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THE CANADIAN PRACTITIONER

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TORONTO, OCTOBER, 1883.

Original Communications

ABSTRACT OF ADDRESS TO MEMBERS OF THE DOMINION MEDICAL ASSOCIATION.

DELIVERED BY J. A. MULLIN, M.D., PRESIDENT.

KINGSTON, Sept. 5, 1883.

Gentlemen of the Canada Medical Association :

"I must thank you sincerely for the very high honour you have conferred on me in electing me to preside at this meeting. When I think of the many energetic workers I have met from year to year at our meetings, it is not difficult to see that this honour might have more justly passed to many others before it reached me, and indeed, for my own part, I could easily have waited."

After referring to the pleasure he experienced at meeting so many young and enthusiastic members of the profession, as well as old familiar faces, he expressed his sorrow for those who had gone, and paid a high tribute to the memory of Dr. David, as well as to that of Dr. Campbell.

"The importance of our annual meetings cannot be over-estimated; each of our Medical and Surgical Societies has its sphere of usefulness. Our County, City and Provincial Associations can do work that will advance the interests and knowledge of the members of the Profession; but the highest and best results may be attained by this Society gathering each year the members of the Profession from all parts of the Dominion, who in the discussions will reflect

the progress we are able to make. We all cordially agree with the remarks made by the President of the Ontario Medical Association, at its late meeting, who referred to the relationship of the various local societies to this, and indicated that while each worked in its own sphere, all should cooperate and endeavour to promote the work of the Dominion Association."

He thought those persons who held the view that itinerancy was dangerous to the best interests of the Society, were wrong. The present successful meeting was the strongest argument against their case.

"We meet now in the old city of Kingston, and look for continued success when we reflect upon the standing of the Profession in this vicinity, and remember that we have come to an important centre of education and culture. Every member of this Association gladly recognizes that the Institutions of this city remain worthy of the history of Eastern Ontario, and exercise their influence over the youth of the present with increased vigour, corresponding to the growth of our country."

"The question naturally occurs: What progress have we made in our store of professional knowledge since we met a year ago? It would be difficult for any one to keep pace with the work that is done each year—so many workers in every branch—so many enthusiastic enquirers in every part of the field, it is almost impossible for any one engaged in the active duties of an everyday life to do more than glance at

much that is being done. I will not therefore attempt even a slight sketch of the work of the past year, but confine my remarks to one subject, which in late years has received the attention of many investigators.

“The name of Lister must stand among the foremost of those who have done much for the advancement of professional knowledge. I do not say that in the antiseptic method which he instituted and did so much in improving the profession has by any means reached an ultimate result beyond which it is impossible to pass. Such does not seem to be his own view—he still hopes for better methods to accomplish his aims. The great merit of Lister’s work lies in this, that it was by his writings the attention of the Profession was called to the agencies through which the decomposition of organic substances is effected. I know that by some it is held that when organic substances are removed from the sphere of vital action, the tendency is towards decay. I have heard it stated that decomposition is, as it were, a law of nature, that as all organic forms live for a time and fulfil their place in the life, their decay is inevitable; that their ultimate particles are held together by so loose a bond, that when life departs the forces of chemical affinity soon resolve them into simpler forms. Noticing the effects of the atmosphere—its water—its oxygen, etc.—upon the various inorganic substances presented to its action, the wearing away of the hardest rocks, the oxidizing of metals—what more natural than to suppose that organic substances are likewise changed, and that all the phenomena of putrefaction are due to the same influences? As practitioners of medicine, however, we must recognize that while chemical affinities may and do play their part, the decompositions with which we have to deal, are attended with and seem to be dependent upon the growth and development of vegetable forms; such appears to have been shown by the investigations of Pasteur, as

well as by those of other observers. It is possible that organic substances exposed to the influence of the atmosphere, apart from that of vegetable life, might in the course of time become decomposed; this however would probably be a very slow process, for we constantly witness the long continuance of organic forms when means are taken to preserve them from the effects of vegetable growth; and, upon the other hand, of the putrefaction which takes place with the growth of vegetable life. The housekeeper knows well how surely the appearance of mould indicates that the fruit is no longer in a state of preservation, and in its absence she is equally certain that her labour has not been lost. The influence of chemical knowledge upon our minds has rendered difficult the acceptance of the theory that the decomposition of organic matter is due to vegetable growth; although it is hard to understand how a ferment, which does not through chemical affinity take part in the change, may determine it. We were taught and constrained to believe that such was the case, seeing that no other cause for it was known to exist. When we reflect, however, upon the forces which are displayed in vital action, and witness the readiness with which living forms appropriate the materials suitable for their growth, an easy explanation seems to be given of the rending asunder of matter that has ceased to live, and whose elements are fitted to nourish other forms that are always present and able to appropriate them.

“In a solution composed of a small percentage of potassium phosphate and magnesium sulphate, with a further percentage of phosphate of lime and tartrate of ammonia, bacteria are found to grow rapidly; from the ammonia salt they are able to derive the carbon and nitrogen necessary for their formation, and if their vital forces in the action of growth and multiplication are equal to the decomposition of the salts of this solution, it is easy to understand how organic substances may be changed and the

same elements derived from them. Perhaps it may be thought that the decomposition first takes place, and the vegetable growth is the sequence; but in reply to this we may say that such has not been shown; while, upon the other hand, the experiments of Pasteur and Tyndall prove how long organic substances will continue without evidence of putrefaction and how speedily this occurs when the first step towards it is taken by the introduction of vegetable life.

"In the treatment of wounds it is universally admitted that it is of primary importance to avoid decomposition, and it is also of primary importance to recognize its causes. Allow me to quote some remarks made by Mr. Gamgee who says 'that infection is always floating in the atmosphere, ready to settle in the shape of impalpable and implacable germs into any breach which may be made in the surface of a living body, is an idea which has never troubled me.' In the same paragraph he refers to the means useful to minimize the material for and the causes of discharge, viz., carry it off as produced by drainage-tubes and absorbent dressings; and states 'that life is the great antiseptic.' * * True it is that life is the great antiseptic, and it is probably also true that as regards tissues which are *instinct with life*, vegetable forms cannot exercise a malign influence; but the vitality of tissues which have been wounded must be to a certain extent impaired, and the fluids on the surface of a new wound are not within the same vital influence as those which pass from the vessels in the nominal operations of nutrition. It is therefore acting upon true antiseptic principles to follow the advice given by the able surgeon, and thus lessen the soil upon which vegetable forms flourish and give rise to poisons producing fevers when absorbed; and if recognizing their influences we can use means to prevent their access to wounds, we are carrying out the principles of rational surgery, which comprehend the fullest knowledge of the causes preventing the

repair of wounds. The question of the cause of decomposition has its relation to the practice of medicine; and although it appears to be the result of the presence of vegetable forms, yet we must remember that this may be only a part of the truth. If decomposition may result in the formation of poisonous substances which, carried into the circulation, produce fever, the question arises, do contagious fevers depend upon changes due to the action of vegetable forms upon the fluids? The current of medical thought seems tending to this belief, and yet before this can be affirmed, it should be proven that the changes in vital fluids causing fever, are due to the influence of vegetable growths, and to this only. This is indeed a most important question to determine, and we cannot reflect upon it without realizing the difficulties which oppose our reaching the truth.

"When a discussion on the germ theory took place in the Pathological Society of London, in 1875, Dr. Murchison called attention to a chemical process which presented some resemblance to the multiplication of contagion. He said that a substance called oxamide is decomposed when it is boiled with acids or alkalies into the oxalate of ammonia, and if the acid selected be oxalic acid, a small proportion of this acid will convert an infinite quantity of oxamide into the oxalate of ammonia; in other words, the oxalic acid which excites the change will itself be indefinitely multiplied. Again, while the vinous, the lactic, the viscid, and butyric fermentations, are each attended with and seem to be dependent upon the growth and multiplication of organic forms peculiar to each, it is known that many organic substances when boiled with water and a small quantity of acid, undergo hydration and decomposition, or other chemical transmutation, the acid remaining ultimately in its original condition. Cane sugar is converted into dextrose, starch into dextrine and dextrose. Diastase found in the germination of grain (in malt-

ing) has the power of converting many times its weight of starch into dextrine and dextrose in the presence of water at a temperature of 66° C. These ferments—the acids excepted—lose their efficacy at temperatures near 100° C. in presence of water; in the dry state they may survive boiling heat. Now here are substances which at certain temperatures induce chemical changes without entering into the composition of the resulting products; and with these facts in view is there not strong ground for believing that the fluids of the body may also be changed by ferments introduced into them, without those ferments being other than decayed or changed albuminous compounds?

“A very great difficulty presents itself when an attempt is made to separate from a pyrogenous liquid that element which produces fever. Dr. Burdon Sanderson, by precipitating with alcohol and then extracting with water, obtained an extract which proved pyrogenous. He shows that this extract is not really in solution, that though it has passed through filtering paper, it still contains particles which carry with them the power of causing fever. He has ascertained that no animal poison is really soluble and adopts a plan of filtering through porcelain, thus obtaining a filtrate which will not produce fever. This filtrate differs from that which has passed through paper in this important particular—it is barren. The first filtrate when under the microscope contained no bacteria, but particles were to be seen; after an hour bacteria were present in considerable numbers. The filtrate through porcelain showed no bacteria, and examined twenty-four hours afterward continued barren. Now here the natural inference is that the fever producing agent is to be found in the particles, and yet may it not be possible that an animal fluid in passing through the fine cells of porcelain may be chemically changed, and that the absence of fever producing energy is due to this change.

“It is well understood that all bacteria found in diseased tissues cannot be regarded as causes of disease. When an animal fluid begins to decompose bacteria are seen, and the forms of vegetable life which appear depend upon the composition of the fluid. One specimen of urine will show the bacterium termo. If sugar is present the torula cerevisiæ also appears; in other specimens small round cells are seen, sometimes isolated, sometimes in chains. So also is it probable that according to the tissue decomposing, different forms of bacteria are present, each form, as it were, choosing that tissue most suitable for its growth. Hence even if after death bacteria are found in any tissue, they cannot at once be regarded as causes of disease. It may be that in the dying body the bacteria which seems to infest the surface of the body and the mucous lining of the intestines in countless numbers, may pass inward to lay hold of the elements that are dead before the life of the whole body has ceased.

“In this way perhaps may be explained that in diseases quite different from one another the same bacterium appears or the same apparent form. It has been suggested that after all the diversity which is seen in fevers, several may depend upon the same bacterium, which in the course of time has been modified by the circumstances under which it has gone, so that while it retains its primitive form it has acquired varied properties producing one form of fever in one case and another form under different circumstances. In like manner it has been found that the harmless hay bacillus may be modified and endowed with the energy of the bacillus anthracis, and that the latter by a process of cultivation may be so changed that instead of causing disease it becomes a vaccinal antidote. The discoveries which have been made regarding bacteria certainly are marvellous and call forth our highest admiration; and yet there are some that as certainly call for a large degree of faith. When it is shown, however,

that the same morphological forms are endowed with facilities so different, it is for us to remember that in chemistry it is sometimes found that substances composed of the same elements in the same proportion are endowed with diverse qualities.

"Turning now from these considerations we must recognize the substantial advances which appear to have been made. Among these I may notice the results of Dr. A. Ogston's experiments, for it seems to me he has shown the relationship of acute suppuration, attended with fever, to micrococci, which occur in two forms called staphylococcus and streptococcus. These growths are found present in a large number of acute abscesses, erysipelas, pyæmia, and gangrene."

Dr. Ogston's experiments were then detailed at some length. He found that a drop of pus containing micrococci when introduced into a fresh egg, caused the development of myriads of these microscopic forms. A drop of albumen from the infected egg injected under the healthy skin occasioned the development of similar abscesses abounding with micrococci.

