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Original Communications.

IMPROVED APPARATUS FOR POTT'S DISEASE OF THE SPINE.*

By HENRY LING TAYLOR, M.D.,
NEW YORK.

The indications for treatment in Pott's disease are to relieve the carious vertebræ from pressure and shock: with a minimum of confinement and a maximum of comfort. There are no more powerful stimuli to general and local nutrition in these cases than the relief from mechanical and nervous strain, and the access to fresh air made possible by the use of an efficient spinal splint. This should be in effect an artificial and temporary backbone, giving firm support and protection at the point of dis-

ease, and receiving, partially at least, the strains that would otherwise fall upon the diseased vertebral bodies, and assist in their disintegration.

Recumbency for short periods and abstinence from standing and walking for longer periods are necessary during the acuter stages, but the prime indication from the start is for definite spinal support, for which no period of recumbency alone, however long or strict, can be successfully substituted.

It is now over thirty years since Dr. C. Fayette Taylor described* the early diagnostic signs of Pott's disease, and showed the indication for treatment by antero-posterior support and protection, that is, by leverage fixation. His later improvements in the apparatus designed to meet this indication are shown in this paper.

* Exhibited to the Surgical Section of the Pan American Medical Congress Washington, September 6, 1893.

* The mechanical treatment of angular curvature, or Pott's disease of the spine, New York State Medical Society, February, 1863.

Much ingenuity has been wasted in the endeavor to apply a continuous extending force to the spine, in an apparatus to be worn on the person. As this appears to be a practically insoluble problem, it is fortunate that a vertically extending force is not needed. Antero-posterior leverage alone is used, because by that means pressure can be most directly and perfectly transferred from the diseased vertebral bodies in front to the sound arches behind.

How then about the plaster of Paris jacket? Bradford and Lovett in their excellent work on Orthopedic Surgery give the following answer, pp. 60, 61 and 71:

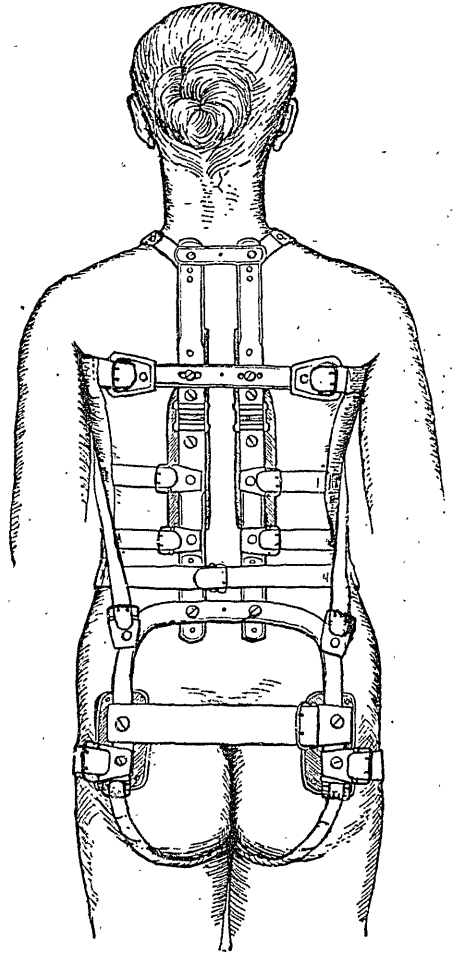
"The undoubted beneficial effect of plaster jackets is due, not to the separation of the affected vertebræ, but to a fixation support in an improved position. In short the plaster jackets afford an excellent antero-posterior support." "Unfortunately, however, the plaster jacket does not of itself, by its hold upon the thorax, maintain a continued extension, but the jacket and thorax so adapt themselves to each other that active suspension ceases. The jacket, however, does act as an antero-posterior support, until it becomes loose and inefficient." We prefer, as do the authors of the foregoing sentences in most cases, if I understand their practice, a properly adapted steel leverage apparatus to jackets of any make or material, on account of its greater precision, adjustability and cleanliness; but it should not be overlooked that as regards results the workman is more important than his tool, and that better results will be obtained with a jacket in skillful hands than with the most perfect apparatus carelessly or unintelligently used.

The improved spinal apparatus is shown in the figures.

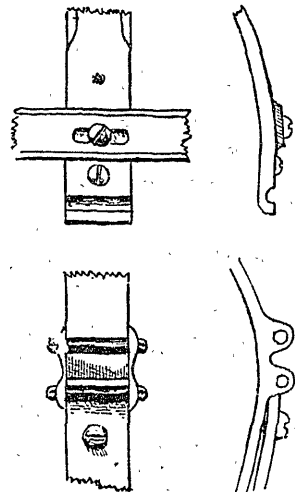
It differs from the apparatus shown to the New York State Medical Society in 1863 in the following points:

1. The vertical parallel bars have been lengthened, and end in hooked pieces,

passing well over the shoulders near the neck.



2. The hinges differ somewhat in construction

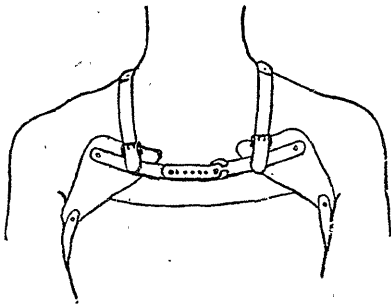


and are screwed to the bars, being retained for purposes of adaptation and adjustment only.

3. The horizontal hip-band is discarded, and is replaced by a rigid steel bar or vertical hip-band having the shape of an inverted U; to the upper horizontal part of this band the lower ends of the vertical bars are firmly attached. The ends of the Ω -shaped band are protected by hard-rubber plates, and rest in the post trochanteric sulcus on either side, and together with the hooked pieces at the base of the neck, fix the apparatus laterally, and assist in vertical and antero-posterior fixation.

4. Hard rubber pads are used instead of the soft pads formerly employed, to transmit the leverage of the apparatus to the region of the spine which it is desired to protect.

5. For counter pressure at the upper part of the chest, instead of the straps encircling the arms formerly used, a "chest piece"

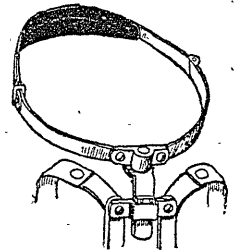


is employed, consisting of two triangular hard-rubber pads, fitted below the clavicles and resting upon the pectoral muscles at the sides of the chest; these pads are joined by a steel bar curved forward to escape the chest, and so contrived that the distance between the plates may be increased or diminished at will. The chest-piece is buckled to straps coming from the hooked shoulder-pieces above, and below it is strapped to buckles at the angles of the Ω hip band on either side, leaving the arms and axillæ free.

6. The apron which holds the whole apparatus forward reaches to the posterior border of the axilla on either side, and from the trochanter to the arm laterally, and is secured by straps and buckles to the apparatus.

7. Perineal straps may pass from the lower border of the apron in front, under the thighs, to the ends of the vertical hip-band to aid in fixing the apparatus.

It is to be understood that appropriate modifications of the form of the apparatus are made to correspond with the indications presented by disease in the different regions of the spine, and by the character and amount of the deformity. Most cases above the ninth dorsal will require, in addition, Dr. Taylor's circular pivoted head-support or chin rest, which is easily fitted to this apparatus.



The treatment of this affection, while remarkably satisfactory in the main, would be less tedious, if the nature and serious character of the disease were earlier recognized, and proper management inaugurated without delay. The first months of the affection often pass entirely unnoticed, owing to the absence of pain, and if, later, symmetrical pains at the sides, over the abdomen or down the legs appear, they are frequently attributed to digestive or other troubles. The short, rapid breathing caused by disease in the upper dorsal region may lead to the suspicion of pulmonary trouble, as in a case which came after having been treated two years for asthma. The breathing became natural after proper support was applied, and the disease was entirely cured with but slight deformity. In another case of disease in the lower dorsal region, poor nutrition and pains were attributed to indigestion, and valuable time was lost in the endeavor to correct the digestive disturb-

ance, which together with severe pains in the legs permanently disappeared soon after the spine was properly supported, with speedy and marked improvement in the patient's health. An early diagnosis can often be made before the appearance of pain or deformity, from spinal stiffness, shown in the attitude and movements, the tendency to lean on chairs and tables or upon the mother's lap for support, the careful shuffling gait, failing health and nocturnal restlessness. At this stage the happiest results follow thorough treatment, for half-way measures taken with the idea that the trouble will disappear in a few weeks are of no avail, even in the earliest stages. The symptoms will temporarily subside, as indeed they frequently do for a time without treatment, only to reappear later with increased intensity, unless the spine is efficiently and persistently supported.

It should never be forgotten in the treatment of these cases that an apparatus is intended to be an aid in the general and local hygiene of the patient, who should be under constant supervision and regulation, and such changes made in the mechanical appliance and other elements of management as the progress of the case may demand.

SOME POINTS IN THE SURGICAL TREATMENT OF APPENDICITIS.

A paper read in the Section on General Surgery of the Pan-American Medical Congress held at Washington, D.C., September, 1893, by AUGUSTUS P. CLARKE, A.M., M.D., of Cambridge, Mass., U.S.A.

Recent experiences of surgeons as well as of the general practitioner have most materially changed the teachings of the earlier views respecting the treatment of appendicitis. In those cases in which the inflammation of the appendix is of a minor degree, it may be overcome by an expectant method.

