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A MEDICAL ITINERARY: BEING AN ACCOUNT OF A SAIL THROUGH THE SACRED ISLANDS.

BY EZRA HURLBURT STAFFORD, M.B.,

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FROM very ancient times it has, I believe, been the custom for eminent doctors of physic to advise the waters of various natural springs for those of their patients who were sufficiently affluent to indulge in such luxuries. The results were often very satisfactory, it is said, and the benefit experienced was usually attributed to the peculiar properties of the waters.

More recently the climate of a few favored regions has for a number of empirical reasons been advised in a similar manner: and the results of a pilgrimage to one or other of these climates has been said to be beneficial in much the same way as a sojourn at the mineral springs. It has possibly been noticed that the benefit derived is often proportionate to the remoteness of the locality selected or the expense attending the undertaking. The ability to drink profusely of alkaline or ferruginous waters a long way off, and to bathe lavishly in the same, came in time to be regarded as a reasonable sign of wealth: and the very word "Springs" eventually grew to be a synonym for all, or at least for a good deal, that was very respectable.

In the choice of a climate, popular practice reached a similar culmination, and in Europe, Italy and the Riviera were considered excellent resorts for wealthy (and feeble) English people; while in America, Florida, the Bermudas and California enjoyed a like preference.

While not for a moment questioning the fact that benefit may be derived from mineral waters and Elysian climates in general, the writer has so frequently observed results quite as satisfactory obtained under altogether different circumstances that he has no hesitation in pressing the point that the chemical qualities of the mineral waters in question, and the particular temperature and specific gravity of the air of a certain climate, are to some extent purely incidental; and that it is not the copious potations indulged in by the conscientious patient at the springs which serve to recuperate his fallen energies, so much as the abrupt and sometimes total disadjustment of a series of habits (frequently luxurious) which, with rest and change, facilitates the processes of constitutional repair.

The life of all men, in whatever rank, from the lowest to the highest, tends to become a routine. Nature, when forced into a diagram, loses its strength; and as artificial conditions become more marked, the first signs of degeneration are developed. Thus the leisure classes, when they go to Tunbridge Wells or to Nice, are drawn away for a time from the routine of sated luxury which would eventually lead to their utter degeneration, and in the complete change find in reality the benefit, *coteris paribus*, which they attribute, with puerile reasoning, to a certain mineral water or a special climate.

This is, of course, all very well for the opulent members of the privileged classes; but if a brief emancipation from the dismal routine of modern life is after all the secret, in great part, of their physical restoration; why should not the classes who find themselves in narrowed circumstances take advantage of the same principle, and, in a similar manner, though with perhaps less splendor and ostentation of respectability, create a "fault" in the diagrammatic strata of their irksome lives; and, regardless of climate or springs, receive similar benfit from the *disadjustment of habit* which is open to them quite as much, thank Fate, as to the complacent millionaire?

All practitioners are familiar with that poor drudge who denies herself the necessities and even the decencies of life, that a tuberculous husband may, as a *dernier resort*, go to Colorado Springs, or winter in Bermuda—aye, and with the half-starved, haggard girls also, who, at the imperious mandate of the enlightened physician, have sent the luminous elder brother (who was probably studying at the theological college, also at their expense—studied too hard, they generally say) to St. Augustine, and are facing the difficult task of keeping that highly gifted individual there—and subsisting themselves at home.

As a matter of fact, one of the most thriving industries in a number of these remote and expensive places is the manufacture and sale of tombstones. In the case of a large number it is both ridiculous and criminal of the physician to dispatch the patient thither. As for those more favored, they might possibly have been

treated at home, or if not at home, certainly with results equally cheering at a score of less renowned places within easy hail of their home and friends. The success of a very large number of both mineral water and climatic resorts is based in a spirit of unmitigated professional charlatanism, as Guy de Maupassant has pointed out with such inimitable derision in Mont Oriol.

The Province of Ontario alone offers within its confines all the geographical variety that any physician really needs; and while destined possibly to furnish acceptable summer resorts to less favored portions of the continent, may in the hands of the conscientious and sane physician, be studied to a more philanthropic purpose —I mean as a salubrious region for the treatment of the sick.

Convinced of this, and in a laudable spirit of inquiry, I lately decided to occupy my "studious leisure" with a scientific reconnaissance of some of the wilder regions of this province, and with the happy result that I can now authoritatively put forward the following itinerary as a satisfactory equivalent to the most delightfully remote and gravely expensive resorts known to fame, for one who feels ill enough to long for such healing (and aristocratic) haunts, but lacks time, and perhaps something else, for the experiment. Conscious that I am conferring a great benefit upon the human race, I have hastened in rather untechnical language, and with many idle digressions, I fear, to set down in writing a careful statement of the itinerary referred to. I regret to say that in my description of the regions explored it was not possible to retain the ponderous dignity usually observed by scientific writers upon this subject. This fault was not, however, so much mine as that of the subject.

Imprimis, I shall always be glad that I decided to wheel to the port of departure, rather than use the railway ticket which had been provided, for the long ride through the summer fields in the moonlight was a very pleasant experience, and it was on the highway, moreover, that I chanced to meet a friend who was afterwards my companion through the whole voyage. He was an unfortunate youth, and was having a good deal of trouble all by himself with the tires of his wheel.

I believe people have been known to be speechless with rage upon such occasions, but in the present instance I did not notice this phenomenon. In fact, I heard what he said. He did not want to be speechless. Having given him (though much shocked by the violence of his language) considerable aid, in the form of advice and cement, the grateful young man clove to me out of sheer gratitude, and the tire having been repaired, we rode away in the early morning dusk together. His name was Johan.

I was destined presently to succor him for a second time. It seems that he had (without medical advice) partaken of a large number of apples in that stage of maturity usually noticed early in July; and he began to complain straightway of a second complication, nearer home than the tire. I began to think that he was

very unfortunate. His little tour did not seem to be beginning auspiciously. Moreover, it might interest the neurologist to know that he had a tendency to plunge awkwardly off his wheel and lie down flat on the ground. Adam himself could not have remembered with greater repugnance the apple which he had eaten, nor have blamed his own folly more bitterly, when it was too late to nourish prudent thoughts.

I told the melancholy young man that he would catch cold —an admonition very popular with the laity; but advice did not act as a very powerful stimulus, so, as a last resort, I awakened a neighboring farmer, and at his suggestion gave the sick youth some salt and water—not very much salt. The farmer said that a pound would make a cow feel better, so being only a man, we merely gave him half a pound. But the farmer's wife, who had joined us as soon as she could arrange her attire, did not seem to think this wise, and the patient eagerly agreed with her that it was not. Somewhat hurt in our minds, the husbandman and I left the sick youth to her, and she promptly administered some forty drops of horse liniment in hot water and rum. She said it ought to be rather warming. The farmer, who seemed to wish to be always disputing with that excellent female, said this was worse for him than the salt was—and my compliant friend had still strength enough to agree with the husband in a very weak voice that it was. But I can with difficulty respect a man who agrees with everybody.

Nevertheless, these adaptations of veterinary practice seemed to have aroused the stricken man, for while we were all still pondering if there were not some other beneficial thing we might do for poor Johan, and had almost struck upon a plan of rather heroic treatment, the patient who had been listening with keen interest suddenly arose and tottered with deep groans to the gate, where he showed an unnatural desire to at once part from his kindly benefactors and continue his journey into the cold night alone—which was, I think, ingratitude.

Having now wheeled nearly all night by the light of the full moon, we stood together an hour later on the summit of a great sloping hill at early dawn, and by the soft pink glow of the rising sun saw through the rolling mists of palest purple the silvery gleam of the Georgian Bay waters miles away. As we approached the port I reasoned with myself as to whether I should unfold to Johan the journey I had laid down for myself, and invite him to join me. Usually I prefer to be alone, and there is always a great risk in choosing a companion, especially in such a learned tour as I was contemplating, which, besides being medical and scientific in its object, was over very historical ground indeed, and a grave enterprise therefore, to be taken in hand seriously, and with a mind calmly poised. I thought I would ascertain tentatively whether his tastes were historical or not. I knew, of course, that they were already medical, for he said that he could still taste the

horse liniment. My opportunity came as we reached the beautiful steamer *Majestic*.

"We part here," he said. It was evident he had followed me down to the wharf to see me off.

"No," I answered in a bluff, hearty voice, "not yet, my friend. I have been thinking it over, and I would really be charmed to have you come with me."

"But I cannot," he said, making as if to go aboard, "for you see I have bought my ticket."

"Not on that boat!" I cried with some irritation. "It is I who am going on that boat. That is my boat." And I looked sideways towards a little mud-barge, as if for him to go on it.

Not knowing my previous thoughts, of course, he only laughed at this, and had given both our wheels to the porter before I could say anything more.

"At all events," I thought to myself, as I grasped the odd coincidence, "I wanted the fellow to come with me, anyway." So I thought I would find out if he was historical, and with a view to further discussing the places about to be visited, which played so important a part in the days of the French *régime* asked him casually if he had paid much attention to the "Relations of the Jesuits." He said that he believed the Jesuits had aunts and uncles like other people, but that his acquaintance among the kindred of the Order was very limited. This was a dampener.

Furthermore, it began to rain as soon as we cleared port, and we withdrew to our stateroom. He sat on the lower berth, and I sat opposite upon a little stool with a pipe. As we couldn't see anything outside for the storm, I talked to him until tea-time about a convention of undertakers and embalmers I once went to on a pass, and he found my narrative so amusing that he would repeatedly throw his head back and hit the edge of the upper berth with the bald portion of his parietals. Johan was very bald. Being mindful to always have my thoughts bent upon scientific inquiry, I made my account after he had done this for the third time even more funny than it really was (for the embalmers had not had a particularly cheerful time together), so that I would be able to see how many times my friend would forget about the berth and hit his head again. Statistics would, I think, be of interest, but the course of scientific observation was unfortunately disturbed, for at the first sound of the gong the passengers poured with alacrity to the tables, and it struck me that this famine alertness might be a preliminary to the period of expansive rejuvenation as prefigured in the enticing advertisements of the steamboat line.

Opposite me glowered a very robust personage who had an enormous brilliant red beard of the variety which polite school-boys in their familiar moments designate as "fire-escapes." A glance at him was like a strong condiment. The meal was what is known as a "fish-dinner," and consisted largely of white-fish,

that exquisite delicacy of fresh northern waters. I would like to say as much about this admirable fish as a certain Roman emperor said once about a favorite fish of his own. Indeed, after this fish, I am told, the steamboat line has been very appropriately named, "The White Line."* Certainly, after having been once initiated into its excellencies, I mean both of the steamboat and the fish, one is in no way to forget it. The Atlantic has its cod, and the Pacific its salmon, but here was a fish of the lonely depths and foaming cataracts with a wild piquancy and a romance unsullied by any mental picture of cod liver oil, or the canned products of Astoria. We were soon to see the dusky fishers themselves.

I found considerable entertainment during the meal in observing a Michigan widower in rather gay mourning, who was speaking to an eligible female with that soft bewitching manner which characterizes some commercial gentlemen when buying and selling goods. He was explaining to her the peculiar uses of a patent finger-nail-parer. I noticed that his nails were nearly gone through repeated demonstrations of its utility upon them. It was his pleasant way of opening an acquaintance or ending a conversation. It was of nickel, and, as he remarked, "small of compass, and with care would last a lifetime." It combined all the uses of the toilet-table armamentarium at a very low cost. He, however, could get another one, I heard him say (through a friend), for thirty cents. The regular price of this invaluable pocket companion would seem to have been thirty-five.

After a promenade on the hurricane deck, where the lake air stimulated one like a glass—two glasses—of sherry, I returned to the saloon, where the more stupid of the passengers were already reading the inevitable Scotch novels with their ministerial heroes; and not much cheered with the sight I retired to our stateroom to find that I had been forestalled by my prudent companion, who had thoughtfully pre-empted the lower berth. For a moment I could have pounded his unconscious head, as it shone through a rift in the curtains like a pale moon through a crimson cloud. It always grieves me to see one too thoughtful of self. I overcame the savage impulse, however, and presently fell asleep in the berth above him though it was still very early in the evening, and slumbered with the soundness of a primitive cave-dweller, with vague visions of the Sacred Islands, lying far away through the dark and storm upon the bosom of the lonely waters.

I had longed for years to see their mysterious coasts, haunted even to our day with the mythical spirit of Algonquin legend. I was awakened very early by the clear warm glow of the morning, and looking out saw the placid waters burnished like silver, with a deep border of crimson upon the eastern sky verge. The sun was up. Far in the distance there was a delicate blue line, broken in places, which I felt must be the enchanted isles. Perhaps the

* The Georgian Bay and Lake Superior Steamship Line of Collingwood.

spell of beauty may have all been in my eye. At all events, it is a great luxury to sleep like a cave-dweller.

We were approaching Grand Manitoulin Island, which was long ago supposed to be the seat of the deity of the Algonquin tribes. Manitou, the *genius loci*, remains only as a name, yet an air of intense loneliness hangs over the sombre hills. The bold banks are luxuriantly clothed with beautiful verdure, but for miles I saw no sign of life. Sweeping northward, we entered a maze of islets which swim like a thick host of smaller satellites about this mighty isle. Through cold blue straits, hewn sharply in the hard red rock, with the plumy green foliage spreading out in the shining air above, the white steamer majestically glided, at times so near the steep shores that outstretching branches almost brushed our decks. The dimpling waters, as soon as we were in the archipelago, were peopled with Indian craft. From Indian beach-fires the white smoke slowly coiled as we floated on from isle to isle; and the brown wigwams could be seen through the trees with the laughing children playing naked in the sunlight with the dogs of the camp. Sometimes we stopped and did trade with them as they came out to us in their fleets—traded with them, I fancy, in just the same old way that Cartier's sailors trafficked by the rocks of Stadacona, or the Argonauts with the peddlers of Cholchis. Copper, our Indian girls had, and purple amethysts, and quaint forest volumes, bound with sweet marsh hay, with the golden and silver pages of birchen bark richly illuminated with the brilliantly dyed quills of the porcupine. An aromatic odor clung to everything—a soft persistent perfume that brought back all the wild romance of the forest, and the power and peril and beauty and innocence of nature still untarnished. In such a book should the epic of that lost race be written.

As the shadows of evening deepened among the islands, group after group of the passengers retired to the saloon, and I was left all alone upon the upper deck watching the dim shores, and here and there the deep red glare of an Indian camp-fire. There was a delicate exhilaration in the balmy air, which, loaded with the soft terebinthinate perfumes from the ancient forests, seemed to suggest frankincense and myrrh. The red and green lights of the vessel were tremblingly reflected upon the calm black water, and soon the moon rose in splendor over all and swam gently out among the stars with all her golden sails spread. I state this as a fact of singular scientific interest. It was at this time that I became conscious of vigorous ululations from beneath, and the tin-pan accompaniment of the steamer's piano. The passengers were all singing hymns! It was Sunday, and I had completely forgotten it for one whole charming day.

We were at the time opposite a great promontory which seemed to wall in all the north. On the hidden shore beneath were many twinkling lights, and presently I perceived a deep cleft and a sweeping valley, and along the banks a populous town. This

beautiful haven was called Core Bay. The thunderous bray of the steamer's whistle put a stop to all the vocal exercises in the cabin, and as we neared the wharves the passengers all poured out upon the deck. Crowds of people were moving upon the landing. Carriages and busses were to be seen a little farther back, and above all I could hear the discordant noises of civilization. It was unmistakable, and in a moment illusion was completely gone. Descending from my place upon the upper deck, I made up my mind resignedly to make the most of the world, the flesh and the devil. I was very soon to come in contact with one of these three, I won't say which, personified in the form of Beauty.

A large number of fresh passengers were coming on board, and with a satchel and parasol in one hand and a dainty travelling cloak in the other, I saw a young girl coming up the brass companionway. In a moment I recognized her with the utmost pleasure. It was Cynthia, who with softly beaming eyes dropped her *impedimenta* at the sight of a familiar face, and tripped forward to meet me, followed by her cousin Farina. Cynthia had been tanned to a soft honey brown since I had seen her last in the hospital, and was covered with that dainty bloom of girlhood which suggests rose gardens rather than drawing-rooms. It seemed odd, too, to see Cynthia without her uniform. Lovely and quaint in her kerchief and apron, and the Red Cross brooch at her neck, like a diviner Britomart, she was just as lovely as a civilian. I imagine Cynthia was a typical summer girl. She had been spending a few weeks with Farina in her remote island home. Relations of camaraderie were established at once by an imperious request from Cynthia to find her ticket, which she had casually discovered at this moment to be lost. It flashed through my mind to go and ask Farina, but she didn't look as if she knew. Then I thought of going out with a few matches and looking carefully over the pier. It might, I thought, have dropped between the planks and be even now harmlessly sticking there. I was prevented from going ashore in quest of it by the drawing in of the gang-plank, and further anxiety was removed by the discovery of the ticket soon afterward where she had placed it for specially safe keeping.

It was a little later that my travelling companion, who had been making overtures to the coy Farina, established her, not without some resistance, at the piano already referred to, from which "bad eminence" she proceeded to discourse popular airs. Withdrawn at some distance I became presently conscious of a portentous lull about that instrument, and it gradually dawned upon me that we were about to be favored with a solo from some one who still kept modestly in the background. My suspicions, which were based upon certain preliminary manœuvres upon the piano which one usually associates with an impending vocal attempt by someone, had too soon their realization, for the next moment my friend Johan was at her side. I admonished Cynthia

to be calm, and we both waited in painful expectation. Johan inflated his breast ostentatiously for the better development of the "chest notes," I should suppose, and glanced about him, bold in his folly and void of fear. Then, without further dramatic preamble, he burst distressingly forth into sacred song. The effort was not exhilarating. At last, feeling this himself, he retired somewhat crest-fallen, and employed the rest of the evening in a discussion of educational matters with Farina, who, it seems, had taught a rural school.

The next day we reached Sault Ste. Marie. The apples were very expensive there, and were sold by the ounce. The shop people would not willingly consent to sell half an apple. Indeed, I know of no place on the continent where one could more profitably have a store, for the prices of things are so high there that one would soon get very rich. Our vessel remained in that port until the next morning, and, with the whole evening before us, we had to make up our minds how we were going to spend it. Farina, who was startled by the terrible expense of everything (even of imitation onyx penholders), suggested that we should all four go to a prayer-meeting. At the Sault they are very reasonable in their prayer-meetings, which are, as they should be, in the reach of all, and we thought that this would be within our means. It appears, however, that my friend had been making independent inquiries upon his own account, and he elected instead to run the rapids. In large bateaux, divers Canadian voyageurs were running what is called the Rapids for a nominal fee, carrying such passengers as they could get while the steamers were in port. After the raft-slides of the Chaudiére Falls, the scene of much youthful disobedience and the joys of truancy, it appeared to me a rather tame business to flounder down these eddies, equally free from any danger of drowning, or, more exciting still, the perils of a parent's just anger. Cynthia is prone to sea-sickness, moreover, and so we left Johan and Farina to run the rapids together.

