse and carriages were at once disinfected. During part of the epidemic the schools were closed. The citizens lent all their aid to co-operate with the board. Small-pox made its appearance in the same town last April, and similar measures were adopted, with the addition of vaccination. None but citizens had power to pass compulsory vaccination laws. This power, under the approval of the Board of Health, should undoubtedly be extended to other municipalities.

He also advocated strict quarantine on all the borders of the country. Children should be taught the rules of hygiene at school. In some subsequent remarks he said that out of forty persons attacked with small-pox, in Windsor, ten were not vaccinated, and eight of these died. The remaining thirty were vaccinated, and none of them died.

Dr. Kains would like to hear some expression as to the working of the Act creating the Board of Health, and whether the provisions for the isolation of disease and placarding houses were practicable.

Dr. Oldright said the placarding of houses had most beneficial results. As to the objection that it would have a bad effect on the place, he would much sooner live in a town where houses were placarded and sanitary measures adopted than where they tried to cover such things up. Referring to but one disaster, he felt safe in saying that by proper sanitary measures they would prevent the equivalent of a Victoria disaster every year. The board had only advisory powers, and they recommended the isolation of scarlet fever patients, and other means of prevention. He related a case of death resulting from getting a cloak made at a house where there was scarlet fever. Toronto was following the example of Windsor, but had not yet got to the point of compulsory isolation and the placarding of houses. One objection was that it would interfere with business. Even if they considered the matter from a pecuniary point of view, the disease was worse when covered up than when the house was placarded. He read some scathing remarks by Dr. White as to placarding being a violation of personal liberty, and denounced as absurd the doctrine that placarding was a breach of the confidence reposed in a physician. It was due to Dr. Coventry and his fellow-workers in Windsor that small-pox had not spread through this portion of the province.

A vote of thanks was passed to Dr. Coventry for his valuable paper.

Mr. Colin McDougall, of St. Thomas, thought the convention should give an expression of opinion on the subject.

DIPHTHERIA AND SCARLET FEVER.

Dr. P. H. Bryce spoke especially on the subject of diphtheria and scarlet fever. These were not apparently so dangerous as small-pox, but really created much more havoc. Measles also caused much mortality, as there was but slight attention paid to the disease. In many of these afflictions it was very difficult to know the nature of the disease for the first twenty-four hours, and that time was sufficient to communicate the infection to others; and parents should at once apply to their family physician in order to have the disease properly diagnosed. It was just because these diseases did not appear dangerous that their total mortality was so large. He had last year the opportunity of seeing a great deal of diphtheria in Guelph. The sanitary provisions were bad, and the mortality very great, probably a hundred deaths. He considered the chief reason of this was the slight attention paid to these diseases.

The following resolution, moved by Mr. Colin McDougall, and seconded by Dr. Bryce, was carried:—

“That this Convention has heard with much pleasure Dr. Coventry's account of the success which has attended the adoption in the town of Windsor of measures for arresting the spread of scarlet fever, diphtheria, and other contagious diseases, and would urge upon other municipalities the adoption of similar measures, such, for instance, as the prompt isolation in their own houses or in hospitals of the first and all cases of these diseases, which at present make such havoc among our people.”

Dr. W. C. Van Buskirk, of St. Thomas, read a paper on sewerage as a sanitary measure. He said that there were three modes of disposing of sewage. The first was the old method now in use in St. Thomas, namely, the cesspool, receiving all the filth from a house and acting like a fermenting tun in a brewery, constantly in action from fresh accessions, and giving rise to noisome effluvia (ammonia, sulphuretted hydrogen, and carbonic acid), thus poisoning the atmosphere, while owing to the imperfect condition of the walls the excreta pass through the porous and stratified earth into the neighbouring wells. The first indication of vitiating