"Experiments like these seem to go far in showing the dependence of acute abscesses and the other affections referred to upon these vegetable growths; and they prepare us to receive the recent teaching as regards the causation of tubercle. The nature of tubercle, however, is such as to form a nidus in which we might expect that bacteria would readily lodge. It is known that vegetable parasites more frequently infest persons whose constitutions are not robust; the tinea tonsurans is difficult to remove in proportion to the weakness of the individual affected; and when we consider the absence of vessels in tubercle, its tendency to caseation and softening, together with the easy access through bronchial tubes of bacteric forms, it is not surprising that they should flourish in morbid products so far removed from healthy tissue. The appearance of the bacillus even in the early cells

of tubercle may be compared to the presence of micrococci in the superficial epithelium of the mucous membrane of the mouth. These latter cells are in the last stages of life, and we may regard the early cells of tubercle as similar in this respect, for they have feeble vitality and soon pass into decay. At the present stage of the discussion, therefore, we may well hesitate before concluding that the dependence of tubercle upon the bacillus has been fully demonstrated. It is to be noted that since the discovery was first announced many observers have confirmed the results of Koch's investigations as to the presence of a bacillus peculiar to this pathological product. This certainly seems to have been a most important discovery as regards diagnosis, for the question whether a recognized change at the apex of the lung is or is not of a tubercular nature, is often most difficult to answer. That such a causation seems to be opposed to what is well known with reference to the hereditary transmission of this disease, or that we must now regard consumption as contagious, are conclusions we must not be too hasty in drawing, while many difficulties oppose the efforts made to ascertain the influence of lower forms of life in causing disease, their study has resulted in advance in the practice of an art. Although it may not be possible to entirely prevent decomposition in wounds, yet surgery will be successful in proportion to the success of our means to attain this end; and the usefulness of many of the appliances in surgical practice depends upon their action in preventing decomposition. In midwifery it may not be possible to place the lying-in woman in an atmosphere of carbolated watery vapour, yet if we take care to secure the complete contraction of the womb and the expulsion of all clots after labour, to unite by sutures when necessary wounds in the vagina and perineum, and direct attention to the removal of discharges that would form a nidus for decomposing agencies, we are

adopting an antiseptic course easily available and powerful to prevent fever in the puerperal period. It has been thought that if the various contagious fevers and also tubercle depend upon bacteria, 'the treatment of disease will resolve itself sooner or later into a kind of *germicide*, within and without the body—within in the fluids, and without in the noxious elements which surround it.' But it does not seem possible that the labours of the medical profession will be very successful in destroying these forms within, whatever it may be possible to accomplish outside of the body. Dr. Ogston has shown how difficult, if not impossible it is to destroy micrococci on the surface of a wound. It does not seem possible, therefore, that we can hope to benefit patients suffering from typhoid fever, tubercle, or any other disease which depends upon the action of vegetable growths, by destroying such in the body, for the agents that destroy them would also be deleterious to the patient. Even though a two per cent. solution of carbolic acid, or one in five thousand of corrosive sublimate, destroys a virus outside of the body, we can hardly hope to bring such solutions into contact with disease processes. Our knowledge at present is in accordance with that long since found true—that as regards contagious fevers and tubercular diseases our efforts must depend to a great extent on our success in teaching the public to rely less upon antidotes and more upon those means which tend to build up strong frames capable of withstanding the agencies causing diseases. That our main hope of lessening the mortality from these diseases lies in carrying out by the public of proper sanitary measures, and as regards the individual, attention to the laws of health :

* * * "By Temperance taught

In what thou eat'st and drink, seeking from thence
Due nourishment, not gluttonous delight,
Till many years o'er thy head return ;
So may'st thou live till like ripe fruit thou drop
Into thy mother's lap, or be with ease,
Gathered, not harshly plucked."

SARCOMA OF THE CLAVICLE.

JAMES THORBURN, M.D.

(Reported by Mr. C. M. Foster.)

W. E. D., æt 43—a short, spare man, admitted to the Hospital, July 9th, 1883, under the care of Dr. Thorburn, on account of an obscurely fluctuating tumour, about the size of an orange, situated just above the sternal half of the right clavicle, and apparently closely connected with this bone.

History.—About nine weeks previously had noticed slight soreness at the point where the tumour subsequently made its appearance one week later, as a small, firm, nodular swelling, which throughout its growth gave little or no pain beyond slight soreness after manipulation, or when pressed upon by any weight, *e. g.*, when carrying poles or posters on the shoulder, which had been his occupation for some time previous to growth of tumour. His health he says has been always good, and is now quite as good as it was two months ago.

Examination of the different organs gave negative results, these being so far as can be made out perfectly healthy. Neither deglutition nor respiration have been in any way interfered with. The left cervical glands are slightly enlarged, as are also the axillary and inguinal of the same side; the left epitrochlear about the size of a hazel nut, hard and tender; about the middle of the anterior surface of the left forearm is a small round firm nodule, slightly smaller than the epitrochlear gland, having the same appearance and sensation when examined; about three inches below this is a smaller similar growth; neither of these are painful or tender. On the right side the axillary and inguinal glands are enlarged, more so than on the left; two firm nodular swellings on the right forearm having the same appearance and position as those on the left. The anterior portion of the trunk is more or less covered with small growths entirely devoid of pain and tenderness, and have

existed as long as he can remember; they are firm, and the integument covering them is of the same colour as that of the rest of the body; a few may be seen on the back and on both arms, but none on the lower extremities; these vary in size from a split pea to a five cent piece, and are only slightly elevated.

In the lumbar region, a little to the right of the median line, a comparatively soft flaccid tumour about the size and shape of a good sized lemon exists, which, on grasping between the fingers gives the sensation of a number of firm coils contained within it, not unlike that produced by a lymph-angioma; the integument covering this growth is pigmented, being of a dirty brown colour; it has been present from childhood, increasing gradually in size up to twenty years ago, since which time it has remained stationary; has never been at any time painful or tender; closely surrounding it is an abundant growth of long coarse black hair. In a space about 6 in. x 3 in., near the inferior angle of the left scapula there is a quantity of long black hair, none existing on the opposite side. About three inches to the left of the umbilicus is a firm slightly elevated tumour 1 in. x $\frac{1}{2}$ in., the duration of which is unknown; this tumour has the appearance of an unpedunculated lipoma.

Aspiration of the tumour over the clavicle only yielded a few drops of blood.

The tumour when examined on the day before operation was found to be softer, and to give fluctuation much more readily; firm pressure on one end seemed to distinctly force a considerable amount of fluid to the other.

Operation, July 20th.—A longitudinal incision about three inches long, being made over the most prominent part of the tumour, through the integument and subjacent tissue, the growth was discovered to be firmly enclosed in a capsule, closely adherent to the clavicle; by carefully separating the surrounding attachments with scalpel and fingers, (care being needed to

avoid the wounding of important vessels) the soft mass was removed, about the size of a goose egg, extremely vascular, and containing on cutting into it a large quantity of extravasated blood; the cut surface had a greyish-white, faintly translucent appearance, at parts slightly fatty, at no part could any softening or breaking down of the tumour be detected; the general appearance was characteristic, of a rapidly growing sarcoma. Another growth of about equal size was also removed from behind, and beneath the sternal end of the clavicle, and extending about two inches down the posterior surface of the sternum; this, with the exception of being much less vascular, was similar to the one first removed. After arresting all oozing, which was considerable, a few carbolized cat-gut sutures were used, strips of plaster and antiseptic dressings; for some days there was considerable gaping of the wound, and some discharge of thick pus, both of which had entirely disappeared two weeks after operation, the wound looking clean and healthy, and union almost complete. During the last few days of the healing process iodoform was used, which appeared to hasten it, so that perfect union exists three weeks after operation. The temperature ranged from 99° to 102° (reaching the latter twice, viz., on the evening of the 3rd and 5th days.)

August 9th.—Complains of constant dry irritable cough preventing his sleeping; a week before this had coughed up some small blood clots at which time he complained of severe pain in the splenic region increased on taking a long breath.

August 16th.—No pain or cough, appetite good, feels "as well as he ever did," no symptoms to point to metastatic visceral growths.

Microscopical examination of the tumour showed it to be a spindle-celled sarcoma, with portions here and there composed entirely of round cells, very vascular and showing beautifully the arrangement of the

blood vessels, the walls of which consisted almost entirely of the sarcomatous cells, thus demonstrating the manner in which metastatic sarcomata are diffused.

This case is an interesting one in many respects; the rapidity of the growth is of importance both as regards diagnosis and prognosis, and in this respect will bear comparison with a case published in a late number of the *Lancet*, by Mr. F. Mason; a man aged 58 with "a tumour about the size of a foetal head, situated at the upper third of the humerus, moderately firm and somewhat elastic," and only seven weeks growth, which on examination proved to be a round-celled sarcoma; in this case local recurrence and secondary growths resulted, case ending fatally three months after the first appearance of the tumour.

The constant irritation produced by carrying poles over the shoulder suggests a cause, but does not explain why this special form of tumour should have developed, or why instead some form of chronic inflammation should not have been the result; we are therefore driven to the conclusion "that there is a specific, qualitative abnormal reaction of the tissue"* which determines the effect produced in the tissue by the irritation. This peculiar specific predisposition may be accounted for if we accept Cohnheim's embryonic hypothesis which would refer the origin of the tumour to a portion of unused belated embryonic tissue, which on the application of some external or other form of irritation, develops into a tumour. It has been objected, that were these embryonic germs to exist indefinitely buried in the surrounding fully developed tissue, without undergoing any change or development, they would then be simply foreign bodies entirely without independent life, for supposing them to be living and receiving nourishment from year to year why should they not give evidence of their existence long before they often do?

The slight though general enlargement of the glands may have an explanation in the relation observed between the red and white corpuscles of the blood, viz., 1 in 27 (Gowers' Hæmacytometer used).

It is intended to remove the growth in the lumbar region if the patient's permission can be obtained.

Dr. Thorburn considered the marked increase of fluctuation obtained on the day before operation to be due to rather free manipulation a few days previously; this would be borne out by the large quantity of extravasated blood found in the tumour on cutting into it, also by the extreme vascularity of portions of the growth, exhibiting an almost sponge like structure under the microscope. The almost entire freedom from pain is a point to be noted. Speaking of sarcomata Billroth states that if they be not located in or on nerve trunks, they are usually painless till they break out.

A CONTRIBUTION TO THE STUDY OF ENTERIC FEVER.*

BY J. J. CASSIDY, M. D.

Mr. President and Gentlemen:—

So much has been written, and well written, about Enteric fever that it would be difficult to advance anything novel or striking. If however, at this early stage I might be permitted to express a hope, it would be that future observers, following in the footsteps of M. Pasteur, would endeavour to isolate the special germ of this disease, and by inoculating the lower animals with the virus, establish beyond question the correctness of the doctrine that Enteric fever in man always arises from the introduction of a specific germ.

In this country as well as abroad we find the same causes powerful to produce it, and the same preventive measures sufficient for its extinction. According to the general consensus of medical opinion the contagium of Enteric fever is developed from the ex-

* Billroth's Surgical Pathology.

* Read before the Ontario Medical Association, June 6th and 7th, 1883.

ereta of patients afflicted with that disease. This contagium is harmless at the time it is excreted; but in a short time by fermentation or otherwise, it multiplies and acquires a virulent activity. When from the neglect of the proper precautions such as efficient disinfection, etc., its vitality has been developed, if the germ finds its way into the sewer, drinking water or milk, and is swallowed or inhaled by a person in whom there is present at the time a receptivity for the disease, Enteric fever results. It is a matter of the commonest observation that exposure to the effluvia of decomposing substances or the drinking of water containing them are of themselves insufficient to produce Enteric fever. These are the conditions most favourable to the development of the poison; but in order that the disease may be produced something more is necessary, and that is the specific germ itself. Not every one however, who drinks polluted water or breathes fever laden air takes Enteric fever. But the same may be said of Malaria or Cholera poison. Individual susceptibilities no doubt exist, or a special state of the constitution may have its influence, viz: the acarus scabiei, cannot thrive in every soil; but when these points are conceded, the main fact still remains, that each case of Enteric fever can be traced to a pre-existing one of the same disease. I am aware that very recent observers, such as Murchison, contend that the specific cause of this disease may be generated *de novo* in sewage, without the presence of the enteric exereta. That there is much cogency in the instances and arguments adduced in support of this view, cannot be denied, still we may safely contend that the *accidental* presence of the specific poison and its prolonged *latent existence* are capable of explaining every case of the apparently spontaneous origin of the disease with less violence to our sense of the relation of cause and effect, than the doctrine of independent origin. Thus a walking case of typhoid not recognized as such or a case of mere

intestinal catarrh, due to the cause of typhoid, may import the specific germs into a locality previously exempt, and in this manner give rise to an outbreak apparently spontaneous, or the contagium may be transported in the bedding or clothing of patients, and in other substances, which may serve as fomites. Numerous instances might be adduced in support of this view; but I shall content myself with quoting the following which Murchison says was related to him on excellent authority. It proves beyond question, the possibility of the transmission of the infecting principle of Enteric fever to a considerable distance without the direct importation of a case and without the person who serves as the vehicle of importation necessarily becoming the subject of the disease.

"In 1859, the wife of a butcher residing in the small village of Warbstowe, situate between Launceston and Camelford, on the Cornish Moors, travelled to Cardiff in Wales, to see her sister, who was ill and soon after died of typhoid fever. She brought back her sister's bedding. A fortnight after her return to Warbstowe, another sister was employed in hanging out these clothes and soon after was taken ill with typhoid fever, which spread from her as from a centre. The woman who had been to Cardiff never took the fever herself, there had been no cases in Warbstowe previous to her return; neither were there any cases in the neighbouring villages, either before or after." The frequency with which washerwomen are attacked is to be explained by the fact that the dejections undergo the changes necessary to render them capable of producing the disease in the bed linen and clothing of the patients.

On the whole, then, the weight of evidence is against the doctrine of the spontaneous origin of Enteric fever from decomposing animal matter or simple faecal discharges.

If the opinions I have just expressed are correct, it follows of necessity, that the

complete and efficient disinfection of the excreta, in every case of Enteric fever is a matter of grave importance.