In the small hours I remember being awakened by a "presence" in our stateroom. Lying at the dock as we were, and the window being open, I was somewhat uneasy. I cautiously looked through the curtains again, and saw that someone in the faint light was standing upright in the middle of the room, so I said to myself, "If I startle him it will startle my sleeping friend beneath me also, and he will dash out of his berth in his impulsive way, and then when the two come to blows (as I hope they won't) I may be able to benefit my intrepid companion in the midst of the melée by some sudden thrust at his adversary from my place of vantage up here." I accordingly brought my foot down with a sounding thwack between the shoulders of the pensive intruder, which sent him with a bounce into the water pitcher. He turned upon me in fury. I had not expected this, and to my consternation the sleeping youth beneath me did not angrily dart out from his berth and close with the stranger as he ought to have done. Could it be possible that

he was of a timid disposition! I had not calculated upon that, and with some uneasiness saw that I was in for it single-handed. I also noticed at this time that my adversary held a shadowy something desperately in front of him as one does a weapon. There was no report, and it began to look as if he preferred to stab. Slowly pulling aside my curtain he scowled at me for a moment and said, "What did you do that for?" It was not a dagger at all, but a five dollar bill. Johan had been dreaming uneasily about it, and had got up to see if it were all right. "I have a right, I think, to look after my property," he grumbled, and taking his filthy lucre to bed with him, the matter was dropped.

The beautiful island of Mackinac is a favorite summer resort of the Western States, and there we ended our outward journey. The hack-driving industry greatly flourishes there. The island is a small one, and a drive around it is very pleasant, I have no doubt. It is altogether to the interest of the legion of cabmen, however, to make the prospect of such a drive almost irresistible, which is necessary, in view of the exorbitant fees in vogue. For this purpose History and Legend have been called into play. At remote parts of the island, the drivers darkly hint, are sights of surpassing grandeur and of intense historical interest. There are, for example, different kinds of rock—arch rock, skull rock, maiden's rock, and the like, which no one should miss seeing. There is also a skull cave, a devil's kitchen, a wishing spring, and a lover's leap. The hack-drivers, before a bargain is struck, only give one the names of these wonderful objects, but they solemnly promise that on the road they will tell you many very interesting things about them. This, however, they will not do for nothing.

While quite alive to the fact that in the foregoing the numerous details into which I have patiently entered, are of vital interest to the professional reader in search of accurate information upon a purely medical subject; and while I have a will to laudably continue for a considerable time longer in the same deeply scientific strain, it behooves me to remember the axiom of Holofernes, *vir sapit qui pauca loquitur.*

So this, in conclusion of the whole matter, was my sail through the Sacred Islands. I sometimes think of those halcyon days even now, and of the tragical partings at the end of that thrice happy voyage. In sordid moments I murmur sometimes, too, against my present commissariat, and cite the famous "fish-dinners" on the *Majestic*, but they say that it was not so much the freshness of the fish as of the air, and mock at me, and bid me with many other unbelieving jibes to go back to the far-away islands of the north and mend my temper and my appetite. This is the fate of all discoverers and explorers. And in revenge perhaps I shall. Yes, perhaps I shall—but Cynthia will not be there! She has gone very far away.

Soberly, however, and without further metaphor, the constant change of scene in a quiet water journey of this kind, while not

sufficient to unduly excite, is quite enough to draw away from self the thoughts of the invalid, and I would strongly recommend such a journey as preferable in some cases to a stay of equal length at the best managed sanitarium in the world. The enforced idleness of a sanitarium is not always the wisest treatment for neurasthenia; and in many cases, especially where mental depression is a marked symptom, the life at such a place frequently directs the patient's thoughts to himself, and furnishes not the best food for a fancy too inclined to brood darkly upon trivial personal matters. The morbid should be removed from all associations of a similar nature, and if possible cast loose in the free, strong current of wholesome humanity, blooming with health, and free from all taint of disease. I have often thought that in such instances *similia similibus non curantur*. And it was these ideas, rather than the pleasure in the voyage which the mere tourist experiences, that first led me to think of setting down what I have upon the subject; and if a certain blitheness of feeling, which the reminiscences of such a journey may have engendered, has led to an occasional lightness in treatment, I sincerely trust that this will in no way cloud the more important facts which I have brought forward for serious consideration.

From the tourist's standpoint, Mackinac Island and Thunder Bay have been exploited by other hands; and it is rather in the interest of the convalescent, therefore, and the neurasthenic that I have been drawn to speak, though not for a moment pretending to have been the first to have been impressed with the idea, when it is in this same charmed region of the north that a sanitarium for consumptives has been very recently erected.

A CASE OF ABNORMALLY HIGH TEMPERATURE SUBSEQUENT TO ATTACK OF TERTIAN AGUE.

BY S. GRAINGER, M.D.

M. P., age thirty-nine, married woman, family of six children, oldest one being seventeen years of age.

Present condition—When summoned first late one evening, she was found suffering from a severe chill, accompanied by chattering of the teeth, becoming almost uncontrollable. In spite of the fact that she was covered up with two eiderdown bed-quilts, in addition to the regular bed-clothing, she still continued cold. I found her pulse at that time 102 to the minute, quite soft and flabby, and considerably interrupted in action. Her temperature was 104 1-5. She had terrific headache with a good deal of local pain over the neighborhood of the spleen. Her skin was decidedly jaundiced, as well as moist. After administering temporary relief, I was told that Mrs. P. had not been feeling well for over two weeks, that she would get up in the morning feeling just as tired as when she

went to bed, and that the least housework she would attempt to do would be a perfect piece of drudgery to her, and that she would have to lie down every forenoon for an hour to rest. She had had a great many headaches recently, coming on about five p.m., and lasting till bedtime, and also frequent attacks of nausea. On being asked about the yellowness in the skin, she said that she had not had that for seven years, since she left the South, where she originally came from. She reported to me that where she spent some years there was very low and swampy land, and that there was a good deal of malarial fever there in the spring and fall of the year.

She said she had eight or nine years before had several attacks of fever and ague coming on every second day, sometimes every third; but that since coming north she had been quite free from the seizures.

Family history was good. Her father and mother are both living and well. Children all living but one, who died of Bright's disease, as a sequela to scarlet fever at eleven years of age. There is no history of phthisis, or any other hereditary condition whatever.

Each attack used to be followed by profuse sweating and excessive weakness for hours. As the case was evidently one of tertian malarial fever, I ordered her to have administered a bottle of medicine containing quinine sulph., grs. v. to the dose, rubbed up in fluid extract of licorice to cover the taste, every hour till the attack subsided; being prepared to double or treble the dose if required, as the patient said, "Now, Doctor, there is no earthly use of you trying to poison me with quinine, as I have taken ounces of it and it is no good." I did not, however, follow that advice, but gave the nurse implicit directions to take the temperature frequently and watch the febrifuge effect of the quinine. I returned next morning, hoping to find the temperature considerably lowered, and my patient a good deal more comfortable, having decided meanwhile to continue the quinine in full doses and at frequent intervals, so as, if possible, to abort the next chill on the second day afterwards. To my surprise, however, my patient was feeling very miserable, and the temperature but slightly lowered, the chill itself being, however, over. The pulse was still rapid and the headache just as bad. Mrs. P. had vomited also three or four times, and could not retain at all even the milk and lime-water which I ordered her as nourishment. I determined to keep up the quinine, but to give it less frequently, though in more heroic doses. I, therefore, had cachets, containing ten grains each, put up, and ordered one to be administered every four hours till my return in the evening. I also stopped the milk and lime-water, and administered half milk and half barley-water, with instructions to the nurse to give a cool alcohol bath every six hours. I also administered triturates of calomel, one-eighth grain to the dose, every two and one-half hours, till one grain had been taken, to be followed by a seidlitz powder. This latter was followed by a profuse bilious

stool. At eight p.m. she was a little easier, and complained of all manner of sounds in her ears, with a sensation as if the room were turning round. She assured me with all manner of mild invectives that if I still even thought of giving her quinine not to do so, as it never did her any good. As soon as I noticed that the awful quinine, which I dared to order in spite of her terrible warnings, had produced the physiological effect it had on the hearing, I was sure that the temperature had considerably deliquesced, and that everything would progress nicely from that on. What was my surprise, however, when I took up the nurse's report to find my patient's temperature still nearly as high as it had been when she was in the throes of the first chill, and that in spite of the fact that she had taken nearly one drachm of quinine since morning. I began to think then that my patient was right when she assured me that the quinine, at least in this case, was no good. I then, finding that there was a good deal of depression present, and shuddering when I thought of the fact that in all probability she would have another chill the next day (forty-eight hours after the first) decided to make a change, and ordered cachets containing salol, eight grains, and phenacetin, four grains, one to be taken every three hours. Next day there was a good deal less depression, and the pulse steadied, becoming fuller and slower. The temperature was lowered to 102 1-5. The only objection I found to the phenacetin was the severe perspiration following each cachet, though there was certainly less nausea. Fortunately, that evening, though there was a distinct chill, it did not amount to very much, and passed away after causing a good sweat. By this time the headache had abated, and there was no further vomiting of the milk and barley, though I added champagne to her diet occasionally. For the following three or four days progress seemed to be going on nicely, with one exception, and that was that for some reason the temperature insisted upon hovering round 102 in the evening and 100 3-5 in the morning. The chills on the fourth, sixth and eighth days were about the same in severity as that on the second day, the temperature at each time rising considerably but soon falling back to about 101 4-5 or 102, but never lower. I examined the urine for albumen, but found nothing abnormal except a large deposit of uric acid. As a little cough had been complained of I went over the chest carefully, back and front, but found nothing to account for the fever. The pulse at the end of the week had come down to eighty-eight, and had lost its intermittency, but, do my best, the thermometer would show, both in axilla and mouth, the same discouraging results. I used both a Hicks' and Barry twin thermometer and got no difference. I stopped the phenacetin and salol and used lactophenin for some days, but found that, whether due to its use or not, the jaundice returned. I ordered acetanilid, but in this case also found such a diminished secretion of urine that I had to stop that also. Having read an article in some foreign medical journal on the antipyretic action of kryofine, I ordered that preparation in seven and one-half grain

tablets every four hours, at the same time increasing the alcohol sponging to every two hours. The following day, thirteen days from the original chill, the temperature had deigned to crawl down two-fifths of a degree. So far, so good. The urine again became normal and the skin resumed its regular color. That night the temperature had not risen, as it had before, to 102 or in that neighborhood, but was the same as in the morning. Next day the temperature had sunk down to 100 2-5, and the patient felt better in many ways, having had a good night's rest. By this time the chills (tertian) had almost disappeared entirely, and she began to complain of wanting something else than "slops" as her food. I kept up the kryofine every four hours regularly, six tablets every twenty-four hours, and was most encouraged in the results. The temperature continued to defervesce, and the pulse to become slow and steady. As soon as the thermometer showed ninety-nine I ventured to order a little chicken, the breast finely teased, for her, which was very much relished. The champagne was increased in quantity, and the alcohol sponging decreased to twice daily. Sleep for six hours at a time became common, and gradually returning physical strength from day to day. In ten days more my patient had entirely recovered. The question may well be asked, What was the cause of the persistently high temperature in spite of the fact of the chills disappearing almost entirely? The cause was not to be found in the kidneys, and not in the chest. There was a distinct splenic enlargement, with a little local tenderness in that region, but nothing more. I would like to hear from any readers of the JOURNAL as to a similar case.

THE TREATMENT OF GOITRE.*

BY CHARLES R. DICKSON, M.D., TORONTO,

Electro-Therapist to Toronto General Hospital, Hospital for Sick Children, St. John's Hospital, St. Michael's Hospital, President of the American Electro-Therapeutic Association.

THE chief worth of many papers presented at meetings such as the present consists in the discussion to which they give rise. My object in reading this paper is to elicit from my confreres their views upon the relative value of the different methods of dealing with the various forms of goitre.

We have yet much to learn with regard to the thyroid gland and the treatment of the abnormal conditions in which we find it, but much progress has been made in recent years in this direction.

In females the thyroid gland is frequently found in an engorged condition before the establishment of menstruation, or before the birth of a child; these conditions may disappear without treatment,

* Read at the Canadian Medical Association meeting, Quebec, August, 1898.

hence if there is no urgent necessity to interfere we may leave to nature the restoration to the normal condition. But it often happens that instead of recession, we find that the condition is aggravated at each menstrual period, or pregnancy, and our aid is invoked. A mild form of counter irritation is occasionally sufficient, and the inunction of iodine is advocated, or the internal administration of calcium sulphide, or the extract of thyroid, or thymus gland. A mild galvanic current passed through the gland is often advantageous.

But the stage of engorgement may be carried further, and as a consequence other changes may be met with, such as fibrous, cystic, calcareous, or malignant. We also find a general disease, of which the enlargement of the thyroid is only one symptom—exophthalmic goitre. In this as in the other forms of goitre, we find that the urgency of the symptoms is not dependent upon the extent of the enlargement. The excitability and rapidity of the heart's action and the dyspnœa are the symptoms to which our attention is chiefly directed, but remedies which are usually efficacious in such conditions are not always to be relied upon here. Rest in the recumbent posture, with a diet restricted as far as possible to milk, with an occasional calomel purge, is one of the favorite recent methods of dealing with this condition; anæmia and amenorrhœa, if present, must be combated; belladonna, strychnia, arsenic and iron are the choice of some, also the administration of the animal extracts already alluded to. Galvanism of the sympathetic is a measure of the greatest value also.

When there are parenchymatous changes, the treatment laid down in dealing with the engorged conditions is applicable; the electrical current in these cases may be used in greater strength.

In the fibrous variety more vigorous treatment is demanded; we may first try the former plan, and failing in this, when no diminution in size is noticed after a reasonable time, electro-puncture may be resorted to, the needle being so prepared that the surface in contact with the skin and subcutaneous tissue is not capable of conveying the electrical current to these parts. The needle is connected with the negative side of a galvanic battery, and the electrical circuit is completed by means of a well moistened sponge or felt covered metal plate connected with the positive side of the battery and placed upon the shoulder. A current strong enough to cause the electrolytic destruction of gland tissue is employed, and if suppuration occurs, free drainage is established.

In cystic goitres, particularly of the thin-walled varieties, electricity heads the list of remedies. The contents of the cyst are first evacuated through an insulated canula; the cyst is then filled to distension with a saline solution through the same canula which is now connected with the negative side of the galvanic battery; the canula and solution thus form an electrode filling the whole cavity; the electrical circuit is established by means of a positive electrode as before, and a current of sufficient strength to destroy the lining

membrane is employed; the contents are again evacuated, and firm pressure maintained, the object being to set up adhesive inflammation of the cyst walls and so obliterate the sac.

Calcification is a condition sometimes met with, particularly if drainage has been prolonged after puncture. In such cases the injection into the cavity of a very weak solution of hydrochloric acid daily may soften the calcified material and assist its removal.

Surgical removal, I consider, should be restricted to the malignant forms, or those fibrous forms which are not amenable to other treatment.

The injection of iodine or other irritating fluids is an unwise procedure. My experience with thyroid and thymus extracts has not been very brilliant.

The whole subject of goitre is one in which I am deeply interested, and, thanks to my colleagues in Toronto, I have been enabled to devote much attention to the subject in recent years; therefore I am particularly anxious to learn what has been the experience of others in this direction.

296 Sherbourne Street, Toronto.

REPORT OF A CASE OF STRANGULATED UMBILICAL HERNIA.*

BY W. J. GIBSON, M.D., BELLEVILLE.

MR. CHAIRMAN,—In presenting the following case to your notice I have nothing new to offer, but desire solely to elicit some discussion as to the best means to be adopted in a class of cases that are always formidable, and when strangulated, frequently disastrous.

Mrs. E., aged forty-seven, farmer's wife, weight nearly 300 lbs., family of seven children, youngest three years old. During childbirth seventeen years ago, a rupture occurred at the umbilicus. The hernial protrusion was small at first, but gradually increased in size and the usual history of such cases followed, the attendance of a physician being from time to time required to relieve the patient. At no time from its inception had the hernia been entirely reduced.

On June the 9th last Dr. Mather, of Tweed, was summoned and found the patient suffering intense pain and vomiting incessantly, the bowel evidently strangulated.

A hypodermic of morphia was administered and hot fomentations applied. In a short time he was enabled to return the bowel. After an interval of ten days he was again called in, the condition being the same as on June the 9th, only the symptoms more

* Read at the Canadian Medical Association Meeting, Quebec, August, 1898.

intensified. Stercoraceous vomiting had ensued. At this stage, Dr. Hudson, of Roslin, was called in consultation, but all efforts for relief proved futile, and it was decided that an operation afforded the only chance of saving the patient's life.

Dr. Mather telephoned to me and explained the nature of the case and asked me to come out prepared to operate. I requested the Dr. to see that plenty of water, towels and sheets were sterilized and a room got in readiness.

Having collected the necessary material for operation, I asked Dr. Yeomans, of Belleville, to accompany me, and after a three hours' drive in a broiling sun and over dusty roads, we arrived at our destination.

On examining the patient I found a tumor as large as could be grasped with two hands. The bowel was readily discovered in the centre of the mass, and as it had been strangulated for forty hours, no further attempt at reduction by manipulation was made. The patient's general condition was fair, temperature one hundred and a half, pulse ninety, stercoraceous vomiting still continuing. Immediate operation was decided on, and the usual preparations for an aseptic operation was made with as great care as time and conveniences at our disposal permitted.

Dr. Mather, assisted by Dr. Hudson, administered the anæsthetic while Dr. Yeomans assisted me at the operation. After thoroughly disinfecting the field of operation, an elliptical incision was made including the umbilicus. The sac was opened and about six inches of the transverse colon was found in the centre of the mass. The bowel was a very dark port wine color but not gangrenous. With considerable difficulty, owing to the extreme distension, the ring was divided, the bowel returned, and large flat sponges introduced to retain it. The omental mass which was firmly adherent to the margins of the opening was ligated in sections and removed. Rather free oozing kept up from a section at the lower angle, and an additional ligature of kangaroo tendon was thrown around it, completely controlling the hæmorrhage. I was rather doubtful of the sterility of this ligature, as it was taken from a number that had been handled at a previous operation without subsequent sterilization.

The abdominal opening, three inches in diameter, was now closed with buried silkworm gut passed one-quarter of an inch apart, through the recti muscles and peritoneum, one inch back from the inner margins of the opening, a continuous suture of catgut whipped over all.

Silkworm sutures were again used and passed through the skin, adipose tissue, the sheath of the recti muscles, including as much of the muscle as possible, and before tying, the adipose tissue was accurately approximated by a running catgut suture so as to prevent any pocketing. The silkworm sutures were now securely tied and the margins of the skin united by a continuous catgut suture. No drainage.