matter appeared when the water had been drawn for some time. It then became turbid, and they might be sure it contained sewage. On an examination of it with a microscope they would find bacteria and infusoria, the frequent cause of bowel complaint, typhoid, and kindred zymotic diseases. Bearing on the same subject was the fact lately noticed by Davaine that the splenic apoplexy of sheep is owing to the presence of bacteria in the blood, and that sheep, rabbits, and horses can be inoculated by transferring into their circulation the bacteria, which are exceedingly thin and rod-like, varying in length from one two-thousandth to one six-thousandth of an inch. The same observer had first found bacteria are present in all carbuncular diseases of whatever form; and the supervention of these little beings in the spleen, lungs, and blood precedes the occurrence of morbid phenomena, and that the carbuncular blood ceases to be contagious as soon as the bacteria have disappeared. Hence Davaine felt justified in regarding them as the cause of carbuncle. If one contagious disease could be proved to be connected with the germs, it was almost certain that similar diseases must arise from corresponding causes. The second method, dry earth closets, was the best for suburban parts of a city where the expense of constructing sewers and conveying water for the purpose of flushing would be too great, and where slops and dish-water may be disposed of in compost heaps or on the surface of the earth, dry earth or ashes being sprinkled over them from time to time. The dry-earth system only enabled part of the sewage to be removed. Dish-water contained gravy, bits of meat, &c., which, when thrown out, underwent putrefactive fermentation, and gave rise to unwholesome smells. The system, therefore, was clearly not adapted to thickly settled districts. The plan recommended by Col. Waring, in use at Memphis, was by some considered the most preferable. It was a small sewer or pipe drain laid on each side of the street, having no openings into the streets for ventilation. Consequently, should fermentation take place there, the foul gusts would be more apt to force open the water seals in the houses than if there were openings in the streets. They were also objectionable because of the expense

of laying two separate drains. There were many persons in St. Thomas under the erroneous impression that sewers by producing gases do more harm than good. In the early days sewers were built very large, as it was deemed necessary that they should be entered and cleaned out, and these are still to be found in many places where the flat nature of the country gave them the character of a prolonged cesspool. But where a fall of one foot in three hundred, or even one in five hundred, could be obtained, and where the small sewer is adopted, that is one sufficiently large to convey the rain fall, house sewage, and land drainage, with flush tanks at the head of each to wash every particle once in twenty-four hours, fermentation, and consequently the formation of gas, was prevented. Ventilating tubes fixed to the soil pipes outside of buildings would prevent any pressure on the water seal, and would freely ventilate the sewer.

The reading of this paper gave rise to a long discussion on the question of sewage, particularly with regard to the drainage of St. Thomas. Drs. Coventry, Oldright, Bryce, VanBuskirk, Registrar McLachlan, Ald. Hunt, and others took part.

A vote of thanks was passed to the chairman for his paper.

Dr. Cassidy, of Toronto, read a paper on the heating and ventilation of buildings. During the summer months ventilation was obligatory, and was efficiently carried out, but during winter it was difficult to combine heating and ventilation without the expense consequent on the free consumption of fuel. Yet much might be done at small cost by an intelligent application of certain methods. In the first place, the house must be perfectly clean; in the second place, every room should be furnished with a fire-place, grate, or open flue communicating with the heated chimney. These flues should be made to open at the base line of the room, and communicate directly with the open air. Thirdly, a sufficient supply of pure, warm air should be distributed to the various living rooms. The speaker then showed a diagram of this heating plan of ventilating a room heated by a coal stove. Ventilation was obtained by a four-inch globe opened at the

bottom, taking air from the floor, and connecting with the chimney. By means of this pipe the heated chimney carries foul air out of doors. Where heating by hot air was adopted it was necessary that the inlet and delivery of pipes be kept clean, and it would be well to have a fine wire screen over the outer and inner orifices of the inlet pipe. In large buildings heated by steam or hot water the same principle of efficient supply and exhaust must be observed. He explained the old and new methods of ventilation used in the Detroit House of Correction, the latter and preferable being by extending ventilating shafts from behind the several cells to and through the roof in some instances, and in others utilizing old neglected flues or shafts to rarefy the contained air and thus induce an inflow below, and a continuous exhaustion. This supplies the needed exhaustion, while beneath and in front of a large window on either side of said corridor are placed large bores made to fit the windows closely, containing an abundant steam coil, and so arranged that on opening the lower sash of the window fresh air is permitted to flow down behind an intervening screen, and beneath this steam coil and hence up through said coil, to be discharged by a well-regulated opening at the top. After describing a somewhat similar method of ventilation in the Toronto General Hospital in the older portion of the building, he said that a more efficient system of exhaust would be to provide four flues, each containing a coil of steam pipe, for each ward. These flues could be grouped in a central column passing from flat to flat, terminating in screened outlets at the roof. The ventilation of the more modern part of the Toronto hospital is furnished by the Reynold's system. The exhaust is obtained by a central shaft passing from the basement through the roof and terminating in an ornamental chimney. This shaft contained a central iron tube used as a flue for the furnace in the basement, which heated the baths. Each room was connected with this shaft by ventilating tubes opening at the base line of the room. In winter, when the doors and windows were closed, the outside air, collected by a large tube, passes over a dome in the base-