Undoubtedly the larger proportion of the cases involving the additamentum coli is of this lesser grade. Such cases often arise from the presence of bacteria or bacilli, which have gained admission into the tissues in immediate connection with the intestinal tract. The symptoms occurring may be characterized by pain or tenderness, by moderate distension, marked constipation, and by disturbance of the constitution generally. Under favorable circumstances, or by rest and by the application of heat and by the administration of gentle laxatives the symptoms may subside, without exciting any grave apprehensions on the part of the patient or on the part of those who are in attendance. After intervals more or less remote there is liable to occur, from various causes, a recrudescence of the inflammation. Not unfrequently after the lapse of some few days the disease may take on retrograde processes; in other instances, it may become so intensified as to demand prompt surgical interference for the patient's recovery. From a careful study of the histories of cases coming under my observation during a number of years past, and also from learning in many instances the final results, I feel that it is not unsafe to say that in every case in which there is reason to believe that the vermiform appendix is involved, however mild or transient the symptoms may at first appear, the surgeon or medical attendant should be on careful watch for sudden surprises or for untoward results. There is great probability in almost any event that the appendix during an attack of inflammation will become adherent to other parts in the immediate vicinity. In a case of laparotomy to which I was called for the removal of diseased uterine appendages, I found that the vermiform appendix had become adherent to the tube and to the ovary of the right side. The appendix caeci was thickened and also indurated as the result of inflam-

matory processes of considerable duration. In some instances the first intimation the surgeon may have of the case will be the formation of a localized abscess ; this may occur in or near the McBurney point, between the umbilicus and the anterior superior spinous process of the ilium, or about five centimetres from that point on the ilium. The temperature in such a case is not usually very high ; it is often not more than 100° to $102\frac{1}{2}^{\circ}$. The pulse may become soft and compressible, and occasionally much more frequent than the temperature would indicate. The vomitus is of a dark or grumous substance, at times it is of a light greenish color. When the symptoms become urgent, surgical measures should immediately be instituted for relief. In many cases, if not in the most, the incision should be made over the point of greatest tenderness. This point, as before intimated, is midway between the umbilicus and the superior spinous process of the ilium, and is usually in the right linea semilunaris. Such an incision will afford an opportunity for free drainage and for flushing the parts with warm carbolized water, or with water of the temperature of 115° to 120° , containing boracic acid or other agents that can safely be introduced into the abscess cavity. A liberal incision when timely made over the tender part has always yielded in the cases occurring in my practice an immediate and permanent result. In all cases after the incision has been made the parts should be thoroughly explored. If the appendix is within easy reach, it should be brought forward and then sewed off by means of sutures of aseptic kangaroo tendon. If, however, the appendix is bound down by firm adhesions, or, if it cannot be found without much difficulty, or without doing excessive violence to the cæcum or to other structures, it is far better to let it remain, for its presence when left will not seriously interfere with the patient's recovery. In a case to which I was called

some months since, the patient, who was aged twenty years, had been suffering nine days. I made a free incision over the tenderest point ; the operation was followed with a profuse discharge of purulent exudation. Careful search at the time was made, but the appendix could not be found. The patient, however, died next day. Extensive dissection at the autopsy revealed the fact that the appendix was drawn upward behind the cæcum, and was firmly adherent to the intestine. It required much patience to isolate and to identify it as the part for which we were in search. No portion of the intestine nor other part was found gangrenous. It is highly probable that, had the patient consented in the early stage of the attack to the operative measures, he could have been saved.

In another case to which I was called, the patient, a girl aged fourteen years, had been ill from the local symptoms for four days ; there had been much distension of the abdomen. The point of greatest tenderness was lower down than usual, but the symptoms so strongly pointed to the existence of appendicitis that a resort to operative measures was advised. An incision was made eight centimetres in length over the point of greatest tenderness, there was considerable discharge of purulent and bloody exudation. The appendix was unusually long and was bifurcated, and at its junction with the cæcum it was larger than normal. The excision of the appendix was effected without much trouble ; it was sewed off as in the other cases by means of the cordwainer's stitch, in which kangaroo tendon was employed. The patient made a speedy and uninterrupted recovery.

In another case to which I was called, that of Miss G., aged thirteen years, the symptoms had been in progress upward of four weeks. The attending physician had early diagnosticated the case as one of appendicitis, and after consultation with

another practitioner had advised a resort to surgical measures. The symptoms, however, soon became so much easier, that the operation was deferred. After the lapse of some days there was a sudden return of the graver symptoms. At this time I was called to see the case. The parents now declined the proposition for any operative interference unless they could be positively assured of ultimate success. Nothing then remained to be done but the adoption of an expectant method. For some days the patient was nourished solely by enemata of beef juice, brandy and beef peptonoids. After that the patient was able to take by the mouth small quantities of malted milk and beef essence. Morphia and other sedatives in small quantities frequently repeated were employed. Under this régime the pain was kept under control, the vomiting almost entirely ceased, the abdominal distension markedly lessened, though there was probably suppuration going on at the McBurney point. The father still refused a resort to operative interference. Though the patient was so much relieved, the temperature was at times somewhat above the normal. On the thirteenth day from the adoption of the expectant method the patient experienced an unfavorable return of the symptoms. She died from sudden collapse on the following day, which was the forty-second from the apparent onset of the disease. In the treatment of this case the patient had the opportunity to try the benefit of the expectant method carried out from the first in the most approved manner. Had an operation been undertaken in the early stage of the inflammation the patient would undoubtedly have recovered.

At no time after I was called did it seem that an operation could have offered much chance for relief, owing to the excessive emaciation and to the other unfavorable phases which the disease had assumed.

If consent had been obtained, I should

nevertheless have given the patient the benefit of an exploratory incision. When an operation in the early stage of the inflammation is undertaken, there will be but little difficulty experienced in the removal of the appendix; of course, after adhesions are formed the danger is increased. In all cases the wound should be kept in an aseptic condition. If an abscess has formed, the cavity should be irrigated or flushed with a warm medicated solution. When the appendix is not easily reached, or is bound down behind the cæcum, the safer method, as before stated, will be to let it remain, and not to make any extended search, or dissection, especially after suppuration has taken place. When the mesentery or other structures have been sufficiently detached, the appendix should not be tied but should be clamped, and then should be sewed off by means of carbolized animal sutures. As soon as all bleeding points have been controlled, the appendix should be incised about two centimetres from the cæcal tissue. In order to prevent adhesions of the stump or base of the pedicle to other parts, the peritoneal tissue in immediate vicinity of the margin of the incision should be closely approximated by a subperitoneal or by a Lembert suture. The smaller sized kangaroo tendon rendered aseptic should preferably be the material for such use. A thorough closure of the peritoneal surface of the wound thus effected will not only obviate the occurrence of agglutination of the parts, but will also help to prevent the escape into the peritoneum of septic matter that may gravitate toward this point, and thus to preclude the occurrence of a fistulous tract. The entire wound should as far as possible be kept in an aseptic condition. Aristol and iodoform will be found to be excellent adjuvants in accomplishing this result. The danger of the subsequent occurrence of hernia may be overcome by paying

careful attention to the closure of the severed parts that have been divided in the operation; the peritoneum, the muscular tissue, the fascia and the external integument should each be brought together separately.

Carbolized animal sutures should be used for this purpose. Entire closure of the wound by the first intension can be effected only in those cases in which the operation has been undertaken in the early stage of the attack. After the formation of an abscess, complete union at first cannot be expected to result, because some method for maintaining drainage for a while will have to be employed. Some operators recommend that, after the appendix has been incised, the stump should be disinfected with a small pointed cautery. In cases in which the appendix has become gangrenous, or in which there has been sloughing or marked septic processes going on, such a method of procedure may do no harm; but in those cases in which it is desirable to achieve immediate union of the tissues, cauterization may cause further sloughing and exudation that will delay cicatrization. In most cases, disinfection with 1 to 1000 or to 2000 mercuric bichloride solution and the liberal use of aristol and iodoform will be more conducive to this end, and be a far safer practice to adopt. The different steps of the operation are much complicated when there is present an unusual abdominal distension; so also it will be in cases in which there is excessive or marked obesity. In one case to which I was called, though the distension was not uncommon, expulsion of the intestines began as soon as a moderate incision was made; the employment of the Trendelenburg posture, however, overcame the complication, and enabled me to complete the operation without further inconvenience. The advantage of Trendelenburg's position in all cases of abdominal section for intestinal affections cannot be over-

estimated. In those cases in which some means for drainage becomes necessary, every detail in the treatment should receive the utmost attention, for if there should occur any hindrance to a free discharge of the exudation, a risk of a dangerous sepsis to the organism will be incurred. In every such case of abdominal section when a drainage tube has been employed, the possibility of the occurrence of hernia should not be overlooked. In all cases, whether the drainage tube has been required or not, a firm binder or a thorough bandaging should be employed; the patient for some weeks should be kept for the most part in the horizontal position. As already intimated, an abdominal section with the removal of the appendix, in the early stages of the inflammation, is most likely to be followed with favorable results. In the initial stage of many of the milder cases the medical attendant often hesitates, or shrinks from assuming the responsibility of undertaking operative measures; he rather indulges in the hope that the case will ultimately take on a more favorable aspect. It is true that in some cases there will be for a while considerable improvement, which will lead to the thought that the patient may finally recover. In other cases there is an evident fear on the part of medical attendants that the diagnosis may be incorrect, or that the symptoms are dependent on the presence of uncertain factors. Such a conclusion, however, at the present day should not obtain when it is considered that our increasing experience will enable us to decide most accurately in reference to the elimination of the existence of other possible causes. Assuming that our diagnosis is occasionally incorrect, the dangers of an exploratory incision are infinitely less than would result from allowing the symptoms to progress without availing ourselves of the advantages of an abdominal section, which in most cases is in any event, when pro-

perly carried out, a comparatively harmless procedure. The question often arises: should the surgeon, when called upon in the later stages of a case, advise operative interference? In answer to this it may be remarked that our experience is favorable to the adoption of an exploratory incision. When an operation is undertaken in the later stages, the patient must of course assume more risks, for the chances of recovery are much less than when an operation is attempted much earlier, though surgical measures at such late date may prevent the rupturing of an abscess into the peritoneal cavity. When there has been such a rupture, removal of the pus and cleansing of the parts may afford an opportunity for a retrograde process of the disease to take place. Nothing, therefore, but the occurrence of extreme collapse should weigh against the employment of operative measures. Some surgeons have advised that when the existence of peritonitis has become somewhat diffused, it should be regarded as a bar to the adoption of surgical treatment. It should, however, be remembered that the implication of the peritoneum may be dependent in any case on the presence of lesions that may have their origin at a distant point, and that the removal of the cause of such morbid processes may effect a speedy subsidence of the peritoneal inflammation. A peritoneal inflammation should always, according to the light afforded by recent pathological investigations, be considered only as a secondary affection to other processes that have had a more or less continuance.

Before closing this paper, I deem it important to say that in those cases of appendicitis which have gone on to suppuration before operative measures have been undertaken, there may occur secondary abscesses in other parts of the abdominal cavity. An operation to insure relief must therefore embrace a course of procedure that will afford a free discharge to all accumulations of puru-

lent exudation. It will sometimes be necessary to make an extensive dissection at different parts, and also to overcome adhesions of an unusual extent. Great care will also have to be exercised, lest an opening be made into an adherent intestinal mass. In some instances, portions of the epiploon may become gangrenous; there may occur in the veins of the abdomen an inflammation that may extend outward to the femoral and to other veins. In carrying out for these complications the necessary surgical treatment, much judgment will have to be exercised and much precaution taken that the dissection or search be not prolonged beyond what may afterward prove to be a beneficial or safe proceeding.