A strip of iodoform gauze was laid along the line of incision for protection, and strips of adhesive plaster two inches wide were applied to reinforce the superficial sutures and to support the wound in case of vomiting. The usual dressing of sterilized gauze and absorbent was applied, and all securely fastened by a broad abdominal bandage. The patient was put to bed feeling very comfortable. Instructions were given to use two quarts of normal salt solution per rectum to allay thirst, and possibly aid in expulsion of flatus and movement of bowels, teaspoonful doses of hot water to be given every ten minutes, a hypodermic of morphia, $\frac{1}{4}$gr., to be given if much pain or restlessness, urine to be drawn off every six or eight hours.

A report by telephone on the following day from Dr. Mather informed me that the patient passed a comfortable night, no vomiting, bowels had moved freely, pulse eighty, temperature ninety-nine and a half, patient cheerful, and everything so far satisfactory.

I saw the patient again on the fourth day; removed the dressing, found everything dry, there had been scarcely any oozing. Dressing renewed, diet increased, and no further disturbance of dressing, until the tenth day when a slight rise of temperature was observed. On removing the dressing it was found there was a discharge of pus from the lower angle of the wound. Wound was thoroughly irrigated, and directions given that it be irrigated twice a day. Wound did not open more than one inch; throughout the rest of its extent union was perfect. I believed the suppuration was caused by the kangaroo tendon, about the sterility of which I had been doubtful. No further trouble followed and the sinus gradually closed. I had expected suppuration to some extent on account of the depth of fatty tissue. The result so far has been very satisfactory, though there is a strong probability that sooner or later recurrence will take place.

AN INTERESTING CASE OF DEFECTIVE SPEECH.

BY W. A. YOUNG, M.D., L.R.C.P. (LONDON, ENG.), TORONTO.

JAMES G—, aged fourteen years, came under my notice some time ago. The moment I asked him a question I saw that it was almost a physical impossibility for him to make any reply. He was quite unable to even form the words, far less articulate to any degree. He seemed at first, to the average outsider, unable to comprehend the meaning of the question put to him, though at the same time his mental faculties were sufficiently acute. His mother told me that her boy had been in this condition "since birth," and that no matter what pains had been taken with him to teach him during the past six years, no benefit had followed. She told me that for days and months she and many others had tried their best

to teach him to pronounce the simplest words, but to no avail James had always had good health, in spite of this trouble with his speech. Neither parent could assign any cause for the fact that two of their sons had suffered in the same way, a brother of my patient having been in just as bad a condition up till twelve years of age. Two remaining brothers and three sisters always have spoken very distinctly. No relatives on either side of the family have ever suffered from a defect in the speech in any way. This boy never had any infantile disease apart from slight attacks of the ordinary exanthemata. He had never been tongue-tied. I examined most carefully his mouth. There was no malformation of either maxilla: teeth were quite regular and in good condition, not even a condition of congestion of either of the pillars of the fauces being manifest. I noticed that both tonsils had been removed. This, the mother said, had been done at the Sick Children's Hospital three years before with the object of relieving the speech defect, but the results were nil. There was no arching of the hard palate, and no prominence of the pomum Adami noticeable. I examined his larynx with the laryngoscope, but found nothing abnormal. In order to make sure, his mother had had the boy examined by an aurist to see that there was no defect in the hearing. Nothing abnormal was found there, the boy being able to hear the ticking of a watch at a considerable distance away. Examination of the chest showed nothing abnormal, the respiratory sounds being perfectly normal. I became satisfied that James was quite able to understand what was said to him, but that he had no apparent power to respond in his mother-tongue. To aid him in making people understand his meaning, he adopted a peculiar gibberish, associated with a system of signs, as his means of expression, which were entirely unintelligible to any one except his parents. The case was not one of stammering, as his mother said so many friends had insisted on calling it, but I satisfied myself that the fundamental trouble in this case was absence of the power of differentiating between sounds, and that to perform a cure, medical treatment in the ordinary way would be useless, and that the entire matter, seeing that the boy had the average degree of intelligence, would lie in a system of education conducted by some one who had the necessary patience to deal with him, and who would concentrate every effort to teach the boy, not to learn his spelling, arithmetic, and so on, in the ordinary stereotyped manner as had been forced upon him without the slightest results for several years, but to differentiate between sounds, in order first that he might know the difference between the letter s and f, or the letter v and t; and then, mastering that, to form his words accordingly. I advised his mother to give up all idea of medical treatment and to take James to a school in the city that devotes special attention to correcting speech and voice defects. I heard nothing more of the case for some time, but had the satisfaction of having both mother and boy call and see me about three months later. James was then

able to speak fairly well, though he had to do so somewhat slowly, and with few exceptions he could pronounce any word he came across in the school reader. Now, five months from the time he was first brought to me, he is able to speak through the telephone distinctly. He can question any one, even a stranger, with ease, and I think there is no doubt that inside of another few months he will have a command of speech almost equal to the average boy of his age. I think the case sufficiently interesting to report, as it is not a case of stammering, nor is the defect due to any physical malformation, nor is it caused by a condition of idiocy or of mental weakness; but on the other hand is an instance of, as I have already stated, absence of the power of differentiating between sounds. It would be interesting to be able to find out what pathological condition, if any, were present in this boy's anatomy.

NEW FORCEPS FOR INTESTINAL ANASTOMOSIS.*

BY ERNEST LAPLACE, M.D., LL.D.,
of Philadelphia.

Professor of Surgery and of Clinical Surgery in the Medico-Chirurgical College; Surgeon to the Philadelphia and St. Agnes' Hospitals.

THE necessity for rapid and accurate suturing in performing anastomosis of the intestines, as well as the simplification of the procedure, has led us to devise a forceps which presents these two special characteristics: (1) It consists of two rings introduced into the two openings to be anastomosed and acts as a support to the parts during the act of suturing. (2) The rings of the forceps

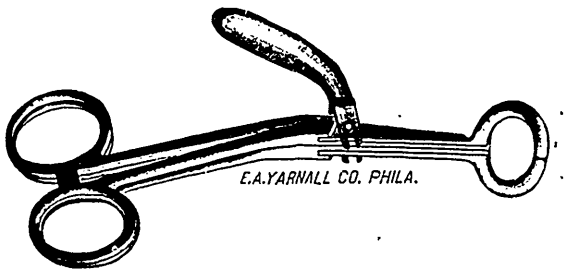

FIG. 1.

being separable into two halves can be gently withdrawn from a small aperture still unsutured, and the anastomosis is completed by adding one or two sutures.

* Read at the Meeting of the Canadian Medical Association, Quebec, Aug. 17th, 1898.

These two features offer the following advantages: (1) Rapidity and accuracy of suturing without leaving any foreign substance

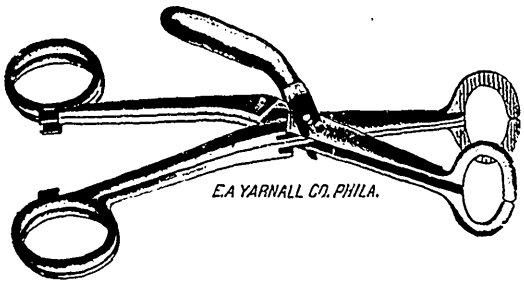

FIG. 2.

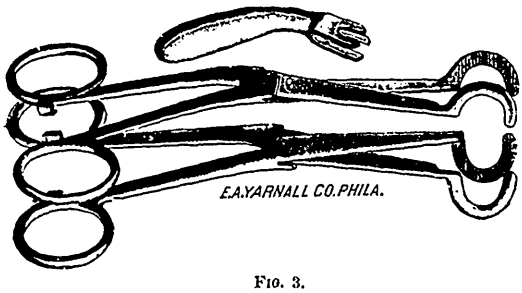

FIG. 3.

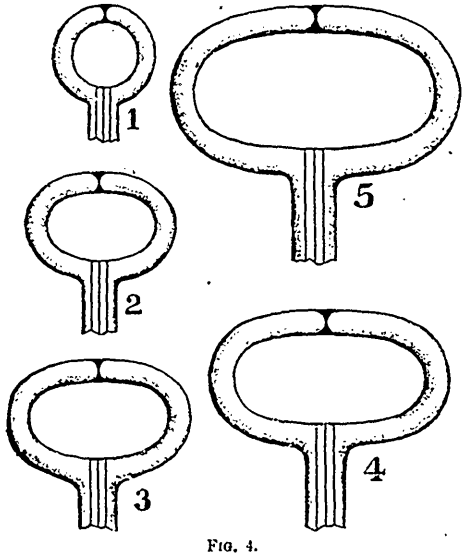

FIG. 4.

within the gut. (2) The forceps is easily adjusted to the openings. (3) There are five sizes of forceps for intestines of various calibre,

as well as for the more delicate work on the gall-bladder (cholecystenterostomy). The accompanying illustrations give a fair idea of the appearance of the instrument, as well as the various steps in the technique.

Description of the Instrument.—The instrument (Fig. 1) consists of two forceps (Fig. 2) constructed on the plan of ordinary locking hemostatic forceps (Fig. 3) brought together laterally, and held together by means of a clamp. The ends of these forceps are curved into a half-circle or half-ellipse, so that on the lateral approximation of the two forceps a ring or elliptic is formed on the end of the forceps; locking takes place at the handles, as in ordinary

FIG. 5.

hemostatic forceps. There are five different sizes of these forceps according to the accompanying figure (Fig. 4).

Lateral Anastomosis.—A longitudinal incision is made in each intestine to be approximated (Fig. 5). At the centre of the incision, right and left, a suture is introduced, uniting the edges (Fig. 5 *a* to *a'* and *b* to *b'*) to the corresponding spot of the opposite incision (Fig. 6). A long end is left to the thread of this suture on each side. By drawing gently on these threads both incisions are transformed into diamond-shaped openings. The forceps, clamped but unlocked, is introduced by inserting one ring into each intestine, encircling each diamond-shaped opening (Fig. 7). The forceps is

then clamped, bringing serous membrane to serous membrane (Fig. 8). The sutures are applied circularly about the intestine (Fig. 9). The handles of the forceps project from the lower end of the opening. By removing the clamp the forceps falls apart in two halves. Each half is now unlocked, loosening its attachment to the gut within the intestine, and by raising one forceps at a time each half-ring is withdrawn out of the small unsutured opening (Fig. 10). The suturing is then completed.

End-to-End Anastomosis.—The two ends of the intestines (Fig. 11) are fastened together by four sutures above, below and on each side (Fig. 12). The ends of the thread are cut short. A pair

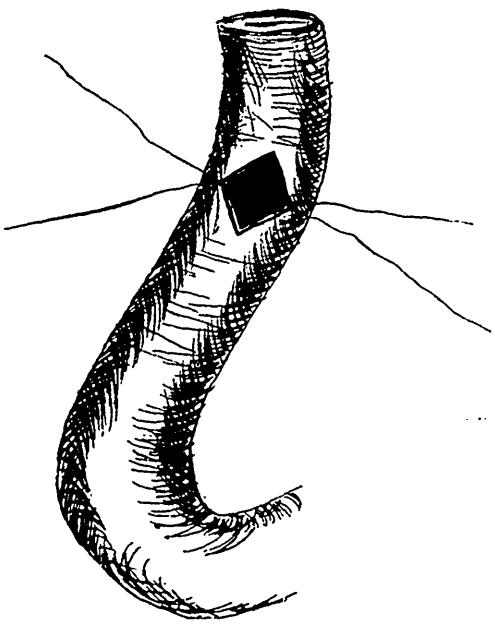

FIG. 6.

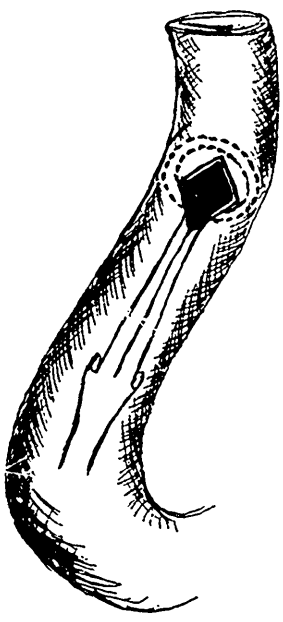

FIG. 7.

of forceps of suitable size is introduced between two of the sutures, clamped, but unlocked, so that a ring reaches beyond the end of each intestine (Fig. 13, *a*, *b*). The sutured ends, therefore, are between the two rings. In order to insure the inversion of the serous membrane before clamping, a thread is passed circularly around the sutured end of the intestines, between the blades of the forceps, and drawn moderately (Fig. 13, *c*, *d*, *e*). The forceps is then closed and locked, bringing the intestines into perfect end-to-end apposition of serous membrane. The sutures are then applied (Fig. 14). When this is completed as far as possible, the forceps is withdrawn as above. The clamp is removed. This loosens two halves of the ring; then each forceps is unlocked, loosening the

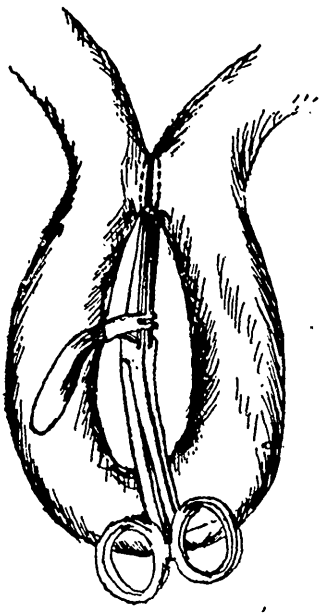

FIG. 8.

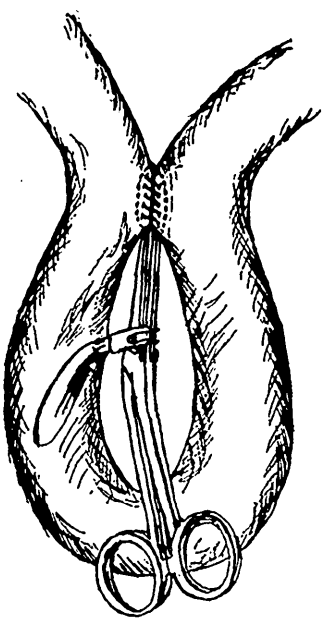

FIG. 9.

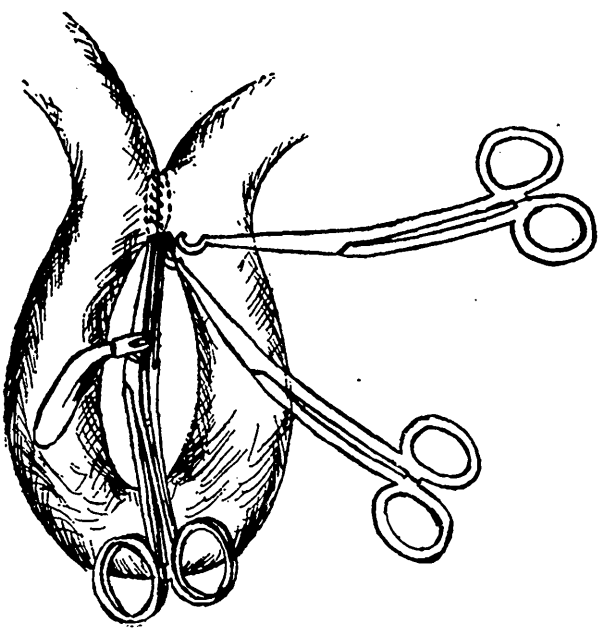

FIG. 10.

grasp of the forceps upon the intestines, and then by a semicircular motion each forceps is withdrawn. The thread which was placed

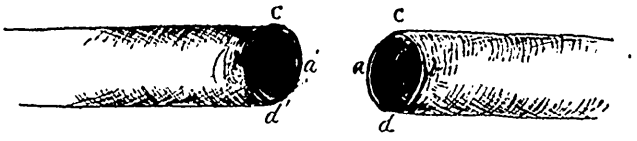

Fig. 11.

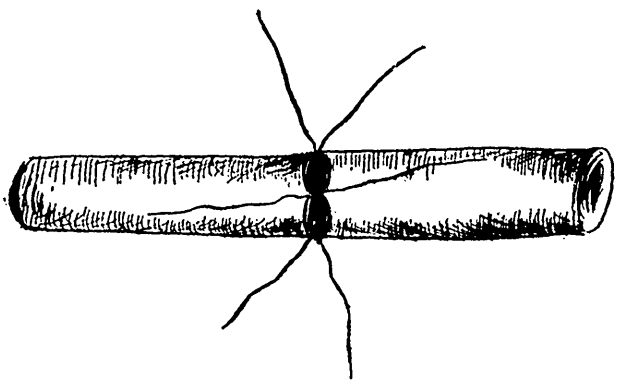

Fig. 12.

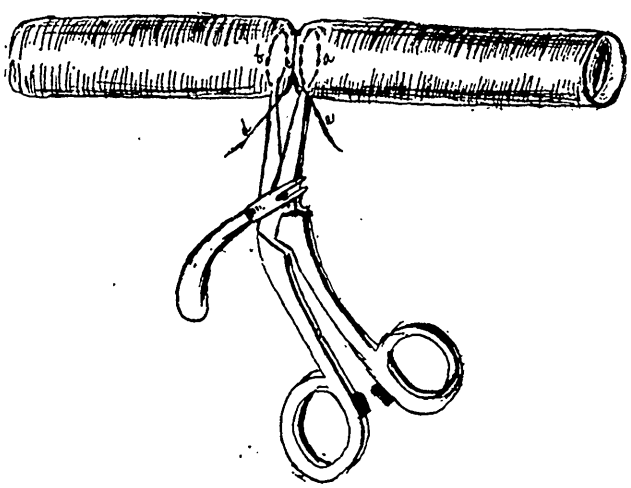

Fig. 13.

circularly between the blades of the forceps is cut and removed. The suturing is then completed.

Invagination.—For this operation we have devised a forceps whose one feature is its long slender blades (Fig. 15). The end of

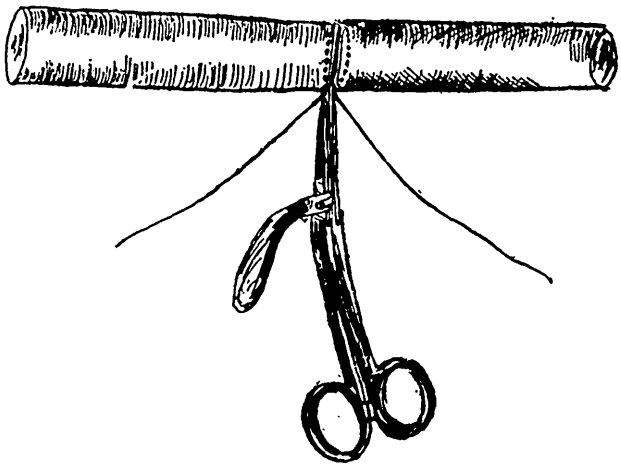

Fig. 14.

Fig. 15.