Instances may be mentioned to show that hospital patients removed quite a distance from the fever wards have contracted Enteric fever, and one satisfactory explanation offered is that the specific germ found its entry into their wards through a leaking pipe, which was placed there to ventilate the house drain. In this particular instance what was intended for a blessing proved to be a curse. But if the excreta had been thoroughly disinfected before they were thrown into the soil pipe, even though the effluvia of a drain might penetrate into the wards, the specific germ of Enteric fever having lost its vitality would not be capable of generating the disease. This subject is of sufficient importance to demand the closest attention of all local and general sanitary organizations, for Enteric fever destroys more lives, that could be saved, than any other acute disease whatever. The remark is certainly true "that measures of prophylaxis will be efficient in proportion to the strength of our belief in the material nature of the typhoid poison, and in the possibility of destroying it or preventing its spread." The one efficient measure which fully meets this desideratum and includes all others is the proper treatment of the dejections. The dejections in every case should be promptly and thoroughly disinfected. The destruction of organisms in the stools and the arrest of their development may be accomplished by the action of powerful chemical agents. For this purpose solutions of carbolic acid in the proportion of one to twenty or one to forty, or sulphate of iron or chloride of zinc are to be employed. When practicable the contents of the bedpan should be emptied into trenches dug anew at short intervals and carefully filled up, care being taken that they are located at a distance from the sources of water supply; except in rural districts this is, of course, impossible and

the dejections must be emptied into the water closets or privy vaults. The bedding and articles of clothing soiled with the excreta of the patient must be immediately removed and thrown into water containing carbolic acid or chloride of zinc and thoroughly boiled within the course of a few hours. Search should be made in all instances for the original cause of infection and measures taken to correct faulty arrangements which lead to the pollution of drinking water, or of the air.

Enteric fever is conspicuous among the acute diseases for the number and severity of its lesions. By far the most important of these is the ulceration of Peyer's patches in the intestine. This in fact is considered to be the characteristic lesion of the disease. Intestinal perforation occurs most frequently in the severest cases of the disease and particularly in those in which diarrhoea, tympany, and abdominal pains have been prominent symptoms. In many instances intestinal hæmorrhage has preceded the occurrence of perforation. On the other hand this accident may occur in mild cases, and in those in which the bowels have been constipated throughout. Perforation is most liable to occur during the third, fourth or fifth week of the disease, though it sometimes occurs, at a later period. The earlier perforations take place about the time of the separation of the sloughs from the ulcerated spots in the intestine, the later ones are probably due to the extension of ulcerations that show no disposition to heal.

Among the immediate causes of perforation may be mentioned hardened fecal masses, vomiting, severe coughing, straining at stool, and sudden changes of posture.

I shall now lay before you the histories of three cases of Enteric fever, in which this accident occurred, were diagnosed during life, and the verification of the diagnoses made at the autopsies.

R. S., æt. 24, male, native of England,

an employé in one of the city hotels. Dec. 13, 1882, he entered the Hospital and was placed under my treatment. The case had been diagnosed as Enteric fever by another practitioner before the patient entered the Hospital. It was from the first a case of unusual severity. Diarrhœa, tympany, and abdominal tenderness, were marked symptoms. The temperature range was high. The lung was affected with pneumonia; delirium showed itself at night, but the patient was carefully watched and not allowed to leave his bed. During the first week of treatment, which was in reality the second week since the attack began, the evening rise of temperature reached 104° and even 106°; a few spots were visible on the abdomen. About the beginning of the third week the usual fall in temperature was noticed, and the case appeared to be progressing in a favourable manner.

Dec. 28.—At 2. a. m., this being the twenty-first day of the disease, the patient had a severe chill; he complained of excessive pain and tenderness in the abdomen; his mind became clearer than it had been, and he recognized the gravity of his situation. I saw him at 11 a. m., nine hours after the chill began; he had vomited, his face was of a bluish colour, he felt cold and shivered a good deal. The temperature was normal, viz., 98.2-5; his legs were drawn up toward his abdomen, tenderness in the right iliac region was excessive. I diagnosed intestinal perforation. The immediate cause did not appear to be quite clearly established. The nurse said that the patient had never been permitted to get out of bed; the coughing was severe and may have been the immediate cause.

Half an ounce of brandy every hour, $\frac{1}{4}$ grain of morphine hypodermically every four hours, were prescribed, and turpentine stupes were ordered to be applied over the abdomen. Some difficulty was experienced in continuing the treatment, as the patient, realizing his dangerous position, declined to take anything. Ultimately,

however, by gentle persuasion, he was induced to take the stimulants and some beef tea. The temperature rose steadily during the ensuing four days, reaching 105° and 106°. He survived until 9 a. m., Dec. 31, four days and seven hours from the time the rigour began.

Post-mortem: On exterior examination of the body.—The body was warm; there was slight tympanitis; the abdominal walls were firm and unrelaxed.

On opening the abdominal cavity, a small quantity of serous fluid escaped. The abdominal walls and the coils of both large and small intestines were covered with lymph. The lymph was of recent formation, and from its appearance might have existed from four to six days. It was friable, thick, opaque, easily detached in many places from the coils of intestine. The coils of intestine thus adherent were carefully separated from each other in view of finding a perforation, as such a condition had been diagnosed, but none was found.

The bowels were not distended by gas; no feces could be discovered, either in the bowels or in the abdominal cavity. The external surface of the whole intestinal tract was most carefully examined. It showed marked arterial congestion of the ileum and cæcum, also congestion of a less degree in the jejunum, but no perforation was discernible. *The intestines were then opened.* The ileum showed its mucous surface ulcerated in the position of Peyer's patches. In some cases the muscular coat of the bowel could be seen, in other places there was merely inflammatory swelling of the patch. In the lower part of the ileum these pathological changes were more marked; most of the Peyer's patches were completely eroded about four inches above the ileo-cæcal valve, where there could be seen a funnel-shaped point of ulceration, the apex of which looked white. On carefully examining this point, it was found to be a perfect perforation of the wall of the ileum, the apex of which was coated with lymph, layers of lymph

having been deposited upon the surface of the intestine to such an extent as to conceal the discovery of the perforation from the exterior.

The cæcum was congested in places, and in two places of the ascending colon there was inflammatory swelling. The balance of the intestine was normal.

The spleen was enlarged, venously congested, pulpy, friable, and the malpighian bodies bright scarlet.

The kidneys and liver were normal. The right lung showed at its base and lower part of right lobe, pneumonic consolidation; the upper part of right lung was venously congested, although buoyant and crepitant.

The left lung was normal. Heart also normal. Brain and spinal cord were not examined, owing to request of his friends.

CHARLES SHEARD, M.D.,
Pathologist.

M., æt. 16, male, Canadian, came from Belleville, Ont., and entered the Hospital Feb. 18, 1883. His temperature when I saw him on this day at 5 p.m., was 103 4-5°; his cheeks had a circumscribed flush, and he coughed violently. He stated that he had been ill for almost eight days. I found pneumonia in the right lung. In addition to the cough the principal symptoms were headache and slight abdominal tenderness. No rose-coloured eruption could be found, though the case had advanced into the second week; no diarrhœa was complained of; no tympanites was observed. I reserved my diagnosis, as I did not think the evidence conclusive in favour of enteric fever. I ordered a diaphoretic mixture, milk diet, and a small allowance of whiskey.

February 22.—The evening temperature reached 105°. This was the highest temperature taken during the course of the disease.

Feb. 26.—The temperature fluctuates from 103° in the morning to 104 2-5° in the evening; no spots, tympanites, or diarrhœa; mind tolerably clear, though the nurse says

he is delirious at night. Treatment continued.

Feb. 28.—The patient has been under treatment for ten days, and the temperature still continuing high I discontinued my diaphoretic mixture and put him on my regular Enteric fever mixture, to which allusion will be made further on. About this time I noticed some dried blood on the inside of his thighs and also on his shirt. The nurse seemed surprised. This hæmorrhage may have occurred during the night, when she was not on duty, but she knew nothing of it until it was pointed out. The pneumonia still continues to give trouble.

March 2.—The temperature in the right axilla is one degree higher than in the left. I ordered turpentine stupes to be used occasionally, sometimes over the chest and sometimes over the abdomen. The regular fever mixture to be continued. Whiskey, six oz. per diem, milk four pints.

March 6.—At 11 a.m. had a severe chill; temperature taken by myself about twenty minutes after the chill began, 102 2-5°; later on in the day it fell to 100°. It is the nineteenth day of the disease. The abdomen is very tender, the face expressive of great pain and distress, the legs drawn up towards the body; no blood in the evacuations; mind clearer. I diagnosed intestinal perforation. Morphine hypodermically, turpentine in stupes, and frequent doses of stimulants were ordered and used, but unavailingly, as the patient died on March 7, at 11 a.m., just twenty-four hours after the seizure.

Post-mortem examination made on H. M.—, twenty-four hours after death. Body of a well nourished boy. The abdomen only was examined. On opening the peritoneal cavity found a small quantity of serous fluid, in which was more or less lymph. The fluid was somewhat opaque. The surface of the visceral peritoneum was injected in places.

The ascending colon was in a somewhat abnormal position; instead of ascending to

the under surface of the liver it passed obliquely across towards the umbilicus, then upwards, backwards, and outwards to its usual position below the liver.

On close inspection found that a portion of the ileum was adherent to the colon. The adhesion was broken up with slight force, and was found to occupy the position of a perforating ulcer.

As the process of ulceration was going on in the wall of the bowel, lymph was thrown out on to the peritoneal surface, which caused the adhesion to a neighbouring portion of bowel.

The patch adherent was about the size of a twenty-five cent piece, and existed in the ileum about three or four inches from the ileo-cæcal valve.

The other organs of the abdomen were healthy. No sign of tubercle.

Eliza C., æt. 28, female, an immigrant, lately arrived from England, and having been only three weeks in the country, was admitted to the Hospital, May 15th, 1883. Her husband had died in the Hospital of Enteric fever the same day that she was admitted; her child had died of the same disease a few days previously, and two days later, *i. e.*, May 17, another immigrant, A. B., who had crossed the Atlantic in the same steamship as the Cliftons, *viz.*, the *Sarmatian*, was admitted to the same ward, suffering from a very severe attack of Enteric fever. It was evident then that these people must have contracted either typhoid in England or on board ship, as they had not been long enough in Canada to have taken the specific germ of the disease in this country. The fact of the other patient, who did not come from the same part of England as the Cliftons, but who came across the ocean in the same vessel having contracted the disease precisely at the same time would make it appear probable that the specific germ may have been contracted on shipboard. How the infection was conveyed is uncertain. The fact that no cases of Enteric fever

were reported on the vessel during the trip makes it appear probable that the germs of the disease were present in the air of the steamship, not having been removed by disinfection or ventilation since the existence of previous cases of the same disease. This is the more probable cause. The water used for drinking purposes may have contained the specific germ. E. C. presented symptoms of Enteric fever in a marked degree. She had a temperature of 104°, severe diarrhœa, abdominal tenderness, gurgling on pressure in iliac fossa, and a rose coloured rash on the abdomen. Bismuth gr. xx, pulv. opii. gr. ss. in powder were prescribed after each liquid stool. The usual fever mixture, Milk diet and 6 oz. whiskey were ordered.

May 17th.—The powders controlled the diarrhœa somewhat; but the temperature continued high.

May 19th.—The evening temperature was 105°.

May 20th.—The temperature is somewhat lower; ranging from 103 4-5° to 103 1-5°.

On the night of the 22nd the temperature rose to 104 3-5° and fell again to 102½° morning and evening.

May 24.—The morning temperature fell to 100 4-5°; but rose again on the two succeeding nights to 104 1-5°, and 105 2-5° respectively, so that although the morning temperature was lower than it had yet been, the evening temperature was also higher. Diarrhœa is under control; about one or two motions per diem. It was evident, however, that there were no severe lung complications to deal with, as the pulse and respiration preserved their normal ratio.

May 26th to 29th.—The temperature sank steadily, reaching 99° on the morning of the 29th. This was the twentieth day of the disease, and as the patient was very delirious at night, frequently attempting to get out of bed, I left particular instructions with the nurse that she was to be

closely watched, tying her to the bed if necessary. Some such precautions were taken, but during the nurse's absence she got out of bed, and when the nurse returned to the ward she found that the patient was sleeping in another bed. After this she had a slight chill.

May 30th.—The morning temperature was 100°; but at 11 a. m. it went up to 104°. I found her in a state of collapse—shivering, pulse uncountable, abdomen extremely tender, thighs flexed on the abdomen, face bluish. The whole appearance of the patient was so characteristic that I had no hesitation in diagnosing intestinal perforation. The treatment already alluded to was prescribed, but unavailingly.

May 31st.—At 11 a. m., twenty-four hours after the seizure, the patient died.

Post-mortem notes by Dr. Sheard:—*Typhoidal Perforation.*—On external examination body was fairly nourished. Abdomen not tympanitic.

Thoracic Viscera.—The pleura was free from adhesions except at upper part of both lungs. These adhesions were old.

The left lung was hypostatically congested to a marked degree, but was not consolidated in any portion.

The right lung.—The lower lobe of right lung presented a small patch of pneumonic consolidation about the size of a penny. The balance of the lower lobe was markedly congested hypostatically but otherwise unchanged. The upper and middle lobes were normal.