Society Proceedings.

THE MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, March 31st, 1893.

JAMES STEWART, M.D., PRESIDENT, IN THE CHAIR.

Enchondroma of the Mammary Gland in a Bitch.—Dr. ADAMI brought before the Society a case of this condition on account of its rarity. Enchondroma has been very occasionally reported as occurring in the female, perhaps more frequently in the domestic animals. The present specimen, a bullet-like growth $2\frac{1}{2}$ inches in diameter, was obtained from a setter bitch, having been removed by Mr. Hart, one of our students, in conjunction with Mr. Tracey, veterinary student. The growth would seem to be of less than a year's duration, and to have originated after a rather severe mammitis. The bitch had a litter of puppies in February, 1892. There was some difficulty about the weaning, and one of the teats became injured and inflamed. The bitch recovered, but in the autumn a small lump was observed in the previously injured teat. It was removed at the beginning of last month.

The structure of this tumor is typical, it is slightly lobulated, and the centre is of bony hardness. Sections showed the lobules towards the periphery to be of hyaline cartilage, with some regions presenting stellate cells and less dense matrix; they were separated by bands of fibrous tissue. Deeper down, the matrix became

impregnated with calcareous salts, but even at the centre there was not true bone. There were large channels in which ran the blood vessels surrounded by loose cellular structure, but the surrounding osteoid framework possessed neither proper Haversian canals nor true lamellæ. Langlois, in the *Dictionnaire des Sciences Médicales*, gives a good account of these mammary enchondromata.

Papillomatous Outgrowth of the Lower End of the Ileum.—Dr. ADAMI exhibited for Dr. Wyatt Johnston the lowest three inches of the ileum presenting the above condition. Several tubercular ulcers had been found higher up in the ileum, but this last portion was quite free, and exhibited numerous delicate papillary prolongations, the longest from $\frac{1}{2}$ to $\frac{5}{8}$ of an inch in length. There was no sign of surrounding inflammation, and they differed both in appearance and structure from the larger coarser papillomata which not infrequently are found in the neighborhood of ulcers. These are beset by villi, and in structure most nearly resemble the hypertrophied projecting, solitary glands which are occasionally met with; but if this be their nature, their length and delicate finger-like appearance distinguishes them from the specimens usually encountered in museums.

Dr. WYATT JOHNSTON said that this very unusual specimen was obtained from a patient who had died from taking Paris green. At the autopsy there was found severe tuberculosis of the intestines, with but little elsewhere. In the lungs there were two tuberculous foci, each about the size of an almond, and were composed entirely of little, grey miliary tubercles; there were also signs of old cicatrices in the apex of one lung. The case appeared to present the unusual conditions of primary intestinal tuberculosis, there being extensive ulceration of the cæcum and ascending colon.

The case is of interest from a medico-legal point of view, as to the possible interpretation that might be put on these ulcerations in view of the history of poisoning by arsenic. In regarding them from the side of the mucous membrane it would be difficult to say positively that they were tubercular; but in viewing them from the serous coat inward, their tubercular nature becomes quite evident. The polypoid nature of the growths is very interesting. They usually grow in the large bowel, and when they occur in the small intestine they are usually in connection with leukæmia. The little projections contain lymphoid follicles arising from the lymphatic tissue of the submucosa.

Dr. LAPHORN SMITH said that for the purpose of comparison with Dr. Johnston's specimen he had brought one shown by himself some meetings back. They are papillæ obtained from a papillomatous disease of the large intestine about the region of the sigmoid flexure. Dr.

Adami, at the time, made a microscopical examination of these shreds, and pronounced the growth benign, to the great relief of the patient. They resemble Dr. Johnston's specimen to the naked eye.

Dr. WESLEY MILLS, referring to the specimen taken from the bitch, said that enchondromata are rather unusual, although tumors of the mammary glands are quite common and tend to become malignant. By far the most remarkable tumor that he had ever seen in connection with the mammary gland was a cyst containing a large worm, some five or six inches long. This position for such a parasite was one of the most remarkable cases he had ever heard of. The bitch belonged to him, and he had removed the tumor.

Dr. ADAMI hoped that Dr. Smith would not express too sanguine opinions with reference to the non-malignancy of the intestinal growth submitted to him for examination some time ago. While from the appearance of the tissue examined it was undoubtedly benign, it is well known that these tumors, although at one time quite benign, may later take on malignant growth. Such growths were of a much coarser nature than Dr. Johnston's specimen.

Nephrectomy through Abdominal Incision.—

Dr. LAPHORN SMITH exhibited an enormous kidney, and gave the following history of the case: The patient was sent to me with what was supposed to be a large multilocular ovarian cyst. The tumor so completely filled the abdomen as to be immovable. The uterus was pushed downwards, backwards and to the left by the growth. The tumor seemed to rest on the brim of the pelvis. On the bowels being well emptied I felt pretty sure that this was a tumor, not of the uterus, but of the kidney. I suspected pyelo-nephritis. When I opened the abdomen the tumor at once presented, but with a layer of peritoneum over it. After selecting a spot in the peritoneum where there were no vessels, we (Dr. Lockhart assisted me) made an opening, and proceeded to dissect the peritoneum off the tumor. On reaching the back we found a large pedicle, which was regularly ligated. We then found the incision too small to deliver the tumor through; the latter was then tapped, when it immediately collapsed, and delivery was easily effected. The renal artery was tied, and the kidney removed without any great difficulty. We then washed out the abdominal cavity with boiled water, and inserted a drainage tube at the lowest part. The pedicle was dropped into the cavity. During the operation there was little or no bleeding, and afterwards there escaped from the tube in the first 24 hours about two ounces of blood, when the discharges rapidly became serous in character. Since the operation the patient has had almost no pain, and temperature has been normal. On

opening the kidney it was seen to be sacculated, and in one of the sacs a calculus was found. In regard to the condition of the urine, before the operation it was free from albumen, but very scanty in quantity. The first 24 hours after the operation she only passed 8 ounces, the next 24 hours the quantity had gone up to 20 ounces. No water was allowed to be taken by the mouth after the first 24 hours from operating.

DISCUSSION ON TUBERCULOSIS—*Continued.*

Dr. LAPHORN SMITH, in opening the discussion, said that Dr. McEachran's paper was the very thing necessary to rouse the profession to a true way of looking at the matter. The infectious nature of tuberculosis has been more readily accepted by the public than by the profession, and in this respect the profession is not altogether free from blame. The public should have been long ago fully informed of the nature of this disease, for as a result of their ignorance thousands have died from exposure to infection—anæmic girls put into the hospital wards with tuberculous patients; young men in lodging houses occupying the same bed or same room with chronic consumptives; young girls in boarding schools or convents.

We have so far laid too much stress on the idea that consumption is hereditary, and this is largely due to the habit of insurance companies inquiring into all the branches of the family tree, but it never seems to occur to them that a person may contract consumption by sleeping in the same room with another in the last stage. He had met cases again and again where a perfectly healthy girl contracted consumption in a few months from a tuberculous husband, and cited a case here in Montreal of a young girl who moved into a house in May, in which a consumptive had died in April, and before six months had elapsed she had contracted the disease herself.

The children of consumptives are not more likely to die of consumption than anyone else, if they are timely removed from infection. The death rate from tuberculosis among children in the hospitals in Paris; the greatest number of which are taken from tuberculosis parents, is not greater than that prevailing amongst children elsewhere. This Society has great influence, and if it sends out advice to the public, the advice will be well received. We can stamp out consumption as well as we can stamp out small-pox.

Dr. F. W. CAMPBELL thought that perhaps he was one of those men who have been educated by insurance companies to look upon the transmissibility of this disease from one generation to another as the all-important factor. There are sometimes facts which present themselves to a man's observation and which he fails to realize. The facts as regards the contagious-

ness of tuberculosis, which now seem so plain to our eyes, were no less plain ten years ago; but not having the theoretical knowledge of today to work upon, they either remained as stumbling-blocks in our path, or were explained on other lines. In connection with tuberculosis, not only as a disease which we may communicate to one another, but also as one which may be contracted from the lower animals, we must remember that our patients should be guarded, not only against exposing themselves with friends who have tuberculosis, but also that the importance of enquiring into the nature of their food supply, especially that of milk and meat, should be duly impressed upon them. We will never reach the bottom of the difficulty until we get a thoroughly honest and scientific investigation of the city milk and food supply. So long as the milk is allowed to be delivered without bacteriological investigation, so long will our efforts be futile; we may isolate, we may carry out antiseptic processes in the treatment of our patients; but so long as the milk and flesh of tuberculous animals is allowed to be used by the public, just so long will we have tuberculosis existing to an enormous extent among the population.

Now, although inheritance is no longer regarded as the sole factor in the etiology of phthisis, it is of unquestionable importance in this respect. There seems to be a great susceptibility of persons, under certain conditions, for the absorption of the tubercular poison. But there is no question as to the advisability of treating the affection as a contagious disease. The absolute necessity of at least partial isolation must be borne in mind. So far as occupying the same bed or the same room is concerned, so far as having every particle of expectoration disinfected or destroyed, the principles of antiseptics must be rigidly applied. The patient should be required to spit into cloths or a paper spit-box, which may be destroyed. So long as these precautions are neglected, just so long will we have tubercular patients. We may never get rid of the disease altogether, but there is a great future before us in modifying its existence. The first thing to do is to absolutely impress upon the people the idea that it is absolutely a contagious and infectious disease.

The treatment of tuberculosis is a question of great difficulty to the medical practitioner. When a tuberculous patient comes to him, he is in a difficulty to know what is the proper advice to give. There is not a physician who, the moment he gets such a case, does not feel that he has a very complicated matter to deal with; it is often a matter in which finances play a great part. Many of us have of late been sending patients to Florida, to California, or to the heights of Colorado; but the amount of money required to enjoy such resorts will, in a great many instances, be beyond the means of the individual.

