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NO. 1.

Original Contributions.

THE HUMORS OF A SHIP'S PRACTICE.*

BY E. H. STAFFORD, M.D.

In a branch of learning so practical as medicine all actual experience has value; and, indeed, where the active profession has been cut up into so many separate fields of practice, the ultimate principles of action arrived at by the whole must in large measure be founded upon the correlative evidence adduced by the parts. In view of this fact, and at the suggestion of the late Dr. Harvey, of St. Johns, the rather copious notes taken in a recent voyage in the North Atlantic, as surgeon on one of the sealing ships, have been arranged for the medical reader in a manner which, it is hoped, will render a newly-treated subject acceptable.

The argument may be stated significantly in a word. In the month of March, which is sometimes intensely cold in this latitude, the sealing fleet sails for the ice with between two and three hundred men on each vessel, and about five thousand in all. The cruise lasts one or two months, and the work of the sealer consists in killing young or old seals on the ice with a gaff or a rifle, skinning them with a knife, and dragging the skins thus obtained over the ice, which is usually in broken or loosely-floating pieces, to the ship or to a common place of deposit. While thus engaged, the sealer is in the open air for a great portion of the day, and sometimes for a large part of the night as well. His food and drink are provided by the ship. He is quartered in the forecabin and in improvised berths in the hold.

* Written specially for THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

The work of the seal-killer, like the work of the miner, lumberman, railroadman, and vaquero, is violent, full of hardships, and not devoid of peril. It is for this reason of paramount importance that only those of robust constitution should present themselves for such employment. On the other hand, the duration of the cruise is so brief that a powerful man may be reasonably expected to endure for a short time many privations and inconveniences which could not be permanently asked of him.

The cases of disease or injury which come under the notice of the ship's surgeon are fourfold: Cases of debility or sickness, where the patient was in a weak condition before he came on board; instances of disease following exposure to the severity of the climate; injuries of a surgical nature received after coming on shipboard, and epidemics and constitutional diseases due to the unsanitary habits of the men or faulty condition of a particular ship.

Influenced by the abundant remuneration which often falls to the share of each sealer after a successful voyage, many men who are in debilitated health or who are even suffering from actual disease at the time, offer themselves confidently for employment upon the sealing vessels, and embark upon the cruise, either hoping that in spite of this handicap they may be enabled to perform the duties expected of them, or wantonly indifferent as to whether they shall make themselves useful or not, since all alike receive the same portion, irrespective of labor done.

In either case patients of this class have committed a grievous wrong, though the wrong to themselves in attempting, at the peril of their health, what is beyond their powers, may be sooner condoned than the wrong which they wilfully do the owners and their associates when they essay a task which they know they cannot, and do not intend to perform.

To prevent the occurrence of this abuse it would be well if every applicant for a berth in a sealing vessel be in future medically examined by a competent physician, preferably the one who is to act as ship's surgeon on the same vessel, before he be allowed to sign for the voyage. Cases of venereal disease should be excluded for obvious reasons. Cardiac derangement, phthisis, rheumatism and severe cases of hernia should decide against him, as well as any imperfection of the sight or hearing. Much trouble may also be saved by making further inquiry as to the condition of the feet, the teeth, and the presence of tumors and ulcers, if they exist, for the physician will otherwise be importuned at the most inconvenient times to pull teeth on shipboard and perform numberless other acts of petty domestic surgery when his time is demanded by more important matters. I may say that the sealers have a positive mania for having their teeth pulled out. Their object is a purely economical one. They recognize the historical fact that all teeth must come out sometime, and it seems well to them to

have as many as possible out when the operation can be done for them for nothing, lest by waiting till the tooth becomes really decayed they should be put to expense.

The form of clothing worn at present by the sealers is admirably adapted to the needs of their employment. The men frequently fall into the sea, however, and are saturated to the skin, on which occasions it is sometimes impossible to return at once to the ship for a change; and they are thus exposed, sometimes for hours, in their wet clothing at a very low temperature. A few, even when they are able to return to the ship, either for lack of a change or from sheer carelessness, remain in their wet clothing until it dries. As a result of such ignorance many cases of rheumatism, pneumonia, pleurisy and bronchitis take their rise. Wetting in the sea is sometimes unavoidable, and may befall the most careful and the most experienced, and when complications arise no possible blame can be attached to the patient; but when wilful negligence has been knowingly added to mischance, the patient is certainly to blame.

Frost-bite, during exceedingly cold weather, is also of occasional occurrence; but as a rule the rigor of the winter has in great degree abated at the time when the fleet reaches the ice, and the thermometer seldom falls below 20. To provide against frost-bite as far as possible, the physician would not be out of his province in personally assuring himself that the men are properly provided with clothing. The main point then is to keep in constant motion, to be plentifully supplied with food, that the energies may be sustained, and to remain within easy distance of the ship in case of emergency. Many of the cases of frost-bite recorded were the direct result of stupidity and carelessness. At the same time, the tragedy of three years ago, when forty-seven men from one ship lost their lives at once through two days' exposure to a severe storm, must be borne in mind. In the instance referred to no blame was attached to anyone concerned. And while commanders of vessels no doubt consider the safety of their men before any possible gain which may accrue at their expense by following a particular course, it is the duty of the men themselves to do their part also, and to remember, however familiar with the life on the ice they may be, that the unforeseen frequently happens.

Ice-blindness, with which large numbers of the sealers are annually afflicted, is less the result of exposure to inclement weather than prolonged visual contact with the dazzling glare of the ice. This is a most painful malady, and for a time renders the patient quite blind. Great pain is experienced at even opening the eyes. Some inflammation is usually present, and the delicate nerves of the organ itself are found to be more or less paralyzed. As a curative measure, soothing antiseptic solutions, mild astringents and complete rest are indicated, and usually assist nature in restoring

the sight after a time. As a preventive, smoked glasses to be worn when on the ice, are recommended. I observed, furthermore, that the caps worn by the sealers have no rim to shade the eye. A deep peak to the cap would greatly mitigate the glaring effect of the ice, as the writer personally discovered in his own case, and might even prevent the development of ice-blindness. Surgical injuries are very numerous, and consist chiefly of fractures and dislocations, gunshot wounds, punctured, incised and lacerated wounds.

If the surgeon's preliminary examination of the men before embarking has been at all thorough he will have no cases of hernia, venereal disease, old standing dislocations, abscess, or ulcer from general debility; and the injuries sustained after going on ship-board by vigorous and healthy individuals will be found to heal with great rapidity.

The punctured wounds are generally received from the sharp steel barbs upon the ice-gaff with which the seals are killed; the incised from the scalping-knives with which the skin is removed from the carcase; the gunshot wounds from the rifles with which they are shot, and the lacerated wounds from the fangs or claws of the seal itself when the animal shows fight.

Fractures and dislocations are the result usually of either falls from the ship, in the ship or upon the ice, or from accident on the ship where machinery is used in stowing the seals, and on the ice where spasmodic muscular efforts are often necessary in leaping from pan to pan. Accidents of this sort are always imminent under any possible conditions, and the absence of any such cases for a couple of voyages is a very frail warrant of security.

Gunshot wounds, grave and even fatal, are likely to occur at any time when the men are shooting the old seals; and especially when the ice is occupied by parties from different ships, engaged in the same vicinity. One or two hair-breadth escapes came under my notice upon the present voyage, but happily nothing more.

The punctured wounds are serious when they enter the capsule of a joint. I had under my charge two such cases, which were very painful, and bade fair to make a slow recovery. The very numerous flesh-wounds which were inflicted healed in a couple of days, nor did I hear of any case of blood-poisoning from this cause, a fact which would indicate a comparative freedom from micro-organisms upon the ice. These wounds are generally the result of carelessness and needless haste when the men are boarding the ship or swarming out upon the ice. Caution in the handling of their gaffs should be constantly impressed.

The incised wounds may also be largely avoided by using a little care when "sculping" the seal. The beginner and the inexperienced should recognize the wisdom of *festina lente*. The slashes thus inflicted heal readily with a few stitches and an antiseptic dressing.

Cases of lacerated wounds are also of common occurrence, for the dog hood (*cystophoro cristata*) is exceedingly ferocious when attacked, and has frequently torn the flesh literally from the bones. Happily many of the wounds inflicted by him call for the offices of the tailor rather than the surgeon. In one case which came under my notice the hand had been transfixed in four places by the fangs of the hood, and looked as if it had been nailed to a board and forcibly torn away. With simple antiseptic treatment such wounds heal in a short time. None of those after-effects ensue which follow the bite of a rabid dog or wolf.

Besides the wounds mentioned, minor abscesses are numerous in the hands or feet, following severe bruises or unnoticed punctures of the skin. Abrasions not properly attended to develop into ulcers. Furunculi and occasional cases of tendinous panaris make their appearance.

The severe strain on one finger, in dragging the skins long distances over the ice with a rope, in many cases produces a stubborn synovitis, or there may be septicemia, or both. Painful and stubborn swellings of the finger, from whatever cause, are termed "sealer's finger" by the men themselves, and when the cause is ascertained should be treated at once. As a result of constant use, the integument is usually thickened and indurated, and it is necessary to lance deep and freely. Antiseptics generally complete a cure. Entire rest for the part and protection from outside contact should be enforced. Poultices are found to be soothing. Successful preventive measures might be taken by relieving the constant strain on one finger. The sealer has several other fingers. A knowledge of the cause on the part of the men themselves is important. Furthermore, a reasonable degree of cleanliness should be suggested, and the means for it provided. Some of the sealers do not wash either hands or face during the entire voyage, and go from day to day with their hands reeking with filth and blood. Erysipelas and diphtheria have already made their appearance, upon the ships, and typhus would probably occur also if the men were not so much in the open air, and if the voyage was not of such short duration. Colds, severe sore throats, bronchitis, tonsillitis, pleurisy and pneumonia are also of frequent occurrence; but the victims will almost invariably be found to be individuals of weakened constitution, who acted unwisely in coming on board at all. The curative treatment will be as anywhere else. The preventive treatment is obvious. There are from twenty to fifty such cases of debility upon every ship, and it is entirely in their own interest that they should be prevented from signing on in the first place, as they do not afterwards earn the remuneration which they receive; which, again, if they did earn, would poorly compensate for a broken constitution inevitably following so severe a strain upon energies never strong or already undermined. One

patient suffering from phthisis had barely strength after the voyage to reach home before he died.

Epidemics of influenza took place on many of the ships during the present year, a dozen at a time being down with it. The treatment indicated is the conventional one, but the means for carrying it out on shipboard are difficult.

Rheumatism is usually the sequel of exposure. There are many such cases, and most of them are also the result of neglect after exposure. Though it may seem inconceivable, many of these men, after being drenched to the skin in the sea, go contentedly, though shivering, to their damp and cold berths in their clammy clothing and wait complacently for a couple of days for their clothes to dry upon them without making any attempt at a change. The same negligence is followed in some cases by renal derangement. I had several cases of this. Warm clothing, a flannel binder, heat to the part if necessary, and saline diuretics afford relief if the patient has sense enough not to repeat his indiscretion.

Indigestion is also of frequent occurrence. If acquired after coming on shipboard it is usually a consequence of the marked change of diet. Many of these poor fellows have been on short commons for a part of the winter, and a sudden accession to the copious and very rich commissariat of the vessels gives rise to digestive disturbance. On the other hand, while the cuisine on the ships is perfectly wholesome, some who have been accustomed to the little refinements of domestic cooking may find the somewhat crude and heavy fare on board disagree with them at first. Often, also, they are forced to carry their food with them all day in a small bag, and eat it cold at irregular intervals while on the ice at a distance from the ship. A very large number suffered also from constipation, which was generally discovered only when some supercurrent affection had made its appearance. Jaundice also made its appearance.

While the accommodation offered the men has no doubt been gradually improving from year to year, and now offers probably a very favorable contrast to the limited conveniences which they enjoyed in the days of the small sailing vessels, and while the owners are willing, and indeed desirous, to make any reasonable innovations for the safety and comfort of the men who are instrumental in bringing annually so great an accession of wealth to the island, the fact still remains that old-established usages, whether on shore or at sea, enjoy always a very strong prestige. What was good enough for, and answered the purposes of the men last year, is very logically regarded as good enough for the men who go next year.

In spite of this fact, more than one needed reform has been made with the most willing co-operation of the ship-owners. One important innovation was in limiting the number of the crews taken

on to the capacity of the ship, which is decided in each case by those most competent to judge. Still other suggestions as to the sanitary needs of the men and the ship will occur to the trained medical man, and these refer particularly to the habits of the men, the defects of the ship, and the medical arrangements. The negligence of the sealers in the simplest questions of hygiene, as indicated by their frequent practice of exposing themselves in wet clothing, has already been referred to. This indifference to the laws of hygiene not only explains much of the disease which makes its appearance on the ship during the cruise, but as they probably are equally careless or imprudent on shore, helps to cast some light upon the alarming increase of tuberculosis in the island during recent years. In most cases of such neglect there is possibly present a subconscious notion of virility in disregarding what seems to them a trivial inconvenience. This widespread ignorance and indifference to sanitary habits cannot be too deeply deplored, and one of the ship surgeon's duties will be to guide and enlighten the men under his care as to the grave significance of such errors.

Though not followed by results as direct or as serious, the general lack of cleanliness among the sealers is not compatible with perfect health. There is no doubt an excellent excuse in his case. He has little leisure for the toilet, and may be called to work almost at any moment. The work itself is exceedingly dirty. The decks are covered with reeking sealskins, to make room for which the supply of coal is being hoisted up from the pounds beneath and thrown overboard or piled in heaps upon the deck. In killing and "sculping" the seals he is literally covered with the blood, the oil, and the contents of the viscera. Not only his hands, but his arms, his clothes, his face, and even his hair is saturated with blood and grease. This foundation catches the black dust of the coal and all the grime and dirt of a ship at sea. To do the work and keep clean at the same time would be really impossible. Add to this the fact that there are no facilities on board for frequent ablutions, and to this fact again, the tradition, which obtains among some of the sealers, that if one washes his thickly-smear'd cuticle during the voyage, it lets in the cold and is followed by sickness, and ample excuse will be found for the sealer if he does not attempt to be over-dainty.

Nevertheless, this condition of filth is not wholesome. He fouls the air of his sleeping place, and everything with which he comes in contact. He sleeps in his clothes without change, and they soon become alive with vermin. Often a badly inflamed eye bears witness to the polluting touch of an unclean hand, or a suppurating wound to infection from a similar source. Two or three men complained of erysipelas, which was found to be nothing more than a slight inflammation brought about by the irritation of filth.

One case of plica polonica also developed itself under the same favorable auspices.

A similar lack of cleanliness is also noticed in the matter of food. Each sealer provides his own dishes, and in them receives his rations from the ship. These dishes become so filthy that one almost wonders that anyone would be willing to eat out of them. With grease, blood and dirt on the outside, one not infrequently detects the smell of fermentation within, where, from day to day, slight deposits of food, not easily shaken out, are left to grow sour and decay.

For this also the sealer has the same excuse that he has for the uncleanliness of his person; and while it is not to be wondered at that he should fall into these ways, the fact must still be forcibly impressed upon him, and upon the officers over him, that habits of this sort are not only objectionable in themselves, but directly inimical to health also, when in common practice among nearly three hundred men packed together like soldiers in a barrack. It is under such conditions that ship-fever usually occurs.

There are also other practices which should be discountenanced. The men expectorate all about their quarters, vomit freely upon the floor and in their berths, and even micturate in odd corners below to save themselves the inconvenience of climbing to the deck above. Particles of food constantly escape upon the floor and are trodden under foot and decay. To this add the fact that rain and sleet are frequently entering their quarters through the open hatches above them, that the rancid sealskins are stowed beneath them, and one can readily believe that the place is so slippery with filth that it is difficult for the tyro to get about on his feet, and that the air is so impure that the act of breathing seems undesirable.

In the face of these statements, I hasten to say that a more high-minded, trustworthy and manly set of fellows than those same sealers I have seldom had the pleasure to meet before. They are merely the creatures of their environment, and having been driven by necessity to a certain point, have allowed themselves to go further than necessity actually required, and have thus gradually fallen into a degree of uncleanliness for which there is ample excuse but no actual necessity.

These considerations lead logically to an examination of the ship's accommodations and equipment. If any improvement is to be made in the condition of the men, it will depend largely upon the facilities which are offered by the ship. The ships of the sealing fleet are barque-rigged, wooden vessels with accessory steam, and are of small tonnage. Each ship carries a crew of nearly three hundred men; and, if the voyage is to pay at all, must return with a cargo of from four to six hundred tons of seal fat. Each ship, moreover, usually starts out with about five hundred tons of coal on board, and sufficient food to supply the crew for six weeks,

which, by the way, is no small matter. Constant readjustment of the cargo, as the input of seals increases, thus becomes necessary, and near the close of the cruise nearly three hundred tons of coal is often, of necessity, thrown into the sea.

In view of these facts it can be readily understood that the ingenuity of the owner might well be taxed even to find standing room for his immense crew on a ship so crowded. He has succeeded in doing a great deal more than this. The fore-castle, above and beneath, and the holds, fore and aft, immediately beneath hatches, have been fitted up temporarily with bunks. The men are very closely packed together, it is true, but each at least has a berth where he can lie down, and when opened to the men at the beginning of the voyage these quarters are perfectly clean and sweet. The breathing space, per capita, is no doubt too small, but the time during which the men have to put up with this inconvenience is very short, for it is expected that only a small portion of each day will be spent in the berth. In military transports and in emigrant ships there is about the same degree of crowding, as also in the overland colonist cars.

Stoves are provided for heating, and free ventilation is always possible, and indeed is generally insured by the exigencies of loading, for the cargo of seals has to be placed in the lower hold; and for the great part of the time it is necessary to keep the hatches partially open, that the skins may be passed down through the quarters of the men to the pounds in the hold beneath. The skins are no doubt dirty enough—but the pot must not call the kettle black! Could the seals be stored in some other way, the admission of fresh air would be no less imperative. I have no doubt the men find this proceeding an annoyance, but it certainly is not an evil.

The standpoint of the owner must not be overlooked. He assumes all the risks and most liberally shares the profit with the men. Until some new way of catching and bringing home the seals is devised, the owner must carry a large crew in a small ship and reserve as much space as possible for the cargo. He cannot be expected to turn the cruise into a pleasure-trip for the men. Many thousands of dollars are expended in fitting out the ships and in running them. I do not think any more space could reasonably be expected for the accommodation of the men. It would reduce the possible cargo below the paying limit.

The first desideratum is to keep the space they have had allotted to them clean and wholesome, and this they can do by keeping themselves clean. This is certainly difficult, but with the co-operation of the owner will prove, I think, quite possible, and will be best accomplished by reserving the berths for sleeping in, and doing everything else outside.

Good water, as I shall point out presently, is obtainable in any

desired quantity, and as a step towards improved cleanliness on the part of the crew, it might be recommended that greater facilities be given for frequent ablutions. A wash-room could readily be improvised on the deck. Arrangements along a similar line might be made, possibly, by which the men could also get their meals in a more comfortable manner, and have a special receptacle for their dishes and utensils. Latrines also might be provided on the ships. The men are at present forced, when an operation on the bowels becomes necessary, to resort to the ship's side; and a natural disinclination to this difficult acrobatic performance accounts for much of the constipation which I observed among the men. A surprisingly large number also suffered from hemorrhoids, which may in part be explained by the same circumstance.