The heart was normal in appearance containing a small ante-mortem clot.

The abdominal cavity was opened with great care. There were no adhesions between the anterior abdominal wall and bowels.

In the peritoneal cavity there was but a slight quantity of serous fluid which was high coloured—(reddish yellow). Deposits of recently exuded lymph were present upon all the coils of the intestines. Some of the coils were slightly adherent. The

intestines were not distended. The outer side of jejunum and ileum showed marked congestion and thickened patches could be felt along their course. On making gentle pressure along the ileum, gas and watery matter could be seen oozing from a small point like perforation in the ileum, seven inches above the ileo-cæcal valve. There were no other perforations. The intestine on being opened showed its mucous surface to be congested, highly hyperæmic, and thickened throughout. Where the perforation had occurred the gradually extending ulceration could be traced through the muscular coat of bowel. Near the seat of perforation were to be seen many places where the patches of Peyer had ulcerated away. Higher up in the ileum many of these patches were thickened, this thickening extended as high as jejunum and down to colon.

The mesenteric glands were greatly enlarged. Some of them were friable and could be broken down on pressure.

The spleen was enlarged, venously congested, friable, and showing the ordinary changes provoked by pyrexia. Liver, soft, yellowish in appearance, probably fatty. Kidneys, normal.

In the case of R. S. the immediate cause of the perforation was most probably violent coughing.

In the second case, H. M., the cause was probably of a similar character.

In the third case the immediate cause was most probably the movement of the patient in getting in and out of bed.

Sex.—Two of the patients were males—
one a female.

Age.—The ages of the patients were 16, 24, and 28 years respectively.

Diarrhœa, tympany, and abdominal tenderness, were marked symptoms all through the disease in two of the cases, and but very slightly marked in the third.

The perforations occurred in one on the 25th day and two on the 21st day of the disease.

Treatment.—The diet was in all three cases confined to milk from three to four pints, a suitable supply of stimulant, and if diarrhoea was not present from four to six ounces of beef tea. The bed pan was always used, the patient not being allowed to rise. Cooling applications were applied to the scalp, when delirium threatened, and sponging of the patient's body was practiced twice a day or oftener according to the temperature. Subnitrate of bismuth with or without opium was used to control diarrhoea. Turpentine was used locally, and sometimes internally to relieve abdominal pains, and to prevent or overcome capillary engorgement.

The following mixture was also prescribed :

Potass chlorate.....	ʒ ss.
Acid Mur. fort.....	ʒ vii.
Aquæ destill.....	ʒ iij.
Shake and add—	
Glycerine.....	ʒ v.

N. B.—To be kept in a dark place.

Sig. ʒ ss. every two or three hours. The glycerine is I think indicated in Enteric fever because it is nutrient, bland, antiseptic, alterative, contains no nitrogen and preserves its fluidity throughout the process of digestion.

Chlorine and chlorate of potash are used for their known action in exciting secretion, keeping the tongue and mouth moist and free from sordes, thereby relieving thirst, promoting the patient's comfort and facilitating the act of swallowing, also for the wellknown disinfecting properties of chlorine and its destructive influence on the lower forms of vegetable and animal life.

Under this plan of treatment my cases have rarely assumed a severe type.

The tongue and mouth remain moist and free from sordes, the pyrexia is moderate, the diarrhoea is seldom excessive, hæmorrhage from the bowels is rare. In severe cases, where there is a manifest tendency to intestinal perforation should anything further be done? My reply is that I fear we cannot cope any more successfully with this dread-

ful lesion by adopting the opium treatment and inviting all the evils which may arise from hardened fecal masses, over-distension of the gut with gas or feces, and perhaps vomiting.

Still if compelled under similarly unpleasant circumstances to choose between conflicting evils, I would give my patient the benefit of the doubt, and by the frequent exhibition of small doses of opium would place his bowels in therapeutic splints (so to speak) until such time as the recuperative powers of his organism being brought into play, I had reason to think that the natural peristaltic movements could be safely indulged in.

REMARKABLE CASE OF OBSTETRICS —ABORTION AT TWO MONTHS, AND QUADRUPLETS AT FULL TERM.

REPORTED BY DRs. EDWARDS AND M'TAGGART,
OF LONDON, ONT.

On the 21st of July, 1883, we were called to see Mrs. S. of this city, patient of small stature, English by birth, age 38, average weight 100 lbs., height 5 feet 1 inch. She is the mother of four living children, two boys and two girls, aged twelve, ten, eight, and seven years. There was nothing unusual at any of her previous confinements. Never had a miscarriage before. On abdominal examination we found the abdomen extremely enlarged and pendulous. We advised support from the shoulders. She told us that she was but five months *enciente*, but from her history and condition we assured her that she was seven months pregnant. Patient always enjoyed good health; her menses regular; she last menstruated December 4th, 1882. About seven weeks from this time she commenced to flow, which lasted for some three weeks, accompanied by pain. With a pain resembling that of labour, something was expelled, which she described as a "lump of flesh with blood vessels in it." To this "lump" was attached a short "string."

At this she became alarmed, and consulted a medical man, who assured her that she had had a miscarriage. He prescribed some medicine, which he said would check the flow, and also cause the expulsion of anything that might remain.

From her account, the flow increased for a few days, then finally stopped. From this time until Friday, Sept. 14th, 1883, she has been comparatively speaking quite well, although distressed by the immense size and weight of the abdomen.

On the evening of the above-mentioned date (Friday, Sept. 14th) she was delivered of four living children, two boys and two girls; the time elapsing between the birth of the first and that of the last child being one hour and forty-five minutes. The weight of the male children exceeded that of the females by a few ounces. The weight of the male babies being 4 lbs. 9¼ oz., and 4 lbs. 3 oz., and that of the females, 4 lbs. 6 oz., and 3 lbs. 13¾ oz. Labour terminated favourably, there being no hæmorrhage to speak of. There was but one placenta, the cords being attached at different parts of it. The quartette are now six days old, all healthy, and able to nurse, and all bid fair to live. The mother is doing exceedingly well, having suffered no more exhaustion than if she had had but one child. We might here say that the father, Mr. C. S., English by birth, age 41, height 5 feet 5 inches, and average weight 169 lbs., is a strong, healthy, and robust man.

Selections : Medicine.

HOW CAN MEDICAL MEN BEST PROMOTE SANITARY PROGRESS?—Undoubtedly the first important step, before success can be hoped from restrictive legislation, is the education of the masses in the essential facts of sanitary science. Ignorance of the danger of the violation of the laws of health induces antagonism where a comprehension of the evil sought to be combatted would have met with acquiescence. Compulsory vaccination is

resisted because it is compulsory; the Contagious Diseases Acts are antagonized only on quasi-sentimental grounds; the social evil experiment of St. Louis was assailed because the community did not comprehend the magnitude of the harm done by the diseases it disseminates when uncontrolled. People fear draughts, but are not afraid of foul air, and so close windows and ventilators to escape the former. When they are made to understand that foul air and moisture are the enemies of mankind, they will shun the unventilated church and theatre; when they are taught that diphtheria and scarlet fever and typhoid are preventable diseases, they will welcome the ordinances which punish the dishonest plumber and the careless householder and establish restrictive quarantines; when they realize that venereal disease may and does enter the purest homes by a thousand unsuspected channels, they will join hands with the legislator, who would make its communication a social infamy and a punishable offence against the law; when they learn that the average of human life has been prolonged one-seventh in the course of a single generation by improved hygiene, they will give heed to the advice that will keep them well, rather than depend upon that which is to restore the health that has been needlessly wasted. Impracticable sanitarians, who find a sting in every sweet that human tastes crave and enjoy, encourage the resolve to brave the risk for the sake of the pleasure. The restriction of the dietary to a few plain, unpalatable simples, the uncompromising warfare against tobacco and alcohol in every shape, the unqualified denunciation of every form of relaxation and amusement, even to the latest novelty of bicycle riding, are instances of sanitary reform retarded by injudicious radicalism. Medical men can best promote sanitary progress by aiding in the dissemination of information as to the actual prevalence of disease, the established facts of etiology and prophylaxis, and the inevitable consequences of their disregard, and this can best be accomplished through sanitary associations and publications, especially in the secular press, which has come in this country to be for the citizen what the school is for the child, with the advantage for the adult that the lessons are taught in a more rational, agreeable, and effective manner.—A. L. Gihon, M.A., M.D., in *Am. Med. Ass. Jnl.*

FARADIZATION OF THE ABDOMEN IN ASCITES.

—In the Russian literature of the past three years, several cases have been recorded, in which ascites was successfully treated by faradization of the abdomen. SKIBNEWSKI has recently reported two additional cases; the first, a little girl, *æt.* 9, very anæmic and with marked ascites. The urine was small, with no albumen, lungs sound, heart-beat normal, with a feeble systolic souffle. For ten days the patient took digitalis and iron without any diuretic effect, and during these ten days the circumference of the abdomen sensibly increased. The digitalis was then discontinued, the iron being kept up, and Skibnewski commenced faradization of the abdominal muscles two or three times a day. Each *séance* lasted fifteen or twenty minutes. The currents were sufficiently strong to produce muscular contraction. During the same *séance* each muscle was made to contract fifteen or twenty times. After twelve days the circumference of the abdomen was reduced from thirty-six and four-fifth inches to thirty; the quantity of urine was considerably increased. After three weeks the circumference of the abdomen was only twenty-four inches, and the quantity of urine normal. A month and a half after leaving the hospital, the patient had a return of the ascites. As before, medication had practically no effect, and faradization was resorted to, with the former effect.

The second case was that of a young man, *æt.* 17. Ascites and augmentation of the spleen commenced after an infectious disease. The urine was small, and contained no albumen. Faradization was performed twice a day for fifteen days, and then thrice a day until, within four weeks, a cure was effected, both of the ascites and splenic enlargement.—*Revue des Sc. Méd.*, July, 1883. *Med. News.*

HEALTH APHORISMS.—Dr. Frank H. Hamilton has formulated the following solid chunks of wisdom :

The lives of most men are in their own hands, and as a rule the just verdict after death would be *felo de se*.

Light gives a bronzed or tan colour to the skin; but where it uproots the lily it plants the rose.

Mould and decaying vegetables in a cellar weave shrouds for the upper chambers.

A change of air is less valuable than a

change of scene. The air is changed every time the direction of the wind is changed.

Calisthenics may be very genteel, and romping very ungenteel, but one is the shadow, the other the substance of healthful exercise.

Blessed be he who invented sleep; but thrice blessed the man who will invent a cure for thinking.

Milk drawn from a woman who sits indoors and drinks whisky and beer is certainly as unwholesome as milk from a distillery-fed cow.

Dirt, debauchery, disease and death are successive links in the same chain.—*Medical Age.*

DR. HARVEY L. BYRD, writing in the *Phil. Med. Times*, deprecates the casting aside old medicines for the sake of taking up the newer inventions and discoveries. He puts in a strong plea for *tartar emetic* which “in doses of one-eightieth to one-tenth of a grain, alone or in conjunction with opium or one of its salts or preparations. I expect good results from it when given as an anti-phlogistic or antipyretic, expectorant, diaphoretic, diuretic or as an alterative. I never prescribe it as an emetic unless no other article of that class is convenient, and am not prepared to speak of its *tolerance*, as mentioned by Rasori many years ago, in acute diseases, from personal experience. Thus I find it a valuable agent in most forms of fever in bronchitis, in pneumonia, in croup and laryngitis, in torpid conditions of the liver, in certain chronic cutaneous diseases, and in sick headache, etc. It is as valuable in lessening the force and frequency of the circulation as *veratrum* or *aconite*, and being tasteless in the proper dose is almost absolutely free from disagreeable or unpleasant effects and thus is generally preferable to either of them.”

GENERAL PRECAUTIONS TO BE TAKEN IN THE EMPLOYMENT OF HYDROTHERAPY.—Apply cold only to individuals whose condition approximates the physiological. In the weak, the aged, and the debilitated, it is indispensable to prelude the bath by moderate, though not violent exercise. This last rendering the individual more accessible to the refrigerant action of cold and delaying the reaction. The most favourable time for the bath is in the morning on rising. During digestion the application

of water, whether cold or hot, is not devoid of danger. Prolonged baths are the best to obtain a sedative effect. Repeated baths, every two hours, interrupted before the second chill, give the best sedative effects. Watch for the reaction, and aid it by massage; but do not make use of forced exercise before the employment of cold water. When bathing the debilitated always have at hand means to combat the collapse, or other effect of nervous inhibition. Frictions with snow, although acting promptly and vigorously on the calorific centres, are dangerous.—*Journal de Méd. de Paris.*

HOW SHALL WE BLISTER? I always use the cantharidal collodion. I shall paint a blister in this instance three by four inches, putting on three or four layers, and then at once put over this a poultice. This is an almost painless way of raising a blister. I have never seen it produce strangury.—*Goodell in Phil. Med. Times.*

Surgery.

SURGERY OF THE PERITONEUM.

A CLINIC DELIVERED AT LA SALPÊTRIÈRE, BY
M. TERRILLON.