Now, we have within reasonable reach a place which is before long to stand pre-eminently the home for consumptives, and which is only a few hours ride from Montreal. There is to-day in the Adirondacks a sanitarium, under the care of Dr. Trudeau, which is indeed a very excellent place. This gentleman has done a great deal to make a good home for consumptives, his charges are only five dollars a week, which includes the medical attendance; he treats cases, and treats them very successfully, almost entirely by keeping them in the open air, amongst the pines. Thus, while we have so desirable a locality close at hand, we should hesitate before recommending long journeys and great expense where fatigue and money are subjects of consideration.

Dr. ARMSTRONG thought that it would be a wise proceeding if the facts brought out in the discussion were put in pamphlet form and sent to each member for consideration, and that some means should be adopted to spread this knowledge among the laity, for by so doing it would lighten the burden of the family practitioner. Every medical man knows how difficult it is to get families to carry out proper precautions when the disease is in their homes, because they do not realize the danger.

Dr. WESLEY MILLS had noticed, in watching the progress of thought in the profession, a very dangerous tendency to swing round from one extreme to another. This is very well seen in the relation of heredity to tuberculosis—from considering it the sole factor, we are coming to regard it as of no importance whatever. If we were to assume that heredity has nothing to do with the subject, we would be making a mistake, and a little consideration will show that all modern physiology and pathology attach as much importance to the invaded cells as to the invading ones. Heredity means the same tendencies in the offspring as in the parents; it may be associated with similarity of form, or it may not; it may be visible or invisible, but it is there. Now, we all know from the experience of breeders that an hereditary tendency can in the course of generations be annihilated, and this fact should be borne in mind in the forming of human alliances. By an injudicious alliance an inherited tendency to a disease can be intensified, just as it can be lessened by a judicious one. So that in spite of bacilli and antiseptics it is not less but more important than ever that people should be warned in making their alliances for life. It is true that an individual who has no special predisposition, when sleeping with a phthisical patient, may contract the disease, but that is an extreme case, and under such circumstances the infection must be due to the enormous quantity of the germs. As a rule, a person who has no predisposition will not contract the disease, and an alliance of a predisposed person with such might help to

eradicate the tendency. There are many instances in pathology when the contraction of the disease depends upon the quantity of the germs, and it is to such circumstances we must attribute infection where no predisposition exists. As to the question of whether the bacilli themselves can be inherited, it has been shown that the placenta has contained not only actual bacilli, but actual tubercles. What we have yet to determine is whether there is actual intra-uterine infection or not.

During the past few years he had bred many hundred pigeons of high breed, that is to say, pigeons which have deviated much from the normal by man's selection. Such organisms are easily disturbed, and disease works great ravages amongst them. It is his custom to make post-mortems on all deaths; some of them were submitted to Dr. Johnston, and by this means many facts about tuberculosis have been acquired; one is, that the organism is quite as important as the bacillus. For a time there was but a little of the disease, at other times considerable. How is that to be explained? The strains he was dealing with were known, as well as that environment which is best suited for resisting all sorts of disease. It is also known that in birds there is one particular period of the year at which their vitality is at the lowest, namely, when they are changing their feathers, which they do completely once a year. When the amount of feathers on a bird is considered, the amount of metabolism that is required to restore these feathers, and also when many of these feathers have blood at their base, it can easily be understood how the bird's vitality must at this time be at its lowest ebb; and it is at this period that tuberculosis, enteritis, etc., is most prevalent amongst them. Then again, during the cold weather we have many instances of tuberculosis amongst our birds. These are splendid instances of how condition and environment may determine disease. Tuberculosis runs in birds a very rapid course. Symptoms of a serious nature may be absent to within a few days of death; even death may result without profound emaciation.

Dr. G. P. GRIDWOOD could not disregard a hereditary tendency to the disease. Whether tuberculosis passes direct from the parent to the offspring, or whether it is some weak constitution brought about by the union of two people with a mal-affinity, may be a disputed point; but every old practitioner knows it as a matter of observation, that in certain families all the individuals, one after another, die off as soon as they arrive at a certain age. In other families you find the greater part die off in consumption, all but one or two, and these usually the scapegraces, who have probably lived a less sedentary life—have lived more in the open air.

There is another point in connection with heredity, and that is, that a peculiarity of constitution may be developed which has no congenital antecedent in the nature of either parent, but that some transient condition of either or both parents, some depressed vitality, may at the moment of conception beget a constitution for the offspring which renders it liable to attacks of the bacillus in after-life.

He had also seen associated with tuberculous disease, madness and cancer. There were families of which several members die of tuberculosis, some of madness, others, especially the girls, of cancer. Now, it may be all the one tendency which takes a particular turn in certain constitutions, now developing into tuberculosis, now into cancer, and again into madness. Again, there are cases of acute mania in young men and women who recover and afterwards die of tuberculosis, which shows another association between madness and tuberculosis. Where this tendency lies is a disputed point.

With regard to the treatment of tuberculosis, he was strongly of the impression that the proper place for a sick man is his own home. All the advantages of distant places can probably be obtained at home, such as open air and exercise which keeps a man employed out of doors, and surroundings which conduce to health. These will place the patient in the best possible position to fight the bacilli. There is also a moral aspect of the question: What right has one member of a family to spend the money required for a change of climate, when by doing so it often means harassing, if not impoverishing, the rest of the family?

Dr. RODDICK, speaking of the treatment, said that sending patients away is a subject of considerable importance, not only to the patient, but to those with whom the patient has to travel. In a trip to the South recently, he was obliged to live for a day and a half in a sleeping car with three persons very far advanced in phthisis. It not only impressed him very much, but many others in the same car; one lady absolutely refused to travel with them; she cannot be blamed, as she was in delicate health. Three years ago he had crossed the Atlantic with a man who was going to the south of France; he was locked up in the same berth with this man, who was constantly complaining of draft and would insist on having the door closed. Such people are unquestionably dangerous, and should not be allowed to travel in sleeping cars or steamboats, except under special circumstances. In fact, in the South, where they have much experience of the results of such practices, so thoroughly alive is popular sentiment to the danger of contagion, that many people will not occupy a room in a hotel unless it has been first as completely disinfected as if there had been a case of scarlet fever occupy-

ing it previously. This is causing so much extra expense that they are now refusing to receive consumptives in the hotels, and probably it will soon come to pass that in Southern resorts these unfortunates will have recognized quarters which they must occupy, and no others.

Dr. McEACHRAN, in answer, said that he felt sure the remarks made, if published, would have a very valuable influence relative to the treatment of the disease in the lower animals, and causing some steps to be taken with a view to even controlling it among human beings.

When statistics in the human subject are looked for, they are not as easily furnished as in the case of cattle; but if the similarity of the disease in animals and man can be shown, the facts furnished from the former should serve as data for our manner of dealing with the latter. With regard to copulation as a means of propagating the disease, he quoted several instances of unquestionable transmission in this way, and in this respect it can pass as readily from the male to the female as from the female to the male. He had met with many instances which show beyond doubt the communicability by contact, sometimes produced by the males, sometimes by the females, of this dread disease.

He thought that if the Society goes before the public, and makes strong statements as to the nature and manner of dealing with the disease, it will be doing a work which shall prove a lasting benefit to the country; while so far as Government interference with the disease in animals is concerned, something will be done in the near future. The Government is going to get up pamphlets, distribute them broadcast, and have the public informed of the true nature of the disease. Now, if the medical part was equally made known, the combined effect would be a work of very great good.

Dr. ADAMI, in answer, said he was very glad that this subject of heredity had been brought forward. The right view, that is, the one which has been fairly well accepted, is that heredity does not imply an inheritance of the bacilli, but rather an inherited weakness towards resisting this particular germ. With regard to whether the foetus is ever affected, there are two, if not more, undoubted instances recorded in which the foetus has been affected by tuberculosis. There is no question but it can occur, but it is of very rare occurrence.

In conclusion, he agreed with what Dr. McEachran and every speaker had said, that information upon this subject should be widespread, and that the public should be made acquainted with the extreme infectiousness of this disease, and that we should do our best in every way to stamp out this terrible scourge.

The PRESIDENT named the following committee to draw up rules in accordance with the discussion: Drs. A. D. Blackader, McEachran, Laberge, Adami and Wyatt Johnston.

ABSTRACT OF THE PROCEEDINGS OF
THE THIRD ANNUAL MEETING OF
THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

HELD IN CHICAGO, SEPTEMBER 12, 13 AND 14,
1893.

AUGUSTIN H. GOELET, M.D., *President.*

FIRST DAY—SEPTEMBER 12th.

MORNING SESSION.

The Association was called to order by the President, Dr. Goelet, and after the transaction of some routine business, the President delivered the annual address, taking for his subject, "The Influences Governing the Progress of Electro-Therapeutics."

He said that last year in a spirit of humor the Association had been referred to as a vigorous infant, but its vigor was readily explained when it was remembered that it boasts of three parents. In the beginning it was predicted that it would never prosper, but would die young—even before the completion of its first dentition. He thought, however, that its present state of health and prosperity was sufficient evidence that it was destined to a long life of great usefulness and a ripe old age. He thought the inauguration of this Association marked an event in medicine quite as important as any that had occurred within the present century, because it established a recognized position for an important and long neglected branch of therapeutics. The need of such an Association was quite evident to anyone who had attempted to present technical papers upon electrical subjects at other medical societies where there is usually so much unreasonable opposition to electro-therapeutics that profitable discussion is impossible.

The work thus far accomplished he considered very creditable for so young an organization, particularly as the field is entirely new, and in the beginning involved much uncertainty. He emphasized the fact that the methods adopted must bear investigation and the stamp of scientific reasoning. Results, he said, may be doubted, but methods based upon scientific laws could not be questioned.

Electro-therapeutics must contend with the natural opposition by the profession to every new inroad upon old and established methods. The fact that it is not more universally employed is due to a want of appreciation, and was attributed to restricted medical education and unfamiliarity with electro-physics and electro-physiology. Some of the more progressive of medical schools, he was pleased to observe, were beginning to realize the necessity of teaching this branch of therapeutics. The imperfections of past methods, which were certainly

unscientific, likewise operated greatly against a proper appreciation of modern electro-therapeutics. This could be overcome by diffusing a more general knowledge of the true position occupied by electro-therapeutics, and its successful accomplishment depended greatly upon the character of the work done by the Association and upon the personality of its members.

The progressive spirit of the Association was well shown by the fact that there were no less than six committees charged with investigating scientific questions having an important bearing upon the different branches of the subject. He regarded the admission of other scientists from the electrical world to membership in the Association a step in the right direction, and further evidence of its progressive nature.