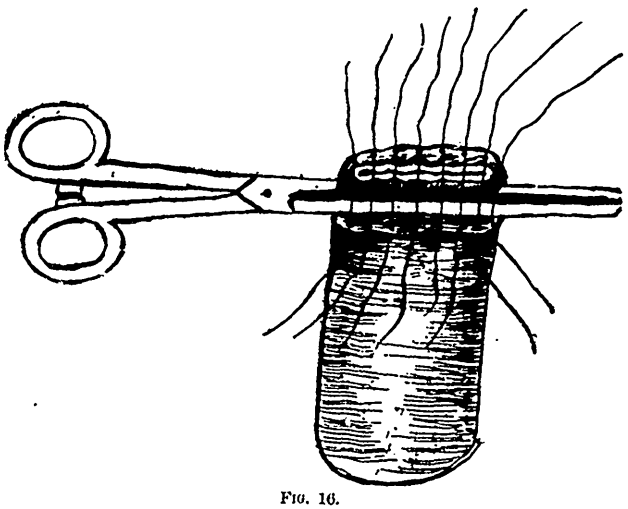

Fig. 16.

the intestine to be invaginated is clamped with this forceps and pushed downward, bringing the serous membrane on each side over

the forceps (Fig. 16). The forceps acts as a support while the sutures are applied by bringing serous membrane to serous membrane, over the forceps (Fig. 17). When the suturing is done, the forceps is unclamped and withdrawn.

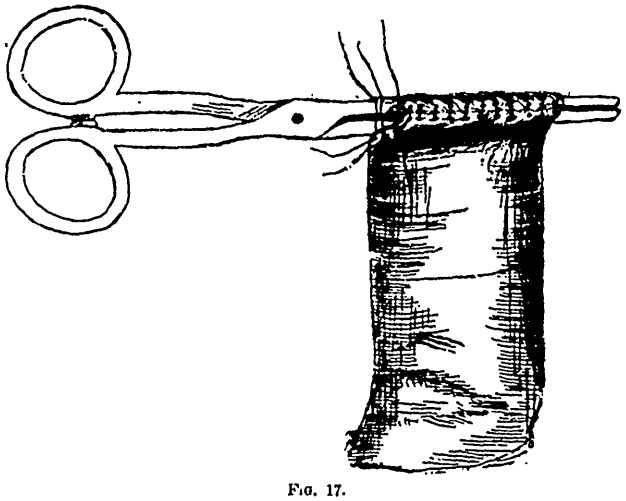

FIG. 17.

Experiments on dogs and on the cadaver have demonstrated the accuracy and rapidity of the work done by the method described.

A demonstration was given on a dog of the technique as described in this paper, at the meeting of the American Medical Association held at Denver, Col., U.S.A., June, 1898, as well as at the meeting of the Canadian Medical Association at Quebec.

THE TREATMENT OF INEBRIATES.*

BY A. M. ROSEBRUGH, M.D., TORONTO.

IN this paper I desire to call attention to the treatment of pauper inebriates and to suggest an economical scheme for the treatment of the more hopeful class of these unfortunates.

In 1890-91, the writer of this paper had the honor of acting on the Prison Reform Commission appointed by the Ontario Government. One of the duties of this Commission was to make inquiry as to the cause of crime in the community, the relation of intemperance to crime, and the most approved methods of treating inebriates. In prosecuting this phase of the investigation sheriffs and prison and jail officials were examined under oath, as well as a

* Read before the Canadian Medical Association at Quebec, Aug. 19th, 1898.

number of Canadian and American gentlemen who were in a position to give their opinions as experts. Medical superintendents of lunatic asylums and gaol surgeons gave evidence also. All agreed that intemperance is a most prolific cause of crime. A number placed intemperance second to that of parental neglect as a cause of crime, while a large number testified that, in their judgment, intemperance, directly and indirectly, is the chief cause of crime. A number testified also that, at least in the case of chronic alcoholism, inebriety is a disease and should be treated accordingly. With regard to the general custom of treating inebriates as criminals by sending them to gaol, all agreed that this treatment is neither deterrent nor reformatory—that it is unphilosophical and bad economy, and by a number it was ever characterized as inhuman.

After a most careful examination of all the evidence and after submitting the proposition to a number of gentlemen qualified to give an opinion, and by whom the proposition was endorsed, the Commissioners made the following recommendations with regard to the treatment of inebriates in Ontario:

"The Commissioners recommend that the Government, out of the funds derived from the fees for provincial licenses (which might be temporarily increased for that purpose), shall erect in the centres of population one or more industrial reformatories for inebriates. Every such reformatory should be near a city, and should have attached to it a sufficient area of good land for the employment of the inmates in farming and market gardening; it should also be furnished with means for employing the inmates in suitable industrial occupations.

"That to this reformatory be committed all habitual drunkards, that is to say, all who have been previously convicted of drunkenness three times within two years; such other persons addicted to the use of strong drink as in the opinion of the county judge may be reclaimed by timely restraint and judicious treatment; and those who may be compulsorily committed to an inebriate asylum under the provisions of the Inebriate Asylum Act. The first committal to this reformatory should be for a period not shorter than six months, the second for not less than one year, and the third for two years less one day. That any inmate, whose term of imprisonment exceeds six months, may, after he has been detained for six months or more, be permitted to return home on parole if he has given satisfactory evidence of a sincere desire to live soberly and of strength of mind sufficient to enable him to keep his good resolution—such license to be granted on the recommendation of the Superintendent, endorsed by the Inspector of Prisons, and approved by the Provincial Secretary, such license to be revoked if the conditions on which it is granted be not observed.

"That if the families of any inmates of a reformatory for inebriates be wholly dependent on them for support, a portion of the proceeds of the earnings of such inmates be paid to their families; also that a portion of the net earnings of the inmates, after defraying cost of maintenance, shall be set aside to form a

fund, out of which those whose general conduct has been good and who give evidence of being reformed, shall be assisted in their efforts to earn a living for a time after leaving the reformatory.

"That if after a third commitment to an Industrial Reformatory for Inebriates, a drunkard again be convicted of drunkenness, he shall then be sentenced to the Central Prison for the full period authorized by law."

These recommendations have been endorsed by the Ontario Medical Association and by a number of other influential public bodies, but the Ontario Government has declined to give them practical effect. The Ontario Government declines to take action on the following grounds: Firstly, the number of inebriates in the Province is very large and the expense for buildings and maintenance would be very great; secondly, it would be impossible to provide such a large body of men with industrial employment; and, thirdly, the temperance organizations are taking very little interest in the movement. On grounds of public policy, as well as on economic grounds, we believe the Government is making a mistake. If only 33⅓ per cent. of drunkards are reformed by reformatory treatment, and this is estimated by competent authorities as the minimum number, the expenditure would be more than justified. This attitude having been assumed, however, the question arose: Firstly, should this attitude on the part of the Government be accepted as a finality; and, secondly, cannot a less expensive scheme be devised which, although falling short of all that could be expected of an industrial reformatory, might nevertheless be the means of rescuing a large number from drunkenness and a drunkard's grave?

Under these circumstances the Prisoners' Aid Association of Canada in January last asked me to visit inebriate hospitals—to interview specialists, and if possible to formulate a practical and economical scheme for the consideration of the Government for the scientific treatment of pauper inebriates. As a preparation for executing this commission I visited eight institutions devoted to the treatment of inebriety and interviewed a number of specialists, including the following, namely: Dr. Lett, of Guelph; Dr. Crothers, of Hartford; Dr. L. D. Mason, of Brooklyn; Dr. Hutchison, of Foxboro', and Dr. Ellsworth, of Boston. I also investigated the Boston Probation System as applied to the case of drunkards, and I made careful inquiry into the comparative merits of the different systems of treatment, whether in accord or out of accord with the generally accepted tenets of legitimate medicine.

In formulating the scheme, I had in view, necessarily, the requirements of the Province of Ontario, but if the plan I have outlined for Ontario be a good one, there is no reason why it should not be adapted to the other provinces as well.

It is in brief as follows:

1. The appointment by the Provincial Government of an inspector of inebriate institutions. This inspector should be a qualified medical practitioner who has made the medical treatment of inebriety a special study.

2. The inspector should organize in the city of Toronto a hospital for the medical treatment of pauper male inebriates of the more hopeful class, and in other cities of the Province an inebriate department in the existing general hospitals, more especially for pauper male inebriates.

3. An industrial reformatory should be established on the farm colony plan for the custody of the more hopeless or incorrigible class of male drunkards, and where they should be detained on indeterminate sentences.

4. The adoption of a rational course of medical treatment in accordance with the tenets of legitimate medicine, as, for instance, that recommended by Dr. Norman Kerr or Dr. T. D. Crothers. In the interests of science and good morals proprietary remedies should not be used.

5. The adoption of the "probation system," and giving a helping hand to patients subsequent to treatment for inebriety.

6. In the case of habitual female drunkards my recommendation is that they be sent to the provincial reformatory for the full term of two years, and that this be repeated in case of relapse. In case of the more hopeful class of female drunkards I recommend a few weeks' special treatment in any of the existing "homes" or refuges for females, followed up by subsequent judicious supervision. Arrangements to this end should be made by the Government Inspector.

In Ontario there is a per capita Government grant of 30 cents a day to all hospital patients. In order to secure the co-operation of hospital trustees in the proposed plan it may be necessary to ask the Government to increase the grant to, say, 35 or 40 cents a day for inebriate patients. The hospital accommodation in some cases may be too limited to admit of the reception of these cases. In that case possibly the Provincial Government may be disposed to come to the aid of the trustees.

An essential feature of this scheme is the proposed utilization of the Massachusetts probation system in giving a helping hand to reformed inebriates subsequent to the hospital treatment. By giving the inebriate a helping hand, and more particularly by finding him remunerative employment, he is rendered a service quite as important as that of giving him medical treatment. Both are essential. The man will not seek employment or retain it when obtained for him so long as he has a craving for intoxicants, and, on the other hand, a reformed inebriate will not long remain reformed if he fail to secure remunerative employment.

In every city and large town in Ontario there is either a truancy officer or an agent of the Children's Aid Society, or both. What I would suggest is that the services of one of these officers be secured to act as probation officer. I have no doubt, in most cases, this will not be difficult.

It is to be understood, of course, that this scheme is not suggested as a substitute for, or to take the place of, a Government reformatory or farm colony for inebriates. That will still be

necessary, and it will be complemental to the proposed hospital and probation system. The latter is suggested for the treatment of the more hopeful cases, while the former will be required for the prolonged detention of the less hopeful and incorrigible class.

Among the advantages that may be claimed for the hospital and probation system are: Firstly, it may be inaugurated at any time without waiting for the erection of expensive buildings; and, secondly, maximum efficiency is secured with minimum expense.

While I advocate the utilization of existing hospitals in the treatment of inebriates, I am free to admit that in the larger cities better results might be expected from the establishment of special hospitals.

My recommendations have not, as yet, been formally presented to the Ontario Government, and I am not in a position to state what action may be taken with respect thereto. The attention of the Inspector of Hospitals, Prisons, etc., has been called to the question, and I infer from what has passed between us that he is disposed to look upon the proposals most favorably, and I may add that, at his suggestion, I am now in correspondence with hospital trustees to ascertain to what extent their co-operation can be counted upon.

As the carrying out of this hospital treatment will naturally devolve upon the house-surgeons, many of whom are recent graduates with limited experience, my proposition is that the special medical treatment of inebriate patients shall be under the direction and supervision of the Government inspector, to whom a detailed history of each case, with all relevant facts, shall be promptly forwarded on admission. This does not refer to the preliminary treatment, which, in most chronic cases, might be entrusted to the house-surgeons. By having the special treatment under the control of a central authority there will be unity of purpose, statistics can be collected, results compared and tabulated, and progress made.

As already stated, if this scheme promises to result in the successful treatment of inebriates in Ontario, it should be equally successful in each of the other provinces of the Dominion.

It is respectfully commended to the thoughtful consideration of the members of the Canadian Medical Association, and may I be allowed to suggest the propriety of appointing a committee early in the session to make a report on the whole question, if possible, before the close of the present meeting.

The question of the treatment of inebriates was introduced into the Ontario Medical Association at the annual meeting held in June last, and was referred to a committee, but unfortunately too late to admit of a report being prepared before the close of the meeting.

I may add that the scheme here outlined has the unqualified endorsation of Dr. Stephen Lett, of the "Homewood Retreat," Guelph, and Dr. T. D. Crothers, of the Walnut Lodge Hospital, Hartford, Conn. It is also approved of by hospital trustees in Ontario, so far as heard from.

Selected Articles.

THE ELEMENTS OF ELECTRICITY IN MEDICINE.

BY PHILIP MEIROWITZ, M.D.
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(Continued from last month.)

Electro-Diagnosis. Diseases which manifest themselves by paralysis and atrophy are the proper subjects for the diagnostic use of electricity.

Very frequently, electricity will give an insight into the severity of the affection and often throw light upon the probable duration and curability of the disease, a knowledge of which can be obtained by no other means. In the case of facial paralysis, for example, the reaction of the nerve and muscles to the electric current tells one whether the affection is light, medium, or severe and incidentally whether one may expect a rapid or a slow recovery. Hence it is proper to speak of electro-prognosis as well as electro-diagnosis.

Normal reaction. To appreciate the results obtained in the examination of pathological conditions, we must know, it seems almost superfluous to say, how normal muscles and nerves respond to electrical stimulation. It is always advisable for beginners to secure some normal subject and study the effects of both galvanism and faradism upon nerve and muscle. The points at which the nerves and muscles should best be stimulated have been made the subject of careful study by Erb and others, who have accurately mapped them out.

These maps of the body with the electro-motive points are to be found in all standard anatomies and text-books on neurology. They should always be placed in front of the operator, so that he may be able to place the examining electrode upon the proper point without much hesitation or loss of time. The examination may be made, first, with the galvanic current, and secondly with the faradic current, or *vice versa*. It is important that both currents be employed, since, in early cases of nerve degeneration, galvanism may not reveal the process as well as faradism.

The procedure with the galvanic current is as follows: The rheophores or conducting cords are attached to the binding posts of the battery and to the electrodes. The indifferent or larger electrode is placed upon some indifferent spot, usually the nape of the neck or the sternum. The different or examining electrode is placed upon the nerve or muscle to be tested. Care must be taken

to saturate the electrodes with hot water and to thoroughly moisten the skin. By this means a part of the resistance which the skin offers to the current will be overcome. The resistance is still further diminished by the addition of bicarbonate of soda to the water. The best form of examining electrode is that which has the device (consisting of an elastic strip of metal which is operated by the finger) by means of which the current may be made and broken. (See Fig. 6.)

Any number of cells as fifteen, or twenty, are thrown into the circuit, and the switch is moved from "off" to "on" by means of the polar switch which plays upon two buttons, and which indicates by its direction the positive pole, the examining electrode is made the negative pole or cathode. By means of the rheostat the current is slowly increased until a minimum current is obtained that will produce a contraction when the circuit is closed by the spring on the examining electrode. The contraction is quick, lightning-like in rapidity and is called the cathodal closure contraction. It is indicated for the sake of clearness and brevity by the symbol C.C.C.

When the circuit is opened (cathodal opening—C.O.) no contraction is observed. If the polar switch be now reversed so that the examining electrode becomes the positive pole or anode and the circuit be again made or closed (anodal closure—An.C.), no contraction is obtained, and the same is true of anodal opening, or An.O.

Thus it is seen that with a weak current we get a cathodal closure contraction (C.C.C.), but neither cathodal opening, anodal closure, nor anodal opening contractions (C.O.C.; A.C.C.; A.O.C.). If the strength of the current be increased, C.C.C. (cathodal closure contraction) become stronger; but this time we will also get An C.C. (anodal closure contraction) and An.O.C. (anodal opening contraction); C.O.C. (cathodal opening contraction) is still absent. If the strength of the current be still further increased so as to become considerable, each of the contractions thus far obtained will be more marked and C.C.C. may become tetanic (C.C.Te.). With this strength of current we also obtain C.O.C., which is the weakest of the four.

The following table after "Neobues" summarizes these results:

	Mild Current.	Medium Current.	Strong Current.
C.C.....	C.	C1.	Te.
C.O.....	....	....	C.
An.C.....	....	C.	C1.
An.O.....	....	C.	C11.

It will be seen that C.C.C. is always greater than An.C.C.; this

law may be expressed by the formula C.C.C.", An.C.C., which is typical for normal muscles and nerves.

The relative degrees of cathodal and anodal contraction are well shown in Fig. 9. This represents a curve of closure contractions in the peroneal muscles of a healthy girl. Ka = C.C.C.; An = An.C.C.

In healthy individuals, the results obtained by examining corresponding points on both sides of the body are the same. These results are, as determined by the mil-am-meter, approximately identical for all individuals. In a patient with a one-sided affection, the healthy side is always examined first; the degree of contraction obtained on the normal side is the standard with which the degree of contraction elicited on the diseased side is to be compared. When both sides—*e.g.*, both lower extremities of a patient—are affected, it is obvious that such a comparison cannot be made. In this case, other standards must be looked for. "Erb" found that the irritability of certain nerves, as the frontal, the accessorius, the ulnar and the peroneus, is about equal in health, *i.e.*, any strength of current applied to these nerves produces about the same degree of contraction in the muscles supplied by them. Thus if the peroneal

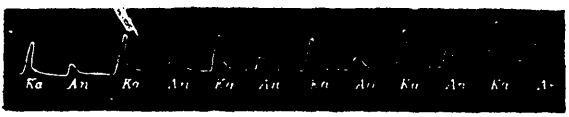

Fig. 9.—An = Anode. Ka = Kathode.

nerves in both lower extremities be affected, their irritability may be compared with the ulnar nerves and *vice versa*. In this way it may be learned, for example, to what extent C.C.C. is reduced or An.C.C. increased.

In using the faradic current, the electrodes are placed upon the body in the same way as when the galvanic current is employed. The healthy side is tested first. Before beginning, the secondary coil must be moved from over the primary coil, so as not to shock the patient who would thus get the full strength of the current. The current is slowly increased by gradually moving the secondary coil over the primary until the current is just sufficient to produce a distinct contraction when it is broken by means of the examining electrode. The affected side is now examined under the same conditions and the contraction obtained compared with that of the healthy side.

Pathological reactions. In abnormal states of the muscles and nerves, their electrical irritability is altered. There may be greater or less diminution of the cathodal; there may be greater or less increase of the anodal, or there may be entire absence of response to any form of stimulation.

Simple diminution of electrical irritability occurs in all con-

ditions of muscular atrophy in which neither muscles nor nerves have become degenerated. There is a quantitative change in the normal formula C.C.C., An.C.C., which now reads—C.C.C. = An.C.C., *i.e.*, each of the contractions is less than normal, but the C.C.C. is still greater than An.C.C.

Among the diseases which are accompanied or followed by simple muscular atrophy are pseudo-hypertrophic muscular paralysis, juvenile hereditary atrophies, hemiplegia following cerebral disease, atrophy from disuse, etc.