A very exact knowledge of the inflammatory reactions of the peritoneum in all operations implicating the abdomen is indispensable to the surgeon. Thanks to it he will be sheltered from the terrible accidents which have, until lately, hindered the development of abdominal surgery, and he will learn a useful lesson from the very curious characteristics of the peritoneum.

You all know that the peritoneum has special characteristics, which are, irritability, absorption, inflammation, and finally the facility with which its alterations are reflected upon subjacent organs.

The peritoneum is not sensitive to the touch nor to prickings but the contact of a foreign body provokes the phenomena of irritability which are explained by the presence of nervous corpuscles situated under the epithelium, corpuscles which have been studied, especially in Germany by Auerbach, and in France by Jullien, of Lyons. This exquisite susceptibility explains the shock which follows the great operations of abdominal surgery, that is to say, the sinking, the collapse, the tendency to cooling, and the general depression which results from such a nervous disturbance. Regnier

and Richet injected boiling water and perchloride of iron into the peritoneum of a rabbit—death took place in twenty-four hours—without the slightest trace of inflammation at the autopsy. The cause of death was nervous shock, for if the nerves were first benumbed by morphine or chloral, the shock was much less, and death was slower. Clinically it is a well established fact that subjects whose peritoneum during an operation is in contact with the air and foreign bodies present a most marked tendency to general cooling. Again it is to this irritability of the peritoneum that is attributed the tetanus which sometimes appears from the 8th to the 15th day after the opening of the abdominal cavity. M. Gubler in particular upheld this opinion.

It has been known for a long time that liquids introduced into the peritoneal cavity may be absorbed with the greatest rapidity. In certain cases this absorption is, so to speak, providential for it frees the peritoneum from liquids which in some way play the part of foreign bodies; but on the other hand if the liquid absorbed is septic grave phenomena of poisoning follow. It is not difficult to explain anatomically the absorption which is produced at the surface of the serous cavity. Bichât already guessed that the peritoneum was in communication with the lymphatic system. Recklinghausen and Ranvier discovered absorbent mouths, stomata, at the level of the phrenic centre; these are microscopical openings limited by a crown of epithelial cells, and communicating with the lymphatic radicles. Thus when a solution of carmine is injected into the peritoneum it is found again in the lymphatics. It is even probable that this absorption takes place from the entire surface of the peritoneum and not exclusively from the stomata. In any case its place of election appears to be the phrenic centre and the folds of Douglas.

You will understand, gentlemen, that air may be, just like liquids, absorbed by the peritoneal serous membrane and in fact it is usual that after operations air remains in the abdominal cavity; this air is absorbed without inconvenience. When blood remains in the peritoneum a clot is formed, the liquid portion is absorbed, but the fibrin remains and is absorbed in its turn only after having undergone various transformations. Experiments made in this sense have thrown light upon facts which

I am about to advance to you. It is thus that one may by a peritoneal transfusion of defibrinated blood raise the strength of a patient. Bizzozero and Golgi practised this transfusion on animals, and Perfick tried it three times in man. Absorption in these cases takes place without great pain, and without marked fever. Albuminous liquids are very readily absorbed by the peritoneum and the best clinical proof of this fact is that cysts of the ovary bursting into the peritoneum most often occasion no serious accident. This spontaneous rupture of the cystic pouch is a mode of cure of parovarian cysts. Experiments by M. M. Dubar and Remy show that albuminous liquids injected into the peritoneum of the rabbit are completely absorbed in about thirty-six hours.

Thus the peritoneum rapidly absorbs liquids injected or spontaneously poured into its cavity and as I have just told you, when these liquids are inoffensive absorption gives rise to no accident; but it is quite otherwise when these liquids are irritant or septic. In the first case the serous membrane is inflamed—in the second, to the inflammation is added septicæmia. Amongst irritant liquids I will name fecal matter, urine, bile, the contents of cysts, which by divers mechanisms may penetrate into the peritoneum. Pus and putrified blood belong to the category of septic liquids and their presence in the peritoneum may cause death in a few hours.

In review, you see that alone, irritant or septic substances are to be dreaded in the peritoneum; so the capital point in an abdominal operation will be to prevent the penetration of these harmful liquids or of those which may become such.

To prevent the introduction of liquids, you have at your disposition Hæmostatic forceps, and sponges, flannel or simple napkins, all these substances have been employed. If in spite of all your precautions these liquids have penetrated, which is so to speak inevitable in a great number of cases, you must carefully make the toilette of the peritoneum. Lastly, you will rigorously employ all antiseptic precautions to avoid the ulterior putrefaction of the liquids which you will not be able to take away in spite of all your care. Here is a point which you should never forget: It is that you have to preoccupy yourself rather with the qualities of this liquid, than with its

quantity, which may have no importance if the liquid is exempt from all cause of fermentation. This is not all yet: The operation finished, there may be produced, and in fact there is produced by various sources, and in a secondary manner, a certain quantity of liquid susceptible of putrefaction. To obviate this, you can establish drainage. This question of drainage of the abdominal cavity, after the ablation of a tumour, has greatly occupied the minds of surgeons, and has given rise to the most diverse opinions. It has especially presented itself consequent upon difficult or painful operations which have occasioned the fall of a hurtful liquid into the peritoneum, or which have left after them a bleeding surface capable of pouring out a certain quantity of liquid which may undergo putrefaction.

In these conditions many surgeons have counselled these drainages to be made either by the abdominal wall alone, the drainage tube simply plunging into the peritoneal cavity, or by the abdominal wound, and by the vaginal cul-de-sac, that is to say, a complete drainage. Some operators have even proposed, on Bardentleur's example, to practice drainage always as a prophylactic for some hours, or some days, in order to give exit to liquids left in the peritoneum, or to those which are formed a little after the operation.

This drainage is often useful, sometimes indispensable; but it presents a great danger, which consists in allowing foreign substances to penetrate by this open canal into the peritoneum, and thus to frustrate the desires of the surgeon. Vaginal drainage is especially liable to this reproach. Let us add that it is often difficult to place these drainage tubes free from contact with the air in spite of the dressings disposed over their orifice. To practice drainage one may make use of tubes of caoutchouc (Chassaig-nac's tubes) or of glass (Koeberlé's). Finally to render the entrance of air more difficult, and to permit at the same time the exit of the liquid, Hegar and Kehrer have employed the one glass, the other rubber tubes, which they fill with disinfected absorbent wadding which is changed each time it is full of liquid, or until it has by capillarity soaked the inner dressings with liquid.

Finally where drainage was impracticable, Koeberlé in an ovariotomy case, where

septic phenomena supervened re-opened the abdomen and withdrew 230 grammes of putrid liquid which he had recognized by the vaginal touch, carefully made the toilette of the peritoneum and his patient thus escaped a death which appeared inevitable.

Another surgeon (Netter) advised that when septicity was suspected, that the peritoneum should be freely opened and washed with warm water.

I believe by these examples that you have been made aware of the interest which surgeons have taken *à propos* of these liquids, primary and secondary, and of their dangers to the peritoneum, and the general condition of the patient. Let us now see if there are any means by which their production may be avoided.

Wagner, in a recent work has demonstrated that as a rule we do not sufficiently take into account in the operation in which the abdominal cavity is opened, the intra-abdominal pressure. This pressure which normally is equivalent to some millimetres of mercury, diminishes sensibly during and after the operation. The importance of this pressure is however considerable, for on the one hand it prevents liquids from being effused too easily into the peritoneal cavity, and on the other hand facilitates the resorption of those which might be poured out from the serous membrane. You will see then how useful it is to establish an energetic compression after the operation by means of a thick layer of wadding, and by a well applied cincture of the body. This energetic constriction of the body is always recommended after abdominal operations, principally when one has taken away a voluminous tumour, such as a cyst of the ovary. You will also find, in this practice, a means of preventing the transudation of liquids which takes place from the surface of intra-peritoneal wounds, liquids which may undergo the phenomena of putridity, if, in spite of your care, they become mingled with hurtful substances. To attain the same end, that is to say, to prevent the production or the secondary exhalation of putrescible liquids, you ought in some circumstances to cauterise the wounds or even the pedicles of the tumours which you have taken away either with the hot iron or with the perchloride. The fire substitutes a dry surface for a moist one, and thus prevents the exhalation that you should dread so much.—*Le Prog. Méd.*

TREATMENT OF NÆVI.—W. Martin Coates, F.R.C.S., Eng., has found (*Brit. Med. Jnl.*) the plan of treatment elaborated by the late Mashall Hall, to be safe, painless, and certain, and without scars following. The method is suitable for superficial venous nævi, and consists in causing occlusion of the vessels by deposition of lymph. A cataract needle is introduced about a line from the circumference of the nævus, and passed to the extreme edge of the tumour, it is then withdrawn almost to its point of entrance, and again thrust through the tumour at about a sixteenth of an inch from the previous track. The incisions take a fan-like shape; the needle is to be kept as close to the surface as possible. In a few months a white spot is all that remains of the nævus, there being no cicatrix or depression. The bright scarlet or arterial nævus requires more pronounced treatment; for this purpose a large needle with a blunt flat end was made and pushed through the nævus, tearing through the vessels. The flat end of the needle being kept at right angles to the skin, ecchymosis results, then white spots form in the centre of the nævus, and gradually coalesce, leaving a white mark, but no scar or depression. When the nævus projects more than one sixteenth of an inch, he finds this process does not work. He then injects undiluted tincture of iodine. The needle of a hypodermic syringe containing a sufficient quantity of tincture of iodine is introduced at about a line from the circumference of the tumour, and the point made to reach its centre. The piston is then slowly sent home, the iodine being forced into every part of the growth, which gradually hardens and shrivels away.

A CASE OF CHRONIC LEG ULCER CURED BY AN ATTACK OF PHLEGMONOUS ERYSIPELAS.—B. F. Nicholls, M.D., in the *Philad. Med. Times*, records a case of a woman 72 years of age who had had an ulcer of the leg for 15 years, during which time though it never healed had never been troublesome. On the first of February she was laid up with an attack of erysipelas which assumed a phlegmonous character, numerous abscesses forming and discharging quantities of fetid pus. The erysipelas was treated by iron, quinine, and nourishing diet with some stimulants. As the abscesses began to heal carbolic zinc ointment was freely

applied. On the 1st May the ulcer had become flat at its edges, in a fortnight it had decreased to the size of a three-cent piece, and gradually healed, so that by July 30th the woman was entirely well, no stiffness, no ulceration, and was able to walk without assistance.

R. MARCUS GUNN, M.B., F.R.C.S., in the *Brit. Med. Jnl.* gives his experience of sickness after anæsthesia at Moorfields Ophthalmic Hospital from 1876 to 1880. He is inclined to consider *age* as the most important factor in the production of after-sickness. He finds the liability to sickness at its maximum about the commencement of puberty, and it gradually diminishes toward both extremes of life. Ether gave the largest percentage of sickness, and chloroform the least; but chloroform was given at the extremes of life. Ether sickness seldom lasts long after the stomach is emptied. Chloroform sickness often continues for several hours and leads to great exhaustion. Food should be given about four hours before operation; too long a fast is disadvantageous.

ETIOLOGY OF ELEPHANTIASIS ARABUM.—Max Bockhart gives the history of a woman who came to the Hospital at Wurzburg, suffering from a severe attack of erysipelas, with which the patient was seized on 25th August, 1882. By 4th September she was nearly recovered from her trouble. In October of the same year she returned complaining of a swelling in the leg previously affected. In January, 1883, the diagnosis of elephantiasis became certain. The microscope shewed the lymph channels to be blocked up; the appearance was that of adenitis. In this case there is no doubt of the fact that the attack of erysipelas caused the elephantiasis.—*Monat F. P. Dermatol.*

LOCAL ANÆSTHESIA FROM CARBOLIC ACID.—Dr. E. F. Cordell, in the *Maryland Med. Jnl.*, advocates the use of a solution of carbolic acid for local anæsthetic effects in minor surgical operations. He freely bathes the parts to be incised or punctured with the following solution: Crystallized carbolic acid gr. xxiv.; distilled water, ʒj. He details two cases in which abscesses were opened in extremely sensitive subjects without the occurrence of the usual signs of pain.