ment heated by a furnace, whence it is distributed to the various rooms by tubes opening in the walls about three or four feet from the ceiling. Provision is made for lowering the temperature. This system is really admirable. Whatever method is adopted all soil pipes, closets, lavatories, drains, &c., should be provided with independent ventilation by pipes extending beyond the roof. Another question of importance was the supply of a sufficient quantity of moisture with heat. Water absorbed impurities, and also rendered the heat more agreeable to the health. It might be evaporated in pans, or placed in a section of pipe which conducted hot air from the cellar to the room above. Care should be taken that the water was fresh and the vessels clean. The proper ventilation of cellars was of the first importance, and the system of ventilation by flues already described, should be applied to them. Carbonic acid was a very hurtful ingredient of impure air, but there were others of a more complex nature escaping from the clothing, the lungs, and the skin. Fortunately carbonic acid gas was endowed with a power of diffusion, which prevented it from exercising its poisonous power. Though much heavier than air it rapidly diffused itself, and was present in the air near the ceiling as abundantly as near the floor.

Dr. Yeomans said 12 per cent. of the deaths in this province were from consumption—an essentially in-door disease, and one which resulted, to a great extent, from impure air, and, therefore, Dr. Cassidy's paper was one of great importance.

Principal Miller, of the St. Thomas Collegiate Institute, said that the foundation of ill-health, produced by breathing impure air, was laid in the Public Schools. The majority of the schools were constructed regardless of the question of ventilation. This was a matter to which public attention should be drawn.

Registrar McLachlan, of St. Thomas, gave one or two instances in which he saw the principles enunciated in Dr. Cassidy's paper practically applied. One was a Church in Georgetown, and it possessed the additional advantage of economizing the fuel.

A vote of thanks was passed to Dr. Cassidy for his paper.

Votes of thanks were passed to the County Council for the use of the Court House; to the various Railway Companies for reduced fares; to Mayor Van Buskirk for the able manner in which he had presided over the meetings; and to the representatives of the press.

The Convention then finally adjourned.

The smallness of the attendance is attributed to the counter-attraction of the fair, but in other respects the Convention was a most successful one.

NORTH-WESTERN BRANCH, ONTARIO MEDICAL ASSOCIATION.

A meeting of the above branch was held at Palmerston, on Thursday, August 17th. Dr. Stewart, of Brucefield, presided. About thirty members were present. After the usual preliminaries, Dr. Mackid, of Lucknow, showed a case of scrofulous disease of the ankle-joint, which elicited a good deal of discussion as to whether it was proper to attempt to save the limb, or amputate in order to preserve the patient's life.

Dr. Yeomans, of Mount Forest, presented a very interesting, but rather obscure, case of disease of the spinal cord. The patient is 58 years of age, previously healthy; a year ago last April had an attack of pleuritis, followed by loss of power in the upper extremities; subsequently symptoms of paralysis occurred in the lower extremities. He cannot walk without crutches, cannot stand or walk with his eyes closed. His powers of co-ordination are at fault; no feeling of constriction; feels as if walking on a very rough surface. Patellar tendon reflex present, no pain in spinal column. Any smooth article placed in his hand feels as if it had a rough uneven surface; No delayed sensation. Habits of life have always been good. Increased irritability by electricity.

Dr. Stewart, of Palmerston, showed a case of infantile paralysis, having two separate lesions, the right arm and left leg being paralyzed. Also, a case of neuramatous tumour of the ulnar nerve, accompanied by severe pains,

no doubt resulting from injury at the same time he received a compound fracture of the humerus.

Dr. Burgess read a very instructive paper on "The pulse variations and their significance," which was well received.

Dr. Stewart read an able report on a case of abdominal section, for fibro-cystic tumour of the uterus, on which he operated 28th of June last. The patient was a young woman, 18 years of age. Tumour was first noticed three years ago. Abdominal incision was 10 inches long, pedicle divided in two by carbolized silk dropped back into the abdominal cavity. There were no adhesions. A drainage tube was left in. Thorough antiseptic precautions (Listerism) were used throughout. Had been mistaken for an ovarian tumour. Complete recovery. Tumour weighed 12 lbs., which was shown to the members present.