When the nerves and muscles have become degenerated, the change in reaction is one of *quality*. It is now found that C.C.C. is no longer greater than An.C.C.; on the contrary, An.C.C. = C.C.C. This is the so-called reaction of degeneration, expressed by the letters R.D The quality of the contraction is also altered. The normal contraction is quick, whilst in degeneration the contraction is slow and sluggish.

When the faradic current is employed in degenerative conditions the reaction may be either very weak or altogether absent, so that the strongest current will fail to produce muscular contraction.

The following table by Sachs ("The Nervous Diseases of Children") summarizes normal and pathological reaction:

Normal Electrical Conditions.		Reaction of Degeneration.	
	Nerve and Muscle.	Nerve.	Muscle.
Faradic current...	Contractions good; prompt.	No response (except in partial R.D.).	No response (except in partial R.D.).
Galvanic current..	Contractions prompt and quick	No response.	Increased excitability at first, then diminished. Contractions sluggish.
Order of contractions	1. K.C.C. 2. A.C.C. } Interchangeable. 3. A.O.C. } 4. K.O.C. 5. K.C.Te. (rare).		With strong currents. 1. A.C.C. } A.C.C. 2. K.C.C. } K.C.C. 3. A.O.C. 4. K.O.C. or A.C.C. = K.C.C.

Significance of the Reaction of Degeneration. The ganglionic cells in the anterior horns of the spinal cord act as nutrient centres or reservoirs, for the nerve fibres which are given off from them are for the muscles which these fibres innervate. Any lesion which destroys the anterior ganglionic cell of the cord will cause de-

generation of the corresponding fibres and muscles. If a lesion severs the connection of a motor nerve in any part of its course, that portion of the nerve and the corresponding muscles below the site of the lesion will undergo degeneration and atrophy. Lesions having other anatomical sites do not cause degeneration. Hence, when R.D. is obtained we are absolutely positive that either the motor nerves or the anterior ganglionic cells are diseased. So long as the anterior ganglionic cells or the nerves remain intact no R.D. can be obtained.

In anterior poliomyelites, *e.g.*, the ganglionic cells in the anterior horns are destroyed. In consequence the corresponding nerves and muscles, atrophy and electrical tests show R.D.

In the severe forms of neuritis, in which the nerve fibres are destroyed, the electrical tests show also R.D.

In diseases of the brain or of the spinal cord which are accompanied by paralysis and atrophy from disuse, but which do not affect the anterior ganglionic cells of the spinal cord or the nerves given off from them, R.D. is never obtained.

In addition to its value as a diagnostic aid, electricity is also extensively employed in the treatment of a large variety of diseases. Owing to their ability to cause muscular contraction, both galvanism and faradism are used with good results in many conditions of muscular paralysis and weakness. A point of importance to which especial attention should be called is, that that kind of electricity should be employed which produces the best contraction. If, for example, in the case of a severe facial palsy the contraction of the affected muscles can only be brought about by the anodal pole of the galvanic current, it would be foolish to employ the cathode or to persist in the use of the faradic current. I have known a physician to use faradism for a long time in a case of facial paralysis when the muscles and nerve would only respond to galvanism. It is needless to say that his treatment was inefficacious.

It is impossible within the narrow limits of a short paper to indicate all the conditions in which electricity may be profitably employed as a therapeutic agent: hence, only some of the most useful application will be made.

Owing to the ability of the galvanic or constant current to decompose water into its gaseous elements (electrolysis), the galvanic current has been much employed in cases where it is desirable to get rid of abnormal tissues, such as tumors, etc. By means of properly constructed needle electrodes the current is conducted into the growth, the watery constituents of which become decomposed and the tissue disintegrated.

In skin diseases, the electrolytic action of the galvanic current has been taken advantage of in the treatment of various facial blemishes, as hypertrichosis, nævi, angiomata, etc.

In uterine affections, the treatment by electricity has been greatly advanced by Apostoli, Tripier and others. The "Kidder"

high tension coil has been found of very great value in painful conditions of the pelvis. Electrolysis always plays an important role in uterine neoplasm.

There is hardly a department of medicine in which electricity in its various forms has not been found to be of great service. The physician should consider the possession of suitable galvanic and faradic appliances as important almost as that of the thermometer and the stethoscope for diagnostic purposes, and more important frequently than all of the remedies in the pharmacopœia. There are many cases that can be treated *only* by electricity in one of its various forms, and the physician who would neglect this valuable therapeutic aid in such cases is certainly not doing the best for his patients.

A summary by "Engelmann" (*Journal of Electro-Therapeutics*, May, 1891) of the most important factors by which the properties of the electrical current are changed should be carefully studied by the beginner.

GALVANIC	FARADIC
VARIES WITH	
Intensity; number of elements.	Intensity; distance between primary and secondary coil; influenced less by electro-motor force of generating element.
Pole; negative, alkaline, fluidifying, stimulating, positive, acid, coagulating, sedative.	Pole; slight difference, negative, more irritating, painful, positive, less painful, more serviceable for deep application.
Time of use.	Time of use.
Constancy.	Number and length of interruptions, method of increase and decrease.
Size, shape and material of electrode.	Size, shape and material of electrode.
Metallic for chemical effect.	Metallic for irritation.
Moist, non-metallic for distribution and penetration.	Moist, non-metallic for penetration.
	Length and thickness of wire in secondary coil.
	High tension, effects on nerves by long secondary coil of fine wire.
	Quality and low tension, effect by short coil of heavy wire.
	Primary current more penetrating with metallic electrode.
	Secondary current more penetrating with moist non-metallic electrode.

"Engelmann" also summarizes the therapeutic effects of electricity which may serve as a sedative, stimulant, counter-irritant and vesicant, muscle contractor, antispasmodic, tonic, promoter of development, absorbent, chemical cautery, coagulator, electrolytic, hemostatic, promoter of hæmorrhage, decongester and medicator.

It is not supposed that this sketch will be considered more than the merest outline of the subject. Having mastered these ele-

mentary principles, the physician is earnestly urged to consult some standard work for a more detailed and extended exposition of electro-diagnosis and electro-therapeutics.

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MILITARY INSTRUCTION AT NETLEY AND ALDERSHOT.

THE following notes as to the work entailed from taking a course of military instruction at Netley, England, and elsewhere, sent by Dr. W. Nattrass, of Toronto, will interest our readers who are of a military turn of mind. The Doctor, in writing home, says:

"It is nothing but work here. I am at work on the parade ground every morning at 6.30, and we keep it up (calling off for breakfast and lunch, of course) until four in the afternoon. I am not looking on, but live up with the rest of the 'Tommies,' sometimes going through the mazes of squad and company drill, or a few battalion movements. At other times I am assisting in lugging around 'the wounded' on a stretcher. It is a little trying at times, especially when the sergeant gives the command 'Lift wounded,' and then lets you stand there until he gives the detail for reaching the nearest ambulance waggon or collecting station. Then you are started off, when someone makes a blunder or false step before we get half way, when 'As you were' rings in your ears, and you feel like dropping the poles, wounded and all. At last we reach the ambulance waggon, get our patients stowed away comfortably, back-board and tail-board—for there are both—up and snugly fastened when we get the command 'Unload wounded.' It is funny to watch the perfectly mechanical way in which 'Tommy' goes about his work. It makes no difference to him whether he is doing or undoing.

"The other day we went down to 'Scroggie's Bottom' for a lesson on building kitchens. We made the Aldershot Gridiron Kitchen, which is large enough to cook for a whole battalion. The place was a sort of summer-dried marsh, hard as a rock. It had all to be picked out, but the Tommies worked away and at last got it completed, lugged some water from a neighboring well, filled their kettles, banked them round and started a fire.

"Then we all fell in and listened to a brief lecture from the Major in command. On the command 'Fall out,' 'Fill in trenches,' Tommy went at it again to fill in, apparently just as happy in the undoing as in the doing.

"One day we went out for a field day exercise with a bearer company in active service. Wounded men were strewn about the battlefield.

"We were sent out with stretchers and first aids, temporarily bound up their wounds (each man was labelled with the wound he

had received), and carried them to the collecting station, where we placed them in the ambulance waggons drawn up to receive them. Then we drove off about two miles to a dressing station, out of range of fire, where the most seriously wounded were further attended to and operations performed, after which they were reloaded in a fresh relay of ambulances, waggons plying between the dressing station and the nearest field hospital, which was supposed to be some five or six miles away. The whole thing was very instructive and realistic, especially so as a brigade of artillery had gone out an hour or two before us and had taken up a position on some rising ground about a mile or so in front of us, and were pegging away all the time we were there (this without any previous arrangement on our part). The whole thing had quite a warlike appearance."

. . . . . .

"This is an excellent course, and although I am as tired as a dog every night, I am enjoying it very much and feel I will know something about my branch of the service when I leave here. The army medical corps here is a perfectly independent unit. Its organization is as complete in itself as any other battalion. The C.O. is a Surgeon-Colonel Allen, who gives us an hour every day on administrative work, orderly room, internal economy, military law, etc. Major James takes us in waggon drill, pack animal drill, cacolet drill, pitching field hospitals and bearer company camps, their organization and administration.

"Capt. Parry takes us in stretcher drill, hand seat drill, loading and unloading wounded on improvised vehicles and into railway cars, etc., while Capt. Julian the adjutant, looks after our squad, company and battalion drill.

"There is only one other Canadian officer in the class—Surgeon-Major H. S. Birkett, of the Victoria Rifles, Montreal.

"The officers are all exceedingly kind to us—made us honorary members of their mess and gave us a dinner the first week we were there. They all seem anxious to do everything they can for us in making us comfortable and in imparting instruction.

"I expect to go for a few days to Salisbury Plain to see the manœuvres, which this year are to be on a very large scale."

. . . . . .

Writing from Aldershot, Dr. Nattrass says:

"Our course is now drawing near the end. We expect to get away next week for the Salisbury manœuvres, and then on to Netley. We will not be many days there, as we have only two or three things to look up—the X-ray as a localizer, and a combination or attachment for telling the distance of the bullet from the surface of the body; the treatment of bullet wounds in the Royal Victoria Hospital.

"I have been very much pleased and interested with the course here. There is a lot of special drill in connection with it. Not the least interesting was a practical illustration this morning of how

to handle the cavalry wounded; how to mount, dismount and carry the wounded with a disabled arm or leg, or, when not too seriously wounded, to sit on his horse alone. This appealed to me as more practical than the cacolets or chairs for mule transport of wounded.

"The officers at this depot have been exceedingly kind to us and have shown us everything they possibly could. Major James, who has had us chiefly in hand, said to-day that we had nearly exhausted all his resources. The colonel said also the other day to a lady friend of ours that 'those Canadians are too energetic, they keep us thinking what we shall give them next.'

"Neither have they neglected us in a social way. My wife being here, through the kindness of the depot, we have seen a good deal of the social side of Aldershot. The seniors have been just as friendly and kind as the juniors, which to us with a Canadian training, was a little bit surprising. The colonel's wife gave us a garden party, and Mrs. O'Dwyer, the wife of Surgeon-General O'Dwyer, P. M. O. of this district, gave us a picnic a few miles into the country.

. . . . . .

"We are off to the manœuvres in a few days. Fortunately Dr. Birkett and I are going to be supplied with a mount each. We were much amused yesterday when the colonel informed us of this. He said, 'You Canadians can get anything you want while we slave away and get kicks for half-pennies.' He said the G. O. C., His Royal Highness the Duke of Connaught, had given instructions for horses for Birkett and me, to be supplied on the grounds when we arrive, also permission to ride anywhere over the battle-ground.

"We expect this will be very interesting and instructive, as several new features in connection with the army medical service are to be put to a practical test. The work of the army surgeon and stretcher bearers is bound to vary with the improvements of modern warfare, so that old methods will have to give place to newer ones. These demonstrations we expect to find both useful and interesting.

THE ANTITOXIN PATENT—WHY REFUSED FIVE TIMES, YET FINALLY ALLOWED.

BY J. R. JOHNS, M.D., PHILADELPHIA.

AN examination of the official file wrapper and contents of the United States patent granted to Behring on diphtheria antitoxin, under date of June 21st, 1898, gives us the clearest idea of the subject, which is at present attracting world-wide attention. It appears that since January 11th, 1895, Behring filed five different applications, each being presented promptly after its predecessor was refused. The first lacked very materially in clearness, but like the other four claimed for the would-be patentee the discovery

and perfecting of "a successful plan or process by which diphtheria antitoxin can be secured upon a large commercial scale." This claim is specially stated in the second application as an elucidation of the intent and purpose of the first, and is defended by argument in the last three. In the same application we find the clearest statement of what is not claimed in the following words: "This invention does not cover a method of medical treatment (which is not patentable). While innoculation to immunize is known, no one before the invention of this process has gone beyond establishing general scientific principles. I lay no claim in underlying scientific principles, as those were evolved by many."

The main argument advanced to sustain the claim is the fact that the applicant was awarded the "Alberto Levy prize" for the discovery of diphtheria antitoxin. This, it may be remarked, is offset by the fact that the French Academy of Science prize was awarded conjointly to Behring and Roux.

The points in law scored against the applicant by the special examiner are, substantially, as follows:

1. The process for which patent is claimed consists of methods of which applicant is not the sole nor first inventor. It is an elaboration of basic principles which are the results of the labors and discoveries of many, and hence is not patentable.

2. The process for which patent is asked is simply a particular application of a general process which is part of the professional knowledge, and applies to the production of other antitoxins than that of diphtheria. The applicant is not the sole inventor, and the process is not patentable.

3. The elaboration of a process so as to make it operative for commercial purposes, when the principles underlying it are common knowledge, is not a patentable novelty.

4. The substances produced by the process for which patent is claimed, can not be described by its physical or chemical properties, but only in terms of results obtained when medicinally employed, and for this reason is not patentable.

5. A method of medical treatment is not patentable. Diphtheria antitoxin is produced by and for a method of medical treatment.

6. The Alberto Levy prize expressly states that Behring and Kitisato published the results of *their* labors, hence either alone was not inventor.

7. It appears that a similar material was patented in England by Aronson under date of February 1st, 1894, hence the applicant is not the sole operator in this field.

The last application was finally rejected by the special examiner, March 19th, 1898, on the grounds of the counter-claim above stated. Four days later the claim was taken before the Board of Appeals and allowed, because, forsooth, the process referred to has been instrumental in very much reducing the mortality from diphtheria. Now it remains for the Supreme Court to decide whether this is sufficient ground for a patent.

The matter is one in which every American citizen should be profoundly interested. The manner in which domestic medical journals have already taken up the subject editorially, shows in what general esteem diphtheria antitoxin is held by the medical profession.

In his native country Behring could not possibly receive a patent, and the fact that he was allowed such a grant in the United States is a lasting reproach upon our patent laws, or their interpretation. Had the domestic product proven inferior in a single particular to the Berlin product, there would seem to be a semblance of an excuse for the least encouragement of this inhuman monopoly. But such is not the case—indeed, is the reverse. American producers have taken the initiative in every improvement that has yet been made in antitoxic serum. Concentrated and standardized serums originated in Philadelphia, and are now known the world over. Only within the last twelve or fifteen months have they been on the list of Berlin antitoxins. Again, the foreign product has never yet compared favorably with the domestic in clinical results, doubtless because of the facts already stated.

Bearing these facts in mind, the gross injustice of any Act which closes American laboratories in order to give an inferior imported product an exclusive monopoly, becomes strikingly apparent.

TORONTO GENERAL HOSPITAL.

In the early survey of the present site of the city of Toronto, various portions of land, consisting of about 399 acres, were set apart for the purposes of a general hospital in different parts of the town. This had lain unused until 1817, when a Minute in Council was passed ordering that these lands should be given in trust to certain persons to carry out the design of their allotment. At the close of the war of 1812-14 the sum of £4,000 was also given for the purposes of a hospital by the Loyal and Patriotic Society, which had been organized at this period to provide for the widows and orphans of those slain in that war, this amount being the balance of its funds which had not been disposed of. With this sum a building was erected in 1819 by Mr. John Ewart, on the block bounded by King, John, Peter and Adelaide streets. It was 107 feet long, 66 wide, and cost £3,000. It was left unused until 1824, when, owing to the destruction of the Parliament Buildings by fire, it was used as such by the Government.

In 1829 it reverted to its original purpose, and was opened in August of that year for the reception of patients. Here it remained for a number of years, until the land on which it was situated having become very valuable, it was decided to erect a more commodious building in a less frequented part of the town. The pres-

ent site of the Hospital was then selected, and in 1854 the central portion of the main pile of buildings was erected after a design by Mr. Wm. Hay. The Hospital continued in operation until 1868, when, owing to lack of funds, the trustees were compelled to close the institution for the reception of patients on the 1st of August of that year. A vain appeal having been made to the City Council for assistance, the condition of affairs was brought up for consideration before the Local Legislature, with the result that the management of the institution was changed, and instead of a directorate composed of three Government trustees, one member of the Board of Trade and one of the City Council, the welfare of the institution was confided to a Board of Trustees of five members, made up of three Government trustees, the Mayor of the City of Toronto, and a member elected by the subscribers to the Hospital funds.

BIRD'S-EYE VIEW OF TORONTO GENERAL HOSPITAL.

Assisted by the provisions of a Provincial Act of Parliament, through which such institutions receive aid in proportion to the extent of improvements carried out, the management soon had the affairs of the institution on a much firmer and surer financial basis. Thus encouraged, the Hospital was again opened in August, 1868, about one year after its closure.

The new directorate found abundant opportunity for the direction of their energy in attending to the improvements, or rather repairs, which were then found absolutely necessary; the floors had settled, the wood of the galleries had decayed from wet and lack of paint, the roofs leaked and the drainage was in bad condition. These and other marks of decay, the care of the Board, though crippled by lack of funds, soon repaired. Direct improvements were not to be thought of in the face of such pressing neces-

sities. But in the year 1875 aid came from an unexpected quarter; through the generosity of the late Mr. Erlandson, of Port Hope, and Mr. Gentle, of Montreal, the sum of $16,000 was given to the Hospital, which enabled the trustees to make many very necessary and important alterations and improvements. Heating by steam instead of by stoves, as formerly, was now introduced, bathrooms and closets were erected, kitchen conveniences perfected, an increased supply of water obtained, a better drainage system provided, and reception rooms for outdoor patients built.

Again in 1877, through the liberality of Messrs. Cawthra, Gooderham and Worts in donating a large sum to the Hospital, the western division of the main body of the Hospital was erected. This portion was considerably enlarged in 1885 by an important extension to the west.

In 1878, following the advice of Mr. Inspector Langmuir that the various hospital charities of the city should be amalgamated under one management, the Burnside Lying-in Hospital and the Andrew Mercer Eye and Ear Infirmary were erected on the Hospital grounds as part of the General Hospital of the city.

In 1882 the building called the "Pavilion" was built from funds donated by Messrs. John Macdonald, Wm. Gooderham, and others, for the purposes of abdominal surgery. To this portion of the establishment an extensive addition has lately been made, particulars of which will be found in the description of the Hospital.

Description of the Hospital Buildings.