The food supplied by the ships is admirably adapted for its purpose. The men themselves bring with them in their boxes many minor luxuries, including a great quantity of cake, which it is the domestic custom in the island for their sweethearts to bake and present to them as they are setting out. Even cake may have its romance!

No alcoholic stimulants are provided by the ship, except for the officers, and this prudential rule cannot be too highly praised. The water supply is inexhaustible. The icebergs, which are very numerous, are not formed from salt water, but are simply detached pieces of snow-formed glaciers. The upper ice upon the floating pans is also free from salt, being formed by rain and snow which have fallen subsequent to the first freezing of the ice. The water obtained by melting the ice is almost as pure as distilled water, and excellent for either drinking or cleansing purposes.

In considering the amount of work required of the men, it cannot be said that the sealers are overworked on the whole. The watch is an hour shorter than on other ships. The labor on the vessel itself, while disagreeable, is not heavy, and consists merely in stowing the seals, shifting the coal and other cargo, and duties of the sort. All rights of watch, however, are waived when the ship is among the seals; and then all hands, even the engineers' assistants sometimes, are expected to do their part and keep unremittingly at work for twenty-four hours at a stretch if necessary.

Thirty thousand seals, if well developed, is considered a good catch; though, on the present year the ships reached the ice too soon, and the seals were not as large as they would have been had the fleet cleared on the 14th instead of the 9th of the month. When the ship is among the seals, ten or fifteen thousand can be killed in a day; and when two or three days of such work will load the ship for the return voyage, and earn each individual's remuneration, no reasonable person would take exception to long hours of work for a day or so.

The Medical Department is a new creation. In previous years

no physicians accompanied the ships of the fleet in a professional capacity. Each ship was provided with a venerable medicine chest, fairly well stocked with the preparations of obsolete pharmacopœias. From this secure arcanum it was formerly the office of the enlightened steward to dispense such nostrums as he thought best fitted for each case.

A year or so ago one of the stewards prescribed carbolic acid; and this being taken internally in copious quantities brought about the unexpected demise of the trusting patient. The medical theory upon which the steward was acting is not clearly known, though the most ready explanation is that the steward was either drunk or thought it was something else. Both are bad enough mistakes to be made by a cook, but are unpardonable in a dispenser of medicines. At all events this incident suggested the idea of sending a physician with each ship; and after two or three years of experiment some method will probably be hit upon whereby the five thousand sealers who annually go to the ice may enjoy medical attendance in case of injury or sickness.

The precedent established by the present year, when six physicians accompanied the fleet, may be regarded as tentative. No appalling accidents or epidemic of any moment chanced to take place on the fleet during the cruise; and as this immunity from mishaps cannot very well be placed to the credit of the physician, it might possibly be used as an argument against him, as going to show that his presence was unnecessary. Yet a man does not discontinue his life insurance because he continues to live, nor are firemen dismissed because for a year or so there have been no fires.

The presence of a physician on the ship is simply a precaution against what has already happened more than once, and what may happen again at any moment. What he really gives is his time, and this ranges from six weeks to two months as the case may be. His services are always ready, though there may be a general wish that they may not be required. Mining companies, railways, and manufactories almost invariably appoint a medical man to look after their employees, and compel the latter to pay a small sum out of their wages to meet the expense. Possibly some such method might be adopted, with justice to all concerned, in the case of the sealing fleet and its physicians.

In case of severe sickness or injury there is no place at present on any of the ships where the patient could be treated separately, nor is there any place where cases of infectious disease could be isolated. Should diphtheria, for example, break out on one of the ships, it would spread with great rapidity among the closely-crowded men. It would thus be a very great advantage indeed if on every ship a special apartment were set aside which would accommodate half a dozen, or, at a stretch, ten men. If necessary, infectious cases could be isolated here; in any case it would add vastly to the

comfort of those who are sick. This apartment might be temporary in character, and would be best on deck and not below, with facilities for maintaining an even temperature, perfect ventilation, and absolute cleanliness. Any cases of malingering which this display of sumptuousness might encourage could be readily rejected by the physician.

Besides having an infirmary where he could watch his critical cases, the physician would do well to make an inspection once or twice a day of the quarters of the men. With the co-operation of the commander and officers of the ship, a great deal of improvement could be accomplished in their habits and condition, and the possibility of an epidemic, which their present careless practices would almost seem to court, be entirely removed. This would simply mean the establishment of a department of public health on each ship. The men themselves will not oppose any innovation for their improvement. They simply require to be educated up to a higher standard of nicety, and if sanitary cleanliness is insisted on will do all that their facilities will allow to adapt themselves to a more healthful *regime*.

The ship's medicine chest will in most cases be found to be very deficient. There are usually a number of ointments and liniments and patent medicines, all of very doubtful efficiency and very uncertain age; while the very drugs upon which the physician depends in critical cases are frequently lacking. It would therefore be well for him to examine the chest on his ship before the fleet sails.

Few instruments will be required beyond the usual surgical pocket-case, stethoscope, clinical thermometer, and hypodermic. A tourniquet, a stomach-tube and a set of dental forceps are very likely to be needed. There is no imperative need for urinary analysis. The ice-blindness will be unfamiliar, and an ophthalmoscope might prove of interest, if not of use. A saw, should an amputation be necessary, may be taken, but in cases of frost-bite there will probably be no need for bone forceps until the ship has returned to port.

There will be no epidemics on board if the physician is thorough in his examination. Neither will there be any women, and an obstetrical or gynecological outfit may be dispensed with. I was told of a physician who, some time ago, besides bringing the above, also took a Roentgen ray apparatus and a sphygmograph, and was thus prepared for any prodigy of nature that might have taken place. But as I have shown, the physician need not look forward to miracles on the sealing fleet, and the usual run of casualties will pretty closely occupy all his attention.

THE GENERAL MANAGEMENT AND CONSTITUTIONAL
TREATMENT OF TUBERCULOSIS OF BONES AND
JOINTS—SPECIAL REFERENCE TO THE
USE OF TENTS.*

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IN the treatment of tuberculous disease of bones and joints, all surgeons recognize the value of functional rest, and in all standard text-books on surgery the various means of securing this by fixation, traction, local protection, etc., are more or less fully discussed; presumably careful and competent surgeons are also not neglectful of the general management and constitutional treatment of this class of cases. A somewhat careful examination of the literature of the subject, however, has caused the writer to feel that most authors make too little effort to impress upon their readers the fact that suitable environment and those general measures which are known to be of such great value in phthisis are also urgently called for when tuberculosis has attacked the bones or joints. The fourteen volumes of the Transactions of the American Orthopedic Association thus far published are replete with papers on almost every possible phase of tuberculous bone and joint disease, yet not a single paper devoted entirely to a consideration of the general management and constitutional treatment has appeared heretofore. In Vol. V. there is a paper by Dr. J. D. Griffith on the use of guaiacol as a constitutional remedy; in Vol. XI. the favorable effect of the climate of Colorado is dealt with by Dr. Geo. B. Packard; there are scattered incidental references to the value of fresh air, sunlight, etc.; but in most of the papers and discussions the general management and constitutional treatment either are not mentioned or receive but a passing notice of at most a few lines. Several excellent books on Orthopedic Surgery have emanated from members of this Association, but in none of these, in the writer's opinion, do the chapters on tuberculous bone and joint disease deal in a sufficiently emphatic and detailed manner with the general care of the patient. In the latest edition of Bradford & Lovett's "Orthopedic Surgery" (1899) over one-third of the book is devoted to a consideration of tuberculous disease of bones and joints, but beyond a couple of sentences on page 44 and a

*Read at the annual meeting of the American Orthopedic Association, at Philadelphia, June 5th, 1902.

single sentence on page 295, no reference is made to general management and constitutional treatment. Again, in Whitman's "Orthopedic Surgery" (1901) a similar proportion of the book is occupied by a discussion of the manifestations of tuberculosis that are of interest to the orthopedic surgeon, and although there are two pointed sentences on the importance of constitutional measures, one on page 58 and another on page 101, as well as incidental references in several other places, it seems to the writer that the matter receives much less attention to detail than its importance demands. In fact, of nearly all books on Orthopedic Surgery, as well as most standard works on general surgery, the criticism is not unfair, that so much attention is given to the details of local, mechanical, and operative treatment, while so much is taken for granted in regard to general management, that the reader can hardly fail to receive the impression that the latter is relatively unimportant. Of the volumes which the writer has examined, the one which appears to present most adequately the importance of looking after the patient as well as his joint is that by Nicholas Senn (Tuberculosis of Bones and Joints, 1892).

The neglect of most authors to lay greater emphasis upon the general management of patients with bone and joint tuberculosis is, it seems to me, largely responsible for the opinion held by so many general practitioners that the treatment of a case of chronic joint disease is practically summed up in the application of a suitable splint or brace. Every orthopedic specialist whose practice is largely of the referred and consultation variety, needs only to look over his correspondence files and recall his consultations with general practitioners to be convinced that the one prominent question asked by the practitioner who is seeking counsel in the management of a chronic joint case is, "What kind of a splint should be used?" as if the application of some appliance constituted the Alpha and the Omega of treatment in such cases. The reason why this subject has not received more liberal attention in surgical literature is perhaps not difficult to discover. It is only a comparatively short time since the immense usefulness of mechanical apparatus in the treatment of chronic joint disease has come to be universally recognized, and our observation of the enormous superiority of the results achieved by mechanical methods over the measures formerly employed has caused us to direct all our energies to the perfecting of means for securing thorough rest and protection, with the result that the mechanical problems in connection with the joint have absorbed too large a share of our attention, and we have forgotten at times that the joint is but part of a patient. Moreover, it is but a short time since we began to realize that fresh air, sunshine, and proper food and clothing are more important than all other measures combined in the prevention and cure of pulmonary tuberculosis; while judging by

our writings, and possibly to a considerable extent by our practice also, we are still largely unconscious of the fact that proper environment and the measures for general invigoration and increase of resisting power which experience has shown to be so useful when tuberculosis has attacked the lungs, are also urgently called for if we expect the best obtainable results when this disease is located in other tissues. I do not for a moment presume that the members of this Association are doubtful of the benefit to be derived from good general management and constitutional treatment in tuberculous joint cases, but I question whether our theoretical views are always consistently embodied in our practice, and this paper is presented for discussion in the hope of arousing renewed attention to the subject, together with a desire to do something toward filling in what appears to me an undesirable gap in our recorded Transactions, rather than with the expectation of offering anything very new.

In the general treatment of bone and joint tuberculosis drugs occupy a small and relatively unimportant place. Tonics, such as iron and arsenic, in small doses, are sometimes of service, but most cases are as well without them if proper hygienic conditions can be secured. Cod liver oil, during the winter months, if it be well digested, is often distinctly beneficial, especially to children, but good sweet cream is perhaps even more useful. Milk, cream, and butter of the best quality should enter largely into the dietary, along with such staples as oatmeal porridge, whole wheat bread and beef. In general, the diet should be simple and nutritious, and it is especially necessary to intelligently adapt the patient's food supply to his digestive power and eliminative capacity. The wisdom of blindly encouraging every tubercular patient to swallow large quantities of highly nutritious foods without carefully considering his ability to assimilate them may well be doubted. Every agency should be employed which will fortify the patient's constitution, augment his general vigor and increase the resisting power of his tissues, and it may be claimed that of all the various means to these important ends at our command the most valuable are fresh air and sunshine. The more nearly the patient can be brought to a continuous out-door life, with the inconveniences of such a mode of living eliminated, the better. The best means of securing this will depend upon circumstances. The ideal method is to place the patient in practically the same kind of environment as is found in the best sanatoria for pulmonary tuberculosis. In fact, sanatorium methods are almost as indispensable to the best results in bone and joint tuberculosis as in phthisis. Saying this is equivalent to claiming that the vast majority of poor patients cannot properly be treated in their own homes, and that even in the homes of the well-to-day special arrangements are necessary, and such is the

case. The poor should be treated, at least for a time, in hospitals, not in ordinary hospital wards, but in hospitals with special provision for the requirements of tuberculous patients in regard to sunshine and fresh air. I know of few more discouraging problems than the attempt to treat successfully and guard against relapse, the immense number of tubercular joint cases seen in the orthopedic clinics of the hospitals in large cities. The depression of vital powers which results from insufficient and unsuitable food, is accentuated by breathing the vitiated atmosphere of small, close, dirty rooms, and is multiplied almost indefinitely by the general ignorance, wretchedness, poverty, vice, and bad heredity of the submerged classes in our large centres of population. The only hope of giving such patients a fair chance in the conflict with such a foe as tuberculosis consists in securing for them, for a time at least, proper hygienic surroundings, and this for the purpose of enlightening them as to their own requirements not less than for the immediate beneficial effect of the improved environment. The writer is not blind to the practical difficulties in the way of providing suitable hospital accommodation during lengthened periods for the multitude of patients with chronic tubercular joint affections; nevertheless, it is the duty of the medical profession to arouse attention to the existing need, and to point out that civilization and philanthropy have thus far failed adequately to provide for it. The requirements will not have been met until the poor who suffer from these affections can command the advantages of sanatorium methods, at least during the acute stage of the disease and in the winter season. In the convalescent period and during summer they can be treated fairly well as out-patients, for a great many cases, even among the poor, do reasonably well in the warm season when for their own comfort they are compelled to open up their houses, live out of doors to some extent, and get all the fresh air possible. My observations have convinced me, however, that relapse and aggravation of Pott's disease, hip-joint disease and other chronic tubercular joint troubles are especially apt to occur during the latter part of the winter, the reason being that the patient's general health and resisting power have been greatly reduced by months of residence in close, ill-ventilated rooms. In the case of the very poor the only sure way of preventing this deterioration of general health and its resulting unfavorable influence upon the joint affection is to provide for them a suitable environment during the inclement season.

The plan of treating pulmonary tuberculosis in tents is one which has gained greatly in favor during the past few years, as it has proved a simple, practical, inexpensive, and efficient method of enabling patients to live all the time practically in the open air. The ventilation in a tent may be made nearly perfect; for although special, controllable, ventilating openings should be arranged, one

has but to examine a piece of canvas under a microscope to be convinced that an immense volume of air must diffuse itself through the natural open windows of this fabric, especially during cold weather, when the tent is heated and a difference in temperature between the inside and outside air thus created. That such rapid diffusion actually takes place is proved by the freedom from foulness of the atmosphere in the tent even when patients are crowded together in a way that could not safely be permitted in an ordinary hospital ward, and by the relatively large amount of fuel required to heat the tents. This fact, that the colder the weather the better is the ventilation, makes the tent especially valuable during winter when the patients are more inclined to shut themselves up. During summer, of course, the sides of the tent are raised and the patients are then practically in the open.

Over a year ago some experiments in treating in tents patients suffering from tubercular bone and joint disease were begun in the Toronto Orthopedic Hospital. In fourteen months (March 15th, 1901, to May 15th, 1902) there were admitted to the tents the following cases: Pott's disease, 25; hip-joint disease, 13; white swelling of knee, 6; white swelling of ankle, 4; white swelling of elbow, 1; in all 49 different cases. The shortest period spent in the tent by any patient was one day, the longest 343 days.

The entire number treated has been too small, and the period over which the observations extended too short to permit of any exact scientific deductions; moreover, the method of keeping records has hardly been sufficiently uniform and exact to make any compilation of statistics possible. Consequently the writer's object is simply to record a few general observations. In a general way, then, it may be stated that from observing these cases and contrasting their behaviour after they entered the tents with their previous progress under ordinary conditions, the conclusion arrived at has been emphatically and even enthusiastically favorable to tent life. The response to the change is usually immediate and pronounced. In most cases a distinct improvement in appetite is observed within twenty-four hours; both nurses and kitchen staff report that relatively a larger proportion of food is consumed, and it is eaten with greater relish by the tent patients than by those in other wards. I have repeatedly been struck by a distinctly favorable change in the color and expression of the face within one or two days after admission to the tents, the dull, listless, sickly, anemic appearance having within that brief time undergone a change which could not fail to attract attention. The patients almost immediately begin to put on flesh, while mental depression vanishes, and a buoyant, happy, hopeful feeling takes its place. The general impression left upon the surgeon's mind as he observes the patients day after day is that they are doing well, that their general health is being rapidly improved, their

physical capital augmented and their resisting power reinforced. Improvement in the local conditions is usually quite as satisfactory, but is slower in manifesting itself, and appears to be consequential upon the improved general condition. The conclusion is irresistible that most of the patients have made much more rapid strides toward recovery than would have been possible under ordinary conditions. It is interesting to note that the friends of patients under treatment in the tents are usually greatly delighted with the improvement they observe, and in some instances parents are very anxious to secure the readmission of children whom they had removed. Another fact worthy of being referred to is that the general health of the nurses who are on duty in the tents undergoes a distinctly favorable change. They report increase of appetite, and that they feel stronger and more vigorous; and it is quite certain that their gain in flesh and improvement in color could hardly fail to attract the attention of even a careless observer. So conscious are the nurses of the difference that they invariably regret when their turn comes to return to duty in the regular wards.

While out-door life is of great assistance in the treatment of all tubercular bone and joint affections, it is particularly useful in that class of patients whose recuperative power appears to have been exhausted, and who are being slowly worn out by discharging sinuses which other means of treatment have failed to heal. We are all only too familiar with these unpleasant cases, in behalf of which we have put forth our best efforts, but in which surgical and mechanical methods alike have failed or been but partially successful, and in which the tubercular process creeps on from one portion of tissue to another, or has become so deep-seated in the pelvis or spine that it is practically beyond reach of direct treatment. In some such cases our only resource lies in efforts to improve the general resisting power of the patient; if this can be done he has a chance of escaping from the malady which holds him so relentlessly. It is not an exaggeration to claim that the lives of some such patients may be saved through the agency of fresh air and sunshine after all other means have failed. It is not claimed that tents offer the best solution of the problem of securing the nearest approach to a continuous out-door life, but that properly designed tents suitably located are much better than the average hospital ward, and that they are an efficient and inexpensive supplement to the regular wards. The kind of buildings and much of the routine of life adopted in modern sanatoria for pulmonary tuberculosis are probably just as useful and efficient as tent life, and are certainly more convenient, and such buildings and a similar routine should be employed by all hospitals which aim at affording everything necessary for the best care of patients with surgical tuberculosis. In the case of private pa-

tients, various expedients may be resorted to to secure the benefit of sunshine and fresh air, when for any reason residence in a sanatorium is impracticable or undesirable. Many patients who have a lawn in connection with their homes can be induced to fit up a private tent and occupy it even during the winter months. Others who have a verandah with a southern exposure can be taught to make good use of it, and soon learn to enjoy spending much of the time in the open air even in cold weather, their body clothing and bed covering being, of course, adapted to the season. Even in ordinary private houses the ventilating arrangements of living and sleeping rooms often can be enormously improved by the exercise of a little ingenuity, and the surgeon should give these arrangements personal supervision.