ENTRANCE OF AIR INTO VEINS DURING SURGICAL OPERATIONS.—Mr. Fred. Treves, in the *Brit. Med. Jnl.* in an interesting paper gives a short account of this untoward accident and details a plan of treatment adopted by him and successfully carried out in two cases. The accident is greatly to be dreaded. It occurs most frequently if not altogether in the veins of the neck and axilla, and is caused by the aspiratory movements of the thorax, acting upon a vein partially divided. For the accident to occur it is necessary for the mouth of the vein to be held open either by being partially divided or from inflammatory adhesions, or from being included in the substance of a tumour, or from peculiar relations to normal structures as in the axillary vein to the costo-coracoid membrane or in the relations of the jugular veins to the cervical fascia. The entrance of air is accompanied by a hissing noise and sudden terror, severe dyspnoea, failure and irregularity of the pulse and collapse. About two-thirds of the cases die in a few hours or days. Some cases, however, recover. The fatal result appears to be due to the rapidity of the entrance of the air rather than to its amount. Death is caused by arrest of the pulmonary circulation, the mixture of blood and air preventing the functioning of the tricuspid and pulmonary valves. Mr. Treves found his treatment upon the observation of the fact that the accident occurs in what may be termed dry wounds. He has an attendant ready with a sponge full of water, which is squeezed into the wound immediately upon hearing the hissing noise. Then during the next expiratory effort forcible pressure is brought to bear upon the thorax, expressing the air as much as possible. When all the air has been forced out, the wounded vein is to be seized and either entirely divided or ligatured, always during the movements of expiration. He gives two cases in which he thus treated successfully this serious complication. The first was a child in whom tracheotomy was performed; immediately after the wound was sponged out, a hissing noise was heard and the child became collapsed and to all appearance dead. The wound was at once filled with water, and forcible pressure made upon the thorax during the expiratory movements. The vein and structures were then seized with forceps and divided completely. The child recovered. The second case was in a man

aged fifty. The common carotid was about to be ligatured. The neck was short, thick and fat. Before the ligature was applied a hissing noise was heard, the wound was at once filled with water; the thorax during the next expiratory movement was forcibly compressed. The vein was then seized and clamped. No further trouble ensued. The patient in each case was anaesthetised.

HOT WATER A RESTORATIVE IN CHLOROFORM NARCOSIS—A. Holmes, M.D., in the *N. C. Med. Jnl.*, calls attention to the value of hot water applications in overdosing with chloroform. He dips folded cloths or towels in water as hot as can be borne and applies them to the head until reaction is established. He ascribes the good effects to the shock and warmth, causing a rapid return of blood to the brain.

Midwifery.

AN INFANT FIFTY-SIX YEARS OF AGE.—M. Sappey communicated to the Academy of Sciences the following fact: When an infant has arrived at its term of development, if any obstacle prevents its expulsion it perishes and becomes a source of great danger to the mother who usually dies. In certain exceptional cases the foetus acts as a foreign body to which the surrounding tissues become accustomed and a new pregnancy may supervene and follow its normal course. The case of Toulouse, where the child remained in utero, for 26 years; of Sens for 28 years; of Pont-à-Mousson for 30 years, for 31 years in that of Joigny; for 47 years in that of Leinzel, in Swabia. To explain these cases two theories have been proposed. The older is that of petrification—the infants becoming calcified—observed facts do not support this theory. The second theory is that of progressive dessication—but the fact I am about to relate sets aside this theory.

The mother became pregnant at the age of 28 years, proceeding until 84 years of age and having been perfectly well all this time she was admitted into the Alms house of Quimperlé and died three weeks after her admission. M. Beaugendre under whose care she had been, performed the post-mortem. On incising the abdominal wall a tumour was found in the right fallopian tube. The tumour was constituted of a cyst with extremely hard walls, its sur-

face unequal and bosselated. The cyst was taken away and its walls divided into two equal parts with a saw. In this envelope, by all its attributes belonging to the mineral kingdom, there was a child, and this child during its long captivity had undergone no alteration. The child was in the ordinary position, the limbs flexed upon the trunk and the head upon the thorax. The pupillary membranes completely developed, attested that it was six or seven months of age. The skin, the superficial organs, the viscera situated in the great cavities, all the muscles and soft parts had retained their consistence, their suppleness and their normal colour. The foetus appeared as if it had just gone to sleep. M. Sappey considers that the foetus owes its preservation in the cyst to its being protected from the ingress of atmospheric germs, like the bottles of blood and urine presented to the Academy by M. Pasteur, which had continued to keep sweet by the prevention of the admission of atmospheric germs.—*Gaz. des Hôpitaux.*

M. LE FORT'S OPERATION FOR PROLAPSE OF UTERI.—M. LeFort starts from the principle, that before the uterus itself passes the *vulva* there is for some time previous a cystocele, which is produced by a prolapse of the anterior vaginal wall, which falls backwards and glides upon the posterior wall, bringing with it first the basfond of the bladder, then its posterior surface, and with it, the uterus, which is attached to this portion of the bladder. The vagina is prolapsed like the inverted finger of a glove. The posterior wall would remain last in place at its inferior extremity. To place an absolute barrier to the inversion of the vagina M. LeFort says that it suffices to fix these two walls to one another, so as to prevent the gliding movement. By establishing between these walls, in the median line, a series of adhesions, which would partition the vagina from above downwards, the anterior wall would be retained in place, and all movement of descent prevented. In a case of this nature, on which he operated lately, the uterus being completely without the vagina, both walls were vivified in the median line. The vivification measuring on each wall a length of five or six centimetres. Care was taken not to cut the tissues too deeply, for fear of wounding in the anterior wall, the bladder, and in the posterior, the rectum. Once that we have long-

tudinal bleeding surfaces on both walls it only remains to put these in contact and cause them to adhere. M. LaFort reduces the uterus just sufficiently to allow him to bring in contact the upper extremities of the raw surfaces, which he fixes by sutures. Then a little further reduction to allow of another suture below the first, and so on until the tumour is entirely reduced and the whole vagina closed from above downwards by a longitudinal and median partition formed by the application of the points of suture.

The results of the operation were most satisfactory. The patient was as comfortable as possible, and at a slight expense had obtained the cure of an infirmity as painful as it is disgusting. For although many points of suture may give way it appears probable that the adhesions produced will be sufficient to prevent a renewal of the prolapse.

This method, which has had several complete and durable successes in the short time since it was put in practice, possesses the advantage of placing no obstacle to copulation. According to what has been observed in cases of congenital partitions of the uterus, when we have a bifid vagina, with a median and longitudinal partition, it may be supposed that parturition will in no way be hindered. The vagina gives way at its sides to such an extent that its dilatation in this sense is, so to speak, indefinite, and each of its lateral halves would suffice for the passage of a child's head, otherwise all that would be feared would be a tearing without grave inconvenience, except that it would necessitate a new operation of the same kind, if the adhesions were destroyed in their entire length.—*Gaz. des Hôp.*

M. Loviot considers that the diagnosis of pregnancy can be made with certitude even in the first three months before the foetal signs are present. He relies upon physical maternal signs revealed by palpation and the touch combined. By this means a tumour is recognized as being formed by the uterus modified by pregnancy. The superior segment of the uterus felt above the symphysis is a rounded depressible elastic tumour. The inferior segment is lowered flattened and enlarged and forms around the base of the cervix which is a protuberance, a characteristic ring. The consistence of the gravid uterus is soft, supple and elastic, gives to the finger on pressure the sensation of a

rubber bulb, this sensation should be felt on all accessible portions of the uterus. M. Loviot avers that neither congestion, metritis, fibromata, even softened, give the same sensation. The presence of a fibroma along with pregnancy is no absolute bar to the diagnosis for the notions of consistence will be sufficiently preponderant to fix the diagnosis surely.—*Jour. de Méd.*

THE

Canadian Practitioner,

(FORMERLY JOURNAL OF MEDICAL SCIENCE.)

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, 1883.

MEETING OF THE CANADA MEDICAL ASSOCIATION.

The recent meeting of this Association at Kingston was in many respects a successful one. The supply of papers was amply sufficient and fairly up to the mark as a whole, while the discussions which followed the reading of papers were in some cases very interesting and instructive.

The reception of the members by the Medical Profession was a most cordial and generous one. Through the kind and hospitable attentions of the Kingston physicians, the visiting doctors, one and all, enjoyed exceedingly their stay in this fine old town. As far as the social aspect is concerned the meeting was therefore a most excellent one.

There were about eighty present, a very small number indeed for a Dominion Society, even when we make proper allowances for all the drawbacks necessarily arising from the magnificent distances between the different portions of Canada. Toronto, Hamilton, London, and Montreal appear to be the only cities in the country which can

muster more than a hundred members at any meeting. Such being the case it becomes a question whether or not it would be advisable to confine the meetings to these four places. Whatever the intrinsic merits of such a question may be, it is not at present likely that such a rule will be established. The majority of the members appear to be anxious to keep the Association as far as possible Canadian in the broadest sense of the term, and to retain this character it is necessary to recognize all portions of the Dominion. A cordial invitation from Winnipeg was extended to the Association to hold its next meeting in that city, and although Montreal was chosen for 1884, it is considered quite probable that in 1885 we may enjoy the hospitality of the Winnipegers.

A separate sanitary association was formed with Dr. Sweetland, of Ottawa, President. So much attention is now being paid to sanitary matters that such an organization had become almost a necessity, as there was not sufficient time at the general meetings for the proper discussion of many important questions continually arising in connection with this subject.

The military Surgeons also held a separate meeting at which certain resolutions introduced by Dr. Thorburn, of Toronto, were passed. These resolutions will be found in our account of the proceedings, and we fancy all the military surgeons in the country will heartily endorse the action of those present at Kingston, who resolved to ask for more consideration on the part of the government towards the surgeons connected with the militia.

One member in discussing the subject of medical ethics certainly displayed a vast amount of ignorance and presumption. He should have been expelled from membership at once, but the good-natured indifference shown by the Association was perhaps better, as it is always a pity to place such a man in a position where he may possibly pose as a martyr.

The general management of the meeting was excellent and reflected great credit on those two able and efficient officers, the President and General Secretary.

ISOLATION HOSPITAL.

Visitors to the Toronto Exhibition cannot fail to have profited by the inspection of the sanitary display exhibited there by the Provincial Board of Health. Apart from the apparatus the building which contained them merits close attention and will repay minute investigation. It is a modification of the Isolation Hospital, viewed by the International Sanitary Congress held at Geneva in 1882. The following is a brief description of it for the benefit of those of our readers who had not the pleasure of visiting the Exhibition:

The building is intended to show to Municipal Health Authorities a model on a small scale of a Hospital for infectious and other diseases. The one shown is not adapted, as it at present stands, for winter weather; but could be modified so as to be serviceable in winter as well as in summer. Its length is 20 ft., width, 16 ft., height of the walls, 11 ft., and from floor to ridge, 16 ft. It is portable, the several parts being bolted together, the roof and floor dividing lengthwise in the centre. The floor is made of hard wood (maple) tongued and grooved, and is oiled. It is raised about 2 ft. 6 inches above the ground, the frame-work being supported on posts. The walls consist of sail cloth stretched on frames or panels, three on each side. These panels revolve on horizontal pivots placed a little above their centres; they are opened and closed by cords. When fully opened, the patients are to all intents and purposes in the open air, nothing existing to remind them of the building but the roof over them, a little surbase rising a few inches from the floor, and two upright scantlings on each side. Near the roof in the ends is lattice work provided with shutters, and in the roof are Venetian

louvre, capable of being closed up when necessary. The advantages offered by such a building are thus described by Prof. Juliard in speaking of the one at Geneva, "1st. They supply a very superior aeration to that which the most perfected system of ventilation can yield. The Hospital smell which prevails more or less in every (other) Hospital is never perceived * * * 2nd. The abode in these tents is very agreeable, and the patients are more cheerful and happy than in the wards of the Hospital. 3rd. They afford an opportunity of completely emptying the wards of the Hospital for nearly half the year, and we have thus in Geneva a summer and a winter Hospital. This periodical emptying of the (surgical) wards which thus are unoccupied each year between five and six months, and can during that time be thoroughly aired, disinfected, and repaired, is a consideration to which I attach the utmost importance as one of the most powerful means of completely purifying and rendering a hospital more healthy. Thanks to this system, we were enabled to free ourselves from the Hospital gangrene in 1871. Since that period we have not been troubled with any epidemic. The only objection that can be urged to these tents or huts is that the patients are exposed to cold and variations of temperature; but experience has taught us that this fancied objection was not a real one, as I have never noticed any bad results." In regard to this last objection we have already stated that by some one of several feasible modifications a double wall of canvas can be secured as in the winter tents used in the North-West, the second wall being removable in summer.

At the Geneva Congress, Dr. Drouineau, described the Hospital tent employed by him. The panels of his tent could be raised leaving nothing but the floor and roof and the skeleton supports. In winter the double walls could be replaced, and methods adopted of heating by stoves or

otherwise. Similar hospital tents are in use in Vienna by Prof. Billroth.

Such is the Hospital as exhibited by the Provincial Board of Health. It is worthy of trial by municipal health authorities, and others. It is not expensive, the cost of the tent upon the Exhibition Grounds being \$300.00. It might advantageously be experimented with in Toronto. There is ample room in the grounds of the Hospital in front of the Burnside for the erection of one or more, which would serve for the reception of the lying-in patients during the somewhat numerous closures of that institution, thus affording abundant opportunity for the complete and satisfactory cleansing and disinfection of the Lying-in Hospital. This, with a staff entirely shut off from direct communication from that of the General Hospital would diminish the danger and lessen the frequency of the outbreaks of metria which have for some time given a sombre character to the reputation of the Lying-in Hospital.

MEDICAL STUDENTS.