Dr. Standish, of Palmerston, opened a discussion on the etiology and treatment of diphtheria, in which the following gentlemen took part:—Drs. Macdonald, Youmans, Jones, McNaughton, Cowan, Gunn, Clapp, Philp, Bethune, Collinge, and Halsted.

The following resolutions were passed:

That two meetings be held instead of three, as at present, each having three sessions.

That the next meeting be held in Palmerston, on the first Tuesday of Feb. next.

That Drs. Burgess and Graham prepare by-laws for the use of the branch.

The following gentlemen were appointed by the President to prepare papers for next meeting:—Drs. Gunn, Cowan, Macdonald, and Holmes.

Luke Teskey, M.B., M.R.C.S., Eng., Prof. of Anatomy in the College of Dentistry, has been appointed Assistant Demonstrator of Anatomy in Trinity Medical School. We regard the selection as a subject of much congratulation to the School.

We regret to have to record the death, from cancer of the tongue and pharynx, of Dr. John N. Reid, of Thornhill, aged 52, who was for many years Professor of Physiology in the old Medical Department of Victoria College.

Miscellaneous.

Pidoux, Trousseau's eminent collaborator, died in Paris on 4th of September.

Erb succeeds the late lamented Friedrich at Heidelberg.

Chiari, the new Professor of Pathology at Prague, is 30 years old, and has made 8,000 post-mortem examinations.

The Seventh Annual Meeting of the American Gynecological Society was held in Boston on the 20th, 21st, and 22nd of September. Dr. T. A. Emmet, President, in the Chair. Mr. Knowsley Thornton, of the Samaritan Hospital, London, was present.

MODE OF ADMINISTERING MALE FERN.—Herr Dietrich (*Pharm. Zeitung*) recommends as most successful the administration of the extract along with castor oil. He gives it in flexible capsules, each containing 1 gramme of the extract, and 2 grammes of oil. One dose consisting of six such capsules, preceded by a laxative, is found effective.

M. Lajoux, of Rheims, found a substance sold at a very low price under the name of *silvery glycerine*, which was simply a saturated solution of magnesium sulphate, (*i. e.*, containing about one third of its weight of the salt at the ordinary temperature,) sweetened with 160 grammes of glucose to the litre.—*L'Union Méd. et Sci. du Nord-Est.*

The Medical Faculty of McGill University celebrate the opening of their Jubilee Session by a *Conversazione*, in the Peter Redpath Museum, on the 4th, and a dinner at the Windsor Hotel, on the 5th inst. We heartily extend our best wishes on the auspicious occasion, and trust that the Faculty may go on and increase the good work they have been doing, especially in the last few years, in the cause of medical education.

In Wadd's *Nugæ Chirurgicæ* (London, 1824) there is an account of one John Foy Vaillant,

a physician of the early part of the eighteenth century. He was famous for his collection of medals, and so enthusiastic in this pursuit, that he is reported to have swallowed six ounces of medals to secure them from the Algerines, when once in danger of being captured; but the wind changing in his favour he got safely on shore. When beginning to be incommoded by his indigestible curiosities, he consulted two physicians who were puzzled by the singularity of his case. Nature however relieved him from time to time, and as he found himself in possession of his treasures, he explained with much pleasure to his friends those already arrived, as well as those he daily expected. A valuable Otho was the last that came to hand.

PULVIS DOVERI.—People whose "inward griefs and peristaltic woes" have been relieved by the powder of Dover, do not generally know to whom they are indebted for this excellent compound. Doctor Dover was a friend and probably pupil of the great Sydenham. He commenced practice in Bristol, where having made some money, he longed to make more. The Roll of the College of Physicians tells us that he joined with some merchants in fitting out two privateers for the South Seas, in one of which, the "Duke" he himself sailed from Bristol, 2nd. August, 1708. On the passage out they touched at the Island of Juan Fernandez, where Dover on the 2nd. February, 1708 9 found Alexander Selkirk, who had been alone on the island for four years and four months, and whom Dover brought away in the "Duke." In the April following Dover took Ginaguil, a city or town of Peru, by storm. In December, 1709, the two privateers took a large and valuable prize, a ship of 20 guns and 190 men, in which Dover removed from the "Duke," taking Alexander Selkirk with him as master, and finally reaching England in October, 1711. After this cruise Dr. Dover removed to London, where his practice soon became great. His patients, and the apothecaries who wished to consult him, addressed their letters to the Jerusalem coffee house, where at certain hours of the day he received most of his patients.