No reference thus far has been made in this paper to the necessity of using such special orthopedic treatment as each case may call for. It is admitted by all that a certain proportion of tubercular bone and joint cases will ultimately terminate favorably as far as arrest of the morbid local process is concerned, under purely expectant measures. We all know, however, that this spontaneous recovery is usually accompanied by unnecessary and often pitiable deformity, and we are quite as certain that not only can deformity be largely prevented, but that the disease can be brought to a termination in a shorter time, with less destruction of tissue, and at the expense of far less suffering, by the intelligent use of surgical and mechanical means. It is important not to misunderstand the true relation of constitutional measures to surgical and mechanical treatment. The mistake is often made of supposing that a patient is necessarily deprived of the benefit of exercise and fresh air while confined to bed. Many orthopedic cases are best managed throughout the acute stage in the recumbent position, fixation dressings, extension, etc., being used according to indications; but it is most important to see that this period of enforced inactivity is passed in a suitable environment, and that the lack of active exercise is compensated for as largely as possible by systematic, efficient massage. On the other hand, it is necessary to guard carefully against the error of looking upon fresh air and sunshine as substitutes for surgical and mechanical means. Their true office is complementary, not vicarious. Our efforts to perfect mechanical and local methods of treatment must not be relaxed, but we should strive more earnestly to secure such fortification of the patient against relapse or other manifestations of vulnerability as are afforded by hygienic living and improved environment.

When we recall the deplorably large number of relapses after apparent cure, and the great proportion of our cured patients who afterwards die of some other form of tuberculosis, it becomes a practical and serious question whether we are not largely respon-

sible for these unfortunate sequels by our failure to make greater efforts to regulate permanently the habits and environment of our patients.

In conclusion, let me say that when an individual with tubercular disease of hip, spine, knee, ankle, etc., presents himself for advice, *the surgeon's first duty is to realize that he is being consulted by a patient who has tuberculosis*; and just in proportion to the clearness with which this idea is defined in his own mind will the surgeon be able to take a comprehensive grasp of the present and future needs of his patient. Painstaking efforts to teach the patient, or in the case of a child, those responsible for him, as much as they are capable of understanding about the nature of this disease will be well rewarded. The patient's hearty cooperation, which is so indispensable, is likely to be secured only in proportion as the surgeon succeeds in making him grasp what tuberculosis means and what its existence in his system implies.

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ECTOPIC GESTATION WITH REPORT OF A CASE.*

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ONE pregnancy in every thousand cases is in the ectopic position. The mortality of extra-uterine gestation when uninterfered with is 68.870, according to Schauta. With this estimate before us, the extra-uterine gestation must always be considered a subject of great importance, both from its clinical and pathological interest—interesting because of the varied character of the symptoms and the quiescence of condition, which so suddenly and on such slight provocation prove alarming, or even fatal.

Few pathological conditions, when submitted to operation, prove so successful in results, or bring such credit to the surgeon's knife; and few conditions, when unrecognized, prove more disastrous. The interest is shared in turn by the physician, the surgeon, and the pathologist.

As a rule the problem is first presented to the family physician, who usually invites the surgeon to assist in the solution or confirm his diagnosis, and finally the abnormality becomes the study of the pathologist.

So true is the statement that the diagnosis and fate of the ectopic pregnancies rests with the general practitioner, that Lawson Tait, with the largest recorded experience of seventy-five cases, *post mortem* and *ante mortem*, never had an opportunity of making an early diagnosis. Dr. Winckel, of Munich, with his large constituency, only had thirteen cases. If it is incumbent upon the pathologist to find the cause for this condition, and the surgeon to treat it, the graver responsibility rests with the practitioner to guard the life of his patient by an early diagnosis.

Having advanced these claims for a subject of such special interest to the different departments of medicine, I need make no apology for presenting the history of a recent case.

Patient, Mrs. M., aged 25, married last August; miscarried in November. On February 15th, the date of the regular monthly period, the patient was seized with pain in small of back, accompanied by aching of legs and pronounced weakness and excessive flow.

These were simply exaggerated conditions of the usual monthly phenomena. The following day the patient was up for about two hours, when the aching increased suddenly to a spasmodic pain felt in the left iliac region. A physician was summoned and attended for a week, till symptoms were relieved. On the 21st, the sixth

* Read at the regular meeting of the Toronto Medical Society, May 1st, 1902.

day after the onset, the patient was up and continued to go about till March 10th. Two unusual features marked the intermenstrual period: (1) Sharp and intermittent pains, sometimes diffuse, but usually localized in the left ovarian area. (2) A vaginal discharge, which varied from a mere trace to a free flow of blood. Nor were these features independent of one another, as the flow was in proportion to the pain, the pain being invariably followed by an increase in flow of blood.

March the 10th and five following days there was a marked increase in pain and quantity of flow. These were more regular in character, and no doubt corresponded to a menstrual period.

On the 11th I saw the patient for the first time. There were few constitutional symptoms to excite alarm, the pulse being 72 and temperature 98 2-5. There was, however, diffuse pain over the abdomen, with special tenderness on the left side and some rigidity of recti. The face was, however, drawn, and wore an expression of anxiety. The pain subsided under treatment, but returned in three days, with no apparent cause. On vaginal examination on the 15th the os was found to be extremely sensitive. There seemed to be thickening of the tube and broad ligament, an opinion based, of course, somewhat on actual observation, but also on inference, as the pain and the rectus of the left side denied me a lax wall for free palpation. I advised the patient to go to the hospital, as she would be in a more suitable place to await results.

On the 18th of March the patient entered Grace hospital, and as she did not improve the next two days, a consultation was decided upon. On account of the tenderness, the patient was prepared for examination under an anesthetic. The abdomen was prepared for celiotomy should the conditions found indicate it. Dr. Emory and Dr. Barrick, as consultants, and myself, examined bimanually, and had no difficulty in locating a tumor of the left ovarian region. The tumor was round and hard, and seemed to be about an inch and a half in diameter. A sulcus was felt between the uterus and tumor. Surgical intervention was considered advisable, and Dr. Emory decided to operate without delay. The usual median incision in the linea alba was made. On coming to the peritoneum the yellowish and jaundiced tint presented by the serous membrane covering blood was seen. A tive hemorrhage was already present, and was very profuse, covering the intestines and omentum everywhere. To arrest hemorrhage at once, the left pedicle was felt for and clamped. The tube was then brought into view, and a large opening at its extremity enclosing a tumor was revealed. The proximal part of the tube was about normal in size, but the distal portion, including the isthmus, the ampulla and the fimbria, were greatly thickened. Salpingo-oophorectomy was performed, the tube being removed beyond the healthy appearing portion. The blood was removed as far as possible, and the ab-

domen closed without drainage. The peritoneum, fascia and skin were closed separately by continuous catgut sutures. As there had been considerable loss of blood, and the pulse had lost its tone, I ordered a hypodermic of strychnia, 1-20 grain, and a quart of normal saline, which were given before the patient left the operating room.

The subsequent condition caused no anxiety, the recovery being uneventful. The patient sat up on the tenth day, and went home on the thirteenth day after operation.

On a more careful examination of tube it was found to be slightly increased in diameter and thickness in its proximal uterine portion. Towards the area spoken of as the isthmus it began rapidly to enlarge and thicken, becoming cone-shaped in appearance. The inflammatory action here was most pronounced, the wall being fully a quarter of an inch thick. The tentacle-like appearance of the fimbriated extremity was wanting; no trace of the fimbriae could be found. The margin of the opening at the extremity was thick and rounded like the rim of an egg-cup. Enclosed in this cup-like enlargement was what at first was considered to be the fetus. On examination it was found to be an organized blood-clot. This blocked the lumen of the tube, but increased in size with the deposit on its surface of the blood from each fresh hemorrhage. The clot was prevented from escaping or being forced into the abdominal cavity by adherent bands of fibrin. The sac appeared to rest between the ovary and the extremity of the tube, supported by the tubo-ovarian ligament and the broad ligament. Traces of the villi of the chorion were found on the tube, ovary, and ligaments.

The broken amniotic membrane was found attached here and there, and its inner smooth surface was easily recognized. No trace of the fetus was found. It was thought that the sac was present in the large tumor, afterwards found to be a clot. Not till the abdomen had been closed was it discovered that the fetus had not been removed with the tube. The action of the clamp when placed on the pedicle may have separated the attachments. Under favorable circumstances the fetus may escape detection, and Howard Kelly has pointed out that it may be lost sight of altogether, and at other times found only after the most thorough search. It is then recognized by the presence of a dark spot representing the pigment in retina of eye.

The presence in the abdomen of a six-weeks' fetation would be readily absorbed, and have no injurious results. The symptoms of an extra-uterine gestation necessarily varies with the age of the pregnancy. The symptoms characteristic of a six-weeks' fetus may be latent in one case, and only those peculiar to later development appear. Extra-uterine pregnancies have gone to full term without arousing the suspicion of either physician or patient, while

other cases have had marked disturbance from the commencement. The symptoms may be those of an ordinary pregnancy, as vomiting, enlargement of breasts with secretion of milk, pigmentation of mammary areola, development of Montgomery's follicles, absence of menstruation. The vomiting in ectopic cases is usually severe, and is considered to be a diagnostic point. Dr. Emmet relates a case in which it was entirely absent; there was no vomiting in my case, and only slight morning nausea. Constipation is usually marked. Sometimes there may be no symptoms till rupture, and then the conditions may be so fulminating in character as to cause death in a few hours. Howard Kelly relates the instance of a case in which an actress died in Paris with the suspicion of death from an irritant poison. The autopsy revealed a ruptured ectopic pregnancy.

Dr. Frederick Gray, in the *London Lancet* of 1879, records a case of a patient who had dinner at seven o'clock, was seized in an hour with violent vomiting and excessive purging, and suffered such collapse that she died in three hours before medical aid arrived. The death was credited to poison, till a *post-mortem* showed two quarts of blood from a ruptured tube.

The diagnosis is based on: (1) Cessation of menstruation; (2) other signs of pregnancy, such as nausea, changes in the breasts, etc.; (3) sudden severe pain, often coming on after exertion; (4) recurrence of irregular, more or less profuse menstruation. In my case there was a history of morning sickness, this being the only symptom of pregnancy.

The two suggestive conditions were pain, which might be found in several other conditions, and the continuous discharge from vagina of blood. Routh has laid it down as a general rule, and one absolutely reliable, that hemorrhage from uterus is merely the external manifestation of a similar internal condition caused by hyperemia, the exciting cause in this case being the presence of a growing ovum.

Baldy, in speaking of diagnosis, says the uncertainty is so great that there can be no certainty. Kelly, on the other hand, says it is one of the easiest of conditions to distinguish. Sometimes symptoms seem to justify a diagnosis of extra-uterine pregnancy, as painful and swollen breasts containing milk, morning nausea, frequent micturition, constipation, a missed period or two, and passage of blood and shreds from vagina. Dr. Price, with Dr. Baldy, diagnosed undoubted extra-uterine pregnancy in this case, but the operation disclosed an ovarian cyst.

In a second case the classic symptoms were present, and examined by the foremost gynecologists of the United States. Dr. Penrose found a pyosalpinx. Dr. Gaillard Thomas, who ranks second to Dr. Lawson Tait in experience with ectopics, but having had greater opportunities for diagnosis, says: "There are few

pelvic conditions which develop in the female from phantom tumor to facial impaction, which I have not seen confounded with ectopic pregnancy.

Cause.—Ectopic gestation has been defined as an arrest and development of the fertilized ovum somewhere between the graafian follicle and the uterus. The causes may be classified under three heads, according to Howard Kelly. (1) Obstacles within the lumen of the tube by which the calibre is diminished. (2) Diseases of the tubal wall, and peculiarities in its anatomy or form. (3) Factors acting externally to the tube, by which its lumen is encroached upon and obliterated. The particular cause in the large number of cases was held to be a catarrhal and purulent salpingitis (Tait and Orthman). It was thought that the cilia of the uterus bore the spermatozoa towards the fundus, and that the cilia of the tube bore the ovum to the uterine cavity, and that fertilization here took place. It is now demonstrated that the action of the cilia in case of tube and uterus is towards the outlet. Those who held to salpingitis theory contended that the spermatozoa ascended the tube and came in contact with the ovum, which had not been carried down the tube owing to the destruction of the ciliated epithelium.

Recent observations have shown that a salpingitis of a purulent character has not destroyed the cilia or interfered with their function. This would leave only one cause to account for arrest of ovum, namely, the decrease in size of the lumen, owing to the swollen and congested condition of tube by inflammatory products. The conclusion is that extra-uterine pregnancy is simply due to some interference with the normal downward passage of the fertilized ovum. An harmonious opinion has not been arrived at in regard to the pathology of the ectopic condition. In a recent review by the *British Medical Journal* of contributions on this subject by Couvelaire, of France, and Dr. Petersen, of Sweden, is set forth the wide difference of opinion. Couvelaire believes that a previous inflammatory condition of the tube is not the cause of the arrest of fertilized ovum. Petersen, on the contrary, claims that there is a history in nearly every case of salpingitis, either chronic or recent.

In making a histological examination of the tube, I find that there is not the slightest evidence of injury to the mucous lining of the tube, nor is there any appearance of inflammatory reaction or loss of ciliated epithelium. There is proof of a chronic inflammatory change which has commenced in the peritoneum and extended inwards. The reaction has not passed the sub-mucous layer. The ovary was small and shrunken, and under the microscope showed the presence of a corpus luteum, which might correspond to an eight-weeks' pregnancy. This fibrous mass was espe-

cially well shown by Van-Giesen's stain, which makes the fibrous tissue conspicuous by its deep, red staining.

These data are in keeping with the clinical symptoms, which gave a history of salpingitis and endometritis some three years ago. In support of the salpingitis theory it must be remembered that the presence of ciliated epithelium here and there does not establish proof of the integrity of motile function of the epithelium, as a failure at one point of the epithelium to carry onwards the ovum would lead to its arrest. The period of proportionately greater growth is in the second month, from the fourth to the eighth weeks, while the period of most frequent rupture follows this, being from the sixth to tenth week. The excessive hemorrhage is accounted for by the fact that rupture most frequently takes place on the margin of the placenta and attached tissue.

Treatment.—There seems to be only one answer to the question of treatment, and that is operation. In cases left without operation, all the children and 76 per cent. of mothers die. Howard Kelly says that with early operation not more than 6.8 per cent. should be the mortality, which is 70 per cent. less than Martin's estimate without operation. A prominent authority has said that every case of early ectopic pregnancy should be treated as a malignant tumor. Two reasons for this method of treatment are conspicuous: (1) Primary rupture in 99 per cent. of all cases, even in those which go to term, is into the peritoneal cavity, and not into the cavity of the broad ligament. (2) Extravasations from ruptured tubal sac are attended by shock out of all proportion to blood lost. In retrospect I may add that experience proved the wisdom of having the operation follow immediately the examination under an anesthetic.

I recall a case almost identical in history with the one related. The operation, it was decided, should follow examination in a few days. The development of alarming symptoms subsequent to examination make an early operation imperative. The abdomen was occupied with a generous supply of clotted blood, from which condition the patient died eighteen hours after operation. The protection afforded the hyperemic tissue by a rigid abdominal wall is removed under anesthesia, and rupture of tube is easily induced.

Selected Articles.

THE CANADA MEDICAL ACT, 1902.

As it will doubtless be of interest to all of our readers to know just what the Roddick Bill, as recently passed by the House of Commons, Ottawa, enacts, we append it herewith:

AN ACT TO PROVIDE FOR THE ESTABLISHMENT OF A MEDICAL COUNCIL IN CANADA.

His Majesty, by and with the advice and consent of the Senate of the House of Commons of Canada, enacts as follows:

1. This Act may be cited as *The Canada Medical Act, 1902*.

2. In this Act, unless the context otherwise requires:

(a.) The expression "medicine" shall be held to include surgery and obstetrics, and to exclude veterinary surgery, and the expression "medical" shall be held to include "surgical" and "obstetrical."

(b.) The expression "Provincial medical council" includes "Provincial medical board" and "College of Physicians and Surgeons."

(c.) The expression "medical school" includes any institution wherein medicine is taught.

(d.) The expression "students" means only persons admitted to the study of medicine in virtue of Provincial laws.

3. The persons from time to time appointed or elected, or otherwise being, under the provisions of this Act, members of the Medical Council of Canada, are hereby constituted a corporation under the name of "The Medical Council of Canada," hereinafter called "the Council."

4. The purposes of the Council shall be to promote and effect—

(a.) The establishment of a qualification in medicine, such that the holders thereof shall be acceptable and empowered to practice in all the Provinces of Canada;

(b.) The establishment of a register for Canada of medical practitioners and the publication and revision from time to time of such register;

(c.) The determination and fixing of the qualifications and conditions necessary for registration, including the courses of

study to be pursued by students, the examinations to be undergone, and generally the requisites for registration;

(d.) The establishment and maintenance of a board of examiners for examination and for the granting of certificates of qualification;

(e.) The establishment of such a status of the medical profession in Canada as shall ensure recognition thereof in the United Kingdom, and enable Canadian practitioners to acquire the right to registration under the acts of the Imperial Parliament known as the "Medical Acts;"

(f.) The enactment, with the consent and at the instance of the medical councils of the various Provinces of Canada, of such Provincial legislation as is necessary to supplement the provisions of this Act and to effect the foregoing purposes.

5. The Council may acquire and hold such real estate and personal property as is necessary or expedient for the purposes of the Council or of providing a revenue therefor, and may sell, lease, or otherwise dispose thereof; but the annual value of the real estate owned by the Council and held for the purposes of revenue only shall not at any time exceed the sum of twenty-five thousand dollars.

6. The Council shall be composed of—

(a.) One member from each Province, who shall be appointed by the Governor in Council;

(b.) Members representing each Province, their number being fixed in each case according to the number of practitioners registered under the law of the Province, in the following proportions:

For the first 100, or fraction thereof	One.
For the second 100, or fraction thereof over one-half	One.
After the first 200, for each succeeding 600, or fraction thereof over one-half	One.

The elected members representing each province shall be elected— one by the Provincial medical council, and the others by the duly registered medical practitioners having received a license or certificate of registration within the province under regulations to be made in that behalf by the Provincial medical council; provided that it shall not be competent to any Provincial medical council, or the regular practitioners of any province, to elect any person as a member of the council who is in anywise connected with the teaching staff or governing board of any university or incorporated medical school which is under the provisions of this Act entitled to elect a member of the council, nor shall it be competent to them to so select any person belonging to any such particular and distinct school of practice of medicine as is mentioned and intended by paragraph (d.) of this subsection;

(c.) One member from each university or from any incorpor-

ated medical college or school in Canada having an arrangement with a university for the conferring of degrees on its graduates, engaged in the active teaching of medicine, who shall be elected by the university or by such college or school under such regulations as may appertain;

(d.) Three members, who shall be elected by such practitioners in Canada as, by the law of the Province wherein they practice, are now recognized as forming a particular and distinct school of practice of medicine, and, as such, are by the said law entitled to practice in the province.

2. No one shall be a member of the Council unless he—

(a.) Resides in the Province for which he is an appointed or elected member;

(b.) Is a duly registered member of the medical profession according to the law of the Province which he represents;

(c.) Is duly registered as a medical practitioner in the register established under the provisions of this Act; but this qualification shall not be required of any of the members originally composing the Council.

3. No Province shall be represented upon the Council either by appointed or elected members until the Legislature of the Province has enacted in effect that registration by the Council shall be accepted as equivalent to registration for the like purpose under the laws of the Province; and when all the Provinces of Canada have legislated in effect as aforesaid, it shall be lawful to appoint and elect in the manner aforesaid the members of the Council;

Provided, however, that if any of said legislatures afterwards repeals its legislation contemplated by this section, no more persons shall be given the right to practice medicine within the jurisdiction of such legislature, by reason of their qualification or registration under this Act.

7. The term of office for appointed members shall be four years.

2. Members elected by Provincial medical councils shall remain in office during the term of the members of the medical council of the Province for which they are elected.