The Hospital (a bird's-eye view of which we reproduce for our readers), facing south, occupies the block bounded by Gerrard, Spruce, Sackville and Sumach streets, and with all these additions and extensions comprises six separate buildings with a capacity of 400 beds. The main pile of buildings, which to a careless observer would seem to be one long structure, is in reality made up of three distinct divisions. The central portion with its three wings running north is the original building of the General Hospital, built in 1854, but since improved and enlarged. The western division, built in 1877, is the earliest of the additions made to the main portion, and is at present used as the nurses' residence, and for other hospital purposes to be afterwards mentioned; whilst the eastern division comprises the added Andrew Mercer Eye and Ear Infirmary, and the Medical Superintendent's residence fronting on Sumach Street.

Extending under these three buildings is one continuous basement, the portions at each end, corresponding to these divisions of the main pile of buildings, being united to the central portion on the west by a half underground tunnel, and on the east by a similar passageway. Here the ground space of the Hospital may be best viewed in its fullest extent. In the basement, beginning at its western extremity and under this division, are situated the

nurses' dining-room, kitchen and pantries, and the work-shops. Under the central portion, with its wings extending north, are situated the upholsterer's room, the general kitchen with its cooking range, the servants' dining-room and bedrooms, the furnace, coal and china rooms, and in the wing the machinists' rooms and storage rooms for coal, groceries, meat, milk, and vegetables. Under the eastern division lie the waiting rooms for eye and ear patients, servants' parlors and bedrooms, and the carpenter shops.

Throughout the length of the basement is a tramway which connects its different divisions and facilitates the conveyance of the heavier articles from one part of the institution to the other.

Above the basement the building rises to the height of four stories with five towers, the central being upwards of one hundred feet in height, from which a splendid view of the city, Lake Ontario, and the surrounding country may be obtained.

The Hospital is built of white brick, in Old English style, partly modified, its most novel and original features being the roofed towers before mentioned, which give a singular boldness of character and outline to the entire structures. These, though simple and free from extraneous detail, are grouped into a pleasing combination; whilst the battlemented turrets, gilded tower, crowns and railings produce picturesque effects of light and shade, glimmer and darkness, in the morning or evening sunlight.

Inside the general entrance, with its flight of stone steps and roofed glass porch, situated under the central tower, is the general hall, with its tablets on either side erected to the memory of generous benefactors, and at right angles to this, extending throughout the length of the building is the central main hall of the first floor. Directly opposite the general entrance is the stairway leading to the theatre for clinical instruction and operations, and to the upper wards, and on either side of this stairway the clinical clerks' room and students' laboratory. On the left of the general hall, extending to the west, are the general office, the Medical Superintendent's office and splint room, the Secretary's office and the dispensary. On the right, extending to the east, are the medical assistants' and the Lady Superintendent's apartments. In the wing, running north from the main hall, are the emergency ward and the ward for electrical treatment, and nine private wards distinguished alphabetically. In the east wing, the linen-room, etc., the Lady Superintendent's office, the medical assistants' dining-room, and private wards. Across the connecting passage in the western division of the Hospital are the nurses' parlor and reception-room and other apartments, which occupy all the first floor and upper flats of the most westerly portion of this division. The eastern extremity of the main hall terminates in the Andrew Mercer Eye and Ear Infirmary, and on either side of it are the consulting and operating rooms for eye and ear, nose and throat patients, both internal and external, the housekeeper's apartments, wards and medical assistants' apartments; whilst above on the second floor are the dining-room and

wards for patients in this department of the institution. On the second floor, reached by ascending the main stairway, are, on either side of the main hall of this flat, beginning at the western extremity of its central portion, male surgical ward No. 1 on the south side, male surgical ward No. 2 on the north, occupying the wing, and male private ward No. 3 connected with this. Adjoining ward No. 2 and on the same side of the hall, are the nurses' kitchen and dining-room for the patients of this flat. Opposite the stairway on the south side of the hall is semi-private male ward No. 4, and at its other end male medical wards No. 5 (occupying the wing running north), No. 6 and No. 7. Across the passage in the western division of this flat are the male surgical wards Nos. 20, 21 and 22, and a small operating room; whilst in the eastern division are, as before stated, the wards and dining-room of the eye and ear, nose and throat patients. On the third floor, also reached by the main stairway, are, beginning as before, female medical ward No. 9, female surgical ward No. 8 in the wing, and private ward No. 8½ connected with this. Adjoining No. 8 female medical ward No. 10, opposite the stairway female semi-private ward No. 11, then female medical ward No. 25, and male medical wards Nos. 13, 14, 15, 16, 17, the last four occupying the wing. Across the passage to the west is female medical ward No. 24, and to the east male private ward No. 35, and male wards Nos. 34 and 36 for medical and surgical cases. The fourth floor, with the wards in the towers, is reached by two separate stairways extending upwards from the basement and also by elevator.

In the central wing of the main building, extending north, is situated the large theatre for clinical instruction and for the reception of outdoor patients, with a seating capacity of over six hundred. Beneath this are the students' hat and cloak rooms, outdoor patients' waiting-rooms and a small theatre. To this portion of the building another large addition has been added, which is two stories high, thirty-six feet long by thirty-two broad. The lower flat is divided into rooms for the examination of outdoor patients and rooms for medical and surgical purposes and private examinations. The upper flat contains two laboratories and rooms for clinical clerks. This building, with its modern conveniences, offers unequalled advantages for pathological research and medical and surgical instruction.

Behind the central portion of the hospital is the laundry and its departments and the disinfecting-room, and north of these the mortuary with its autopsy theatre for post-mortem examinations and teaching.

The hospital is lighted by gas, heated by steam and hot water, and the danger of fire is reduced to a minimum by the regular distribution of extinguishers, hose, pails of water and fire-escapes at convenient positions throughout the institution; whilst to render ready communication possible throughout, its different divisions are united by the Village system of telephones.

The total number of beds now in commission is four hundred.

The following table shows the number and distribution of beds in each department at the present time:

	Males.	Females.	Special.	Private.	Total.
General.....	131	74	38	14	292
Eye and Ear....	21	13	..	6	40
Lying-in.....	..	25	..	4	29
Pavilion.....	..	30	..	9	39
Total.....	152	142	38	33	400

A large electric elevator runs from the basement to fourth flat.

Down-Town Emergency Branch, 105 Bay Street.

This much-needed institution, which was opened on the 1st of last month under such favorable and encouraging auspices, is situated on the east side of Bay Street, a short distance north of King Street. Being within less than half a mile of Union Station, old and new City Halls, the water front, and the principal hotels and warehouses of the city, the location is very central. It is nearly two miles down town from the General Hospital. Within half a mile of this centre are three miles of streets with double tracks, upon which the Street Railway system centres; and in the whole district is a heavy traffic of waggons, drays and vehicles of all kinds, including innumerable bicycles, all being prolific sources of causing street accidents.

The new building is four stories in height and has a frontage of forty-two feet and a depth of fifty-four feet.

The front is of red brick and brown stone and is enlivened with awnings over all the windows and portico and a Union Jack is floating above in honor of its opening day.

Basement contains kitchen, dining-room, fuel room and cold storage and other store-rooms.

Ground floor has a large receiving room for patients in the rear, which is reached by a covered roadway under the south part of the building through which the ambulance will pass and drive up to a covered entrance, free from obstruction from the street. This floor also has one large ward, an emergency operating room, instrument room and a reception room or office near the front entrance.

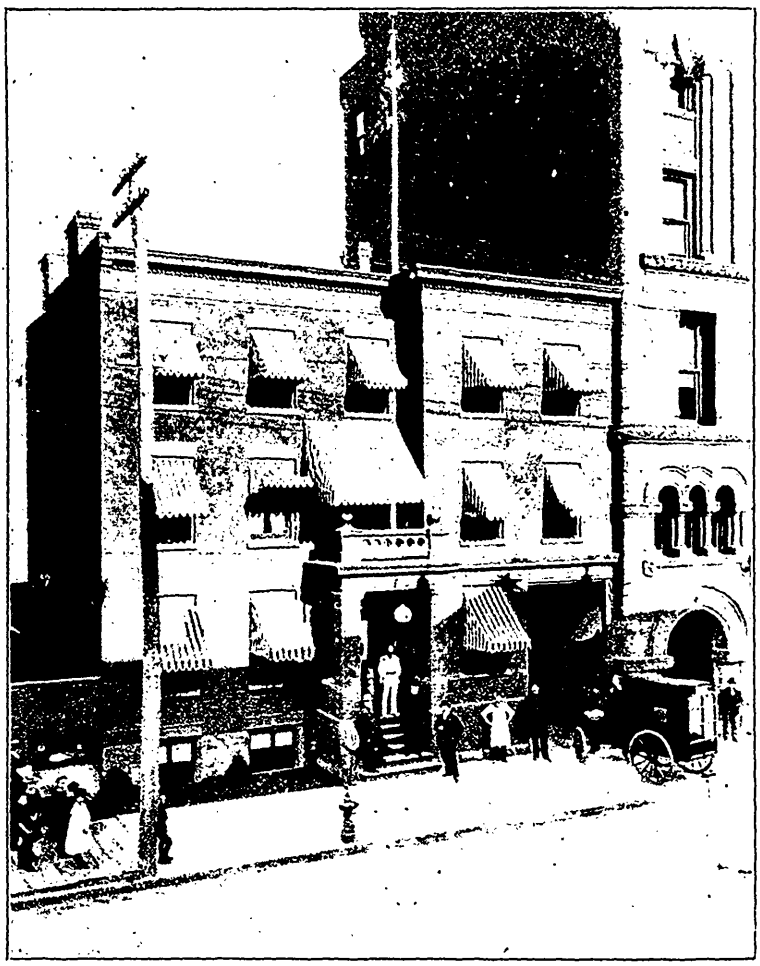
There are bathrooms and toilet rooms on all floors.

Upon the upper floors are two large wards, three private wards and complete suit of rooms for medical and resident staff, nurses, attendants and servants. A dumb-waiter runs from basement to top story. The building is heated with hot water, and is provided with gas and electric lighting. A fire-escape is fitted up in the rear from the roof.

The building is neatly furnished throughout and is equipped with all modern appliances suitable for the treatment of all kinds of accidents and casualties occurring daily in a busy city like

Toronto. The position of the Hospital is all that could be desired, and is certainly an ornament to the street. We reproduce for our readers here in half-tone a photograph of the building.

The Emergency Hospital, being a branch of the Toronto General Hospital, is under the direct management and control of the



TORONTO GENERAL HOSPITAL EMERGENCY BRANCH, BAY ST., TORONTO.

Toronto General Hospital Trust. The chairman, Mr. Walter S. Lee, and the other trustees, Mr. Geo. Gooderham, Mr. J. T. Blaikie, Mr. Hugh Ryan and the Mayor, with Dr. Charles O'Rielly, the Medical Superintendent, and Messrs. Gregg & Gregg, architects, are to be congratulated on the successful manner in which the

building has been constructed and arranged for the immediate care of the sick and wounded. The staff will be drafted periodically from the most experienced at the Toronto General Hospital, so that this institution, though two miles away from the General, is in reality, part and parcel of the *Mother Hospital* established in 1817. Dr. O'Reilly chose Dr. H. Anderson and Dr. T. Bradley to be the house-surgeons on duty for the first period. Miss Mitchell is head nurse, with an assistant nurse, ward tender, cook and housemaid.

This branch is open to all members of the profession in the city, who may at any time send in and attend cases of emergency and accidents taking place in their practice. This privilege will no doubt be largely used by the profession, and will add much to the popularity of this Institution.

Medical Women and Their Own Sex.

There is a hospital in Melbourne devoted to the treatment of diseases of women, the managing committee of which almost entirely consists of women. But when the resident appointments are advertised for competition, the vacancies are not filled up with young medical women, but young medical men. It is stated that the candidates are appointed by ballot, and if there be in the field a man of good appearance and engaging manners, he may rely upon the support of a majority of the lady managers. Within the past few months three medical women of ability have applied for vacancies in the resident appointments, but in each case a male competitor was chosen instead. These facts are significant, but they are not encouraging to those of the opposite sex who study medicine in Melbourne.—*Medical Press and Circular.*

A Novel Cure for Whooping-Cough.

There are many curious customs and superstitions existing in this enlightened age, and among the most peculiar are some practised by the peasants of Ireland for the cure of various complaints. In certain districts of that country whooping-cough is treated in quite a unique manner. A few months ago much amusement was caused by a case which came before the Coroner's Court of Belfast, in which whooping-cough was treated in a child by passing the sufferer three times under a donkey. Mr. W. R. Le Fann, in his amusing book on Irish life, relates several other instances of a like nature, and draws attention to the fact that nearly all the most popular remedies are for the relief of whooping cough or chicken-pox. Some donkeys are believed to be possessed of curative virtues in a much higher degree than are others. A man living in County Cork owned an animal which could boast of more than a local reputation. This man used to lead his donkey through the streets of the city of Cork, crying out, "Will any one come under my ass for the chin-cough."—*Pediatrics.*

Public Health and Hygiene.

. . . IN CHARGE OF . . .

J. J. CASSIDY, M.D., AND F. H. ADAMS, M.D.

EXECUTIVE HEALTH OFFICERS' ASSOCIATION OF ONTARIO.

THE annual meeting of this association was held at Ottawa on September 26th, in order that the members might have an opportunity of attending the sessions of the American Public Health Association, which began on the 27th. An important paper was read on "Inspection of Meat for the Local Market," by Dr. Cassidy.

AMERICAN PUBLIC HEALTH ASSOCIATION.

THE twenty-sixth annual meeting of the American Public Health Association was held at Ottawa, Ontario, September 27, 28, 29, 30, 1898.

The Executive Committee had selected the following topics for consideration: The Pollution of Water Supplies; the Disposal of Garbage and Refuse; Animal Diseases and Animal Food; Car Sanitation; Steamship and Steamboat Sanitation: the Etiology of Yellow Fever; the Relation of Forestry to Public Health; Demography and Statistics in their Sanitary Relations; the Cause and Prevention of Infectious Diseases; Public Health Legislation; the Cause and Prevention of Infant Mortality; Transportation of Diseased Tissues by Mail; the Period During which Each Contagious Disease is Transmissible and the Length of Time for which each Patient is Dangerous to the Community; Sanitation, with Special Reference to Drainage, Plumbing and Ventilation of Public and Private Buildings; report upon some Method of International Arrangement for Protection Against the Transmission of Infectious Diseases; Disinfectants; to Examine into the Existing Sanitary Municipal Organizations of the Countries Belonging to the Association with a view to Report upon those most Successful in Practical Results; the Duties and Responsibilities of the Healthy Man for his own and others' Health.

Upon all the above subjects special committees had been appointed. Papers were also received upon other sanitary and hygienic subjects.

At the time of going to press the officers for 1898-99 had not yet been elected. We shall give further details of the meeting in our next issue.

The Canadian Journal of Medicine and Surgery

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Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S. Eng., Toronto.

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

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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.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

VOL. IV. TORONTO, OCTOBER, 1898. NO. 4.

Editorials.

INSPECTION OF MEAT FOR THE LOCAL MARKET.

FOR a number of years, notably since 1884, the United States Government has enforced a system of inspection of all cattle, sheep, calves and hogs intended for export and interstate trade. The motive that prompted this action was founded on the commercial interests of the American people. As the meat industry, which ranks third in importance in the export trade of the United States, was threatened with serious opposition in Europe, it was deemed necessary to place it above all criticism or suspicion. Hence, through the agency of the Bureau of Animal Industries,

extremely rigorous laws were, and are being, enforced in the work of inspection. Through the operation of this bureau 102 registered abattoirs, distributed over twenty-six cities in the United States, were established in 1896, and 35,917,479 animals were inspected, of which 89,399, nearly one-quarter of one per cent., were condemned.

Strange to relate, outside of these inspection centres the butcher may practically do as he pleases, and nothing prevents non-inspected meat from reaching the markets of the large American cities.

Canadian export cattle are not inspected according to the rigorous methods of the Bureau of Animal Industries, and they are not equal, either in weight or quality, to the animals sent to Europe by the American stock raisers.

In Toronto there is an inspection of cattle by an officer of the local Board of Health. The report of the inspector for the year ending October 31st, 1897, shows that the following animals passed through the market for export and home consumption:

Cattle	134,335
Hogs	211,486
Sheep	90,497
Calves	5,762
Total	442,080

Of the above the inspector intercepted sixty-three cattle, which were affected with lumpjaw or other tumors. These were slaughtered and, if the disease was found to be entirely local, the affected parts only were destroyed. The carcases of four cattle and one hog were cremated. Thirteen cattle, eighty-seven sheep, ten calves and 132 hogs, which had been killed in transit, were consigned to the rendering tank to be converted into patent manure.

Of the meat intended for the local meat trade of Toronto, part is derived from choice beef cattle; but, unfortunately, the entire supply does not come from such a select source. Even the carcases of animals which die of puerperal fever and pneumonia are bought and dressed for the market.

Again, there were in 1896 in the Province of Ontario 920,346 milch cows. Now, when animals of this class have become useless for dairy purposes, as the result of wearing out under high pressure, old age, or disease, they are sold to drovers, who scour the country looking for such material, and shipped to Toronto or

some other town in the Province for slaughter and conversion into dressed beef and various kinds of sausage. Some of these cattle are sent to the regular cattle market and are there bought by butchers, while others are sent from the country direct to the little slaughter-houses in the city. It is quite likely that a high percentage of such dairy cattle are affected with tuberculosis, and some of them in an advanced degree. At present, however, no means are available to the consumer for discovering the existence of that disease in animals intended for slaughter. The owner of an animal may suspect that it is tuberculous; he may, in fact, have diagnosed that disease by the tuberculin test, but he keeps his opinion to himself and sells the animal in the local market to the best advantage. The condition of the city slaughter-houses is variously represented, an inspector of the local Board of Health stating that they are not nuisances, while a leading city veterinarian says they are extremely filthy and ill-kept, so much so that "if the people of Toronto knew the horrible surroundings and the disgusting conditions of the places where their meat is dressed, they would feel too nauseated to eat it."

If to protect ourselves against such neglect and wrong-doing we admit that inspection of cattle before slaughter and of meat before marketing are necessary, we are confronted with the question as to what system will best fill the requirements of the situation. The answer is that in many places (more than six hundred in Germany) there are municipal abattoirs, in which it is required that all the slaughtering shall be done. The preliminary inspection of animals intended for slaughter, and the passing of the meat intended for the local market, are easily secured when the work is done at one place, but they cannot be done by the most efficient and energetic inspectors if animals are being killed in thirty slaughter-houses at one time. An abattoir is not a very expensive affair. It is stated on the authority of the Provincial Board of Health of Ontario, that an estimate of the cost of an abattoir and pens, 50 by 20 feet, calculated for a population of five thousand, according to Toronto prices would be $1,572.50. At the Western Cattle Market, Toronto, an abattoir has been erected at a cost of about $50,000 by a private individual. It is a substantial brick building, and is fitted with the needful requirements, including an excellent system of cold storage. The accommodation is sufficient to provide for the dressing of two hundred carcases of cattle a day. It may be used for a small fee by the city butchers. There is no inspection of

meat. A simple examination of the cattle intended for slaughter, and a subsequent inspection of the viscera and meat by a competent veterinarian, would make this quite a model institution—so much so, indeed, that the City Council might, if it were legal to do so, order the butchers to use this abattoir and close their slaughter-houses.