He recalled the fact that within the past five years scarcely a year had elapsed without the development of some new and important feature involving the application of electricity in some one of its forms. As an instance of this, he cited the development of metallic electrolysis and its extensive application, also the alternating sinusoidal current of D'Arsonval and the capabilities of the interrupted induced current obtainable from modern apparatus.

The important improvements that have been made within the past few years in induction apparatus, whereby an increased frequency of interruption and an increased electro-motive force of the current was obtained, he thought deserved special mention. The possibilities of this current, from a therapeutic standpoint, are quite beyond the conception of anyone who has not had a practical clinical experience with it.

The programme of the present meeting gave abundant evidence of the advanced thought and work which have characterized the Association ever since its inception, and it was evident that electro-therapeutics is steadily progressing towards an exact science.

Attention was directed to the fact that, though concerted effort for electro-therapeutics is still young, its influence upon the views prevailing in medicine is already distinctly manifest.

In conclusion, the President declared that by conjoint efforts electro-therapeutics would be brought to that scientific plane which would make its most strenuous opponents their most cordial supporters.

The next order of business was the reading of "Reports of Committees on Scientific Questions."

On Standard Coils.—The Chairman of this Committee, Dr. William James Morton of New York, said that the subject was so large, and each month was bringing so many new facts, that it seemed premature to make a report as to what should constitute a standard coil. On motion, the committee was continued.

On Standard Meters.—Dr. Margaret A. Cleaves of New York read a report of this Committee. The report stated that a good meter should possess a clear, legible scale of long range, and should be so constructed that it could be easily read by the operator while at work; that although in itself a shunt is not disadvantageous, it is undesirable, because of the possibility of its heating and thereby changing its resistance; that the instrument should indicate in all positions, and is preferable when constructed to indicate with the current passing in either direction; that it should be very portable; and lastly, that it should not easily get out of order. Instruments of the galvanometer type were considered to be inaccurate on account of the magnetic influence exerted by surrounding objects.

Then followed a detailed description of the nine meters which had been submitted to the Committee for examination, and the tests to which these instruments had been subjected. The report concluded with the statement that in the opinion of the Committee the two meters which most nearly fulfilled the requirements were the Weston and the Kennelly meters, and the Association was urged to adopt at once a standard meter.

The report called forth a long and earnest discussion as to the advisability of adopting at present a standard meter. Some of the members were of the opinion that one of the meters especially recommended by the Committee had not been sufficiently long before the profession to enable many of those present to pass intelligently upon its advantages or disadvantages, and they therefore deprecated hasty action. Others thought it was impossible to combine in any one meter all the points a meter should possess in order to render it a thoroughly reliable instrument for all kinds of clinical works; and they consequently favored the adoption of two types of standard meters. It was also suggested that to avoid unnecessary discrimination the Association should adopt a type of meter as a standard rather than any one particular instrument. The report of the Committee was finally accepted, and the Chairman of the Committee continued.

On Static Machines.—Dr. Morton reported that in order to pursue their investigations systematically, a number of questions had been sent out in a circular letter, but no responses had been received. The Committee made the following recommendation: That electro-static machines adapted to medical practice should not have less than four revolving plates, and that the diameter of these plates should not be less than twenty-six inches. The report of the Committee was accepted and the Committee continued.

On Constant Current Generators and Controllers.—Dr. W. J. Herdman, of Ann Arbor,

read a carefully prepared report on this subject, in which he considered in detail the work accomplished by the various batteries which had been submitted to him for examination. No secondary batteries had been submitted, and mention of one or two batteries which had only been very recently sent in was omitted for lack of time to make the necessary tests. On motion, the report was accepted, and the Chairman of the Committee continued.

On Electrodes.—Dr. A. Laphorn Smith, of Montreal, read a report of the committee. The committee expressed the opinion that the best ground-work of all electrodes is copper wire gauze, and that the connection is best made by copper wire soldered the whole length of the gauze and terminating in a binding post—that known as No. 6-32 (?)—which is largely used by telephone companies throughout the world. Clay was considered the best covering, as it was the only substance which could be rendered moist enough to conduct properly without at the same time soiling the patient's clothing. It should be half an inch thick and of the consistency of putty. Before each application it can be readily cleaned by washing its surface with soap-suds. The back of the electrode is insulated with common table oilcloth.

The committee recommended three sizes of dispersing electrodes, viz.: each having a uniform length of one foot, and the width three, six and nine inches respectively. It was desirable that these sizes should be given in the metric system. For active electrodes to be used with the positive pole, the committee naturally selected platinum as the best, its one objection being its first cost. Where the applications are to be made to the surface of the body or to the interior of a cavity like the uterus, carbon is equally good, and for such purposes carbon beads can be threaded on platinum wire. Zinc is also a useful material for intra-uterine galvano-cauterization. It should be connected with the reophore by means of the standard binding post already mentioned. It was recommended that the conducting cords employed in electro-therapeutical work should be of the standard sizes and lengths used by the Bell Telephone Company.

For negative intra-uterine application, a Simpson sound made a useful electrode, and its size should be stated according to the French scale. Where the surface of the electrode is necessarily very irregular, its area should be determined by ascertaining how much water it will displace. It will be well for manufacturers to stamp all electrodes with two numbers—one giving the French scale, and the other the displacement of water on the surface of the electrode.

The committee recommended that a standard insulating material be adopted, and that the standard screw should be No. 2-40 of the American gauge.

All electrodes should be washed with soapsuds after each application, and boiled for five minutes before being used again.

Dr. Morton supplemented this report by presenting certain electrodes which he had devised, and which had proven useful in his practice. The first was a rubber covering for dispersing electrodes. It was an elastic rubber cap which would slip over the various sized electrodes, and which formed a pocket around the electrode, thus catching the water which would otherwise leak out on the patient's clothing. The second instrument was a new cataphoric electrode. With the usual form of this electrode it had been found impossible to apply the desired quantity of the medicated solution to the electrode without increasing the thickness of the blotting-paper, to such an extent that it interfered with and sometimes wholly prevents cataphoresis; for it is essential that the distance between metallic conduction and electrolytic conduction should be reduced to a minimum. To obviate this defect, Dr. Morton had an electrode made in the form of a hollow box of hard rubber, the bottom of the box being formed by a piece of block tin perforated with numerous small holes. The box is filled with the desired quantity of the medicated solution, which passes through the small openings in the tin bottom and is fed to a thin piece of blotting paper on its lower surface. In this way any quantity of the solution may be employed without interfering in the slightest degree with the cataphoric action.

The third instrument exhibited was an Apostoli intra-uterine electrode insulated at the tip and at the cervical portion. In conclusion, the speaker referred to the advantages of punk as a covering for electrodes, and said his patients invariably found it the most agreeable covering of any employed. It had the great advantage of remaining moist for a long time.

Dr. G. Betton Massey, of Philadelphia, said that two years ago he devised an electrode made of a spiral of platinum wire enclosing a second spiral, the object of this construction being to facilitate rendering the instrument aseptic. A flat coil of No. 20 wire was in his opinion a much better basis for an electrode than gauze. If the French scale were employed, he thought it should indicate the diameter and not the circumference of the instrument.

Dr. Franklin H. Martin, of Chicago, called attention to the fact that he was the first one to invent and exhibit a spiral electrode. His instrument was first brought to the notice of the profession in 1887.

Dr. J. B. Greene, of Indiana, preferred the English to the French scale. The best material he had ever used for an electrode was moistened wood-pulp; it was an excellent conductor, and so cheap that it can be thrown away

after use. In his opinion, it would be impracticable to fix upon standard sizes for electrodes.

A communication was read from Dr. Lucy Hall Brown, of Brooklyn, in which she recommended a special electrode made of perforated brass plate covered with punk, and connected to the reophore by a peculiar spring clamp which she had devised.

On Investigation of Dr. Newman's Statistics in Urethral Stricture.—The committee, consisting of Drs. A. H. Goelet, Wm. J. Morton and W. J. Herzman, reported that they had made a very careful and conscientious examination of Dr. Newman's records and statistics, and had asked, but unsuccessfully, for the co-operation of certain general surgeons. The committee unanimously agreed that Dr. Newman's statistics fully substantiated the claims he had made.

AFTERNOON SESSION.

Dr. Newman, of New York, read a paper on "Electrolysis in Tumors of the Bladder."

The author considered only cases of non-malignant tumors in the female bladder. If the bladder be very irritable, the preparatory treatment should consist in the careful use of medicated injections, by which means a bladder which can hardly retain four ounces may be made to tolerate as much as twelve ounces of fluid. For the proper use of the cystoscope it is necessary to have from four to six ounces of fluid in the bladder. The cystoscope is first used to locate the tumor, and the author advised that its use should be immediately followed by an examination with the endoscope. By means of the rubber ring slid on to the instrument it is easy to locate the distance of the tumor from the meatus. Indeed, he had found comparatively little difficulty in subsequently cauterizing the exact spot desired. The constant current of a galvanic battery was invariably employed, and except where it is necessary to control hæmorrhage, the negative pole was the one selected. The average current strength was 10 m.a., each sitting lasted from five to fifteen minutes, and the intervals depended upon the result of each sitting and the condition of the patient.

There are two methods of electrolysis, general and local. General electrolysis has a specific absorbing and healing effect upon a tumor, and may be employed when the patient cannot tolerate other measures. Local electrolysis may be performed: 1st, by means of a little bulb placed in contact with the tumor; 2ndly, by the introduction of a platinum needle; and 3rdly, by fixation of the tumor and the introduction of a platinum needle into the tumor.

To be continued.

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MONTREAL, NOVEMBER, 1893.

THE STAMPING OUT OF TUBERCULOSIS IN CATTLE AND IN MAN.

As a result of the discussion of this subject at the Medical Society of Montreal last session, the Government of Canada has with commendable energy set about eradicating this disease from the herds of Canada, beginning by the slaughter of all the animals found to be infected on the experimental farms. The diagnosis is made with Koch's lymph, and appears to have been verified in every case by the subsequent autopsy.

So far, however, little has been done towards banishing the fell disease from the midst of the six millions of human beings among whom its presence is annually causing financial loss and general misery, in comparison with which the few million dollars involved in the cattle interest are a mere bagatelle. It is unnecessary for us to go into elaborate calculation, estimating the annual cost of consumption to a country like ours; everyone who reads this is only too well aware of the expense and loss of earning power which it inflicts. The most important question is: Can anything be done to prevent or at least to diminish it? The answer is, we think, decidedly, Yes.