3. All other members shall be elected for four years.

4. Any member may at any time tender his resignation by written notice thereof to the president or to the secretary of the Council. Upon the acceptance of such resignation by the Council, the Council shall forthwith give notice in writing thereof, in case of an appointed member, to the Secretary of State of Canada, and, in case of an elected member, to the secretary of the medical council for the Province, or to any university, incorporated medical school or college, or to the president or the secretary of any recognized distinct school of practice of medicine represented, which such member represents.

5. Any person who is or has been a member may, if properly qualified, be re-appointed or re-elected; but no person shall at one time serve as a member in more than one capacity.

6. In the case of members of the Council whose term of office is about to expire, successors may be appointed or elected at any time within three months before the expiration of such term; provided that where any vacancy exists in the membership of the Council by reason of any term of office having expired, or otherwise, such vacancy may be filled at any time.

7. If there has been a failure to elect a member of the Council, or to elect a properly qualified member, or to cause the name of the member elected to be certified to the secretary of the Council within a reasonable time after such election might have been made, then, after notice from the Council, requiring the Provincial medical council, or the incorporated medical school or college or university, or the recognized distinct school of practice of medicine, to cause such election to be made and to certify the result thereof to the Council within one month from the date of service of such notice, the Council may, in case the default continues, itself elect such member.

8. A member appointed or elected to fill a vacancy caused by death or resignation shall hold office in all respects as the person in whose place he is appointed or elected would have held office, and for the remainder of the term for which that person was appointed or elected.

9. All members appointed or elected shall continue in office until their successors are appointed or elected, or until the expiration of their term of office, if their successors are appointed before the expiration of such term of office.

8. The Council may from time to time—

(a.) Elect from among its members a president, a vice-president, and an executive committee;

(b.) Appoint a registrar, who may also, if deemed expedient, act as secretary and treasurer;

(c.) Appoint or engage such other officers and employees as the Council deems necessary to carry out the objects and provisions of this Act;

(d.) Require and take from the registrar, or from any other officer or employee, such security for the due performance of his duty as the Council deems necessary;

(e.) Fix the allowances or remuneration to be paid to the president, vice-president, members, officers, and employees of the Council.

9. The Council shall hold its first meeting at the city of Ottawa, at such time and place as is appointed by the Minister of Agriculture; and, thereafter, an annual meeting of the Council

shall be held at such a time and place as is from time to time appointed by the Council.

2. Until otherwise provided by regulation of the Council, twenty-one members of the Council shall form a quorum, and all acts of the Council shall be decided by a majority of the members present.

10. The Council may make regulations not contrary to law or to the provisions of this Act, for or with reference to—

(a.) The purposes mentioned in paragraphs (a.), (b.), (c.), (d.), and (e.) of section 4 and in section 8 of this Act;

(b.) The direction, conduct and management of the Council, and of its property;

(c.) The summoning and holding of meetings of the Council, the times and places where such meetings are to be held, the conduct of business thereat, and the number of members necessary to constitute a quorum;

(d.) The powers and duties of the president and vice-president, and the selection of substitutes for them if unable to act for any cause at any time;

(e.) The tenure of office, and the powers and duties of the registrar and other officers and employees;

(f.) The election and appointment of an executive committee and of other committees for general and special purposes, the definition of their powers and duties, the summoning and holding of their meetings, and the conduct of business by such committee;

(g.) Generally, all fees to be required, paid or taken under this Act;

(i.) The establishment, maintenance, and effective conduct of examinations for ascertaining whether the candidate possesses the qualifications required; the number, nature, times and modes of such examinations; the appointment of examiners; the terms upon which matriculation and other certificates from universities, schools and other medical institutions shall be received as evidence of qualification; the dispensation of candidates from undergoing examinations, either wholly or partially; and generally all matters incident to such examinations or necessary or expedient to effect the objects thereof:

Provided, however, that—

(i.) The requirements of any curriculum established by the Council, shall not, at any time, be lower than the requirements of the most comprehensive curriculum then established for the like purpose in any Province;

(ii.) The standard of examination shall not, at any time, be lower than the highest standard for the like purpose then established for ascertaining the qualification for registration in any Province;

(iii.) The possession of a Canadian university degree alone,

or of a certificate of Provincial registration founded on such possession, obtained subsequent to the date when this Act shall have become operative, as provided in sub-section 3 of section 6 hereof, shall not entitle the possessor thereof to be registered under this Act;

(iv.) No retroactive effect shall be given to this Act, and especially as regards persons duly inscribed as students under the laws of any of the Provinces of Canada at the time it shall become operative as aforesaid.

(j.) The recognition of licenses granted by any British, Canadian, colonial or foreign licensing body or authority, the arranging and bringing into effect of any schemes of reciprocity as to registration with any British, colonial or foreign medical licensing body or authority; the terms and conditions upon which, and the circumstances under which, medical practitioners shall be entitled to registration under this Act in cases where such medical practitioners are duly registered or licensed under the Medical Acts of the United Kingdom, or under the laws of any British possession other than Canada, or under the laws of any foreign country, which British possession or foreign country extends reciprocal advantages to Canada;

(k.) The enrolment and registration of all persons entitled under this Act to appear on the register for Canada of medical practitioners;

(l.) Generally, all matters which it is necessary or expedient to provide for or regulate in pursuance of the purposes of this Act and in furtherance of its general intention.

2. No regulation made under the authority of this section shall have effect until approved by the Governor in Council, and such approval shall be conclusive evidence that the regulation has no retroactive effect.

11. A copy of any such regulation certified by the registrar or secretary under his hand and the seal of the Council, may be received in evidence in any court of justice without proof other than the production of a copy purporting to be so certified.

12. The Council shall enact such regulations as shall secure to practitioners who, under the laws of any Province, are now recognized as forming a particular school in the practice of medicine, and to all applicants for registration who desire to be practitioners of such school, rights and privileges not less than those now possessed by them under the laws of any Province, and under the regulations of any Provincial medical council.

13. At each annual meeting of the Council, the Council shall appoint a board of examiners to be known as "The Medical Council of Canada Examination Board," whose duty it shall be to hold the examinations prescribed by the Council, subject to the provisions of section 12 of this Act.

2. The members of the board of examiners shall be eligible for reappointment.

14. The subjects of examination shall be decided by the Council, and candidates for examination may elect to be examined in the English or French language; and the examinations shall be held only at those centres at which there is a university or college actively engaged in the teaching of medicine, and having hospital facilities of not less than one hundred beds.

15. The Council shall cause to be kept by the registrar under the direction of the Council, a book or register to be known as "The Canadian Medical Register," in which shall be entered, in such manner and with such particulars as the Council directs, the names of all persons who have complied with the requirements of this Act and with the regulations made by the Council respecting registration under this Act, and who apply to the registrar to have their names so entered.

16. Every one who passes the examination prescribed by the Council, and otherwise complies with all the conditions and regulations requisite for registration as prescribed in that behalf, shall be entitled to be registered as a medical practitioner.

2. Any person who has received a license or certificate of registration previous to the date when this Act shall have become operative as aforesaid, and who has been engaged in the active practice of medicine in any one or more Provinces of Canada, shall, after six years from the date of such certificate, be entitled to be registered under this Act as a medical practitioner, without examination, upon payment of the fees and upon compliance with the other conditions and regulations for such cases prescribed by the Council.

3. Any person coming within any of the classes of registered or licensed practitioners to which paragraph (j) of section 10 of this Act applies, shall be entitled to be registered upon complying with the orders and regulations established by the Council in that behalf.

17. Any entry in the register may be cancelled or corrected upon the ground of fraud, accident or mistake.

18. In any case of an application for registration or for correcting or amending any entry upon the register, the applicant, if aggrieved by the decision of the registrar, may appeal to the Council, and the Council shall hear and determine the matter; but all applications to cancel or strike off entries from the register made adversely to the person whose registration it is desired to affect shall be by the registrar referred to the Council, and the Council shall, after three months' notice sent by post, prepaid and registered, to the last known address of such person, who shall have the right to appear by counsel, hear and determine all such applications.

19. If it is made to appear to the Council, after inquiry, that any person registered under this Act has been convicted, either in any part of His Majesty's possessions or elsewhere, of an offence which if committed in Canada would be an indictable offence under *The Criminal Code*, 1892, and its amendments, or that he has been guilty of infamous or disgraceful conduct in a professional respect, then, whether such offence has been committed, or such conviction has taken place, or such infamous or disgraceful conduct has occurred, either before or after the passing of this Act, or either before or after the registration of such person, the Council shall, after three months' notice sent by post, prepaid and registered, to the last known address of such person, who shall have the right to appear by counsel, direct the registrar to erase the name of such person from the register: provided, however, that if a person registered under this Act has likewise been registered under the laws of any Province, and such provincial registration has been cancelled for any of the causes aforesaid by the authority of the Medical Council for that province, the Council shall then, without further inquiry, direct the registration of such person under this Act to be cancelled.

2. The name of a person shall not be erased under this section—

(a.) Because of his adopting or refraining to adopt the practice of any particular theory of medicine or surgery; or

(b.) Because of his conviction out of His Majesty's possessions of a political offence against the laws of any foreign country; or

(c.) Because of his conviction for any offence which, though coming within the provisions of this section, is, in the opinion of the Council, either from the trivial nature of the offence or from the circumstances in which it was committed, insufficient to disqualify a person from being registered under this Act.

20. Whenever it is made to appear to the Governor in Council that any of the provisions of this Act are not complied with, the Governor in Council may empower the Commission of Arbitration hereinafter provided for, to inquire in a summary way into and report to him whether such is the case and, if so, to prescribe what remedies are necessary, if any.

2. The Governor in Council may require the Medical Council of Canada to adopt the said remedies within such time as he, having regard to the report of the commission, thinks fit to appoint. In default of the Council so doing, he may by Order in Council amend the regulations, or make such provision or order as he deems necessary to give effect to the decision of the commission.

3. The commission of arbitration shall be composed of three members, one to be appointed by the Governor in Council, one by the Medical Council in Canada, and the third by the complainant.

4. The commission may compel the attendance of witnesses and examine them under oath and require the production of book and papers, and shall have such other necessary powers as are conferred upon it by the Governor in Council for the purposes of the inquiry.

21. This Act shall not be interpreted as authorizing the creation of medical schools, or otherwise giving medical tuition.

DOSIMETRIC ALKALOIDS.

BY GUY L. LARAWAY, M.D.

HAS anything that can be said in favor of the alkaloids and the dosimetric method been left unsaid? It would seem not, and at first thought would seem ridiculous to undertake to make anything that is already so obvious more so; and still with each number of the *Clinic* come one or more articles from the pens of as many alkaloidists, reiterating the same facts in new words and in old words giving new force to the issue in hand. A large majority of physicians, and among them some of our brightest medical lights, continue in the old rut of guessing.

No manufacturing house puts out any two lots of fluid extracts or tinctures of the same strength in the active principle, that part upon which the medical action depends; and how can physicians learn by their own observation what dependence they can put in their remedies in this way? How many of us can remember in some particular case of the splendid results we got, and saved a life perhaps, and when in a second case just like the first we have tried the same remedy and looked for the same results, and been doomed to disappointment?

And since becoming acquainted with the use of the alkaloids, did we ever experience such disappointment? I can answer, never, for myself, and am safe in answering the same for others. Why will physicians be so blind as to give the fluid extracts and tinctures, containing active principles antagonistic to each other? And the echo answers, Why? If you should start out some day of leisure and come up with a man running an engine, and you saw at once the engine puffing and blowing, with part of the drivewheels whirling one way and part the opposite way, and the engine making no progress either way, and upon enquiring the engineer would tell you: "Why, you see, the man who put this engine together got the power mechanism mixed, so that one cylinder drives one set of wheels one way and the other cylinder drives another set the opposite way," and when you ask him why he doesn't fix it, as he knows the trouble, he says: "Oh, well, this is the way it was put together,

and if it doesn't go the way I want it to, it's no fault of mine. This is good enough for me." You would say: "Why, that man is a fool, for trying to accomplish anything that way while he knows the remedy." Pray tell what else are the physicians doing but running their wheels in opposite directions when they are giving antagonistic principles. It is much a quandary to me why they will persist in this, and continue to guess. I am entirely alone in the use of alkaloids in this section of the country, there not being another physician in consulting distance who uses the alkaloids; and the thought of calling counsel when I have a severe case is not a pleasant one. I will describe a case that actually occurred:

I was called at midnight to see a patient, man, 48, robust, full habit, not a weak point in his whole physique. He had a severe chill, had had pneumonia twice before, and knew the symptoms, so the wife suggested that I call Dr. S. in consultation, for she did not want to leave a thing undone that was possible; this being the third attack, she was fearful of his life. With examination for diagnosis, I opened my case and dropped a glonoin granule on his tongue and said: "We will direct our efforts to scatter the chill, which will only take a minute or two;" feeling so sure of my remedy, and confident that I would see my patient relax and the chill a thing of the past before the third glonoin granule, one every ten minutes. If I could divert the attention of the friends for a few minutes they would see the improvement, and the question of counsel would be left until morning; and I felt that by morning he would not only be without need of counsel, but of a doctor as well. When I spoke of scattering the chill in so short a time I met an incredulous look all around, but I felt bold enough to say, "you'll see," and by the time I had kept the attention of attendants and friends, while I was calling for a glass, spoon and water, and had prepared a solution of defervescent compound, and dropped a ten-grain powder of calomel on the tongue, our patient was relaxed completely, and all signs of chills gone. "Well, I never saw anything like that," and similar remarks went around. Now, everything being quiet and excitement passed off, I proceeded to examine my patient. (I knew glonoin would relieve a congestion and scatter the chill, even if I did not know its cause or location.) Respiration 40, with the characteristic exploratory explosion of pleuro-pneumonia, temp. 105.5, pulse 140, the whole left lung congested, crepitant rales over the whole area, with the acute burning pain extending into the shoulder that we so often get. I ordered glonoin every half-hour, defervescent comp. every fifteen minutes in solution until effect, then every hour. At 8 a.m. next morning, resp. and pulse were normal, but temp. 99.8, all pain gone, a loose painless cough, raising abundant rusty sputa.

The vision I saw, when I first came to the case, and counsel suggested if I had used no strategy, was Dr. S., recommending

salol, phenacetine and quinine; and if I would have insisted on giving my little pills instead. I can imagine Dr. S's surprise, and hear him say: "What, do you propose to discard these old, reliable, tried and proven remedies to experiment with these new-fangled things?" And I can hear my dismissal with, "Well, Dr. S., if Dr. L. has gone crazy you had better take the case." Of course I don't get it quite as rough as that when I call in counsel, as I have pictured here, but if my counsel is a warm friend he gives me a look of long-suffering pity, as he says: "If this was my case I would push quinine and phenacetine right along," and if he is not a warm friend he is apt to try and prejudice the friends and my patient, with the air he puts on, if not outspoken.

If the profession were now to adopt the alkaloids as a body, it would be a step in advance attained, in saving life and preventing human suffering, more than we can expect from all other attainments and scientific research.

In the last three weeks I have aborted from a dozen or fifteen cases of pneumonia, as quickly and unmistakably as the case mentioned; and the only case I have failed in was a baby three months old, which had been sick ten days when I saw it, where disintegration had already set in, the baby dying during my second call.

I omitted to mention intestinal antiseptics in the treatment of my case, which I used and do invariably. While my medicine case contains about 100 different granules and compounds, still if I were to find myself face to face with an acute condition, with only my pocket-case, containing only aconitine, Defervescent Compound, Dosimetric Trinity, calomel, Saline Laxative, glonoin, calcium sulphide and iodised lime, I would have no fear and trembling of not being able to meet the immediate emergency. Of course the corks are drawn often from my arbutin, asparagin, colchicine, digitalin, emetin, lithium benzoate, and less often from eighty others; yet I consider the first few mentioned, among which I should have mentioned atropine, apomorphine and pilocarpine, the first and most important with which, when we understand them perfectly, speaking for myself, I feel a confidence I never dared to feel before.

Why, when brought face to face with any of the acute febrile diseases, after they are fully established, if not gone too far beyond this, I dare stake my reputation on my ability to abort, and bring the indications, pulse, resp. and temp. to a normal condition, in from 12 to 36 and 48 hours. We will give the same testimony, but could we have given such testimony as this, before we became familiar with these known quantities of active principles, and prescribed the unchangeable and accurately measured granules?

We are often put in the false position of being accused of confining ourselves entirely to alkaloids, but this is an erroneous idea of our Galenic brothers. Their names are legion, the medicines

that cannot be prepared into granules. Neither are all medicines used in dosimetric alkaloids. There are many others such as acids, glucosides, resinoids, a great many of the metallic salts and a great many chemical combinations. One alkaloid that I have never seen any literature on is berberine, and when I sent for Shaller's Guide some months ago it was with the hope that I would find it there, but he does not mention it. All I have seen on berberine has been among the answers to queries in the *Clinic*, but I have observed its usefulness in malaria, when the spleen is enlarged and tender. I hope some one who has studied it and feels competent will soon give us a full write-up on it.

Among the false and erroneous impressions of our Galenic brothers there is none so gross as theirs on aconite. I consider aconitine one of the most valuable, wonderful, indispensable and never-failing agents of the known medical world. In acute febrile diseases I pull the cork of my aconitine bottle more than any other, for I find it indispensable in all of these cases; and any physician who will give it a fair trial will find it has no equal as a febrifuge. It seems almost incredible, but a fact nevertheless, that in cases of children and babies one or more granules, according to age, in 24 teaspoonfuls of water, is all that is needed; and what other medicine can be so easily given to children, on account of the tastelessness?

And then the Dosimetric Trinity, in pale, weakly babies, does not only insure against any possible harm, but improves the strength of a weak heart. I have never found it necessary to give the Defervescent Comp. to children under six years, but would not hesitate to use it for a full, bounding pulse, with exceedingly high temperature and dry parched skin, with perfect assurance of soon getting moist skin, soft and slowed pulse, and reduction of temp.

There! If there is no virtue in repetition, there is none in what I have said, for it is certainly repetition. I feel almost silly to enclose this to you, for the reason that all this has been said so many times; but where the facts are so obvious, and still so many unconverted, what can we do but reiterate. If a large proportion of the inhabitants of the earth did not yet know and believe the earth revolved on its axis, we would still see those old calculations and proofs setting forth the facts, but as it is a universally accepted fact, such calculations and proofs are things of the past four hundred years, and I only wish the universally accepted calculus of alkaloidal dosimetry was a yearling.—*Alkal. Clinic.*

SOMNOS—CHLORAETHANAL ALCOHOLATE.

SOMNOS, which has the chemical formula $C_9H_{11}O_6Cl_3$, is formed by the synthesis of chloraethanal with a polyatomic alcohol radical. It forms a dense semi-solid body, soluble in all proportions of water, is free from local irritation to mucous membranes, and is not changed by the gastric juice.

Physiologic Action.—In the human being Somnos produces a sound, dreamless sleep of several (average six to eight) hours' duration, from which the patient awakens refreshed and without the headache, languor, mental confusion, and intoxication-like symptoms which commonly follow the usually employed hypnotics. The sleep produced by Somnos differs in no perceptible essential from that of a normal healthy man; records of the frequency and volume of the pulse and respiration show no diminution from the same in normal sleep.

This nature-simulating sleep induced by Somnos is due to the sedative action of the product upon the psychic and motor functions of the brain; this has been indisputably proven by extensive experiments upon the lower animals.