In Ontario an Act for the Inspection of Meat and Milk Supplies of Cities and Towns, being chap. 63, 59 Vict., makes it optional for cities and towns to construct municipal abattoirs, simply requiring that any city or town establishing an abattoir shall construct and equip it according to the regulations adopted by the Provincial Board of Health, and have the inspection of animals and meat carried out as provided in section 108 of the Public Health Act. It may be stated, *en passant*, that this Act would be more workable if a section were introduced stating that "when an abattoir shall have been established in a municipality all the butchers shall be obliged to stop using their slaughter-houses; and all butcher's meat sold in the municipality shall have been dressed in the abattoir." So far, not one of the 745 municipalities of Ontario has provided a municipal abattoir. The capital of the Province, might be supposed to set an example by initiating this important reform; but, so far, the Toronto City Council, though requested to do so, has not taken any action in the matter. Certainly, however, if the people of Toronto wish to have the assurance that the meat served at their tables is free from disease, there is no other method than to request the City Council to provide an abattoir, in which all animals intended for the meat market shall be examined before slaughter, and the meat inspected by a veterinarian before it is marketed. There are other important sanitary improvements which would follow the establishment of a city abattoir. At present there are about thirty slaughter-houses in the city. The offal and the blood at these places are collected every evening by a contractor, who removes them to an establishment where they are converted into a fertilizer. As these slaughter-houses are mostly situated in the suburbs of the city and the offal is removed every day, there is no malodorous nuisance in the populous portion of the city. From the standpoint of the meat trade, however, a city abattoir would offer superior advantages, in the interest of the butcher as well as his patrons.

It would do away with the poor, badly equipped, badly managed slaughter-houses, which in many cases are nuisances in their respective neighborhoods. It would make it unnecessary to drive

cattle through the streets, a practice that blocks traffic, frightens people, and at times occasions serious accidents. It would give small butchers the advantages enjoyed by the wholesalers; they could use the facilities of the large slaughter-houses, which are superior to their individual establishments, and the cold storage system could be used by all, with economy to the dealer and advantage to the consumer in the increased wholesomeness of the meat. The offal and the condemned organs and carcases could be disposed of to better advantage.

Moreover, it has been shown by repeated trials of this system that, instead of increasing the cost of meat, it tends to reduce it. A large system can be conducted by co-operation between butchers at less expense than when each has his own establishment. The European system of municipal ownership is undoubtedly most desirable. It has been found that the rentals from abattoirs are sufficient to pay the running expenses and to afford a reasonable return on the investment. The whole system is not only an advantage to the consumer of meats, but it subjects the butchers to no hardships whatever, and makes it more convenient and cheaper for them to conduct their trade. Although the butchers may be in favor of the seeming privileges which they possess at present, we feel confident that, after they have examined the question from every side, they will decide for an abattoir, *in their own interest* as well as for the advantage of their customers. Should this opinion be verified, we may expect to see established in Toronto a system of inspection, based on common-sense, not vexatious to those who have cattle to sell or expensive to those who prepare meat for the market, and such as will commend itself to those who wish to improve the public health. J. J. C.

TREATMENT OF THE MORPHINE HABIT.

DR. PAUL SOLLIER, in *La Presse Medicale*, gives some very instructive views on his method of treating patients, who have for many years been addicted to the use of morphine. When regularly injected in a continued manner, morphine causes, after a considerable time, a more or less important diminution of the activity of the nervous system, and a very marked slowing of the processes of glandular secretion. When morphine is rapidly withdrawn, there is frequently a resumption of the glandular functions; but this

does not happen immediately in all the organs at the same time, the different phenomena appearing one after the other. Most frequently perspiration and sneezing open the scene, accompanied with yawning. Then diarrhœa appears—at first ordinary fæces, then pure bile, afterwards loose motions, half bilious, half fæcal in character; mucous vomiting (gastric juice), then bile, where there is any, appears after the diarrhœa has started and stops before it. Spermatorrhœa appears afterwards, then salivation and muscular cramps. Each glandular apparatus begins operations in its turn, without any determined order in this succession of phenomena, which varies with each person and depends on the different degrees to which the different organs of the body are impregnated with morphine. The mechanism by which the system rids itself of morphine appears to be an epithelial and endothelial desquamation of the impregnated mucous membranes. These processes may be renewed during six or eight weeks after abrupt withdrawal of the drug, and when complete correspond to a *restitutio ad integrum* of the affected organs. Assuming that these premises are correct, it follows that the stronger the reaction of the organism the more abundant will be the desquamation at first, and the more rapidly will organic regeneration be brought about, the more quickly will the system renew itself in its elements, the more favorable will be the course of convalescence, the more completely will health be restored, and consequently all the more will the chances of a relapse be lessened. Just as in the infectious diseases, in which the return to health is more perfect, when the disease has pursued a more acute course, on the condition of course that the organism is in a suitable condition to react against the infection.

Hence the object that one ought to propose to one's self in treating a patient with morphine habit is to favor as much as possible the elimination of the altered glandular elements, to provoke the appearance of each secretion, if slow in appearing, or if it slackens its work when begun or stops too soon. To meet these indications it suffices to excite glandular activity by every known method, while at the same time lessening the quantity of morphine. Purgatives, diuretics and diaphoretics ought to be used concurrently. Under the influence of these medicines, and the rapid diminution of the quantity of morphine, the resumption of glandular activity begins before complete removal of the drug is enforced. The effort of the organism at this time is therefore less intense, the emunctories being already prepared. Hence it results that the heart is not forced to perform excessive work, and the pain provoked by

the reaction of the organism, striving to free itself of its altered elements, is reduced as much as possible.

Dr. Sollier since using this method has not observed even in patients with diseased hearts any signs of heart failure or syncope, and still less has he been confronted with the collapse which frightens so many morphine-takers when trying to get cured, and physicians who have not had any experience in such cases. When the morphine-taker is thus prepared for weaning, not only is there no serious accident to dread, but it is useless to give him any heart tonic, such as sparteine or caffeine, for heart failure need not be apprehended. When, on the other hand, weaning from morphine is begun without having taken previous precautions to prepare for glandular elimination, one is exposed to what may be called a false elimination of morphine.

Dr. Sollier explains this as follows: Weaning from morphine should not be confounded with elimination of the drug from the system. Weaning may be put in force, but elimination may not follow. Should this occur, convalescence does not take place, or else comes on in a slow, torpid manner, and besides even fatal results may happen. To illustrate this point, two cases are selected from several others, which we give in Sollier's own words: "I was summoned one day to see a physician, a morphine-taker for several years, who was finally obliged to give up his habit in order to continue his practice. Not wishing to go to a hospital he had undertaken to treat himself at home, and naturally adopted the slow method. He lessened the quantity of morphine for six weeks in a progressive manner, until he was taking from a third to half a grain of morphine a day. But he was extremely weak; he was constipated the whole time, and had lost appetite and sleep; was nervous, and his heart was irregular in action; he suffered from a general atony, and the bodily functions, instead of resuming their offices owing to a reduction in the quantity of morphine, were slower than ever. Threatened syncope appeared, when he wished to stop the morphine entirely. After having treated him in the manner described above, I prepared him for weaning. Everything passed without an accident. After eight or ten days the patient began to regain his appetite and enjoy a little sleep, and I thought he was out of danger. But at this juncture the heart, exhausted by six weeks of slow suppression, exhibited the phenomena of myocarditis, which caused death in three days. Nothing in his organic condition justified such a result, which was simply the outcome of exhaustion produced by the long struggle

of the heart and of the organism to bring on elimination, which did not occur. In spite of what may be said to the contrary, slow discontinuance of morphine is more exposed to accident and more dangerous than abrupt stopping of the drug.

"In the second case the results were happier and the demonstration still more conclusive. The patient was also a physician, a morphine-taker for twenty-five years, and sixty-three years old. Obliged to suspend his lectures and his occupation on account of weakness, many of his colleagues advised him to stop the use of morphine at once. He made the effort at his own house. But total stoppage of elimination occurred; constipation was obstinate, and pains of a hyperæsthetic character all over the body prevented sleep or rest. Appetite was abolished, and alimentation became more and more impossible. To get rest injections of chloral were given, but without results. After a month the condition of the patient was unchanged, emaciation was very marked, and weakness was notable. It was concluded to call in my services for fear of a rapidly fatal issue. I easily discovered, that if the patient was weaned from morphine he was by no means eliminating the drug. I began, therefore, the same as if weaning had just been commenced, and proceeded to excite the functions of all the glandular organs of the body. Everything happened just the same as if we were dealing with a morphine-taker, who had begun treatment the day before. After ten days he got up. Appetite returned, and, after two months and a half, he was able to resume his work, having gained twenty-six pounds in weight, recovering his appetite, sleep and strength."

Dr. Sollier is opposed to the use of other hypnotics when treating a morphine-taker, and does not, therefore, use napelline or phosphate of codeine. Adjuvants, such as sparteine and caffeine, are sometimes used if the heart is weak. Antipyrine and bromide of potassium are used when there is a tendency to cerebral congestion. He is totally opposed to the use of sulfonal, bromidia, chloral, etc., and thinks that sulfonal is the most dangerous drug in this category.

The rational treatment of morphinomania, according to Sollier, consists in provoking and favoring as much as possible, the secretions of all the glands, in depriving the patient of the drug as soon as possible, in avoiding subsequent interference except to keep up elimination, and observing the patient through all the period necessary for glandular regeneration. J. J. C.

AMBULANCE CLASSES—A BEAUTIFUL FAD!

WITH the coming of the summer the voice of the lecturing physician on "First Aid to the Injured" was silent in the land; and evidently with his devotees it is out of hearing, out of mind, otherwise some of his precepts would have been put into practice when occasion required, as it has frequently during the past few months. Perhaps, however, we are censuring without just cause, so we pause to ask a question: "What has been taught in these "Ambulance Classes"? Has, for instance, the rescuing and the resuscitating of the drowning been made the subject of lecture and study? If so, passing strange, is it not, that any should perish, judging by the enormous attendance accredited to these classes. In fact, half the population seem to have been seized with a longing for a wider sphere of usefulness. Pity 'tis, that their fancy has taken such a morbid direction. The public press has kindly chronicled long lists of those who have "passed the necessary examinations." Here may we venture another question: "What are the graduates qualified to do?" Are their qualifications simply to stick a pin in a bandage, without causing the oftentimes ungrateful subject of their ministrations to "see stars"? One would be inclined to pity the long-suffering physicians who have so courteously given their time to a cause so apparently useless. Are these classes, that have been the fad of the past two winters, needed? They have been attended alike by all grades of society, from the ladies of Toronto, the Y. M. C. A. men, etc., down to the housemaids. Perhaps the wisest thing the physician can do is to bow the misguided ladies back into the social circles, which they so gracefully adorn, or pray for a new fad to become epidemic.

As for these Guild classes, what is the use of physicians bothering themselves to talk to housemaids? Little can be accomplished except a cheapening of the dignity of the medical men themselves. As for the young men mentioned, possibly better results might be obtained, as few "boys grown tall" trouble themselves to listen to lectures or learn anything unless they intend to make some practical use of the knowledge attained. However, we think these classes are not needed, and too often the truthfulness of the good old maxim has been proven—"Little knowledge is a dangerous thing."

We do not wish to censure sweepingly, as there are several classes in our community to whom lectures upon "First Aid to

the Injured" should be given; for instance, railway men, steamboat employees and all such as are exposed by reason of their occupation to unusual danger.

Nevertheless, we are firmly of the opinion that, thoughtlessly perhaps, a number of our physicians are lowering the standard of the medical man by freely imparting to the laity too much medical knowledge. If this fad continues it may soon come into vogue to consult one's patients as to what they would prefer as an antidote to poison, or perhaps, in a case requiring surgical treatment, a serious argument may occur between physician and patient, the latter feeling his superior knowledge, owing to his having been a "grad" of the ambulance class of the winter of '89.

As physicians, let us remember where we put ourselves we must stay. Already the wise worldlings engaged in other professions are laughing at our prodigal liberality; so let us, ere it is too late, keep the knowledge that it has taken years of study to acquire, imparting it cheerfully only to those who intend to espouse our noble calling as a lifework. We have already cast our bread to feed the stranger, for have we not given, with scarce a protest, the name "Doctor," to be framed, chromo-like, to enhance the barndoors of quackdom? W. A. Y.

THE ONTARIO MEDICAL LIBRARY ASSOCIATION.

AGAIN we desire to refer to the Library, and remind our city confreres that they have it within their power to make use of the volumes of the Association by the payment of a merely nominal fee, and that our country friends, by a post card to the secretary, may do likewise at the mere cost of the express charges. In addition to this the library of the Surgeon-General of the United States at Washington may, through the Ontario Medical Library, be consulted in the same way. A substantial deposit has stood in Washington to the credit of the Provincial Library, for the purpose of recouping it for the possible loss of any of its books. This arrangement has existed for some time, and yet few of the profession, excepting perhaps the officers of the Association, are aware of the easy manner in which they may consult the works of the largest medical library on the continent, with little or no trouble or expense, the secretaries of the two libraries doing a the work therewith.

The work and worry to the profession here in regard to consulting any book or reading up any subject is reduced to a minimum, thanks to the energetic secretary. It is not necessary for physicians to go themselves and look over shelf after shelf until they find what will help them. If they simply write or telephone the subject they wish to investigate the secretary will do the looking up and advise promptly of the result. It is a great comfort at times to be able to lay one's hand on the latest literature bearing upon some peculiarly puzzling case.

"THE CANADIAN PRACTITIONER" versus THE CANADIAN MEDICAL ASSOCIATION.

It was certainly no news to the profession when *The Canadian Practitioner* in last month's issue, in referring to The Canadian Medical Association, used these words: "We were never particularly enthusiastic over the meeting," going on to point out that the attendance was always small, and, in fact, to hint that the Association was rapidly losing its interest and dwindling into insignificance. In order to enlighten the author of the editorial in question upon the subject he strove to write about, we need only say that during the past five years the average attendance has been 114, and for the ten years previous to that the average number of members registered was but 90. It might be well if the editors of our contemporary were to mend their own ways before criticising, as by their consulting the members' register they will find that at least five years have elapsed since they last helped to swell the attendance roll. One of the gentlemen referred to might also, perhaps, promise fewer papers, but turn up more frequently at the meeting. Don't grumble, but come.

A MOVE IN THE RIGHT DIRECTION.

We are pleased to notice a new departure in the extern department of the General Hospital. Each patient on his first visit is given a blank form to be filled out and signed by a doctor or clergyman certifying that said patient is at present unable to pay for medicine and attendance. This certificate must be presented at each subsequent visit.

We congratulate Dr. O'Reilly on his good beginning in hospital

reform, and feel assured, now that he has taken the initiative, that he will continue this much-needed work and extend it to indoor patients who, in many cases, are imposing on both hospital and doctors to even a greater degree than the externs. The example of the General Hospital has been promptly followed by the Western, and it is to be hoped the other hospitals and dispensaries will soon fall into line. W. J. W.

WE have been honored by receiving recently a large number of original papers from many well-known writers of medical lore all over Canada, as well as the United States. This feast of good things we know our subscribers appreciate, as we are enabled thus to give them each issue between 70 and 80 pages of the most recent and up-to-date material procurable. Several papers, which we have in type at present, but owing to lack of space are absolutely prevented from publishing till next month, include "Progress of Medico-Legal Surgery," by Clark Bell, Esq., LL.D.; a paper by Dr. J. J. Morrissey, of the New York School of Clinical Medicine; "Infection and Serotherapy," by Edward Leberge, M.D., Montreal; "Diphtheria, with Special Reference to the Laryngeal Cases requiring a Choice between Tracheotomy and Intubation," by A. Gaudier, M.D., Sherbrooke, P.Q.; a paper by Ferd. C. Valentine, M.D., New York (the last three having been read at the Quebec meeting of the Canadian Medical Association).

W. A. Y.

DR. A. A. MACDONALD is again out for representation on the Medical Council for West Toronto.

DRS. G. A. PETERS, R. A. Reeve and K. C. McIlwraith, of Toronto, returned last month from England.

DR. GRAHAM, who recently moved on to College Street and has resided in the house until lately occupied by Dr. Geo. Carveth, intends leaving the city.

THE result of Toronto University Senate elections will be known in a day or two. Besides the former candidates representing the Medical Faculty, Dr. J. M. Macallum is in the field.

DR. J. O. ORR, of 337 Jarvis Street, will return home about October 22, and resume his general practice at his old residence. The doctor has been spending the greater part of the year in the hospitals of England and the Continent.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

HOW THINKING IS DONE AND OUGHT TO BE DONE.

To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY:

DEAR SIR,—Cabani's conception that "the brain secretes thought as the liver secretes bile" is erroneous. Bile is a tangible substance while thought is not. Had he said the brain produced nerve secretion, as the liver secretes bile, then his assertion might have had some scientific significance. The brain is simply the great nerve centre of the human or animal system. Until God breathed thought into the mind, at the same time as He breathed life into the inanimate brain, which, somewhat like the mainspring to the watch, set the machinery in motion that guides the circulation, the brain could never have evolved thought. The stomach can evolve as much thought when fruit-cake is eaten before retiring. Thought is not evolved by physiological and pathological changes directly, but the Deity in a human being takes cognizance of these changes and governs the mind accordingly. If thought were the product of physiological and pathological change, then thought must be a tangible substance. But what microscope has ever discovered thought as it has all proliferation? Man, therefore, is not only human, but divine. The life of God was breathed in and man became a living soul, with the capabilities of a free-will agency to enjoy independent thought. So that vain philosophy does not and never can, no matter how much research there may be made by so-called scientific materialists, locate the exact formation of thought in the human system. It is an extraneous element, altogether, that finds the brain a proper vehicle through which to operate. The sun's rays are extraneous to the earth, and yet his rays very decidedly effect the earth. "Out of the same mouth proceed blessing and cursing." What physiological change could produce such opposite results at the same time? By the aid of the senses thought is, for the most part, if not entirely, occupied. And yet out of the heart proceed evil thoughts, murders, adulteries, etc. Sin being the disturbing element in man throws him out of harmony to God's will, and the thoughts can only be brought into harmony to the will or thought of God by the power of the spirit of God through the atonement of Jesus Christ and repentance and turning away from all sin and sinful suggestion. In this way alone can the evil heart of unbelief become changed. No medical treatment of that part of the heart of the most scientific character can, in itself, effect in the slightest degree that form of disease. The

Great Physician alone can cure that form of disease, and the sanctified common-sense of the truly scientific physician will at once recognize how one-sided and materialistic a physician is who undertakes the practice of medicine without being soundly converted to God and consecrated through His help to his profession. The time has come when the empiricism of divine healers, so-called, Christian Science and other forms of delusion, should be taken up and thoroughly exposed, and with your permission, Mr. Editor, I will write again shortly and do so.