Medical students in all parts of the world are *getting into line* for the work of the regular session. To some of the citizens of Toronto the fact that some four hundred of these blood-thirsty bone-hungry individuals are now being let loose in our midst may cause considerable trepidation. When to the comparatively mild and moral medicos are added the many hundreds of *Arts men*, *Divinity fellows*, and other varieties, the city must in many ways feel the effects of such a vast influx. In the past there has occasionally been some bad feeling between the "town and gown." In a few instances some of our valiant policemen have "whacked" the boys' heads rather unmercifully with their batons, while on the other hand the boys have been known to act rather disrespectfully towards the "bobbies." Other reminiscences of an equally pleasing character might be recalled, but for the present we will refrain.

For our own part we extend to all students a most cordial and hearty welcome. We know something about their varied trials and vicissitudes, their labours and relaxations, their joys and sorrows, their hopes and fears, their early generousities and later impecuniosities. We know how highly they appreciate a kindly welcome and a helping hand. We know how worthy they are of such assistance. It is true, and hardly to be wondered at, considering the many hundreds who are for the first time away from home influences, that many errors are committed. We wish not to justify these, but we dislike exceedingly to see them grossly exaggerated as they frequently are. From a worldly point of view they deserve the kindest consideration at the hands of our citizens. They leave a large amount of money in the city during their residence, and at the same time they by their attendance at our various colleges and schools year after year have given Toronto the proud position of being the great educational centre of Canada.

To the medical students, with whom we are now especially concerned, we may say, your friends are many. They will be found not only in your colleges, but also among the clergymen of all denominations, and the general public including *both sexes*. May we venture to ask you to conduct yourselves at all times in a way which will meet the approbation of those interested in your welfare. College songs are excellent in their way but not suited for midnight hours in our public streets. Consider street lamps as things not superfluous and touch not *doctors' signs*.

THE TORONTO MEDICAL SCHOOLS.

We are informed that an unusually large number of students are registering at the Medical Schools of Toronto. We are pleased to know that they are making the most vigorous efforts to keep fully abreast of the times in all departments. The arrangements recently made for clinical

teaching are especially complete. In addition to the outdoor clinics, indoor clinics, and bedside instructions, the programme has provided for systematic teaching in the various special departments such as diseases of women, diseases of the eye and ear, throat, skin, etc. In framing this comprehensive system all the *schoolmen* of the hospital have been utilized including the specialists in midwifery, eye and ear disease etc.; and as a consequence the students derive an increased advantage from the fact that they are able to enjoy all the privileges thus placed at their disposal without any reference to the school to which they belong.

POISONING BY MISTAKE.

Another of these sad cases was added to the *long list* in September. Mr. Baxter, of Mount Brydges, obtained some powders from a drug store which should have been composed of santonine. By a *mistake* of the clerk strychnine was given instead, and its administration caused the death of two of Mr. Baxter's children. The druggist's clerk has been arrested under the charge of manslaughter.

It is a very serious thing to think that the lives of patients should be imperilled when going to drug stores for even the most harmless medicines. Young men are often careless even to a criminal extent, while the proprietors often show an amazing indifference to the safety of the public by placing in close proximity, and in similar bottles, what may be called safe medicines and the most deadly poisons. Druggists should be compelled to put all drugs which are poisonous in large doses in a separate place, and at the same time in receptacles with distinguishing characters of colour and shape. They might, for instance, be kept in red triangular shaped bottles in a closed cabinet while no other drugs were put in similar bottles. Will some of our medical men in the Legislature attend to this matter?

THE 100th anniversary of the Medical School of Harvard University, will be celebrated on the 17th inst., and at the same time the dedication of its new building in Boylston street, will take place. The celebration will be held in Huntington Hall, Massachusetts Institute of Technology, at 11 a. m., when the President of the University will deliver an address, followed by an oration from Oliver Wendell Holmes, and the presentation of a portrait of Prof. Holmes, and a bust of Prof. Henry J. Bigelow. The second part of the programme will be carried out at the Medical College, consisting of prayer by Rev. Dr. Peabody, dedication of the building, reception of the Faculty, and exhibition of the building.

WE have received No. 2 of the 1st vol. of the *Atlantic Journal of Medicine* published in Richmond, Va., with Dr. R. B. Stover and Henry G. Houston, Editors and Proprietors. The contents of this number comprise three original articles, of considerable interest, a full account of a meeting of the Richmond Academy of Medicine, and a number of well selected articles upon medicine, surgery, and gynaecology, and an editorial department dealing with various questions of the hour. We welcome the journal to our exchange list, and express our hearty wishes for its success.

Two new Medical Schools have been established in Buffalo, says a correspondent of the *N. Y. Med. Jnl.* One under the presidency of Dr. John Cronyn, is the medical department of the university of Niagara, late the "Seminary of Our Lady of Angels," and is a Romish Institution with a non-sectarian faculty. There are some good men on the staff. The other is a Post-graduate school most of whose professors are just far enough out of their teens to get diplomas. The object of the school is "to polish off the graduates of the other Buffalo Medical Schools."

THE *American Psychological Journal* is the name of a new quarterly, issued by the National Association for the Protection of the Insane and Prevention of Insanity, under the editorship of Dr. Joseph Parrish, of Burlington, N. J., and numbering such names as Dana, Chevallier, Godding, Banuister, and Shaw, amongst associate editors. It is published by P. Blackiston, Son & Co., and the number which has reached us presents a very creditable appearance.

LA PSICHIATRIA, LA NEUROLOGIA E LE SCIENZE AFFINI, is the lengthy and comprehensive title of a new Italian Quarterly, published under the supervision of Prof. G. Buonomo, of the Provincial Insane Asylum for Naples, and edited by Dr. L. Bianchi. It is well issued and like most Italian Journals, presents its readers with an admirable summary of the progress of science in the departments of which it treats.

THE CANADIAN PHARMACEUTICAL JOURNAL, appears in a new and improved dress, and presents an enlarged and more imposing shape. A change in proprietorship has also taken place, and we congratulate the editor, Mr. Shuttleworth, on the excellent appearance of the first number of the New Series, and his manifest determination to keep in the van of progress.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—This Association will meet in Montreal, August 27th, 1884. By a resolution passed at Kingston, the next meeting of the Canada Medical Association will be held in Montreal a few days before the meeting of the British Association

INDOORS AND OUTDOORS, is the official organ of the National Association for Sanitary and Rural Improvement. It is published monthly at a yearly subscription of 50 cents, and being well conducted, and attractively issued will doubtless do much towards the popularization and dissemination of sanitary information.

Meetings of Medical Societies.

MEETING OF THE DOMINION MEDICAL ASSOCIATION.

The Association met in Kingston, on Wednesday Sept. 5th, at 10 a. m., the President, Dr. Mullin, of Hamilton, in the chair.

ADDRESSES OF WELCOME.

Mayor Livingston, on behalf of the city, in a brief address accorded a welcome to the Association, after which Dr. Sullivan tendered a welcome in behalf of the local physicians. Another welcome was extended by Dr. Williamson, in the absence of Principal Grant, of Queen's College.

In the absence of Dr. Robillard, Dr. Sheard was appointed acting treasurer by the President.

VISITING DELEGATES.

Dr. Hurd, of Pontiac, Mich., Dr. Walker, of Detroit, a delegate from the American Medical Association, and Prof. McLean, of Ann Arbor University, were welcomed and invited to take seats on the platform.

REPORTS OF COMMITTEES.

Dr. Canniff, of Toronto, as chairman of the Special Committee on Vital Statistics, reported that the committee had never held any meeting, and that he had been frustrated in continuing those efforts by which a grant had been obtained from the Dominion Government for collecting vital statistics. He read letters showing that this had been caused by Dr. Larocque, Dr. Playter, and others, calling a convention at Ottawa and ignoring the special committee which had secured the grant.

Drs. Playter and Larocque explained their connection with the convention referred to, and showed that the matter was entirely an oversight. They were under the impression that the Special Committee, of which Dr. Canniff was president, had ceased to exist after last year's meeting.

Dr. Larocque, of Montreal, read a report from the Committee on Climatology and Public Health.

A vote of thanks was tendered to Dr. Larocque for his able report.

COMMITTEE ON NOMINATIONS.

Drs. Botsford, G. E. Fenwick, Grant, Graham, Rogers, Bray, Worthington, Malloch, Glover, Eye, Sweetland, Canniff, Old-

right, and the President were appointed a Special Committee on Nominations.

Dr. Metcalfe extended an invitation to the members to visit the asylum at their convenience, after which the meeting adjourned to meet at 2 p. m.

AFTERNOON SESSION.

The afternoon session opened at 2.30, and the first business was the President's Address.

The Association was then divided into sections, with Dr. J. E. Graham, of Toronto, Chairman of the Medical, and Dr. Tye, of Chatham, Chairman of the Surgical Section.

MEDICAL SECTION.

Dr. Playter read a paper on "Diet as a Therapeutic Agent" in both acute and chronic maladies.

Drs. Graham and Reeve referred to the importance of diet, especially fruit, as a cause of diseases of the skin and eyes.

Dr. Sheard, of Toronto, presented a specimen of invaginated and gangrenous bowel. The ileum to the extent of nine inches was gangrenous and invaginated in the caecum and colon. There was also a right inguinal hernia of long standing. Dr. Burns had performed abdominal section, but the patient died shortly after the operation.

Dr. Botsford's (St. John) paper on "Inflation of the Lungs by Traction, Abdominal and Thoracic," gave rise to a long discussion. Dr. Botsford in the treatment, recommended the use of traction by a plaster which adheres to the abdomen. The abdomen could be drawn out by means of the plaster, thus forming a cavity for air.

Dr. Grant said a patient in the Hospital at Ottawa was about to collapse after having taken chloroform, but being stood on his head he revived almost immediately.

Dr. Burnham, of Toronto, stated that in the Royal London Ophthalmic Hospital there had been no deaths caused by anaesthetics for seven years. When serious symptoms arose, artificial respiration was employed together with the administration of amyl nitrite by inhalation.

Dr. Dupuis, of Kingston, read a paper on the "Relations of Medical Men to Each Other, and to Each Others Patients," which consisted of childish twaddle very unethical in its character.

Dr. Metcalfe, of Kingston, read a paper on "Hyoscyamine in the Treatment of Mental diseases." He thought the crystalline

was the better of Merck's two preparations. He gave 1/12 to 1/8 grains hypodermically. It possessed two great advantages, promptitude and certainty. He had never found any bad effects produced and the patients often derived great benefit. It was especially beneficial in severe mania and in fact in all forms of maniacal excitement.

Dr. Hurd, Pontiac, Mich., endorsed Dr. Metcalfe's views. The drug seemed to change the mental action and was beneficial in melancholia. He gave small doses of 1/48 to 1/24 grains.

Dr. Daniel Clark, of Toronto, thought general practitioners should use it more frequently in cases of delirium tremens, acute mania, and melancholia with suicidal tendency.

Dr. Thorburn suggested caution in the use of large doses.

Dr. Graham, of Toronto, read a paper on "Leprosy in New Brunswick."

SURGICAL SECTION.

Dr. Worthington, of Clinton, read a paper on "Retroversion and Retroflexion of the Uterus."

Dr. S. Campbell, of Seaforth, on "Anomalous Case of Femoral Hernia."

Dr. Fenwick, Montreal, one on "Imperforate Anus with Fæcal Fistula." Short discussions were entered into on each paper being read.

Dr. McDonald, of Londonderry, N.B., reported a case of paracentesis pericardii, in which he had removed 20 ounces of pus, after which recovery took place.

Dr. Bell, of the Montreal General Hospital, gave the results of recent experiments, in which he had removed portions of the bowels in dogs, varying in length from a few inches to two feet. Generally the animals recovered, and when killed afterwards, perfect union was found to exist without narrowing of the gut:

THURSDAY MORNING.

The chair was taken by the President at 10.45 a.m. The minutes were read and approved.

Dr. Fulton, Chairman of the Committee on Necrology, had no lengthy report to make. The great majority of the deaths were between the ages of forty and sixty, which was rather remarkable, as that was the age of most vigorous medical practice. The list was as follows: Hon. Drs. D. Campbell, of Port

Hood, N. S., and Dumochel, of Quebec, and Drs. Scott, Montreal; John Fraser, Fout Hill; Edwin Henwood, Hamilton; Wm. H. Bacon, Brantford; J. N. Reid, Thornhill, formerly Professor of Physiology in the Medical Department of Victoria University; Samuel Richardson, Galt; R. H. Russell, Quebec; Milne, Claremont; S. Shaw, Dalhousie, N. B.; Jas. A. Sinclair, Colborne; L. E. Olivier, St. Ferdinand; T. R. Fraser, Pictou, N. S.; Robt. Thompson, St. Stephen, N. B.; Duncan McGregor, Winnipeg; Joseph Clarke, Oshawa; James McG. Campbell, Sherbrooke, N. S.; Joshua Chamberlin, Frelighsburg, Que.; J. S. Balmer, Princeton; Fred. B. Going, St. Thomas; A. Moren, Halifax; J. J. Clarke, Barrington, N. S.; H. Kollymer, Montreal; W. D. Ross, Pembina; G. E. Gascoigne, Brockville; J. A. Stevenson, London; Jos. A. Whyte, Montreal; Jonathan Woolverton, Grimsby; McIver, Pembroke; James A. Hunter, Newcastle; Robert Eustace, Canso; A. Chisholm, Alexandria, Ont.; James A. Sievwright, New Westminster, B. C.; Wm. Ruddeck, St. Martins; E. Rosseau, Quebec; Norman McGregor, Lucknow, and Edward Laberge, St. Philemon, Que.