Before Somnos was tried upon human beings, careful comparative tests were made upon the lower animals, under exactly similar conditions, with chloral hydrate and several of the well-known newer synthetic hypnotics. The majority of these comparative tests were made between Somnos and chloral hydrate, because preliminary animal experiments proved that, of all the hypnotics employed, chloral hydrate is the most reliable, and because this remedy is so widely employed that accurate knowledge of the relative merits of Somnos and chloral hydrate was deemed desirable. All comparative tests showed that Somnos, given in twice the fatal dose of chloral hydrate, merely produced natural sleep, from which the animals awakened in a normal condition. It is, therefore, self-evident that Somnos is a much safer hypnotic than chloral.

Furthermore, careful comparative studies of the effects of Somnos and chloral hydrate upon the heart, respiration, vaso-motor and thermotaxic centres in the medulla, show that while, as is well known, chloral hydrate depresses and ultimately paralyzes these, Somnos, even in twice the sleep-producing dose, has no appreciable effects upon them; hence it is clear that the therapeutic dose of Somnos can have no deleterious effects upon the heart, circulation, respiration or temperature of human beings. Somnos is free from effect upon digestion, the bowels and kidneys.

As the results of clinical trial in hospital and private practice, four very important facts have been established:

1. That Somnos is a *reliable, uniformly active* hypnotic; this

fact was noted even in those cases uninfluenced by chloral and the usually-employed hypnotics.

2. The sleep produced by Somnos exactly simulates *natural sleep*. This fact corroborates the results of animal experiments, which show that the dominant action of Somnos is upon the cerebral cortex (psychic and motor areas).

3. That Somnos is a safe hypnotic, free from depressing influences upon the heart, circulation and respiration. This was proven by administering Somnos to patients the subject of organic heart disease (myocarditis, valvular affections) and pulmonary lesions (emphysema, pneumonia, etc.).

4. Somnos does not induce unpleasant by- or after-effects. Languor, headache, vertigo, nausea, vomiting, giddiness, mental confusion, and digestive disturbances, which are practically always present after the use of chloral hydrate and most, if not all, hypnotics, are not induced by Somnos.

Indications.—Somnos is indicated in sleeplessness, from what ever cause; compared with chloral hydrate, it is safer, more reliable, and free from bad after-effects.

1. In the insomnia of nervous affections, such as hysteria, neuralgia, nervous irritability, etc., Somnos produces natural refreshing sleep.

2. In the mental excitement of acute mania, delirium tremens, dementia, and chronic insanity, Somnos is preferable to all other hypnotics, because of its selective sedative action upon the disturbed psychic and motor areas of the brain.

3. Sleeplessness occurring in the course of organic cardiac disease (valvular affections, myocarditis, fatty degeneration, etc.), may be safely overcome by the judicious use of Somnos.

4. In acute infectious diseases, such as typhoid fever, pneumonia, and influenza, accompanied by insomnia, Somnos produces excellent results because of its freedom from depressing effects upon the enfeebled cardiac and respiratory functions.

5. In insomnia due to *pain*, Somnos produces sleep in the majority of cases; it is, therefore, of service after surgical operations.

6. Somnos yields satisfactory results in a large proportion of the cases in which chloral is without effect, and particularly in patients with wrecked nervous systems, for whom hypnotics are necessary, but are usually found of transitory or negative value.

7. Somnos is of especial value in the insomnia of the eruptive diseases of childhood.

Somnos is furnished in fluid form only.

Directions.—The average hypnotic dose of Somnos is from one dessertspoonful to one tablespoonful; repeat once or twice if necessary. As a sedative, one to two teaspoonfuls, repeated at intervals of three or four hours. For children, one-half to one teaspoonful, according to age; repeat once if necessary.

The hypnotic effect of Somnos is sometimes rather slow in developing; this is due to the gradual evolution in the system of its active hypnotic ingredient. Hence, it is advisable to administer Somnos several hours before the desired advent of sleep; this may be in the afternoon, early evening, or according to circumstances.

ON THE DISINFECTION OF THE HANDS.

BY PROFESSOR TH. PAUL AND PROFESSOR O. SARWEY.

THE authors have made a critical examination of a large number of methods on disinfection of the hands, and have come to the conclusion that no one of them renders the hands absolutely germ-free. In the absence, however, of a method that fulfils the ideal requirements in the cases, they advocate disinfection by means of mercurial combinations as the best at our disposal.

As regards the Sublamine method, Paul and Sarwey state "it is about as effective as the Furbringer method," which is the one most generally used at the present time. This method, as is well known, consists of three procedures: Washing the hands with soap and water, treatment with alcohol, and, finally the use of sublimate. These procedures are reduced to two by the Sublamine method, the alcohol, which is expensive, being entirely omitted. Since its bacteriological effects are equal to those of the Furbringer method, this simplification is an important improvement; and this is still more the case since the Ethylenediamine-Mercury does not injure the operator's hands in any way, whilst the sublimate frequently occasions irritative symptoms.

The authors entirely agree with the conclusions that Professor Kroenig and Dr. Blumberg have come to. After infection of the hands with tetragenus germs the Ethylenediamine-Mercury solutions, especially when employed in the stronger concentrations, are entirely equivalent to the 1: 1000 sublimate solution in disinfectant power; and, in consequence of the absence of any cauterant effect, they have the great advantage that they can be employed concentrated, and hence exhibit a more certain disinfectant action when the hands have been in contact, for instance, with highly virulent pus.

Paul and Sarwey also recognize the importance of the absence of irritative action when Sublamine is employed. The cosmetic care of the skin of the hands has been acknowledged by most authorities (as for instance, Haegler) to be an important element of the disinfection problem; and this can be much more easily and thoroughly effected with the non-irritant Sublamine than with the caustic sublimate solutions.

* Experimental Investigations from the Bacteriological Laboratory of Professor Döderlein's University Gynecological Clinic at Tübingen.

The hands are to be thoroughly scrubbed with soft or a sand soap, lukewarm water, and a nail brush, for from eight to ten minutes, and then well rinsed in water. They are then treated for five minutes with a nail brush and a warm 3 : 1000 Sublamine solution, made by dissolving three tablets in a quart (1 litre) of water.

Alcohol need not be employed.

The tablets dissolve very quickly, and cause a pleasant softening of the water. A vial of Sublamine tablets in the pocket-case enables the practitioner to sterilize his hands before and after operations and after visits to patients suffering from infectious diseases.

Sublamine is equal to bichloride of mercury in toxicity and bactericide effect, and is to be used in the same strengths.—Abstract from the *Munchener medicinische Wochenschrift*, Nos. 37 and 38, 1901.

THE SYMPTOMATIC TREATMENT OF TUBERCULOSIS.

IN a paper, "The Symptomatic Treatment of Tuberculosis," by Dr. Karl von Ruck, published in the *Journal of Tuberculosis*, Asheville, N.C., January, 1902, the author, under the caption, "The Treatment of Pneumonia Complicating Phthisis," says :

"Until recent years, I had much faith in the administration of one or two full doses of quinine (10 to 15 grains), and while I still believe its use to be valuable, I have, for the present, abandoned it in favor of full doses of creosotal, which has appeared to have a decided influence in diminishing the ordinary duration and in bringing about resolution of the pneumonia process. My experience extends now over upwards of twenty cases, in none of which the pneumonic area progressed to caseation as is so apt to be the case in pneumonias complicating pulmonary tuberculosis, especially if the inflammatory area is already the seat of tubercle. This may be, of course, a fortunate coincidence, and I would still consider it so were it not for the favorable results reported by various clinical writers in other forms of pneumonic inflammation."

In the same paper, under the heading, "The Treatment of Hemorrhage," Dr. von Ruck again recommends creosotal:

"Although the benefit from expectorants is not susceptible to proof, I can say that I have seen fewer pneumonias since using them after severe hemorrhages than I did before, and if the favorable reports, and my own favorable experience of the action of creosotal (carbonate of creosote), or carbonate of guaiacol, in the treatment of pneumonia is further confirmed, we may hope that their administration for the first three or four days in the cases under consideration, may still further reduce the frequency of this serious sequela to hemorrhage."

Proceedings of Societies.

THE ONTARIO MEDICAL ASSOCIATION.

THE twenty-second annual meeting of the Ontario Medical Association opened in the Normal School Buildings, in this city, on June 4th. It was by a long way the best meeting of this rapidly growing body that has taken place for many years past, this being attributable to the exceedingly able manner in which the President, Dr. N. A. Powell, conducted the proceedings, not to speak of the way in which he and the General Secretary, with the various committees, worked for months past in order to ensure the annual convention being a notable success. The attendance was good, 185 members having registered and paid the annual fee. The general spirit of the meeting was most enthusiastic, each one present seemingly bending every effort to make the convention what it should be. The list of the papers read was large, and their quality, as also the character of the various discussions and the exhibition of clinical cases, lantern slides, etc., could hardly have been improved upon. We were glad to see that so many of the papers read were contributed by members of the profession outside of the city, and we trust that this will continue to be so. Our space this issue unfortunately prevents our publishing a full report of the meeting, though we hope to present our readers from month to month with many of the papers read. The morning session of the first day was opened with a few words of welcome from the President, Dr. N. A. Powell, who assured all how happy he was to see so large a gathering at the twenty-second annual meeting of the Ontario Medical Association, and expressed the hope that their two days' session would not only be enjoyable, but exceedingly profitable to all who were present. A very able paper was read by Dr. J. L. Davison, of Toronto, entitled "Some Points in Life Insurance." It was full of most practical matter, the author impressing his hearers with the importance of more careful attention being given to life insurance examination, and asked practitioners who lived out of the city to remember the fact that, by their sending in carelessly filled-out reports as to applicants for insurance to the Medical Director, who never saw the applicant, and knows nothing about the subject desiring insurance, they very often greatly prejudiced their own and their patients' best interests, and instead of the Company paying a fee of \$5.00 to the medical man

for the examination, they would frequently prefer to pay \$50 for none at all, so unsatisfactory are some of them.

Others papers read at the morning session were: "Transplantation of the Omentum into the Abdominal Wall, for the Relief of Ascites due to Cirrhosis of the Liver," by Dr. G. A. Peters, Toronto, which we will publish next month; "The Cure of Chronic Bright's Disease by Operation," by Dr. Alex. Primrose, of Toronto; "Tonsillar Hypertrophy, its Operative Treatment, and the Comparative Value of the Different Methods," by Dr. Perry S. Goldsmith, of Belleville; and "Some Comparative Results of the Medical and Surgical Treatment of Appendicitis," by Dr. J. P. Armour, of St. Catharines.

In the afternoon the session was opened by the President, who read his annual address. It was a most masterly effort and practical to a degree.

One topic upon which he touched was the proposed Dominion Medical Council. Upon this his position was that in regard to the regulating of the study and practice of medicine by legislation, Ontario is in advance of any other Province or State on this continent. "What we in Ontario must guard with jealous care is the standard which we now have. There must be no levelling down to meet the needs of schools in any other part of the Dominion. Pledges will not suffice. We must have the power to prevent its being done, and if we have such power, and use it, I am exceedingly doubtful if we shall ever see the Act in operation." In this connection Dr. Powell referred to recent proposals to reorganize the Medical Council, opposing the suggestion to limit the representation of universities and homeopaths on the council. The latter, he observed, are diminishing in number and influence, "and for us to drive them into making application for separate incorporation and into the position of an oppressed minority, would be foolish in the extreme." He suggested that members of the council who represent charters for medical colleges in abeyance, or universities having no direct influence in medical education, should be dropped.

Dr. Powell referred to the increase in the number of house surgeons through the increase in the number of cottage hospitals. He raised the question of "the advisability of the appointment of a certain proportion of the house surgeons of our larger institutions every six months, with a graded service of eighteen months, instead of our present unsatisfactory plan of appointing all together once a year, and for one year only." In this connection he suggested the withholding of the power of administering anaesthetics from men in the first six months of their course. Reference was also made to post-graduate instruction, the opinion being expressed that in this Ontario is falling behind.

"The continued presence of smallpox in Ontario," Dr. Powell

observed, "the large number of reported cases and their wide distribution are causes of regret, of alarm, and of humiliation. . . . Two of the factors which increase the difficulty of stamping out smallpox undoubtedly are humbug vaccination and a failure to make the differential diagnosis between this disease and chickenpox. . . . Justice fails when a man who spreads smallpox is not made to atone so far as he can for his offence by serving a long term in the penitentiary. May I here raise the question of the necessity of a standard certificate of vaccination, stating the result obtained in each case, and may I in this connection also ask if the time has not arrived for placing chickenpox on the list of diseases which must be reported to our medical health officers?"

Reference was also made to the free sanitarium for cases of incipient phthisis lately established in Muskoka.

After the President sat down, Dr. J. A. Temple, Toronto, read a paper on "Ventro-fixation, its Value and Results." The meeting then divided into sections. In the obstetrical section the following papers were read: "Placenta Prævia," by Dr. H. G. Livingstone, Rockwood; "How Best to Meet Obstetric Emergencies," by Dr. C. J. O. Hastings, Toronto; "Notes on five Cases of Ectopic Gestation," by Dr. R. E. Webster, Ottawa; "The Treatment of Septic Abortion," by Dr. Kennedy McIlwraith, Toronto. In the medical section were read: "Pneumonia," by Dr. David Hoig, Oshawa; "Treatment of Pneumonia," by Dr. J. C. Mitchell, Enniskillen; "A Recent Epidemic of Cerebro-spinal Meningitis," by Dr. Alex. McPhedran, Toronto; "Primary Tracheal Diphtheria," by Dr. R. D. Rudolf, Toronto; "Where Can our Consumptives best be Treated?" by Dr. J. H. Elliott, Gravenhurst; and "Pleurisy with Effusion," by Dr. D. G. Gordon, Toronto.

At the evening session the principal paper was a most interesting one by His Honor Judge McDougall, on "Expert Medical Evidence." Judge McDougall told the Ontario Medical Association why expert testimony in the courts was at such a low ebb, and he went further than most critics, and showed how, in his opinion, this state of affairs could be remedied.

Having pointed out how conflicting medical and other expert testimony often was, with the consequent confusion of the jury, the judge gave his views as to why there was so much conflict. It arose chiefly out of the method of securing and employing such witnesses. At present experts were obtained by the parties to the suit, who, before subpoenaing an expert, took care to find that his opinions were in their favor. The fees came out of the pockets of the man who was to benefit by the testimony. Taking these two things together, they were apt to produce, perhaps wholly unconsciously in the mind of the expert, along with the natural desire to see his side win, a disposition to view the facts with a view to this result. It had, in fact, a tendency to corrupt the witness, not

in the strict sense amounting to moral torpitude, but giving him a bias in favor of that side. A man had to have strong mental honesty not to be swayed under these circumstances.

Then, the experts being witnesses for one side or the other; the cross-examination by the counsel was not conducted for the purpose of getting at the facts, but for the purpose of showing that the evidence adduced by the opposite side was upon a wrong foundation, and therefore absurd.

Judge McDougall proceeded to consider whether there was no better way. He was decidedly of the opinion that there was, by making the expert an assistant or adviser to the court. The court or the State should be the party to designate who the two or three experts should be, not the parties to the case, and their reward should not depend upon the parties, but should be provided by the State. This plan was successfully adopted in the Admiralty Court, where the judge was assisted by two experienced nautical assessors, generally retired sea captains, who sat on the bench on either side of the judge, and gave him assistance in all nautical points. In some such way medical or other expert testimony might be had.

He thought the new act limiting the experts to three, or five, if asked for before the trial began, was a move in the right direction. He urged doctors to give their testimony in popular, untechnical language, and unadorned by superlatives.

Mr. Irving H. Cameron thought that the popular criticism of experts was a harsh one, because the public did not understand the difficulties under which the expert worked. As Judge McDougall had pointed out, only those were selected whose opinions were known beforehand, and as the expert was not giving facts, but opinions on facts, unanimity was not to be expected in the present state of medical science, which rendered two views possible and likely in every case. He noticed that Judge McDougall had not given his own experience, but that of others, and he knew that all medical men appearing in Judge McDougall's court would be fairly treated. On the other hand, he knew that all medical men would welcome any such change in the law as that suggested.

Dr. Harrison, of Selkirk, made a humorous speech in the same strain, and it was evident that the Association endorsed Judge McDougall's stand.

After Judge McDougall took his seat, papers were read on "The Status of the Hospital Interne in Ontario," by Dr. H. S. Hutchison, Toronto; and "Dry Labors," by Dr. Adam Wright, Toronto, after which a series of lantern demonstrations were given as follows: "On Certain Functional and Organic Diseases of the Nervous System," by Dr. H. A. McCallum, London; and "Anomalous Forms of Smallpox," by Dr. C. A. Hodgetts, Toronto. The meeting then adjourned till 10 o'clock Thursday morning.

SECOND DAY'S SESSION.

The session of the Association on Thursday was full of interest, the members being present in goodly numbers, for the opening about 10 o'clock. Dr. N. A. Powell was, as usual, in his place on the platform, and did not do what too many Presidents have been in the habit of doing in the past, viz., absenting themselves from the chair during the greater part of the time, especially on the second day. Dr. Powell stuck faithfully to his post, and by his ready wit, for which he is now well known, and general executive ability, made the second day's meeting also not only instructive, but full of interest, which did not flag from beginning to end. He confined the reading of papers, as well as the discussions, strictly to the allotted time, so that, except in a few instances, little haste was exhibited. The morning session was almost exclusively devoted to the exhibition of clinical cases, the time being well spent and exceedingly profitable. The cases included: Pseudo-Hypertrophic Muscular Paralysis; Muscular Dystrophy; Lateral Sclerosis; Adenoma Sebaceum; An unusual case of Varicose Veins; Extensive Necrosis of the Skull; Chronic Hereditary Trophædema of Lower Extremities; Fracture of Pelvis in a Child, with Complete Laceration of the Perineum by the Ramus of the Pubes, Subsequent Repair of Perineum and Bowel—Recovery; Removal of Stones from Common Bile Duct; Notes of Patient whose Abdomen has been Opened eight times; Three Cases of Transplantation of the Ureters into the Rectum for Exstrophy of the Bladder; An unusual case of Multiple Peripheral Neuritis; Urticaria Pigmentosa; Marked Disability arising from Fracture of Coccyx—Relief by Amputation of Coccyx; Chronic Intestinal Obstruction Cured by Operation; Three Cases of Pyothorax; Splenic Leukaemia.

Pathological specimens of Multilocular Cyst, appendix with eight Enteroliths, Carcinoma of the Prostate, were on view, as also a capital collection of plaster casts by Dr. George Peters, of Toronto. In the Surgical Section, papers were read by:

Dr. C. R. Dickson, of Toronto, on "The Uses of the X-Ray, other than Diagnostic."

Dr. J. E. Hett, Berlin, on "The Use of the X-Ray in Cancer, Lupus, and Hodgkin's Disease."

Dr. John McMaster, Toronto, on "The Results that are being Obtained by the Use of the X-Ray, with Exhibition of Patients."

Dr. Beverley Welford, of Woodstock, on "Stricture of the Esophagus."

Dr. D. J. Gibb Wishart, of Toronto, on "Hydrobromic Ether—Notes upon its Use as an Anesthetic in Adenoid and Tonsil Operations."

Dr. J. Price-Brown, of Toronto, on "The Use of India Rubber Splints in the Treatment of Deflected Nasal Septa."

In the Medical Section, the following papers were read, one or more taken as read:

Dr. C. D. Parfitt, of Gravenhurst, on "Climate and Health Resorts of the Southwestern States."

Dr. Graham Chambers, of Toronto, on "Some Unusual Cases of Syphilis."