To begin with, a great deal can be done without at all interfering with the liberty of the unfortunate people. In our experience of consumptives, at least 75 per cent. of them were so poor that they would gladly have accepted an invitation to become the guests of the State;

in fact, a great many of them applied in vain for admission to our overcrowded hospitals. We feel sure that if the information which we now possess concerning the contagiousness of the disease were scattered broadcast, and at the same time the Federal Government would establish a free sanitarium for consumptives, at least 75 per cent. of all the consumptives in the country would voluntarily apply for admission. They might be accepted on condition that they would promise to remain until they died or were cured. We say cured, for there is not the slightest doubt that many cases would be cured under special treatment. Microscopical examination of the sputa would easily decide when the latter were free from bacilla and when the patient might return to his family. It is difficult to realize the magnificent results from the removal of even 75 per cent. of this foci of infection. But even the remaining 25 per cent. among the well-to-do classes would soon be educated up to the point of making a little self-sacrifice for the sake of those they loved, and before long private sanitariums for pay patients would be opened for the reception of those who were able and willing to pay their own expenses.

Neither does it follow that the inmates of the vast free national sanitarium would be condemned to enforced idleness; on the contrary, farming and many other outdoor occupations are eminently conducive to the ventilation of the lungs, which is one of the first steps in the process of killing the parasitic fungi of the disease. The establishment would probably in a short time become self-supporting. The great objection to this very rational scheme is of course the expense. But are human lives not worth fully as much as those of cattle? If so, then no matter what the cost, the Federal Government is justified in incurring the expense of stamping out this plague from the homes as well as from the stables of Canada.

A UNIVERSITY OF CANADA.

More than once the establishment of such an institution has been advocated in these columns, but, until lately, without much prospect of success. The idea, however, has been steadily growing in favor with the profession, and before many years we hope to see it *un fait accompli*.

At present a physician of the highest standing, the Dean of McGill College, for instance, might be prosecuted for practising without a licence on one side of the Ottawa river in Ontario, although he would be entitled to practise in the village of Hull, a quarter of a mile distant, in the province of Quebec. This arrangement or lack of interprovincial reciprocity is felt to be such an anomaly that various schemes have been proposed for its remedy. All are agreed that there should be some kind of a Federal or Dominion licensing board whose diploma would carry with it the right to practise in any part of the Dominion. It seems to us, however, that if such a piece of machinery is to be organized, it would be better to make it the best of its kind, and call it a University, modelling it after the most illustrious University at present in the world,—the University of London. This would in no way interfere with the rights of the various Medical colleges, which could continue to exercise their teaching and even degree and diploma-giving functions, for the University of Canada would not be a teaching body. The duties would simply be to meet at Ottawa once a year, for a week or longer, for examining purposes only, and anyone from any land presenting proper guarantees of previous general education, and paying a fee of, say, one hundred dollars, could present himself for examination. This would provide a long-felt want for some standard portal through which the graduates of all the schools might pass if they were able, and go forth on a perfect equality. There is no doubt that on the establishment of such a University, and adducing proof of its high standards, its degree would be accepted by England and France on reciprocal terms. A talented Canadian, who has the glory of our country deeply at heart, and who is now a leading London surgeon, has urged us to advocate persistently the great step towards convincing the world that medical education in Canada is second to none. The examiners should be chosen for merit only from the teachers in all parts of the Dominion, the fees for examination offering ample remuneration for their time and travelling expenses. We would strongly urge those who have the question of a Dominion license in hand to make it take the form of a University degree, and forthwith bring the matter before Parliament at its next session.

THE CLOSURE OF THE KINGSTON WOMEN'S COLLEGE.

After several years of brave struggling to keep open in the face of many discouragements, the above College has been compelled to close its doors, and the female students have been transferred to the excellent Women's Medical College of Toronto. Many of them would have come to Montreal had any of the medical schools been able to receive them. But the McGill Medical Faculty is opposed to female medical students, and the Faculty of Bishop's College, which is favorable to them, has unfortunately no hospital facilities for clinical instruction, the authorities of both the Hotel Dieu and General Hospital having declined to admit them to the practices of the hospitals. So that Bishop's College, which made considerable preparations for the reception of female medical students, sees them drawn away to Toronto, owing to the action of the governors of the General Hospital. With so many difficulties to contend with, we fear that Bishop's College will never attain a satisfactory position until it has at its disposal hospital facilities of its own, and to this end we think she should devote all her energies. The acquirement of hospital facilities is all the more important now that the whole tendency of modern medical teaching is inclining towards clinical instead of didactic lectures. The loss of these female students is the more to be deplored at the present time, when the number of male students has been considerably diminished by the financial depression in the United States. We hope that some wealthy friend of the College may come forward with a liberal endowment for a general hospital, so that the students of Bishop's may be able to obtain there clinical instruction, without having, as at present, to depend for it upon the good nature of the professors of rival schools. As it is, the vast endowment of McGill and Laval with a large corps of paid teachers renders it very difficult for a small and unendowed college to attract pupils; for no matter how willing the unpaid teachers may be, they must attend first to their private practice, on which their livelihood depends.

ANNOUNCEMENT.

(For English-speaking Candidates.)

COLLEGE OF PHYSICIANS AND SUR-
GEONS OF THE PROVINCE
OF QUEBEC.PROGRAMME OF THE PRELIMINARY
EXAMINATION FOR 1894.

Latin.—The *Commentaries* of Cæsar, Bks. I, II, III, IV, V.—The *Æneid* of Virgil, Bks. I and II.—The *Odes* of Horace, Bk. III. A sound knowledge of the Grammar will be required.

English.—A critical knowledge of Shakespeare's play of HENRY VIII. Questions of grammar, Etymology and Analysis.

French.—Translation into English of passages from "*Telmachus*," with questions of grammar and parsing. Also translation into French of easy English sentences.

Belles-Lettres.—Principles of the subject and of Rhetoric; also History of the Literature of the age of Pericles in Greece, of Augustus in Rome and of English and French Literature of the 17th, 18th and 19th centuries.

History.—A general knowledge of the History of Greece and of Rome, and a more particular knowledge of British, French and Canadian History.

Geography.—A general knowledge of the subject, and more especially of England, France and North America.

Arithmetic.—Must include vulgar and decimal fractions, simple and compound proportion, interest, percentages and square root.

Algebra.—Must include fractions and simple equations of two unknown quantities.

Geometry.—The first three books of Euclid and principal propositions of the Sixth. Also the measurement of the lines, surfaces and volumes of the regular geometrical figures.

OPTIONAL SUBJECTS.

The Candidates must select one of the following.

Greek.—The *Anabasis* of Xenophon, Bks. I, II, III, and the *Iliad* of Homer, Bks. I and IV, with questions of grammar.

Physic.—General principles as in Peck's translation of Ganot.

Philosophy.—Logic with Mental and Moral Philosophy.

N.B.—Candidates must produce certificates of good moral character. Any candidate detected in copying or in aiding another to copy, or in using books or notes, will be immediately dismissed from the room. At the conclusion of the examination, each candidate will be required to make before a magistrate, then present, a solemn declar-

ation that he has not had recourse to any fraudulent means to aid him in the examination. He must also furnish proof of his identity.

ORDER OF SUBJECTS AND NUMBER OF MARKS
FOR EACH.

FIRST DAY.

| | | | |
|----------|----------------|-------------------|------------|
| Group A. | Latin..... | from 9 to 11..... | 200 marks. |
| | History..... | " 11 " 12..... | 100 " |
| | Geography... | " 12 " 1..... | 100 " |
| | French..... | " 2½ " 4..... | 150 " |
| | English..... | " 4 " 5½..... | 150 " |
| | Belles-Lettres | " 5½ " 6½..... | 100 " |

SECOND DAY.

| | | | |
|----------|----------------------------|--------------------|------------|
| Group B. | Geometry..... | from 8½ to 10..... | 100 marks. |
| | Arithmetic.... | " 10 " 11½..... | 100 " |
| | Algebra..... | " 11½ " 1..... | 100 " |
| | Optional Sub- ject..... | " 2½ " 4..... | 200 " |

NOTE.—A Candidate must obtain half the total marks allowed for Group A. in order to pass in that group. So also for Group B.; but his failing to pass in one of the groups will not nullify success in the other.

Further, in order to pass in the several subjects, a candidate must obtain marks for them as follows:—

For English, being the mother tongue, three-fourths of the marks.

For Latin, Arithmetic and Optional subject, one-half of the marks for each.

For all other subjects, one-fourth each.

Lastly, if a candidate fail in any one subject of a group, he will be required to repeat examination in all the subjects of that group, though he may have been successful in the other group.

H. ASPINWALL HOWE, LL.D.,

J. C. K. LAFLAMME, LL.D.,

HENRY WATTERS, B.A.,

PROF. CHARLES ALBERT PFISTER,

Examiners.

BOOK NOTICES.

A MANUAL OF MEDICAL TREATMENT OR CLINICAL THERAPEUTICS. By I. Burney Yeo, M.D., F.R.C.P., Professor of Therapeutics in King's College, London. In two 12mo. volumes containing 1275 pages, with illustrations. Complete work, cloth, \$5.50. Philadelphia, Lea Brothers & Co., 1893.