Dr. Thorburn, Chairman of the Committee on Education, reported that nothing of importance had occurred in connection with medical literature. Several changes were proposed in other directions, the chief of which were, a summer course of study, and the establishment of female colleges. Another matter of importance to the profession was the change which had just been made in the law of New Brunswick. Formerly any graduate of a recognized medical college in Canada or the United States was allowed to practise on paying a registration fee, but now practitioners will have to undergo an examination such as is exacted in Ontario, which would have the effect of keeping her young men at home.

The President directed the attention of the meeting to the new Sanitary Society which was to be formed in this city to-morrow, and asked that any members who were leaving the city should leave their names with the Secretary that they might become members of the new society.

The Secretary announced that Dr. Neilson, Surgeon-Major of B Battery, would like to meet with all doctors who had any connection with military matters.

Dr. Osler read a paper on "Some Points

in chronic Bright's Disease," in which he referred: 1. To the fact that so many cases of chronic Bright's Disease were for a long time unsuspected, and the physician was first called to see the patient with some grave manifestations, cerebral or otherwise. Cases were given to illustrate. 2. Some peculiarities in the onset of the uræmic symptoms, of which two cases were given; one, in which violent mania ushered in the uræmic attack in a man in whom no kidney trouble had previously been suspected, and in a second, a woman in whom pronounced hysterical symptoms preceded an attack of uræmic coma. 3. The occurrence of fatal uræmic symptoms at a very early stage of renal cirrhosis.

Two instances of sudden and fatal uræmic symptoms in apparently healthy men, and the condition of the kidneys was such that they would have passed a superficial inspection, but on microscopical examination changes were found in the form of atrophy of some of the tufts and slight epithelial alterations.

Dr. Graham, of Toronto, thought that the sphygmograph was frequently of great diagnostic value in these obscure or unsuspected cases, and referred to a remarkable case of chronic Bright's Disease, which had come under his observation, in which there were pronounced uræmic symptoms, and finally death, and yet the amount of urea excreted was not at any time below the normal quantity.

Dr. Holmes, of Chatham, read a paper on "Erosions of the Female Urethra."

Dr. Major, of Montreal, read a paper on "Tumours of the Naso-pharynx," in which he gave a description of the different varieties found with modes of removal.

Dr. Oldright, of Toronto, exhibited a specimen of fibro-myxoma of the thigh, and read notes of the case.

PUBLIC HEALTH SECTION.

A special meeting of those interested in sanitary matters was held, at which a Sanitary Association was organized.

Dr. Sweetland, of Ottawa, was appointed chairman, and Dr. Campbell, of Scaforth, secretary.

During the afternoon the members went an excursion among the Thousand Islands.

MILITARY SECTION.

The doctors who are connected with the militia held a meeting on Thursday at which they discussed their various relations to the

militia force of the Dominion and decided to ask the Association to send the following recommendations to the Minister of Militia.

1. The organization of a Militia Medical Department with a chief medical officer at headquarters.

2. That the senior medical officer in each military district be appointed Principal Medical Officer.

3. That substantive rank be granted to all military medical officers.

4. That the medical department shall be supplied with all the necessary equipment for the use of the force when required.

5. That it be further submitted to the Hon. the Minister of Militia the advisability of changing the titles and designations of Canadian medical officers so that they will correspond with those held by the medical officers of the British service, thus: Surgeon instead of Assistant-Surgeon; Surgeon-Major instead of Surgeon; Brigade-Surgeon instead of Surgeon-Major; Deputy Surgeon-General, etc.

6. That the scale of pay and allowances of the Militia Medical Department be assimilated to that of the corresponding ranks of the British Medical Department.

The report was presented by Surgeon-Major Thorburn, seconded by Prof. Gardner, of McGill College, Montreal, and passed unanimously.

FRIDAY MORNING.

The Committee on Nominations brought in their report, which was accepted without amendment. As a consequence the following officers and members of committees were elected:—

President—Dr. Sullivan, of Kingston.

Vice-Presidents—Ontario, Dr. Thorburn; Quebec, Dr. Robillard; New Brunswick, Dr. James Christie; Nova Scotia, Dr. McDonald; Manitoba, Dr. Lynch.

General Secretary—Dr. Osler, of Montreal.

Treasurer—Dr. Sheard, of Toronto.

Local Secretaries—Ontario, Dr. Bray, Chatham; Quebec, Dr. James Bell, Montreal; New Brunswick, Dr. Coleman, St. John; Nova Scotia, Dr. Black, jr., Halifax; Manitoba, Dr. Betts, Winnipeg.

The next place of meeting to be Montreal, the date to be left to the President and Secretary, in order to arrange for the meeting to be held immediately before the meeting of the British Association for the Advancement of Science.

Committee of Management—Drs. Hing-

ston, F. W. Campbell, G. W. Ross, Roddick, Lachapelle, Gardner and Rodger, with power to add to their number.

Publication—Drs. Ross, Cameron, Fulton and Sheard.

Medicine—Drs. Graham, Toronto; Ross, Montreal; Oliver, Kingston.

Surgery—Drs. Roddick, Albertson, N.B., and Tye, of Chatham.

Obstetrics—Drs. M. Lavell, Holmes and Lawson, of Halifax.

Therapeutics—Drs. George Wright, Toronto; Stewart, Montreal; Small, Ottawa.

Necrology—Drs. Fulton and A. H. Wright, Toronto; J. C. Cameron, Montreal.

Education—Drs. McCammon, Bray, Yeomans; Bayard, Parker, Halifax; Whiteford, Winnipeg; Wilkins, Montreal.

Public Health—Drs. Canniff, Oldright, Toronto; Robillard, Montreal; Yeomans, Harding, Worthington, St. John, Larocque, Botsford, Playter, Winburne, Covertou, Bryce.

Ethics—Drs. Mullin, Harrison, McCammon, Bray, Grant, Prevost, Osler, Almon, Coleman.

Delegates to the American Medical Association—Drs. Grant, Ottawa; Gardner and Hingston, Montreal; the President and Secretary to give credentials to others who may wish them.

Delegates to the American Public Health Association—Drs. Larocque, Tye, Bray, Holmes, Sweetland and Covertou.

The above convention meets in Detroit in November.

The Secretary intimated that the Association had received a cordial invitation from the Winnipeg Medical Society and the College of Physicians and Surgeons of Manitoba to hold their next meeting in Winnipeg but it was thought advisable to hold the meeting in Montreal, on account of the meeting of the British Association for the Advancement of Science. The Association, however, might go to Winnipeg in 1885.

Votes of thanks were unanimously passed to the Authorities of Queen's College for the use of their building in which the meetings of the Association had been held, to the railroad and steamboat Companies for reduced fares, to the Medical Profession of Kingston for their cordial reception, to His Worship the Mayor of Kingston for his kind and hearty words of welcome, and to the retiring President, Dr. Mullin, for his able, gentlemanly, and urbane conduct in the chair, after which the Association adjourned.

Book Notices.

Annual Announcement of the Medical Department of Niagara University, Buffalo, N.Y. Session 1883-4.

The Dispensatory of the United States of America. By Dr. Geo. B. Wood and Dr. Franklin Bache. Fifteenth edition. Re-arranged, thoroughly revised and largely re-written. With illustrations. By H. C. Wood, M.D., Joseph P. Remington, Ph.G., and Samuel P. Sadtler, Ph.D., F.C.S. Philadelphia: J. B. Lippincott & Co. 1883.

Fifty years ago the first edition of this magnificent work saw the light. It sprang from the fertile brain of Dr. Geo. B. Wood, an able and standard commentary on the then new *Pharmacopœia of the United States*, the acceptance of which it did much to ensure. During the half century since its birth it has passed through fourteen editions, each ably and fully embodying the latest achievements of Pharmacological Science. The original editors, after lives of great utility and fame, have gone over to the majority; and this Fifteenth edition has been issued by three successors, whose names alone are sufficient guarantee that in each department not only will the merits and reputation of former editions be maintained, but the practical value of the work enhanced by the insertion of whatever is worthy amongst recent discoveries after due filtration through a master mind. Prof. H. C. Wood has re-written the sections on Medical Properties and Uses, and revised the sections on Botany and Vegetable Materia Medica. The Pharmaceutical Chemistry and Pharmacy have been contributed by Prof. Jos. P. Remington; and the Theoretical Chemistry and Toxicology have been reproduced by Prof. S. P. Sadtler. Amongst new features may be mentioned the illustrations of drugs, and very accurate representations of microscopical sections and the complete list of analyses of American Mineral Springs, and of a large number of European Springs of note. The work is a vast storehouse of information, simply invaluable alike to physician and pharmacist, and fully realizes the aspiration of its authors "to make the new U. S. Dispensatory worthy of the time when it was universally recognized as the supreme treasure-house of pharmacological lore."

Personal.

DR. BROWN, of Montreal, has returned from Vienna.

DR. RODDICK started, Sept. 8th, for Europe where he will remain a year.

DR. STEWART, formerly of Brucefield, has returned from Europe and settled in Montreal.

DR. SULLIVAN, of Kingston, is President of the Canada Medical Association for the coming year.

DR. OSLER, of Montreal, spent a week in Toronto, after the meeting of the Canada Medical Association.

DR. BARRETT will deliver the introductory address for the Women's Medical College, Oct. 1st, at 2.30 p. m.

SIR SPENCER WELLS has been elected an Honorary Fellow of the Physico-Medical Society of Erlangen.

DR. JOSEPH C. HUTCHINSON, of Brooklyn, sustained a fracture of his thigh while driving at Lake George.

THE Kingston City Council voted \$5, for the entertainment of the doctors in session, Sept. 6th and 7th.

DR. W. H. AIKINS, eldest son of Dr. Aikins, of Toronto, who spent a year in London, has returned to Canada.

DR. WELSH, of Philadelphia, was fined \$10 by the Board of Health for neglecting to report a case of diphtheria.

DR. SHEARD will deliver the opening address for the Trinity Medical School on Tuesday, Oct. 2nd, at 4 p. m.

DR. WORKMAN, of Toronto, will deliver the opening address for McGill Medical School, Montreal, Oct. 2nd.

DR. J. E. GRAHAM is one of the Vice-Presidents of the American Dermatological Association for the coming year.

DR. C. W. COVERNTON has been made a Foreign Corresponding Member of the Spanish Society of Hygiene of Madrid.

DR. ROLPH LESSLIE has gone with an exploring party to ascend the river Congo under the command of Sir Frederic Goldsmid.

DR. J. H. RICHARDSON will deliver the opening address for the session, in the Toronto School of Medicine, on Monday Oct 1st, at 4 p. m.

DR. UZZIEL OGDEN, has returned to Toronto after his trip to Europe. It is his intention hereafter to confine his practice to diseases of women.

PRINCIPAL DAWSON, of McGill University has gone to Europe for a year's rest. Before leaving Montreal, the citizens presented him with a purse of \$5,000.

THE Royal College of Surgeons have awarded the John Hunter Medal to Professor Owen, C.B., F.R.S., superintendent of the New Natural History Museum for the great services he has rendered to comparative anatomy.

DR. W. H. MONTAGUE has removed from Dunnville to Welland. His many friends in Dunnville entertained him before his departure at a banquet which was largely attended.

THE following are the officers of the Brant Medical Association for the ensuing year: President, Dr. W. T. Harris; Vice-President, Dr. R. H. Dee; Secretary-Treasurer, Dr. W. E. Winskill.

PROFESSOR PERNET after seventeen years connection with the University of Toronto and other educational institutions of this city, has resigned and left the city to take up his abode in *La Belle France*.

M. VERNEUIL will represent the Society of Surgery of Paris at the next International Medical Congress. M. Desprès has been invited to accept a commission, but he replied that he made it a rule never to attend "Scientific fairs."

CANADIANS ABROAD.—David George Bennett, B.A., of New Brunswick, obtained the degree of M.B., and C.M., on the 1st of August, at the Edinburgh University. At Aberdeen University, David Tulloch, M.B., and C.M., Winnipeg, received the M.D. degree. Thomas Gray, M.D., Ont., obtained the double qualification of Licentiate of the Faculty of Physicians and Surgeons of Glasgow, and of the Royal College of Physicians Edinburgh. B. J. W. Hurdman, F. Uniacke Anderson, of Halifax, N.S., obtained the L.R.C.P. and L.R.C.S., of Edinburgh.

Birth.

BURRITT—On the 1st of September, at 84 Wellesley Street, the wife of Dr. H. C. Burritt of a son.

Married.

KENNEDY—ALLEN—At Cornwall, Ont., on the 19th of September, George Allan Kennedy, Surgeon in the N. W. Mounted Police, to Alice Maude, only daughter of Dr. Allen.