Dr. John Gillies, Teeswater, on "Cerebral Embolism."

Dr. J. T. Duncan, Toronto, on "How much Ophthalmology should the General Practitioner Know, with Special Reference to the Discovery of the Cause of Headaches."

Dr. H. B. Anderson, Toronto, on "Tabes Dorsalis, with Involvement of Cranial Nerves."

Dr. W. H. Thistle, Toronto, on "A Case of Brain Tumor, with Interesting Localizing Symptoms, with Specimen."

Dr. John Hunter, Toronto, on "A Case of Acute Nephritis."

The Committee of Arrangements served an excellent luncheon in the hall at the rear of the Auditorium, and it was thoroughly enjoyed. After lunch was over, the usual toasts were duly honored, and speeches delivered by the President, Dr. Roswell Park, of Buffalo, Dr. A. R. Robinson, of New York, Dr. Garrett, of Kingston, Drs. R. A. Reeve, J. B. Geikie, J. A. Temple, J. W. Cotton, G. A. Bingham, and others. A notable item on the programme, and one which "brought down the house," was the Scotch song by Dr. A. A. Macdonald, "the only song he knows," the President said. The chorus was joined in by all. The speech by Dr. Harrison, of Selkirk, and that by Dr. Geikie were capital, the latter being full of vim and loyalty, showing that the old man of Trinity Medical School is still a long way from being dead yet.

During the afternoon session Dr. Roswell Park, of Buffalo, gave the Association the benefit of an exceedingly clever paper on "The Gall-Bladder, its Structure, and Diseases to which it is Liable." He compared the gall-bladder with the vermiform appendix, and took the ground that when abnormal it should be removed and not treated. The paper was prepared for the meeting of the New York Medical Association.

Another welcome visitor was Dr. Knopf, of New York, one of the recognized authorities on the subject of tuberculosis, who gave an address. He spoke in the strongest possible condemnation of the resolution which he understood had been adopted by the Congress of Tuberculosis in New York, to the effect that tuberculosis was an acute infectious disease. Dr. Knopf said that if such action had been taken nothing could do more harm to the movement for the prevention of the disease than the teaching of any such erroneous doctrine. The members of the Congress, he feared, were suffering from "phthisiphobia," and the publication of any such a statement could accomplish no good. Dr. Knopf said

phthisis was spread by the sputum, and it was not an acute infectious disease.

Dr. A. R. Robinson, of New York, was also a guest of the Association during the afternoon.

The next business was the election of officers for the year, which resulted as follows: President, Dr. J. C. Mitchell, Ennis-killen; first Vice-President, Dr. George A. Bingham, Toronto; second Vice-President, Dr. W. G. Anglin, Kingston; third Vice-President, Dr. J. W. S. McCullough, Alliston; fourth Vice-President, Dr. J. D. Meikle, Mount Forest; General Secretary, Dr. Harold C. Parsons, Toronto.

Reports of the various committees were presented and resolutions passed, the most important of which gives the Publication Committee power to print the proceedings of the session.

The remainder of the afternoon was devoted to papers on "Technique of the Removal of Tuberculous Cervical Glands," Dr. L. W. Cockburn, Hamilton; "Abdominal Neuroses," Dr. D. Campbell Meyers, Toronto; and "Remarks upon Some Eye Cases," Dr. G. H. Burnham, Toronto. The Association then adjourned.

The Auditorium of the Normal School was nicely decorated with Union Jacks, and the platform looked very pretty with its many flowering plants along the edge. The hall of the building, as one came in, was comfortably filled by various exhibits of drugs, surgical instruments, medical books, etc., and we were glad to see that the visiting medicos took advantage of their presence. Among the exhibitors were the firms of Parke, Davis & Co., H. K. Wampole & Co., R. L. Gibson, J. A. Carveth, The Chandler & Massey Limited, F. A. Stearns & Co., and others.

Among the visitors from the other side of the imaginary line were: Dr. Roswell Park, from Buffalo, N.Y., Dr. Knopf, of New York, and Dr. A. R. Robinson, of New York, all of whom the members of the Association were glad to welcome. Dr. Mussen, of Philadelphia, and Dr. Howard Kelly, of Baltimore, were to have been present, but found it impossible to do so at the very last moment.

TORONTO MEDICAL SOCIETY.

The regular meeting of the Toronto Medical Society was held on May 1st, 1902, the President, Dr. F. N. G. Starr, in the chair.

Dr. Hooper read a paper on "Ectopic Gestation," reporting a case. (See page 21.)

Dr. Eadie said, in discussing the paper, that he had seen eight cases: one case had been operated on for one side, returning later for operation on the opposite side. The diagnosis was difficult before rupture, but after that there were cardinal symptoms: (1) Disturbed menstruation; (2) sudden shock with acute pain; (3)

temperature subnormal, showing the pain was not due to inflammation. He had not noticed any shreds in any but two cases. All cases had said when pregnant that they felt increasing changes in the pelvis, not always a pain, but a discomfort, which was increased while up, and somewhat relieved on lying down.

Dr. Wilson said *re* causation, in the country there was much less inflammatory trouble in the tubes. In the city the question of a gonorrhoea in the husband must always be considered.

Dr. Hay reported two cases, one typical; second had ruptured, and was seen thirty hours after, when the woman was "as pale as a sheet." The abdomen was found full of blood clots. It was drained through the vagina and normal salt solution given, but the patient died two days after. The operative procedure had been too long delayed.

The President said the rule to operate as soon as a diagnosis was made was a good one. He cited a case. He said the lymphatics of the diaphragm absorbed rapidly, and it is a good idea to use saline solution to fill up the abdominal cavity after operation, when rupture has occurred. Dr. Hooper, in reply, said on the right side, even after rupture, diagnosis was not easy. The temperature may be down in appendicitis.

Dr. Oldright showed (1st) a man previously seen by the members, with an epithelioma of the lower lip. It had been removed. (2nd) A specimen, ovarian cyst.

Mr. Crawford opened the discussion on anesthesia by relating a case in which death had occurred.

DISCUSSION.

Dr. Carveth said it was wrong to begin with chloroform, and then change to ether. Gas should be first used, then ether. In Toronto ether was considered the safer anesthetic. It did not cause nausea if the patient was put out of doors or in very fresh air. He objected to the moving of the patient while anesthetized. The head should be turned on the side as soon as the anesthetic is discontinued, and water should be given as soon as the patient asks for it, freely. He raised a protest about the fee, saying that the anesthetist, of the trio—surgeon, assistant, and anesthetist—was the one given the lowest fee, or none at all, if one had to remain unpaid. He considered the fee for anesthesia should equal that of the surgeon, who was in reality taking fewer risks.

Dr. Wilson said that it did not matter what drug was used, they were all dangerous. Only just enough should be given. The anesthetist should not be bound by any set rules, should change if he wished from one to another drug. Air was important in the after care. The patient should have plenty of it.

Dr. Hunter spoke of the dangers of anesthetics. He advocated the drop method of administration, and stated that he had

for four hours kept one patient under with eight drops to the minute.

Dr. Hay said that patients were too often slugged—that was, too much was given at the start. He gave morph. sulph. 8 1-8, atropine, gr. 1-120, half an hour before operation to relieve nervousness. The quick return to consciousness was the evidence of good administration. The proper preparation of the patient for operation, with water given freely, prevented after thirst.

Dr. G. B. Smith said, years ago he had given morphia and alcohol also, but now he preferred to have the patient in a normal condition, free from any drug, when the anesthetic was begun. Dr. Oldright objected to the giving of a purgative the night before operation. It should be given the second night before. The fabric used to drop upon should be thin enough to breathe through. The anesthetist should test this himself before beginning. He objected to the Claver's inhaler for ether, saying the patient should receive pure air.

Dr. Beatty said, in London gas was first used, then ether, never chloroform; the anesthetist had no choice. The head was always turned to one side at once on the cessation of administration; no water was allowed for some time, but ice was given. After some hours a teaspoonful of water was given every hour until sure no vomiting followed, then gradually increased. The a.c.e. mixture was always given to elderly people. A purgative was given the night before operation.

The President said he liked the Claver's inhaler. He was glad to hear Dr. Smith object to drugging the patient and then anesthetizing him. The Society then adjourned.

FINAL MEETING.

The final meeting of the Toronto Medical Society took place on May 15th, 1902, the President, Dr. F. N. G. Starr, in the chair.

Dr. Hay moved that visitors be extended the privileges of the Society, and be asked to take part in the discussion.—Carried.

Dr. H. G. Machell was absent, and his paper was not read.

Dr. S. M. Hay read his paper, "Some Important Points to be Noted in Life Insurance Examinations."

DISCUSSION.

Dr. Oldright said *re bona-fides* of applicant, it was a question how far we were justified in taking statements of applicants. Urinary analysis is now required by all companies. Applicants were not told this by the agents. The urine must not be brought to the office in a bottle, but must be voided in the presence of the

examiner. *Re* tuberculosis: Association with tubercular people is just as important as heredity. Heredity on one or both is important, also any history of straight infection, a single instance of straight infection being much more favorable to the applicant than a case of hereditary taint on one side or the other. He said the remuneration to the examiner was too small for the amount of work and running round required of him. He also spoke of the protection of the examiner, stating that companies too often changed their local examiner to please an agent. This should not be as long as one man is giving satisfaction and doing good work. Preventive medicine was a subject not taken up by insurance companies. Cases of appendicitis operated upon he considered better risks even earlier than Dr. Hay had said, than cases cured without operation even after six years.

Dr. John Ferguson said: Applicants were often first class in one part of the examination, fair in another, and poor or bad in another. As, for instance, personal history may be first class; family history bad; physical examination good or first class; or all first class, and moral and social elements be bad. These must all be considered carefully before recommending a policy. A very important point was the difficulty of making an examination in the applicant's office or place of business. The urine should always be passed so that the examiner knew no substitution, or alteration was possible. It was not always possible to get a sample. A good examiner would always be on the outlook for first impressions—were they good, was he healthy, had he any habits, were the pupils contracted, did he rub his nose frequently, showing the morphine habit, etc. A family history showing early deaths showed a general lack of vitality in the family. He fully agreed with Dr. Oldright *re* cured cases of appendicitis. Some diseases were an advantage, as typhoid, small-pox, etc. He divided alcohol ulcers into three classes: (1) Spree class—a drunk with friends, a jollification. (2) Dyspsomaniacs—periodical outbreaks ending in delirium tremens, which may be twelve or eighteen months apart, or oftener. (3) Dram drinkers. Classes two and three were rejectable lives. Occupation was important. An indefinite answer should never be taken, as clerk, traveller, etc. The following points of the examination should always be carefully considered: (1) Heredity—the whole family history; (2) personal record; (3) proportionate height, weight, expansion, and measure; (4) occupation, social habits, and moral condition.

Dr. J. Hunter asked what stand medical referees took upon albuminuria, for albumen could be shown in the urine of men in apparent perfect health, at times, and entirely of a transitory character.

Dr. W. Wilson said in a large proportion of middle-aged persons no albumen would be found until after repeated examina-

tions. The urine may be of low sp. gr., but granular casts were frequently demonstrable without albumen being shown by chemical tests.

The arterial tension should be considered; was there any evidence of sclerosis in the radial or temporal arteries. A velvety condition of the skin or spotting were important, and should put the examiner on his guard. The hear. sounds should be proportionate. Men married a second time to young women died sooner than men once married. Syphilis is almost always denied, and should be watched for. He noticed in a recent number of the *British Lancet* that rheumatic personal history reduced the life expectancy according to the experience of the Scottish Widows Fund Society. He also spoke about the appointment of examiners (local).

Dr. Clouse said medical students should receive a special course in insurance examinations. He thought the supreme examiner often made mistakes by laying too much stress upon proportions. It was sometimes very hard to put down for the head office answers received, so as to give correct and proper information. Urinalysis was very important, though sugar may be occasionally found in perfectly good risks. Some individuals were very prone to meet with accidents, and were therefore not first class because of some visual defect or nervous condition, which of itself did not amount to much; only its bearing upon the safety of the applicant. The moral element mentioned by Dr. Ferguson he considered very important. Having had contagious diseases indicated a condition of lowered vitality.

Dr. Ashton Fletcher said that he did not agree with Dr. Hay that tall men were usually better risks. Short men, he said, usually had greater lung capacity. That the difference between expiration and inspiration was usually greater in short men than in tall men. Therefore, Dr. Hay's rule that the mean chest measurement should be half the height was not sound. Short men were less liable to accidents, being more agile, and were sure-footed. *Re* preventive medicine: He noticed some companies were beginning to wake up to this important point. One company was asking the questions: How long after the death of a consumptive did you occupy the same house or room? Have you been closely associated with a consumptive? Another company asks: Have you used patent medicines? If so, for what?

The president said, "Do not write normal." State the facts. A question that should be on every form is: Does applicant in illness use a regularly qualified medical man? It was hard to get a correct family history. Death at childbirth; was it during labor? A week or six weeks after? were questions hard to answer, and meant much to the chief examiner. He knew cases of hernia cured by injection method accepted by companies, though

he considered them unsafe, as he had seen at *post-mortem* a knuckle of intestine attached to the sac by adhesions which formed a stoppage, causing death. Underweight men were prone to tuberculosis. The pulse should be taken with three fingers, in order to be able to accurately and correctly estimate the quality and arterial tension.

Reply.—Dr. Hay said the referee was not justified in accepting cases with sugar in the urine, where found frequently. But many cases might have been accepted. The applicant must be examined thoroughly, even if the local examiner is sure he will not pass. He made the same reply *re* albuminuria as *re* sugar. A very important point was the question: How long have you known the applicant? He would consider much more carefully the recommendation of the local examiner if he had known the applicant some years. Short men with large chests were out of proportion, and usually too fat.

The Treasurer's report and the Recording Secretary's report were read and adopted, showing the Society financially strong, and doing good work. The membership had been increased by eleven during the year, the average attendance being twenty-five.

The officers elected for the ensuing year were: President, S. M. Hay; 1st Vice-President, G. Silverthorne; 2nd Vice-President, J. Hunter; Corresponding Secretary, H. A. Beatty; Recording Secretary, Ashton Fletcher; Treasurer, G. H. Carveth; Committee, F. N. G. Starr, E. R. Hooper, J. H. Fisher.

In introducing the President-elect, the President said he wished him all success and the Society continued prosperity. To him and the Executive he would relegate two things—one, to take into their consideration some plan whereby the promiscuous newspaper advertising of certain members of the profession may be stopped, and also to consider to what extent the practice of paying commissions for cases sent to certain men for operation is carried on, and thus help to elevate the dignity of the profession, a duty that we should ever keep before us.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

THE twenty-fourth annual congress of this Association was held this year in Boston on the 26th, 27th and 28th of May, in the Library Building of Harvard Medical College. Among the subjects of special interest discussed was the large and important one of the use of the X-ray. Many of the men, so far as time limit would allow, had given it a fair trial, and spoke enthusiastically of its use in the treatment of malignant disease. It was too soon, however, in any case recorded, to report a permanent cure, although the benefits derived from its application were undoubted. Pain

had been eased and relieved; diseased tissues had been restored to an apparently normal condition; malignant cachexia had been replaced by an improved condition of skin and mucous membrane; and growths had been either altogether absorbed or materially diminished in size by its influence.

Some observers had, in advanced cases, experienced no beneficial results whatever; while others stated that even in the most severe cases of epithelioma, the course and severity of the disease had been retarded by its use. As a rule the seances were repeated every two or three days, and the time of each application of the tube was limited to ten or fifteen minutes.

Gleitsmann reported a case of subglottic sarcoma, removed endolaryngeally by galvano-cautery snare. It was attached by pedicle, and he believed the removal to be complete. There had been no glandular enlargement. Five months had elapsed since the operation, and there were no indications of recurrence.

The paper created a good deal of discussion for and against the doctor's method of operation. This was led by J. N. Mackenzie, who set his fiat emphatically against all intra-laryngeal operations for the removal of malignant disease. The consensus of opinion expressed was with him in cases of undoubted carcinoma; but with Gleitsmann when the neoplasm was sarcomatous, and under conditions similar to the one he reported. In all other cases, where operation was advisable, external laryngectomy was the operation approved of.

A good paper was that of Clarence Rice, upon changes occasionally seen in the shape of the arytenoids in professional singers and actors. He also dwelt at some length upon the compensatory increase of size and function of the false vocal bands, in cases where the action of the true cords had been impaired.

Hudson Makuen, following his well-known line of curing the stammerer by the application of established physiological principles, presented an interesting case, which fully verified his position; while Braden Kyle opened up the new subject of sialo-semiology, a branch of chemical pathology, as a means of diagnosis. This is a subject which, though at the present time in its infancy, may be destined in the future to occupy a wide place in progressive medicine.

One exceedingly interesting feature of the Congress was a series of addresses delivered in succession in the operating amphitheatre of the University. These were given by Professors Minot, Dwight, and Lothrop, upon development of the tonsils, the growth of the face and pharynx, and the anatomy and cell development of the inferior turbinated. They were all profusely illustrated by charts, giant dummies, and a large variety of pathological specimens.

Among the many papers read at the regular sessions was one

by our townsman, Price-Brown, upon "Rubber Splints in the Treatment of Curvature of the Triangular Cartilage."

This Association contains a limited membership. It is one of the oldest in the land, and next year expects to celebrate its silver wedding, as one of the branches of the Triennial Congress to be held at Washington.

A Turpentine Catastrophe.—An action was tried in the High Court on Friday last in which a lady claimed damages from the Buckeye Bath Cabinet Company under somewhat peculiar circumstances. It seems that the instructions for the use of the cabinet which is a sort of portable vapor bath, comprise the discretionary use of turpentine, a certain quantity of which is to be placed in the water heated by a spirit lamp therein. The plaintiff complied with the instructions, with the natural result that the turpentine which of course floats on the water and is evaporated first, formed an inflammable vapor. This took fire and inflicted serious injury on the unhappy patient, whom the jury invited to console herself with damages to the extent of £100.—*Medical Press.*

Canadian Medical Association Montreal Meeting, September 16, 17 and 18, 1902.—Below will be found a list of papers already promised for the Annual Meeting at Montreal in September next. Members and others contemplating contributing to the success of this meeting should notify the General Secretary at an early date of their intention. Arrangements as to railroad and steamship rates, entertainments, clinics, etc., will be announced in due time. Address in Medicine—Professor William Osler, Baltimore; Address in Surgery—Dr. John Stewart, Halifax, N.S.; Lantern Demonstration on the Exanthemata—Dr. Corlett, Cleveland, Ohio; Paper by Dr. D. Campbell Meyers, Toronto; Paper by Geo. S. Ryerson, Toronto—Subject not yet decided on; Paper by A. Laphorn Smith, Montreal, also Card Specimen; Paper by F. A. L. Lockhart, Montreal, "On some Points of Cerebral Localization, illustrated by a series of Morbid Specimens, and some Living Cases—James Stewart, Montreal; Paper and Specimens by Dr. Geo. A. Peters, Toronto; "The Country Practitioner of To-day," J. R. Clouston, Huntingdon, Que.; Paper by Dr. P. Coote, Quebec, Que.; "The Pathologic Prostate and its Removal Through the Perineum," A. H. Ferguson, Chicago; Paper by Geo. E. Armstrong, Montreal; Paper by Ingersoll Olmsted Hamilton; Paper by Dr. Casey A. Wood, Chicago, "Empyema of the Frontal Sinus;" "On Tuberculosis," J. F. Macdonald, Hopewell, N.S.; "X-Ray in Cancer," A. R. Robinson, New York; "On Degeneration of the Spinal Cord, Anemia, Mal-nutrition, with Microscopic Specimens," David A. Shirres, Montreal. Dr. Geo. Elliott, General Secretary, 129 John Street, Toronto.