This work is devoted entirely to the treatment of disease, being the first we have ever seen of the kind. There are many excellent works on therapeutics, but this is the first work devoted to clinical therapeutics. For this reason, and

also because it is written in such charming language, this book is really interesting. More than once we have taken it up to glance over it, which, we are sorry to say, is all the time we can spare for the work of reviewing, but after an hour's reading we were unable to lay the volume down, and, instead of writing a notice of it, we have just read on and on. As the author says, he has approached the subject from the side of the disease and not from the side of the drug or remedy. Only enough of the pathology and etiology of disease is introduced as is necessary to arrive at the rational indications, without which the administration of a drug can hardly be called scientific. Half a dozen choice formulæ by leading London physicians are appended to each chapter. The author deprecates the modern tendency to prescribe new remedies, some of them patent chemical agents merely on the recommendation of the manufacturers. There is no doubt that many medical men are the poor tools of the wealthy drug exporter, and many a physician of good ability has prescribed himself out of practice, when, if he had stuck to the well-known standard drugs which have stood the test of years, he would have reaped a splendid success. It is impossible, of course, to specially notice all the good qualities of this work, we can only take up a few in which we are more especially interested—for instance, the article on habitual constipation is a remarkably clear one. The author points out that in many of such cases, the patient does not take in a sufficient quantity of water, so that after the other organs have been supplied, none remains over with which to keep the contents of the bowels soft; others again, he says, owing to defective appetite or painful digestion do not take a sufficient quantity of food to yield the necessary stimulus to peristaltic contraction in the intestinal canal. He lays great stress on the necessity for bodily exercise, and where this cannot be obtained in sufficient amount, he recommends abdominal massage along the whole course of the colon. He does not neglect either to urge, especially in the case of young girls, the importance of having a regular hour every day for attending to the bowels. His article on the treatment of peritonitis is thoroughly up to date, and he brings forward a good deal of evidence to show that the operative treatment is on the whole most likely to be of benefit. The *pièce de résistance*, his article on pulmonary tuberculosis, having been for many years physician to Brompton Hospital, we are not surprised to find that he has devoted one hundred and thirty-one pages to the treatment of this disease.

In his chapter on the prevention of the disease, he sets forth very clearly the necessity for the disinfection or the destruction of the sputum of phthisical patients. He considers that the exposure of tubercle bacilli to boiling

water for cleanliness is the most effective method of destroying them. The risk of infection by the dust of dried sputum may be provided against to some extent by warning the patients not to spit on the floor either in the house or in street cars, etc. He recommends Japanese paper handkerchiefs, which afterwards can be burned. He is also greatly in favor of the sanitary cuspidor, which we have already noticed in this Journal. There are also five chapters on the general medical treatment of phthisis, on the symptomatic treatment, on the treatment of complications, and the surgical treatment of phthisis cavities. Chapter Five treats of the regimenal treatment, and Chapter Six, climatic treatment. In his article on the medical treatment of acute rheumatism and speaking of rheumatic endocarditis, he is very severe on the dry diet recommended by our esteemed *confrère*, Professor James Stewart of Montreal. He says, "to attempt to feed a patient suffering from acute rheumatism, who is sweating profusely and passing dense high-colored urine, with a dry diet in order to obtain some very problematic lowering of blood pressure, is surely to misapprehend the situation entirely." The index is so arranged that one can find either a disease or the various remedies at a glance. Without exaggeration, we can say in conclusion, that one could hardly read anything affording at the same time so much pleasure and profit as this elegantly written and beautifully printed book by Doctor Burney Yeo.

A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY. By W. S. Playfair, M.D., F.R.C.P., Professor of Obstetric Medicine in King's College, London; Examiner in Midwifery to the Universities of Cambridge and London, and to the Royal College of Physicians. Sixth American from the eighth English edition. Edited, with additions, by Robert P. Harris, M.D. In one octavo volume of 697 pages, with 217 engravings and 5 plates. Cloth, \$4.00; leather, \$5.00. Philadelphia, Lea Brothers & Co., 1893.

The demand for eight English and six American editions of this standard work in seventeen years testifies to the success with which the author has executed his original purpose. His object "has been to place in the hands of his readers an epitome of the science and practice of midwifery which embodies all recent advances." He has "endeavored to dwell especially on the practical part of the subject, so as to make the work a useful guide in this most anxious and responsible branch of the profession." The present issue is the result of a thorough revision of its predecessor at the hands of the author. It has likewise received the benefit of careful revision by Dr. Robert P. Harris, of Phila-

delphia, whose annotations in this and in previous editions have covered the points wherein American practice differs from that of English obstetricians. The work will continue to be a favorite text-book for students and a trustworthy guide for the practitioner.

Ever since its first appearance it has enjoyed the reputation of being the leading text-book in England on this subject. We had the pleasure seventeen years ago of being intimately acquainted with a young Canadian in London, who had won the gold medal for Obstetrics offered by the University of London. He told us then that he had made "Playfair" his *vade mecum*. We were rather disappointed in former editions at the small attention devoted to puerperal fever. This defect has been fully remedied in the present edition, the chapter on puerperal septicæmia and also the one on symphyseotomy being very complete, with the one exception that the total removal of the septic uterus is not mentioned among the methods of treatment. The great claim which may be made for Playfair is its thoroughness. There is hardly anything connected with midwifery that one cannot find an ample but concise notice of, under its appropriate heading; and the wood-cuts are all useful ones. In fact, there is a total absence of padding either in the cuts or in the text. The veteran American editor, Dr. Harris of Philadelphia, who is recognized all over the world as an authority on symphyseotomy in particular, and as a vigorous writer on obstetrical topics generally, has fully made use of his privilege to make annotations, and to the American reader his notes are a valuable addition to the book. Both the author and American editor show a vast amount of erudition and wonderful familiarity with journal literature, as evidenced by their quoting nearly every important case that has been reported on this topic, while their own opinions are expressed so modestly and yet so decidedly as to deserve our admiration. We do not say that this is the best work extant, but we can truly say that it is one of the most valuable text-books on midwifery that has ever appeared.

THE THROAT AND NOSE AND THEIR DISEASES.

With one hundred and twenty illustrations in color and two hundred and thirty-five engravings designed and executed by the Author. Lennox Brown, F.R.C.S. Eng., Senior Surgeon to the Central London Throat and Ear Hospital, late President British Laryngological Association. Fourth edition. Philadelphia: Lea Bros. & Co.

In this edition the author has introduced all recent information of value, much that was doubtful has been expunged, and the space thus gained has been devoted to further details of the influence of micro-organisms in producing throat diseases. The main feature of this

new edition, however, has been the expansion of that portion of the work which deals with diseases of the nose, for in the condition of the nasal fossæ which constitute the first avenues of the natural breath way is, to be found the key to the right understanding and successful treatment of the majority of faucial, pharyngeal and laryngological diseases. One of the things that strikes us more forcibly is the valuable help afforded by the very numerous and exquisitely beautiful lithographic plates drawn from nature and on stone by the author.

The wood-cuts which appear on every page are not less explicit in their teaching. With commendable courtesy the author says in his introductory chapter, that he has quoted largely from the writings of his American confrères in this specialty. No excuse is made for this procedure, because from no quarter have we derived in these later days so many original observations and suggestions of real practical value as from the members of the American Laryngological Association.

In addition to the unusual thorough subject-matter of the work, the mechanical part, as is usual with Messrs. Lea's publications, is of the highest order, it being evident that no expense has been spared to make it one of the best works of its kind, the article on tubercle, syphilis and diphtheria being especially worthy of mention. Although quite complete enough for the use of specialists, it is at the same time so clear as to be of daily value to the general practitioner, who will find at the end of the volume a number of well tried formulas most in vogue at the London hospitals for diseases of the throat. The book may be obtained through Mr. Renouf, book-seller, Montreal, or directly from the publishers.

A MANUAL FOR BOARDS OF HEALTH AND HEALTH OFFICERS.—By Lewis Balch, M.D., Ph.D., Secretary State Board of Health of New York; Health Officer of Albany; Emeritus Professor of Anatomy; and Professor of Medical Jurisprudence, Albany Medical College.

The Secretary of the State Board of Health, Dr. Lewis Balch, has prepared a Manual for the use of members of local Boards of Health, Health Officers and all others interested in health matters. The book is exactly what it purports to be, a practical working manual. It defines the powers of the State and Local Boards, it contains direction to the Local Health Officer, it gives examples of problems which may arise and their solution, it offers suggestions for the prevention of disease, and it includes directions to be followed in times of danger from epidemics of contagious diseases. Price \$1.50, delivered upon receipt of price. Banks & Brothers, Albany, N.Y.

A DICTIONARY OF MEDICAL SCIENCE. Containing a full explanation of the various subjects and terms of Anatomy, Physiology, Medical Chemistry, Pharmacy, Pharmacology, Therapeutics, Medicine, Hygiene, Dietetics, Pathology, Surgery, Bacteriology, Ophthalmology, Otology, Laryngology, Dermatology, Gynecology, Obstetrics, Pediatrics, Medical Jurisprudence and Dentistry, etc., etc. By Robley Dunglison; M.D., LL.D., late Professor of Institutes of Medicine in the Jefferson Medical College of Philadelphia. Edited by Richard J. Dunglison, A.M., M.D. New (21st) edition, thoroughly revised, greatly enlarged and improved, with the Pronunciation, Accentuation and Derivation of the Terms. In one magnificent imperial octavo volume of 1181 pages. Cloth, \$7.00; leather, \$8.00. Philadelphia: Lea Brothers & Co., 1893.

This has been for the past sixty years the favorite Medical dictionary on this continent, the fact that it has gone through twenty-one editions during that period being sufficient proof of its popularity. As the science of Medicine has progressed, hundreds and thousands of changes have been made, but in this edition these changes have reached the great number of forty-four thousand new words and phrases. Although the page has been enlarged, this volume contains one hundred more pages than its predecessor.

Dr. Richard J. Dunglison enjoys a wide reputation as a medical writer, and no one more fitted could have been found to revise the work of his talented father. Some minor faults have been found in the work, such as the printing of the Greek roots in English letters; this, however, has probably been intentional, in order to adapt the work to the use of the unfortunately very large class of practitioners who are unacquainted with the Greek language. There are also a few mistakes in pronunciation, but these are so few in comparison with the many thousands of correct ones that they may be easily ignored. The derivations and explanatory definitions for which this work has long been celebrated are thoroughly given.

Under diseases we find their symptoms and treatment; under drugs, their properties and doses; under poisoning, their symptoms, antidotes and treatment.

Very complete tables furnish a vast amount of information which cannot be otherwise obtained. One cannot even glance over the work without uttering an expression of admiration for the indomitable energy of the author and reviser. We have tested several words, and have been very much struck with the completeness with which the subjects are handled. For instance, taking the word liver, in the space of three-quarters of a page we have the anatomy,

physiology and pathology of the organ, including a table of dimensions and weights of the liver and its component parts. A dictionary is of necessity a difficult work to review, but we can only say that it has long been recognized as the standard work of its kind on this continent, and that no medical library can be said to be complete without it.

CHEMISTRY AND PHYSICS. By Joseph Struthers, Ph. B., Columbia College School of Mines, N.Y.; D. W. Ward, Ph. B., Columbia College School of Mines, N.Y.; and Charles H. Willmarth, M. S., N. Y. \$1.00. (The Students' Quiz Series.) Philadelphia, Lea Brothers & Co., 1893.