El Shadow and a Hope.

On the eve of our going to press, the Anglo-Saxon nation, arrayed for, or humbly jubilant over, the Coronation, has been saddened and silenced by the dread news of the illness and consequent severe operation to-day submitted to by His Gracious Majesty King Edward. The Royal patient is under the care of the most skilful surgeons the Motherland possesses, so hopefully we await to-morrow's bulletin, as silently all join in the heartfelt prayer—

God Save the King!

JUNE 24TH, 1902.

W. A. Y.

VOL. XII.

TORONTO, JULY, 1902.

NO. 1.

Editorials.

TALMA'S OPERATION.

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The Canadian Journal of Medicine and Surgery

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Oral Surgery—E. H. ADAMS, M.D., D.D.S., Toronto.

Surgical Pathology—T. H. MANLEY, M.D., New York, Visiting Surgeon to Harlem Hospital, Professor of Surgery, New York School of Clinical Medicine, New York, etc., etc.

Gynecology and Obstetrics—GEO. T. McKEOUGH, M.D., M.R.C.S. Eng., Chatham, Ont.; and J. H. LOWE, M.D., Newmarket, Ont.

Medical Jurisprudence and Toxicology—ARTHUR JONES JOHNSON, M.B., M.R.C.S. Eng., Coroner County of York; Surgeon Toronto Railway Co., Toronto; W. A. YOUNG, M.D., L.R.C.P. Lond.; Coroner County of York, Toronto.

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Laryngology and Rhinology—J. D. THORBURN, M.D., Toronto, Laryngologist and Rhinologist, Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post-office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication. Advertisements to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

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and pressure in these vessels, and thus obviate the occurrence of ascites.

H. Kummel (*Deut. Med. Wochenschr.*, April 3rd, 1902, No. 14, p. 242) reports seven cases in which this operation was performed. In one case, dating back to 1887, owing to a mistaken diagnosis, a simple laparotomy had been done, which, in place of a supposed hydatid cyst, revealed the presence of ascites. The liquid was not reproduced, and the patient got better. In the six other cases in which Talma's operation was performed, two succumbed on account of their desperate condition at the time of operation. A third patient survived the operation three weeks.

In the fourth case death supervened from erysipelas, four months after the operation. At the autopsy it was shown that the ascites had not reappeared. Finally, in the last two cases in which the operation had been done six and eight weeks respectively prior to the report, ascites had not reappeared, and the general condition had been improved. Dr. Kummel did not think that Talma's operation would be capable of curing cirrhosis. However, its undoubted action on ascites, as well as on hypertrophy of the liver and of the spleen, causes it to be regarded as a most valuable procedure in cases in which ascites becomes particularly annoying to a patient.

At the annual meeting of the Ontario Medical Association, June, 1902, Dr. George A. Peters, Toronto, exhibited a patient upon whom he had successfully performed Talma's operation for cirrhotic ascites.

He favored a supra-umbilical incision of from four to five inches in length, which allowed the surgeon sufficient room in which to make the required manipulations of the parts. Dr. Peters had in his case taken four omental grafts, two from the right and two from the left side of the great omentum, and inserted them into the abdominal parietes, in which they were retained by sutures, in the following manner: By making two longitudinal incisions about 1 1-2 inches long in the parietal peritoneum, at a distance from one another of about an inch, he was able to raise a strap of peritoneum in such a way that a large graft of omentum could be drawn by forceps into the pocket thus made. By preference, portions of omentum containing large veins were selected. In addition a large graft of omentum was drawn through the suspensory ligament of the liver in the hope that its veins might con-

tract anastomoses with the vein in its free border, which on one occasion Talma found to be as large as the finger.

He had not practised massage or scarification of the surfaces of the liver, and of the parietal surfaces of the peritoneum, with gauze, which had been recommended by Talma and Drummond as being conducive to the establishment of vascular adhesions between these surfaces. The patient had been tapped prior to this operation at intervals of from eight to twelve days, for about two months. At the time of the first tapping the patient's abdominal circumference was 64 inches, and on that occasion three patent pailfuls of fluid (estimated at 1,100 ounces) were removed.

After the operation the fluid reaccumulated, and tapping was required at intervals for some three months (seven times in all), but the intervals gradually increased in length, and the amounts withdrawn progressively diminished. The last tapping occurred in November, 1901. The fluid has since ceased to accumulate in troublesome quantities, though there is still some effusion in the peritoneum. At present he is in fairly good condition, having no appearance of ascites, or edema of the extremities. His complexion is slightly congested, but his general appearance indicates good health. Inspection of the abdomen revealed a number of largely dilated veins coursing over its surface. Dr. Peters' case is certainly most instructive, showing that although cirrhosis may not be cured, its most formidable symptom, ascites, can be completely relieved.

Of course, it is true that in some cases repeated tappings have, by the establishment of several vascular connections between the portal system of veins and the systemic veins in the walls of the abdomen, relieved ascites. Dr. Peters' patient was tapped four or five times previous to the operation without relief to the ascites. After the operation the fluid reaccumulated rapidly, so that it had to be removed by aspiration seven times. In spite of these recurrent attacks of ascites, which seemed to forebode a bad result, the fluid has ceased to reaccumulate, and the present condition of the patient gives no impression whatever that he had ever suffered from well-marked ascites. His present waist-measurement is 43 inches—his measurement prior to the operation was 64 inches.

J. J. C.

PREVENTION OF DIPHTHERIA.

THE existence of a case or cases of diphtheria in a public school is, of course, a matter of great importance not only for the patients themselves, but for their companions as well. An examination of the children attending a school, in Paris, France, in which forty-two cases of diphtheria had occurred, showed that in several instances, the Klebs-Löffler bacillus was discoverable in the throats of children, who had not been attacked with the disease. In all 231 children were examined, of whom 42 had diphtheria, 42 had not diphtheria, but had the Klebs-Löffler bacillus in their throats, 66 had the short bacillus (doubtful diphtheria), 81 had neither short bacilli nor Klebs-Löffler bacilli.

The examining physicians, Drs. Netter and Martin, forbade the children who had Klebs-Löffler bacilli in their throats from attending the school, and the epidemic of diphtheria, which, up to the time of their adopting this procedure had been very severe, having caused outbreaks in 42 children, immediately subsided. Only two other cases were noted subsequently in that school, and it is quite likely that these patients were infected from some outside source. Moreover, the cessation of the outbreak among the children attending this school was followed by a notable diminution of cases of diphtheria among all the children of that neighborhood. Relying on these facts, Drs. Netter and Martin think that, in dealing with outbreaks of diphtheria among school children, strict measures of repression should be adopted. Children found to have Klebs-Löffler bacilli in their throats should be kept under observation until their throats are declared to be free from these bacilli. Preventive injections of anti-diphtheritic serum should also be administered to other children who had been in contact with the children in whose throats the Klebs-Löffler bacilli have been discovered. By taking precautions of this kind, outbreaks of diphtheria in large schools can be prevented from attaining great dimensions.

The discovery of Klebs-Löffler bacilli in the throats of persons who have been exposed to diphtheria, but who have not been attacked with the disease, would thus seem to be of the first importance. Physicians, nurses, and attendants in such cases are liable to have these germs in their throats, and may thus prove infective to other

persons with whom they come in contact. As a preventive measure oral antiseptics should be regularly practised by those who come in contact with diphtheria for their own benefit as well as to obviate the extension of contagion to other persons. There can be no doubt that a bacteriological examination of the throats of physicians and attendants exposed to diphtheria would be useful in preventing the spread of diphtheritic contagion. J. J. C.

A CANADIAN'S "LOOK-IN" AT THE AMERICAN MEDICAL ASSOCIATION.

SARATOGA—full of sunlight, smiling men and women meeting, greeting, and tarrying for half a week of days to attend the annual convention of the great American Medical Association. The Convention Hall is well arranged for its purpose, and blessed alike, these many moons, by meetings of Sunday School Alliances, Distillers, Sons of the Morning, Sons of the Evening (the names are not copyrighted), Jew and Gentile; in fact, all sorts and conditions of men, running the social gamut, all the way up to the splendid fifteen hundred Knights of the Scalpel, who delved into the deepest scientific problems all day, and dined and danced far into the night. Saratoga, although of late years very cosmopolitan, is diplomatic in the extreme. She knows whom she is welcoming, and arrays herself fittingly to entertain her guests.

Let us congratulate again the able President, Dr. Welch, and the Secretary, Dr. Simmons, upon the success of the meeting, the former upon his splendid equipoise and able presidency, and the latter upon his untiring and energetic work as General Secretary. The many different sections were conveniently arranged, and the papers, although perhaps too generous in number for the time allotted, and were comprehensive enough to make one wonder "how one little head could carry" away half the interesting facts the ears listened to.

The enormous United States Hotel was "Headquarters," and to join in the throng of promenaders upon its spacious verandas and lawns, whose huge trees were ablaze with lanterns and devices of colored lights, and listen to the concert, band and vocal, arranged in honor of the delegates, was indeed a pleasure. To drive through old Saratoga's streets under the avenues of trees out to the various

springs, and play "follow-the-leader," until at last the funny man of the party, as we drew up at still another Spouting Geyser, relieved our sense of polite obligation (the water was offered freely) by laughingly saying, "You may drive a horse to water, but you can't make him drink"—any more! Sometimes discretion is the better part of valor. No one present will ever forget the privilege afforded of visiting one of the most palatial summer residences in America, owned by Mr. and Mrs. Spencer Trask, who generously invited the members (and their wives) of the Association to an "At Home" from 5 to 7 o'clock at "Yaddo," where, after a drive of a couple of miles out of Saratoga proper, the home of Mr. Trask was seen amid a perfect garden of the gods, rising terrace upon terrace, and surrounded by trees and rose gardens of exquisite beauty, comprising in all a park of fourteen hundred acres. An orchestra stationed on the stone balustrade and an entrance magnificent in dimensions, a hall with flowing fountains, grand fireplaces, paintings rare and costly, and a dining-room fit indeed for King Edward to grace its board, with a library where the muses sit enthroned, and perchance the ghosts of Shakespeare and a troop of the Poets steal softly in on moonlit nights, and finger lovingly the wondrous collection of books, the best thoughts of men of all ages, which even a peep at on that June day will be a memory for ever in the garish life of the physicians, who scarcely find a pause long enough in the daily round to think or dream, and into whose lives comparatively so little of the exquisitely beautiful, if we may use the term, ever comes. The closing evening of the Convention, the President's reception at the United States Hotel, was brilliant in the extreme, the handsome drawing rooms flower laden, the beauty of the costumes of the ladies and the kindness of the unwearied greetings of Dr. and Mrs. Wyeth and Dr. Comstock (Chairman of the Reception Committee), made all present feel glad to be there.

The museum of exhibits was also very fine, and the exhibitors vied with one another in courteous attentions to the visiting physicians. At the close of the meeting, as good-bye was said, all through the corridors echoed and re-echoed, "Till we meet again in New Orleans in May, 1903." Nothing succeeds like success, and the enthusiasm of the members carried all present alike in its flow-tide of good fellowship, like a leaf on a stream. Never for a moment did the Canadian guest feel himself an alien, nor even a

stranger, and he has carried home a lasting and delightful memory and a big ache in his wrist as a souvenir of the heartily extended glad-hand of his "brother chips," and in his heart old Jack and young Glory float side by side.

W. A. Y.

ANNUAL MEETING OF THE ONTARIO MEDICAL
ASSOCIATION.

THE twenty-second annual meeting of the Ontario Medical Association, which was held in the Education Department, Toronto, June 4th and 5th, was in many respects very successful. The attendance, 185 registered members, was small for a Provincial association which has eight hundred members on its roll, and would not have been large if it were the annual meeting of the united Toronto medical associations, for this city boasts of four hundred regular practitioners. Barring a small attendance, the list of short-comings may be considered as closed. A long array of papers at a medical gathering is not always an unmixed blessing, and listeners are occasionally regaled with lengthy essays, which have a somewhat familiar sound; but an unprejudiced critic could not mete out such a judgment as to the quality of the papers read at this meeting. The exhibition of clinical cases was useful and most instructive. There was little, if any, evidence of experimental research in the papers, the work detailed being of a clinical character, but much of it was worthy of more than ephemeral fame, and deserves a wide circle of readers. It is pleasing to learn from the report of the Committee of Publication that so desirable an end may be looked for. We understand that an effort will be made to publish the annual transactions this year in book form, each member in good standing being entitled to receive a copy. We hope that this project will be realized. The publication of the transactions every year would be gratifying to the readers of papers, useful to members who cannot attend the meeting, and a ready means of placing foreigners in a position to judge of the quality of our medical studies by the tone of the finished product.

The business of the meeting was conducted faultlessly, much credit being due to the President, Dr. N. A. Powell, of Toronto, who, in addition to the possession of a proper sense of the value of minutes, and a correct appreciation of the rights of the assembly

and the privileges of speakers, knows how to season his decisions with a happy blending of good sense and good humor.

The Association was fortunate in having as guests three distinguished American physicians, Dr. Roswell Park, of Buffalo, Dr. Knopf and Dr. A. R. Robinson, of New York, who took part in the proceedings. The luncheon served at the Education Department on the second day of the meeting was quite enjoyable, proving to be an agreeable break in what might have otherwise assumed the aspect of a rather exclusive devotion to scientific work.

We feel satisfied that as long as the Ontario Medical Association continues to put forth efforts as great as those witnessed at the meeting of 1902, there will be small difficulty in securing an efficient membership. On the President-elect, Dr. Mitchell, and his officers will devolve the duty of continuing the good work, and of striving to obtain still higher results at the next meeting.

J. J. C.

DR. STAFFORD'S ARTICLE ON CLIMATOLOGY.

WE have been delighted with the perusal of Dr. Stafford's article, "Experiments in Climatology—The Canadian Summer," which appeared in our May number. This writer's graceful style, and his evident knowledge of the subject of which he treats, make an article on climatology, which is usually arid reading, as grateful as the contemplation of shady groves on a hot day in July.

The editor of the *Journal of the American Medical Association* finds fault with the article, because its author satirizes the heat and discomfort of America, and particularly American cities in midsummer. Dr. Stafford says: "In July the Washington shop-keepers, to attract trade, fry eggs by breaking the shell and allowing the contents to fall upon the heated asphalt of Pennsylvania Avenue." Of course this assertion smacks of the Alphonse Karr type, and may be considered a work of the imagination. It is simply a method of saying that Washington is unbearably hot in summer.

The summer climate of Canada may, without fulsome praise, be considered perfect. Travelled Americans are aware of the advantages obtained by a residence in Canada during summer, both for pleasure and health, and are right glad when the south wind blows steadily to escape from the overheated plains and cities of their own land to our more genial clime.

J. J. C.

EDITORIAL NOTES.

Complementary Office of the Liver.—Gilbert and Carnot, describing in their recently published book, "Les Fonctions Hepatiques," the complementary office of the liver in respect to substances derived from the intestine, state that this office applies not only to assimilable alimentary substances, but also to non-assimilable ones as well, which are thus eliminated from the organism. This action of the liver is exercised on foreign bodies of a solid nature, pigments, and micro-organisms, and also on soluble bodies (intestinal poisons, nicotine, etc). Some of these substances, such as iron, mercury, coloring matter, etc., are extracted from the circulating blood stream by the hepatic cells, and afterwards eliminated by the bile. Other substances, solid or in solution, are simply removed from the blood stream and accumulated in the liver. Such are pigments, a great number of bacteria, which are destroyed in the liver, a good many alkaloids (morphine, etc.). Others are changed into harmless products. Such are the products of the disassimilation of the albuminoids, which become changed into urea or the phenols, which are sulpho-conjugated, losing thereby a portion of their toxicity, etc. At the meeting of the Association of American Physicians in April, 1902, J. Adler, of New York, read a paper entitled "Some Effects of Tobacco on the Tissues of Rabbits." His experiments showed that tobacco affects, for a time at least, the fibrous tissues of the liver solely, and that these changes are not complicated by attendant lesions. The paper was discussed by Professor Adami and others, Adami pointing out that in human cirrhosis, at least, the formation of the so-called new bile ducts was from the modified liver cells, and doubting whether the very presence of these, noted by Adler, did not indicate the influence of the tobacco on the cells, as well as on the connective tissues. Adler said that he did not intend to transfer the results of these experiments to human cirrhosis; that proliferation of the bile ducts had occurred in his experimental animals, may or may not be true; but his experiments had shown that there are substances that primarily produce an increase of fibrous tissue solely in the liver, and that these changes are not complicated by attendant lesions. He promised to perform fresh experiments in order to throw further light on the effects of tobacco on the liver.

That in tobacco-users nicotine is eliminated by the biliary ducts seems clear. If, further, it can be shown that the process of eliminating nicotine so disorders the biliary passages as to determine in them a proliferation of fibrous tissue, this datum would assist in proving that the habitual use of "the weed" imposes a rather heavy task on the liver.

Indecent and Immoral Advertisements.—At a recent meeting of the Kansas City Academy of Medicine, a series of resolutions were introduced relating to indecent and immoral advertisements, by a committee composed of Drs. Kyger, Browell, and Zwart, and passed. The resolutions ask for a censorship over the press, and call the attention of the post-office department of the United States to its broken and unenforced laws. We have already alluded in these pages to the matter of indecent advertisements which appear in our daily papers, and we fully sympathize with the efforts of the Kansas City physicians. With the newspapers, commercial advantage is a powerful motive, and many of them do not hesitate to publish the plain enough solicitations of the abortionist. *Eccē signum:*

Cook's Cotton Root Compound

IS successfully used monthly by over 10,000 Ladies. Safe, effectual. Ladies, ask your druggist for Cook's Cotton Root Compound. Take no other, as all mixtures, pills and imitations are dangerous. Price. No. 1, \$1 per box; No. 2, 10 degrees stronger, \$3 per box. No. 1 or 2, mailed on receipt of price and two 3-cent stamps. The Cook Company, Windsor, Ont.
 Nos. 1 and 2—old and recommended by all responsible Druggists in Canada.

Perhaps the offending newspapers imagine that they are public benefactors, and that they are generously engaged, for a very small consideration, in furnishing timely information on a subject of surpassing interest to women. Until the laws condemning incitements to abortion in Canada are repealed, the postal laws should be enforced against publishers who offend against decency, and assist in the perpetration of abortion, by giving information as to the readiest method of effecting that crime.

The Treatment of Thermic Fever.—At the meeting of the Association of American Physicians, held at Washington, April 29th, 1902, a very instructive paper, entitled "A Report of Cases of Thermic Fever, treated at the Pennsylvania Hospital in the summer of 1901," by Morris J. Lewis and F. A. Packard, of

Philadelphia, was read. Ninety-one cases of thermic fever were admitted to the Pennsylvania Hospital during the first week of July, 1901. The number of negroes was small, showing the comparative immunity of that race. No patient with a temperature below 106 degrees died; no patient with a temperature of 111 degrees F. recovered. Patients who had a temperature of 100 to 102 degrees, 34 in number, were treated by rest, ice-cap, cool bath, aromatic spirit of ammonia, strychnine and alcohol. Those patients who had a temperature of from 102 to 106 degrees, 20 in number, were treated with stimulants, ice-cap, cold bath, or ice rub. Those patients who had a temperature of from 106 to 108 degrees, 15 in number, of whom three died; and those who had a temperature of 108 degrees or over, 22 in number, of whom eight died, were treated by bleeding, salt solution, and ice rub. Bleeding is not advised as a routine measure, but when a falling temperature is not accompanied by improvement in the general symptoms, it should be done. Intravenous injection of normal saline solution is preferred to hypodermoclysis, as it acts more rapidly than the latter, and the solution can be injected through the wound made for bleeding. Ice rubbing, in cases with a very high temperature, is the most efficient means of reducing the fever.

Popular Methods of Arresting Arterial Hemorrhage.—Recognizing the readiness with which hemorrhage from an artery in one of the extremities of the body may be stopped by application of an Esmarch bandage, one wonders why that useful auxiliary is not popularized, especially in places remote from the emergency hospital. Last May a gentleman residing in a country place in Ontario, who had accidentally cut his foot with an axe, died of hemorrhage before surgical aid was available. The wound was inflicted at 10 a.m., and when the surgeon reached the scene of accident at 6 p.m. the same day, the patient was dead. Speaking generally, one would say that, in Canada, where the axe is freely used in felling trees, traumatic hemorrhage is rather common. Could not the teachers in the public schools impart some information to their pupils as to the uses of the Esmarch bandage? Could they not show them how to apply a Spanish windlass? One sees a great deal of reference, nowadays, to manual training in the schools. Gardening is useful, and a proper employment of carpenter's tools may also be helpful to school boys. A practical knowledge of the simplest

method of stopping arterial hemorrhage would be a useful form of manual training, and we commend the subject to the consideration of the school inspectors.

Suprarenal Glands in Malarial Fevers.—Attention has been attracted in France to the employment of suprarenal glands in malarial fevers, and favorable reports have been presented by Drs. Gautier and Bucquoy. The latter mentioned a case of chronic malaria, in which quinine had been taken for eighteen months, with the effect of only lengthening the intervals between attacks, and which was cured by the use of suprarenal glands. In tertian fevers, suprarenal glands are administered eighteen hours before the probable time of the attack, on the day of the attack, and the following day. Six days afterwards another dose is given. The results of the treatment are said to be quite remarkable. Dr. Terveran, the French malarial expert, in discussing the use of suprarenal glands in malaria, expressed the opinion that, if a practitioner failed to cure malaria by the use of quinine, taken orally, he should employ the preparation subcutaneously; if he then failed to check the fever, he could use the suprarenal glands. He added that, up to the present time, suprarenal glands had not proved curative in attacks of pernicious malaria, and that, in such cases, he would prefer to use quinine.

The Tuberculising Power of Tubercular Stools.—A report by Drs. Anglade and Choenaux, which was presented to the Society of Biology, Paris, April 19th, 1902, deals with the presence of the bacilli of Koch in the alvine evacuations of tubercular patients. According to the reporters, Koch's bacilli are found in the stools of a tubercular patient, whether the intestine is ulcerated or not, and whether he expectorates or not. Water placed in contact with stools of a tubercular patient, and subsequently injected into a guinea-pig, always gives positive results, even if there is no intestinal ulceration present; hence Koch's bacilli, if swallowed, may pass through the intestine without parting with their virulence. The virulence persists in such water, even when exposed to the air, and cooled down to 14 deg. F. Hence it is reasonable to conclude that the stools of tubercular patients should be treated with disinfectants. More particularly is this true in cities, in which the water supply may be contaminated with fecal excreta.

Items of Interest.

Professor Ehrbach.—It is said that Emperor William has commissioned Professor Ehrbach, the well-known bacteriologist and physiological chemist, of Frankfort-on-Main, to devote himself henceforth exclusively to the study of cancer.

Attention, Physicians.—We desire to correspond with physicians who desire good locations for the practice of medicine in the United States. Full information of excellent locations given free.—INDEPENDENT BUSINESS BUREAU, Waterloo, Iowa.

Wm. Wood & Co.'s New Catalogue of Medical Publications.—We received a week or two ago the new Catalogue of Medical Publications, as gotten out by the firm of Wm. Wood & Co., of New York City. It is certainly a very handsome pamphlet, and is illustrated with half-tones of many of the authors, whose books are referred to. The catalogue is printed on a splendid quality of paper, and is not one of the kind which is frequently apt to be tossed in W. P. B., but, on the other hand, retained for reference.

Drug Store Manager Suffers for Giving Substitute to Customer.—In Special Sessions on May 22nd, before Justices Wyatt, McKean and Hinsdale, Clarence D. Bowman, a director of the Lewis A. Bates Company, and the manager of their drug store in No. 739 Sixth Avenue, pleaded guilty to having violated Section No. 364 of the Penal Code, in using another preparation in place of essence of pepsin, manufactured by Fairchild Brothers & Foster, in filling prescriptions calling for the latter preparation. He was fined \$50. It appeared that on several occasions, when physicians had prescribed Fairchild's pepsin, Bowman had delivered the imitation mixture. Bowman said he was sorry for what he had done, but had no excuse to offer. In imposing sentence, Justice Wyatt said that the offence was a most serious one, and that a heavier penalty would have been imposed had not the injured firm recommended leniency by reason of its being the defendant's first conviction.—*New York Press.*

Canadian Branch for the Borden Condensed Milk Co., of New York.—Borden's Condensed Milk Company now have a factory in Canada for the manufacture of their celebrated Eagle Brand and Peerless Brand of Evaporated Cream. This will permit a lower cost price to the dealer, and will consequently make quite a difference to the consumer. Heretofore the high duty on Condensed Milk imported into Canada has made it necessary for

the dealer to charge a considerably higher price for the Borden Brands than is charged in the States. Realizing the trade in Canada was practically prohibited from buying the Eagle Brand owing to the high price, caused by the duties charged, the Borden Company decided that it would be necessary to operate a plant in Ontario in order to put them in position to sell its brands at a fair price. It is not necessary for us to lay any stress on the fact that the usual quality will be maintained, as it is against the principle of the Borden Company to deviate in the least from the Standard quality of its brands. This Company originated condensed milk, and has been established over forty-five years. Their Peerless Brand Evaporated Cream is one of the largest sellers.

Local Treatment of Leucorrhœa and Gonorrhœal Vaginitis.—

The following is recommended as a specific for persistent vaginal discharges (especially old standing cases), by Dr. Chapelle, of Paris, and has proved almost universally successful, and is now used to destroy by phagocytosis pathogenic germs which invade the vagina:

R. Cerevisine (<i>saccharomyces cerevisiæ</i>)	3 ounces.
Glycerine of starch (cold).....	2 "

Make into a paste.

A portion of the paste made up in a ball about the size of a walnut, should be placed in the vagina, well up against the cervix, and retained in position by a tampon of absorbent cotton. The treatment is perfectly harmless, and if persisted in for a week or ten days, will give marked beneficial results, which will be maintained, especially if the patient is sustained by liberal diet and tonics, such as phospho-glycerate of lime wine. Cerevisine is a pure form of the yeast plant, desiccated at a low temperature.

The G. Cramer Co.'s New Catalogue.—There has just appeared the sixth edition of the G. Cramer Dry Plate Co.'s Catalogue. It is full of interest, and contains a full description of the various brands of plates manufactured by that well-known firm, as also the most recent formulæ for working the same, all of which have been carefully tested beforehand. It would not be easy to enumerate the many plates made by The Cramer Co., but one will interest medical men perhaps more than some of the others. We refer to the Cramer X-ray plates. They are made expressly for X-ray work, and are used by the most prominent experts throughout the United States and Canada. These plates are reliable, uniform in results, and easy to manipulate. The same developer and fixing bath used for the Banner or Crown plates can also be used, but on account of their extreme sensitiveness, great caution must be exercised while handling and developing, by not exposing more than is actually necessary. The firm have discontinued packing these

plates in the paper envelopes, as the contact of paper affects the sensitized surface and materially injures their keeping qualities. They therefore furnish the envelopes separately, into which the plates can be readily inserted as required for use. Any physician interested in this work will be well repaid by sending for a copy of this catalogue.

Monument to the Late Dr. Thos. Dunn English, Author of "Ben Bolt."—A committee have been appointed by the Board of Managers of the Society of American authors to solicit subscriptions for the erection of a suitable monument over the grave of Dr. Thomas Dunn English, editor, lawyer, soldier, physician, statesman, author, and long-honored Vice-President of the Society of American Authors. Gifts for this tribute to the illustrious author of "Ben Bolt" will be welcome in any amount, large or small. The receipts will determine the character and stateliness of the monument. Names of the donors will be imperishably preserved on brass sheets in the monument. If, after the completion of the work, there should be any surplus funds, they will be turned over to the family of Dr. English. Checks or money orders should be drawn in favor of Morris P. Ferris, Treasurer, and should be addressed: "Thomas Dunn English Memorial, Society of American Authors, 32 Broadway, New York." An itemized report of the receipt and distribution of all funds received by the Committee will be mailed to all contributors.

The American Röntgen Ray Society.—The American Röntgen Ray Society desires to announce that its next meeting will be held in the city of Chicago on December 10 and 11 of the current year. There has been secured a most excellent local committee of arrangements, composed of well-known and leading men of Chicago, under the chairmanship of Dr. Ralph R. Campbell. This committee further embraces the names of Drs. John B. Murphy, Louis E. Schmidt, M. L. Harris, W. L. Baum, H. G. Anthony, and W. A. Pusey. The personnel of this committee gives evidence of the earnest desire of the Society to have its meetings entirely ethical and scientific. The very nature and mystery of the X-ray, and the tremendous impetus in a therapeutic way which has been given to its use during the past year, will unquestionably encourage a very widespread abuse on the part of many irresponsible persons. It is the hope of this Society to serve a useful purpose in encouraging on the one hand a proper understanding of the uses and limitations of the X-ray, and on the other hand to limit and control the inevitable abuses which are now springing up on all hands. It is hoped that all those who feel an interest in the uses to which the wonderful discovery of Professor Röntgen may be put, will bear the date of this next meeting in mind and communicate with the local committee of arrangements, or with the Secretary of the Society, James B. Bullitt.

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however, withholds the honor from the dentists, Wells, Riggs, and Morton, in favor of Long of Georgia.

"In my opinion," he says, "the credit of first using ether as an anesthetic is due to Crawford W. Long, and the credit of demonstrating its value and use to the medical profession and the world must be ascribed to W. T. G. Morton."

This is eminently just. But Long's prior use was in 1842. The honor of "first demonstrating the use" of an anesthetic, therefore, reverts to Sir Humphrey Davy. Sir Humphrey Davy was the real discoverer and demonstrator of its use; and it is post-erous that the claims of the persons mentioned should have received so much attention. In his *Researches, Chemical and Philosophical, Chiefly Concerning Nitrous Oxide*, published in 1800, Sir Humphrey Davy plainly remarks: "As Nitrous Oxide, in its extensive operations, appears capable of destroying physical pain, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place." (Jones' Investigations on Hemorrhage were not published till 1805.) Indeed, while the dentists in their "parlors" were jubilantly advertising their "new era in tooth-pulling," Dr. Chas. T. Jackson, the only person, it would appear, of education or breeding connected with the controversy, stated that "the fact had been known to the scientific world for years."

This was true. It is therefore exceedingly unfortunate that this plebeian exhibition of mercenary ignorance, which did not originate "in the scientific world" at all, but among the unlearned and unscrupulous, should not be allowed to fall into deserved oblivion. It was Sir Humphrey Davy who first suggested anesthesia, and Dr. J. C. Warren, of the Massachusetts General Hospital, was the first reputable surgeon to employ it. To Sir Humphrey Davy and to Dr. Warren the divided honor (if it must be divided) undoubtedly belongs.

E. H. S.

Handbuch der Physikalischen Therapie. Herausgegeben von Dr. A. GOLDSCHIEDER, a. o. Prof. in Berlin; und Dr. PAUL JACOB, Priv.-Doc. in Berlin. Leipzig: Verlag von Georg Thieme. 1901.

During the last decade medical science has made much progress in the direction of employing natural methods of cure, that is, physiological as distinct from methods dependent upon the employment of drugs. There can be no reasonable doubt that the change marks a real advance. The more important place given to fresh air, sunshine, rest, sleep, diet, bathing and exercise, does away in some measure with the opprobrium of empiricism with which the profession has been charged. Not the members of the profession alone are the gainers, but their patients also.

Enumeration alone of the subjects discussed in this valuable work by Dr. A. Goldscheider and Dr. Jacob, both of whom are

teachers in Berlin, would suffice to show the extensive range of therapeutic agencies which may be employed without entering the domain of the pharmacist.

As would be expected from the names of Rubner, Nothnagel, Eichhorst, du Bois-Reymond, and Leibig, who write the chapters on Climatology, they are among the best not only in this work, but to be found anywhere. While a concise but interesting account of the merits of high altitudes in Europe is given, there is a notable lack of reference to those of America.

The chapters on Sea Influences and on Hydrotherapeutics by Hiller and Winternitz are highly instructive in their explanations of the physiological action of water as employed to influence and stimulate bodily functions.

Goldscheider's chapter on Thermotherapeutics is concise—to be concise—but is a valuable chapter.

The wide range of the discussion of gymnastics is seen in the fact that not only is full justice done to formal gymnastics, but an interesting account is given of riding, wheeling, swimming, snow-shoeing, etc.

While the principles which govern the use of mechanical appliances in the treatment of orthopedic cases are concisely set forth, yet it is not a satisfactory discussion of this subject. A limit of twenty-four pages and a sparseness of illustration render it impossible to do justice to the subject.

The chapters on Electricity and Light as therapeutic agents, by Ludwig Mann, Bernhardt, and Rieder, bring to a close a most valuable work.

B. E. M.

A Manual of Surgical Treatments. By W. WATSON CHEYNE, C.B., M.B., F.R.C.S., F.R.S., Prof. of Surgery in King's College, London; Surgeon to King's College Hospital and the Children's Hospital, Paddington Green, etc.; and F. F. BURGHARD, M.D. and M.S. (Lond.), F.R.C.S., Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital, the Children's Hospital, Paddington Green, etc. In six parts. Part VI., Sec. 1: The Treatment of the Surgical Affections of the Tongue and Floor of the Mouth, the Pharynx, Neck, Esophagus, Stomach and Intestines. London and Bombay: Longmans, Green & Co., 79 Paternoster Row. Canadian Agents: J. A. Carveth & Co., Toronto, Ont. Price of this volume, \$4.50. 1902.

This volume covers very fully the surgical treatment of injuries and diseases of the Neck, Mouth, Tongue, Throat, Esophagus, Stomach and Intestines. The work is uniformly good throughout, making it impossible for us to refer especially to any one chapter. We would, however, note a preference given in retropharyngeal abscess to opening through the upper part of the posterior triangle of the neck, instead of through the interior triangle of the mouth. Tubercular glands of the neck are treated in a conservative manner,

and removed only when hygienic and medicinal treatment have failed, and enlargement or softening is taking place. The treatment of affections of the stomach and intestines, including hernia, takes up 278 of the 470 pages, and is the most concise and complete work it has been our pleasure to review. W. J. W.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat and other topics of interest to Students and Practitioners. By leading members of the Medical Profession throughout the world. Edited by HENRY W. CATTELL, A.M., M.D., Philadelphia, U.S.A. Volume I. Twelfth Series, 1902. Philadelphia: J. B. Lippincott Company. 1902.

This volume, the first of a new series, has many things about it to recommend it to the notice of the general practitioner. It is well gotten up, the type, paper, and binding being not only of an attractive character, but in every way arranged so as to make the book easy and interesting to read. Some of the illustrations are exceedingly good, and the articles of value, and not long enough to be wearisome. The first half-dozen pages are devoted to "Biographical Sketches of Eminent Living Physicians," the two described in the volume being S. Weir Mitchell, M.D., LL.D., and John A. Wyeth, M.D., LL.D. Besides the leading articles, forty pages are devoted to "General Surgical Subjects," in which extracts are given from a number of journals. Space is also devoted to general surgical subjects, new instruments, devices, etc. Of the contributors, one is German, one Canadian, two Parisian, two Scotch, and fourteen American, more than half of whom belong to Pennsylvania.

The Practitioners' Hand-Book of Diseases of the Ear and Nasopharynx. By H. McNAUGHTON JONES, M.D. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1902. 10s. 6d.

The first edition of this manual appeared in 1878. When one has devoted thirty-four years of one's life to otology, as has McNaughton Jones, one is not very likely to develop an excess of surgical zeal, one's operative enthusiasm is chastened by a recollection of highly vaunted methods which have proven but a delusion and a snare. The opinions of such a man are invaluable.

The greatest advance in modern otology certainly is the recognition of the morbid conditions of the middle ear, which threaten life by extension to the brain and its coverings. The surgical methods by which such extension may be prevented and combated are of the greatest interest to every practitioner. The portion of the book dealing with this subject is written by William Milligan, of Manchester, who gives a very lucid account of the various radi-

cal operations on the mastoid. Some day the general practitioner will recognize that an exploratory opening of the mastoid process is even more justifiable than exploratory abdominal incision. Herbert Tilley, of the Golder Square Throat Hospital, contributes the article on the affections of the nose and its accessory cavities, which may affect the ear. To Professor Birmingham and Dr. Joyce has been given the anatomy of the ear. The book is well bound, well printed, well illustrated, up-to-date, and yet not too much so—progressive, yet moderate.

J. M.

A Manual of Practical Anatomy. By the late PROF. ALFRED W. HUGHES, M.B., M.C. (Edin.), F.R.C.S. (Edin.), F.R.C.S. (Eng.), Professor of Anatomy, King's College, London, etc. Edited and completed by ARTHUR KEITH, M.D. (Aberl.), F.R.C.S. (Eng.), Lecturer on Anatomy, London Hospital Medical College. In three parts. Part II., the Abdomen and Thorax; illustrated by four colored plates and 15 figures in the text. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1902. Canadian Agents: Chandler & Massey Limited, Toronto and Montreal.

Part II. of this excellent work, which we have had the opportunity of referring to in a previous issue, is devoted to the Abdomen and Thorax. It is well illustrated, and a great deal of credit is due to the publishers for the excellence of this feature of the book. The illustrations are, without exception, splendidly executed, those that are colored being not only beautiful, but convey at once to the mind a very correct idea of the part of the human frame being studied. It would be a difficult task to single out any chapter better than another, the entire volume being full of matter which, perhaps, especially to the surgeon, will be found most useful, and worth a great deal more than the price charged for the book, viz., \$3.00.

Les Fonctions Hepatiques. Par MM. A. GILBERT, Professeur a la Faculte, et P. CARNOT, Docteur es-Sciences, Membres de la Societe de Biologie. I. vol., in-12 de 287 pages. Cartonne a l'anglaise. Paris: C. Naud, 3, rue Racine. Prix, 5 francs.

A fact driven home to a physician who reads this book is that instruction in physiology should be given in a laboratory, and if possible by teachers of the same capacity as MM. Gilbert and Carnot. Scraps of physiology caught up at lectures or picked out of books furnish an insufficient basis from which the physician can elaborate a suitable knowledge of the institutes of medicine. May the medical students of the future receive better drilling in the science of the hepatic functions than their predecessors. In presenting to the reader this record of their original investigations, which are considerable, the authors render justice, as the subject required, to the past labors of other workers in the same field of experimental physiology. The book is written in a happy, lucid style, and is deserving of a large sale.

J. J. C.