This new series of manuals for students of medicine is rapidly approaching completion. The volume on Chemistry and Physics is the twelfth to appear, and the thirteenth and final volume, that on Surgery, will shortly follow. This series is written by well-known New York teachers and specialists, and it enjoys the advantages of issue under competent editorship. The volume on Chemistry and Physics, like its companions, deals with those facts of its sciences which are requisite to a thorough medical education. The various matters are presented tersely and pointedly in the form of questions, which are answered with equal clearness. The book is well illustrated. Teachers as well as students will gain much advantage from the use of these manuals—in fact, their value far exceeds their modest price, which is rendered possible only by a large sale.

When one looks through this small work, it is astonishing to see how much information on Chemistry and Physics have been compressed into it. For students preparing for examinations, and even for teachers, reviewing this small work saves a large amount of time.

NEW ILLUSTRATED DICTIONARY OF MEDICINE, BIOLOGY, AND COLLATERAL SCIENCES.

DR. GEORGE M. GOULD, already well known as the editor of two small medical dictionaries, has now about ready an unabridged, exhaustive work of the same class, upon which he and a corps of able assistants have been uninterruptedly engaged for several years.

The feature that will attract immediate attention is the large number of fine illustrations that have been included, many of which—as, for instance, the series of over fifty of the bacteria—have been drawn and engraved especially for the work. Every scientific-minded physician will also be glad to have defined several thousand commonly used terms in biology, chemistry, etc.

The chief point, however, upon which the editor relies for the success of his book is the unique epitomization of old and new know-

ledge. It contains a far larger number of words than any other one-volume medical lexicon. It is a new book, not a revision of the older volume; pronunciation, etymology, definition, illustration, and logical groupings of each word are given. There has never been such a gathering of new words from the living literature of the day. It is especially rich in tabular matter, a method of presentation that focuses, as it were, a whole subject so as to be understood at a glance.

The latest method of spelling certain terms, as adopted by various scientific bodies and authorities, have all been included, as well as those words classed as obsolete by some editors, but still used largely in the literature of to-day, and the omission of which in any work aiming to be complete would make it unreliable as an exhaustive work of reference.

The publishers announce that, notwithstanding the large outlay necessary to its production on such an elaborate plan, the price will be no higher than that of the usual medical text-book.—P. BLAKISTON, SON & Co.

THE THEORY AND PRACTICE OF MEDICINE PREPARED FOR STUDENTS AND PRACTITIONERS. By James T. Whittaker, M.D., LL.D., Professor of the Theory and Practice of Medicine in the Medical College of Ohio; Lecturer on Clinical Medicine at the Good Samaritan Hospital; Fellow of the College of Physicians of Philadelphia; Member of the Association of American Physicians, of the American Academy of Medicine, and of the American Medical Association. With a chromo lithographic plate and three hundred engravings. Octavo, 840 pages. Extra muslin, price, \$5.75; leather, price, \$6.50. New York: William Wood & Company.

The author of this book is of wide reputation and recognized ability, and possesses an experience admirably suited to the production of such a work as this. All the more recent advances in diagnoses and in therapeutics will here be found. The practitioner who looks up from the signs and lesions to the cause will entertain more hopes of treatment.

Part I. is devoted to general diseases, such as infections and parasites.

Part II. to diseases of organs, including digestion, respiration, circulation, genitourinary system, and nervous system. It is unusual to find in such works so many as three hundred illustrations which this book contains, and which adds so much to the interest of the reader. Its general excellence is beyond our power to criticize. Its size, clear type, good paper and above all the conciseness of the

author's descriptions, render it an excellent text-book for the use of both students and practitioners.

MINOR SURGERY AND BANDAGING.—Including the Treatment of Fractures and Dislocations, Tracheotomy, Intubation of the Larynx, Ligations of Arteries and Amputations. By Henry R. Wharton, M.D., Demonstrator of Surgery, and Lecturer on Surgical Diseases of Children in the University of Pennsylvania. Second edition thoroughly revised and enlarged. With four hundred and sixteen illustrations. Philadelphia, Lea Brothers & Co., 1893.

Although the author only claims this to be a book on minor surgery, it is really much more than that, as it includes nearly 100 pages on fractures, 30 pages on dislocations, 40 pages on the ligation of arteries, and 50 pages on amputations. The illustrations are nearly all photo-engravings while the woodcuts are of the highest order. There is nothing for us to criticize, the descriptions of the preparations of ligatures, sutures, etc., being according to the most recent methods. We cannot speak too highly of the excellence of the mechanical part of the work, which comprises in all a little over 500 pages. Although probably intended for the student, it contains so much recent information on aseptic operating and dressing which is not yet otherwise accessible in book form, that this little volume would be especially useful to the country practitioner who has a taste for surgery.

OUTLINES OF PRACTICAL HYGIENE—The Art of Preserving Health by Preventing Disease. Adapted to American conditions. By C. Gilman Currier, M.D., Visiting Physician to the New York City Hospitals; Fellow of the New York Academy of Medicine; Member of the New York Pathological Society; Member of the American Medical Association, etc., etc.

CONTENTS FROM CHAPTER HEADINGS.—Soil—Climate—Protection of Body—Clothing—Bathing—Personal Hygiene—Physical Exercises—Schools—Occupations—Their Influence on Health—Heating—Lighting—Buildings—Ventilation—Diet—Foods—Their Preparation and Adaptation—Water and Water Supplies—Fluid Waste—Sewers—Drainage—Plumbing—Garbage and Other Refuse—Disposal of the Dead—Human Excreta, Disposal of—Bacteria and Diseases—Infectious Diseases—Disinfection—Restriction—Communicable Diseases. One large octavo volume, 468 pages, illustrated, \$2.75.

A NEW MEDICAL DICTIONARY.—A completely new Medical Dictionary is announced for early publication by Lea Brothers & Co. The author, Dr. Alexander Duane, of New York, is already widely known as the medical expert for Webster's International Dictionary. His new work has been drafted to supply medical students with all desired information concerning the words they will meet in their course of reading; and as the vocabulary has been selected most liberally, the work will be of value to practitioners also. The pronunciation of each word is given by a simple and obvious phonetic spelling; then follows the derivation, an unexcelled aid to memory, and finally a full definition. Descriptive matter has been appended to such words as cannot be adequately explained by simple definition. Thus, diseases are described, and their symptoms and treatment are given; drugs are followed by their properties, effects, doses, etc. Extensive tables of bacteria, doses, etc., are placed in the alphabet most conveniently for reference. A work of real value is promised, and we shall take an early opportunity of reviewing it in these columns.

AMERICAN TEXT-BOOK OF GYNÆCOLOGY.—Mr. W. B. Saunders, Publisher, of Philadelphia, Pa., announces this work as ready for early issue. It is the joint work of Drs. Howard, Kelley, Pryor, Byford, Baldy, Tuttle, and others who stand before the profession for all that is progressive in gynecology. The work will contain operations not before described in any other book, notably ablation of fibroid uterus. It is designed as a profusely illustrated reference book for the practitioner, and every practical detail of treatment is precisely stated.

ESSENTIALS OF MINOR SURGERY, BANDAGING AND VENEREAL DISEASES. Arranged in the form of Questions and Answers. Prepared especially for Students of Medicine. By Edward Martin, A.M., M.D., Clinical Professor of Genito-Urinary Diseases, Instructor in Operative Surgery, and Lecturer on Minor Surgery, University of Pennsylvania. Second edition, revised and enlarged. 78 illustrations. Philadelphia: W. B. Saunders, 925 Walnut Street, 1893.

This is a useful little volume of 163 pages arranged in the form of questions and answers, and while in no sense taking the place of larger works, will be found handy for students reviewing their work.

HERNIA: PALLIATIVE AND RADICAL TREATMENT IN ADULTS, CHILDREN AND INFANTS.—By Thomas H. Mar'ey, A.M., M.D., Visiting Surgeon to Harlem Hospital, Consulting Surgeon to Fordham Hospital; Philadelphia, Pa. The Medical Press Co., Limited, 1725 Arch street, 1893.

Although this little work of 277 pages is hardly up to the usual standard as regards paper, printing and engravings, yet it contains a vast amount of information concerning Hernia in a comparatively condensed form. His chapter on the Argen progress and present position of the radical cure is very good, as is also his description of Bassini's method. The three woodcuts illustrating it are also very good. We are surprised to find the author taking a decided position against the operation. The author is well up in the literature of the subject, the book being plentifully supplied with references to the book and journal literature.

PAMPHLETS RECEIVED.

DIET IN ITS RELATION TO THE TREATMENT AND PREVENTION OF DISEASE. Read before the Section of Physiology and Diagnostics at the Forty-third Annual Meeting of the American Medical Association, held at Detroit, Mich., June, 1892, by Augustus P. Clarke, A.M., M.D., of Cambridge, Mass., U.S.A., President of the Gynecological Society of Boston; Vice-President of the Pan-American Medical Congress, Washington, 1893.

POST-PARTUM HEMORRHAGE: ITS ETIOLOGY AND MANAGEMENT, by Augustus P. Clarke, A.M., M.D., of Cambridge, Mass., U. S. A.

ORIGIN AND DEVELOPMENT OF MODERN GYNÆCOLOGY, by Augustus P. Clarke, A.M., M.D., of Cambridge, Mass., U. S. A.

ADDRESS ON HYGIENE.—Delivered by Prof. Samuel G. Dixon, M.D., at the meeting of the State Medical Society, Williamsport, Pa.

REPORT OF A CASE OF APPENDICITIS. By Dr. Mordecai Price, Philadelphia.

A CONSIDERATION OF SOME OF THE OPERATIVE MEASURES EMPLOYED IN GYNÆCOLOGY, by Augustus P. Clarke, A.M., M.D., of Cambridge, Mass., U.S.A.

HYGIÈNE DE L'ENFANCE ET DE L'ADOLESCENCE. Ouvrage honoré d'une Médaille d'argent de l'Académie de Médecine (Comm. d'Hygiène de l'Enfance): Le Premier Age et La Seconde Enfance, par le Dr. E. Verrier, ancien préparateur à la Faculté de Médecine, Lauréat de l'Académie de Médecine (prix Capuron), Officier de l'Instruction Publique. Troisième Edition, Paris, Société d'Éditions Scientifiques, Place de l'École de Médecine, 4, Rue Antoine-Dubois, 1893.

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