163 Wilton Ave., Toronto. R. H. ROBINSON.

[We always appreciate hearing from our subscribers, but as this journal is purely a medical and surgical publication, we courteously request our correspondents to confine themselves to subjects distinctly pertaining thereto.—EDITOR.]

OBITUARY.

DR. GEO. W. SANDERSON died at his residence, 299 Huron Street, Toronto, on Wednesday, September 14th. He was born at the corner of Elm and Yonge streets, in Toronto, 72 years ago. His medical studies were carried on in Toronto and at McGill University, in Montreal, and after graduating from the latter institution he spent a year in Great Britain, taking the M.R.C.S. degree. Returning to this country he commenced practice in Woodstock, where he speedily drew around him a large circle of patients. After some years he moved to Orillia, where, "a doctor of the old school," he ministered to the sick and suffering over a wide area of northern Ontario, at a time when the population was scattered and conditions of life in the district were primitive. About twenty years ago he retired from active practice and moved to Toronto. He was naturally of very robust constitution, but a succession of illnesses dissipated his stock of vitality. The severe physical exertion consequent upon his practice in the Muskoka district at one time gave rise to acute dilatation of the heart, which laid him aside for many months, but from which he apparently completely recovered. About five years ago he sustained a fracture of the neck of the femur, the slight resulting lameness continuing until his death. The accident which caused the fracture gave his system a shock from which he never fully recovered. Three times following the fracture he became so debilitated from extreme anæmia that his life was despaired of, but each time he recovered. His last illness, a persistent and uncontrollable diarrhœa, overtook him at a time when he appeared better than he had been for several years His wife, to whom he was singularly devoted, preceded him in death exactly four months. He leaves two sons (J. R. Sanderson, of London; F. G. Sanderson, of Montreal) and three daughters, Mrs. J. B. Wallace, of Orillia: Amy Louise Sanderson, and Mrs. (Dr.) Galloway, of Toronto.

The Physician's Library.

BOOK REVIEWS.

In order to show what an almost unlimited expenditure has to be made in the publication of certain medical works, we take pleasure in publishing a letter recently received by us from the well-known firm of W. B. Saunders, of Philadelphia, which explains itself and goes to show what a mine of medical knowledge this firm intend producing during the next few months in the shape of certain books:

PHILADELPHIA, *Sept. 7th, 1898.*

DEAR SIRS,—Encouraged by the large sale of the first two volumes of my new series of Hand Atlases (two editions of Jakob's "Internal Medicine" having been sold in less than four months), I visited Germany this summer and made a contract with the central publisher, agreeing to purchase from him one hundred thousand copies of the lithographic plates. There are not more than a hundred thousand physicians in this country, and this seems an extraordinarily large undertaking. When, however, you take into consideration the beautiful colored plates, which are produced by the most skilful artists obtainable in Germany, and the fact that the books are sold at a price which would have been impossible unless there had been a combination of some eleven publishers, it does not seem to me a difficult undertaking, as I am convinced that when the profession sees these works they will meet with a very large sale. The mechanical execution of these lithographs is of the very best, and the illustrations are equal to, if not better than, those in the larger atlases which heretofore have sold for from $30 to $40. I personally examined the plates which are now being produced for "External Diseases of the Eye" and the "Atlas of Skin Diseases," and found them marvels of beauty. By reason of my new contract the central publisher has agreed to insert in all new volumes an additional number of colored plates, thus making the newer volumes more beautiful than those that have already been published, and yet they are to be sold at the same price.

Besides the atlases which were sent to you this summer for review, I have sent you the revised edition of Da Costa's "Modern Surgery," the second edition of McFarland's "Pathogenic Bacteria," and I now have ready, and will send you in a few days, the second edition of "An American Text-book of the Diseases of Children" and "An American Text-book of Gynecology." Both of these text-books have been thoroughly revised and a large amount of new material added. I will also send you in a few days the fourth revised edition of Vierordt's "Medical Diagnosis." This work has been entirely re-written and very much enlarged. Vierordt has gone through three very large editions in this country, and is now a recognized standard text-book on medical diagnosis both in this country and abroad. Dr. Stuart's translation has met with a very good reception in the English market, where I have placed several large editions. You will also shortly receive the second edition, revised, of Griffith's "Care of the Baby" and Butler's "Materia Medica and Therapeutics." I am pleased to announce that we have almost ready, and will publish on or before October 1st, Stengel's "Text-book of Pathology." This will be a work of about eight hundred pages, and will be a model text-book on modern pathology. We will also have ready on or about the 16th of October a "Text-book of Obstetrics," by Barton Cooke Hirst, Professor of Obstetrics at the University of Pennsylvania. This will be a profusely illustrated text-book on obstetrics, of about eight hundred pages. Dr. Hirst has embodied in this book a series of original illustrations which he has collected in his work as Professor of Obstetrics at the University of Pennsylvania. I expect these two works—Stengel's Pathology and Hirst's Obstetrics—to be leading text-books on their

respective subjects during the coming season, as they are both written by men of well-known ability in their respective lines.

"The American Pocket Medical Dictionary" will be ready before the first of October. This is an entirely new work, designed as a handy volume for physicians and students. It will contain a total of over twenty-six thousand words, or about five thousand words more than any other pocket dictionary. It will form a handsome volume bound in full limp leather.

We shall have ready, on or about January 1st, "An American Text-book of Diseases of the Eye, Ear, Nose and Throat," edited by Drs. de Schweinitz and Randall; also Church and Peterson's "Mental and Nervous Diseases." Both of these books will be well illustrated.

I shall be glad if you can give me a preliminary announcement of these forthcoming works, together with a special notice of my Medical Hand Atlases. I more particularly desire to call the attention of physicians in this country to the hand atlases, and to explain to them how it is possible to supply these books at so low a figure. I would be pleased, however, if you can lay stress on the fact that the initial cost of publication in the making of the expensive colored plates is borne by eleven publishers instead of one, as is usually the case, thus making it possible to produce them at so low a price.

With kind regards, and best wishes for the coming season,

I am, yours sincerely,

W. B. SAUNDERS.

International Clinics. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynæcology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology and Dermatology, and specially prepared articles on Treatment and Drugs, by professors and lecturers in the leading medical colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by JUDSON DALAND, M.D., University of Pennsylvania, Philadelphia; J. MITCHELL BRUCE, M.D., F.R.C.P. (Lond., Eng.); and D. W. FINLAY, M.D., F.R.C.P. Volume II., Eighth Series, 1898. Philadelphia: J. B. Lippincott Co. Montreal: C. Roberts, 593A Cadieux Street.

Rapidly following the publication of Vol. I. of this Eighth Series of "Clinics" comes Vol. II., and it is a difficult matter to pronounce as to which is the better. Amongst the contributors to the second volume are such men as Drs. A. H. Barbour, of Edinburgh; Seth Scott Bishop, of Chicago; Henry C. Coe, of Bellevue Hospital Medical College; Prof. Ewald, of Berlin; Webster Fox, of Philadelphia; Pearce Gould, of London, England; W. W. Keen, of Jefferson Medical College; T. P. Pick, of London; A. Pinard, of Paris; Nicholas Senn, of Chicago; and last, but not least, our own fellow-townsman and litterateur, Dr. Alex. McPhedran, who has contributed a chapter of no little importance, entitled "The Treatment of Acute Failure in Chronic Heart Disease" Under the same heading of treatment, amongst other articles, come also the Treatment of Tuberculosis, by Prof. Grancher, and the Operative Treatment of Sclerotic Catarrh of the Middle Ear, by Dr. S. S. Bishop. Under the heading of Medicine, there is a most instructive lecture by Prof. Ewald, the author of the work on diseases of the stomach, entitled "Some Forms of Gastralgia." Dr. James Cantlie also contributes a chapter in Medicine on that disease found so much in China, some parts of India and the Straits Settlements, known as psilosis or sprue. We also read carefully and with interest a lecture by Dr. F. M. Crandall on Malarial Fever in Children. The contributors to the department of Neurology are Prof. R. Von Jaksch, who gives a clinical lecture on Toxic Polyneuritis, and Dr. T. W. Mott, who has an article on Arsenical Neuritis. Drs. Nicholas Senn, W. W. Keen, Pearce Gould and T. Pickering Pick are the principal writers under the department of Surgery. Dr. Senn treats of the Etiology and Classification of Cystitis; Dr. King, on a case of appendicitis, where the appendix became attached permanently to the bladder like a third ureter. Mr. Gould lectures on the Choice of Method of Amputation, and Mr. Pick on Syphilitic Stricture of the Rectum. Under Gynecology

and Obstetrics Dr. Barbour, of Edinburgh, comes to the front with an exceedingly able chapter on a case of labor in a universally contracted pelvis, which shows great study and original thought. Dr. Coe, under this heading, speaks of sterility. Ophthalmology is contributed to by such well-known men as E. Treacher Collins, L. Webster Fox and W. C. Boteler. Dr. W. Milligan contributes an article on Suppurative Inflammation of the Frontal Sinuses under Laryngology, and Dr. J. F. Schamberg, in Dermatology, gives a chapter on the Varieties, Causes and Treatment of Baldness. As we have already said, the series of International Clinics will be found to be a *multum in parvo*, the great advantage being that it is not like a large work, where one has to turn from one volume to another to complete an article, but each volume of "Clinics" is a separate and distinct work by itself, worth a great deal more than the price of the book.

William Stokes. Masters of Medicine Series. By his Son, SIR WILLIAM STOKES. Illustrated. New York: Longmans, Green & Co., 91 and 93 Fifth Avenue.

It would be difficult to find the biography of an Irishman dreary reading. In this one the writer aims to tell of William Stokes, the physician, but somehow the reader is more impressed by the many glimpses of William Stokes, the man. In early life, in Dublin, surrounded by a social atmosphere which contained the wit and culture of the time, the love of poetry and art were innate in him. The author understands the charm of letting his subject prove self-revealing, and so, many of his letters are given in the book, full of exquisite descriptions of places visited. He felt the beauties of nature and described them with a keenness and tenderness beyond the depth of ordinary men. With all his intense love of mankind he had strong dislikes toward some: for instance, his opinion of Thomas Carlyle (his guest for a short time in 1849) seems worth repetition. Of him Dr. Stokes said, "I have met many *bores*, but Carlyle was *hyper boream*."

As a physician, lecturer and writer Dr. Stokes played an active and creditable part. His first small publication was on "The Use of the Stethoscope." It is of interest in this machine-made age to notice how long it took before the stethoscope, then a novelty, was adopted by the profession. Perhaps his greatest work was a treatise on the diseases of the chest. In his work on the heart and the aorta, the Cheyne-Stokes respiration is referred to. In the section on cardiotherapeutics the principles are found which are practically identical with those now known as the Schott method. A leisure hour could hardly be spent to better advantage than in reading the busy life of this Master of Medicine, lived in a land for which "God has done so much and man so little."

W. A. Y.

Clinical Lectures on Diseases of the Heart and Aorta. By GEO. WM. BALFOUR, M.D (St. And.); LL.D.(Edin. and St. And.); F.R.C.P.(Edin.); F.R.S. (Edin.); Consulting Physician to the Royal Infirmary, Edinburgh, etc., etc. Third Edition. London: Adam & Chas. Black, 1898. Toronto: The Publishers' Syndicate, Limited.

Considering the reception given to former issues of this work, it is little wonder that Dr. Balfour found it necessary to rewrite it and publish still a third edition. The name of the author and his standing as a clinical teacher is in itself quite enough to induce a large sale, and when it is known that to this edition considerable additions have been made and parts entirely rewritten and brought right up to date, it can be safely said that this edition also will soon be inprocurable. The rules given for the use of digitalis in order to prevent any cumulative effect in cardiac disease, as also regarding the employment of potass. iodidiv in cases of aneurysm will be most useful to practitioners. The mere fact that all the cases referred to are those which came under the author's notice, and which in many instances were afterwards corroborated in the mortuary, will go to show that he has not attempted in any way to draw upon his imagination, but give fact and fact only. We cordially recommend the work to professors, clinical teachers and practitioners alike.

A Manual of Modern Surgery, General and Operative. By JOHN CHALMERS DA COSTA, M.D., Clinical Professor of Surgery, Jefferson Medical College, Philadelphia; Surgeon to the Philadelphia Hospital. 386 illustrations. Philadelphia: W. B. Saunders, 925 Walnut Street. 1898. Canadian Agents: J. A. Carveth & Co., Toronto.

That it is the greatest encouragement to an author on any subject to find it necessary, so soon after the launching of the first volume on the market, to publi '. again and practically re-write his work, goes without saying. Dr. Da Costa, in the first edition of this manual, made up his mind that his book should not be anything like a system of surgery, and that he should not attempt to cover the field in so complete a manner as would be required by a work comprising surgery in its entirety; so he decided, and that wisely, that it should be classified neither as a text-book nor a compendium, but as something between the two. In many parts he has re-written the chapters, adding many things which are quite new, and leaving out parts which were not as practical as he considered requisite. Chapters have been added upon the female breast, the spleen, the pancreas, wounds as inflicted by modern projectiles, and one on the use of the Roentgen Rays. Dr. Da Costa has described such operations as Bodine's method of colotomy, Senn's method for re-section of the hip-joint, methods of gastrostomy, Owen's operation for hare-lip, and others. Altogether we are fully satisfied that the second edition will meet with as flattering a reception as did the first, as in every point it is excellent.

Atlas of Syphilis and the Venereal Diseases, including a Brief Treatise on the Pathology and Treatment. By PROF. DR. FRANZ MRACEK, of Vienna; authorized translation from the German. Edited by L. Bolton Bangs, M.D., Consulting Surgeon to St. Luke's Hospital and the City Hospital, New York; late Professor of Genito-Urinary Surgery and Venereal Diseases, New York Post-Graduate Medical School and Hospital. With 71 colored plates. Philadelphia: W. B. Saunders, 925 Walnut Street, 1898. Toronto: J. A. Carveth & Co.

That any publishing house is able to turn out such perfect work in colored plates as is represented, for instance, in the case of plate 60 B, that of hereditary syphilis as manifested in the teeth of children, says a great deal for the care shown in the books they turn out. The subject of syphilis and venereal diseases is one in which a quick, and at the same time, absolutely correct diagnosis is everything, so that in reading the matter presented by the most recent writers on the subject, illustrations well and correctly produced make a very great difference. The author in this atlas has not attempted to go into the subject of venereal diseases in its entirety, but has wisely dealt with the more common conditions met with, leaving out whatever does not interest the ordinary practitioner. His cases, as given, came almost all from under his own care in his hospital at Vienna.

Will the business manager of Meyers Bros.' *Druggist*, that excellent journal published at St. Louis, Mo., permit us to congratulate him on the showing his department makes every month.

One of the most appreciated of our exchanges is the *Medico-Legal Journal* of New York, edited by Clark Bell, LL.D. Every issue is full of the most interesting material, and shows work to no end on the part of the editor. There is no practitioner who takes any interest in medico-legal work who can afford to be without this publication.

One of the handsomest souvenirs of Toronto we have ever seen is one recently received from Mr. W. S. Carter, the editor of the *Locomotive Fireman's Magazine*, an organization which honored Toronto by its convention last month. It contains well on to half a hundred magnificent half-tones of the principal buildings in Toronto reproduced on coated paper. It is a credit to Editor Carter, and will be, we are sure, appreciated by all recipients.

[PUBLISHERS' DEPARTMENT.]

PURITY IN FLOUR INDISPENSABLE.

BY B. F. ALLEN, M.D.

NONE of the many articles which make up the household food supply is of more vital importance than flour This may seem a self-evident proposition. Yet it happens that it requires to be repeated over and over again, because even thoughtful people seem to forget it. Only the other day an eminent German hygienist addressed a warning on this subject to the housekeepers of the fatherland. "It is strange, indeed," he said, "to find people who are fastidiously careful in other respects willing to accept, without question or examination, almost any flour that is offered to them. Do they realize the danger that lies in such indifference?"

This is the same spirit in which the *American Journal of Health* has for many years addressed its readers. Flour is used in almost every culinary process; it is indispensable in the preparation of food; it forms what may be called a general basis for the dietary. Therefore, it might seem inconceivable that it should receive from so many housekeepers such secondary consideration as it does.

Health cannot be preserved in a household which uses persistently an inferior grade of flour. Housekeepers need to be told what are the best grades in order that they may escape the consequences of mistakes which occur through ignorance. Mistakes caused by wilful carelessness, however, will bring their own punishment. We are constantly examining the various brands on the market and have found none more eminently worthy of confidence than "Ogilvie's Hungarian Patent Flour," offered by W. W. Ogilvie, Montreal, Canada. The method we follow in testing a brand of flour is to secure a sample of it as if it were required simply for household use, to submit this to a chemical analysis, and then to adopt the report made by our own experts. It is impossible for anyone not connected with the staff of this journal to be aware that an examination is being made, and when we publish the facts to the world they form a statement which cannot be contradicted truthfully by anyone. No consideration prevails with this journal excepting the welfare of its readers, nor do we seek to serve any interest whatever but theirs. We endorse "Ogilvie's Hungarian Patent Flour" for the reason that it is nutritious in a high degree on account of its large percentage of gluten; that it is free from an undue percentage of starch, and so does not dispose to indigestion; that it has a distinct uniformity of high quality; that it does not sour; that it produces bread which is both light and white. These are the distinctive characteristics of a first-class flour, and their absence denotes the inferior kind. The stomach will inevitably suffer from

poor flour, which is the dearest in the long run. Sour bread ferments in the stomach, and finally dyspepsia results. Go on eating sour bread and you will become an incurable dyspeptic. And bread, biscuits, piecrust, etc., made from inferior flour are unpalatable as well as injurious. The reinforcement of nervous force—in short, every physical benefit to be derived from good flour may be ensured by the use of "Ogilvie's Hungarian Patent Flour." Remember that there are all kinds and grades of flour, retailed at all sorts of prices. You get what you pay for, and the best kind is the only really economical kind. No more superior flour than "Ogilvie's Hungarian Patent Flour" can be found on the market. It deserves the housekeeper's patronage for the reasons we give. We desire to see it used because it is excellent; not for the sake of its manufacturer, but for that of the large public we seek to serve.

HYPERIDROSIS, BROMIDROSIS—THEIR TREATMENT.

ONE of the frequent affections, for the relief of which the family practitioner is consulted, is hyperidrosis, though more frequently bromidrosis, especially as applied to the feet. Nothing can be more disagreeable to the sufferer from the latter complaint than a consciousness that his presence is obnoxious owing to this cause. In many instances hyperidrosis is due, not to lack of bathing or personal cleanliness, but is as much a disease as are eczematous eruptions due to gouty or rheumatic diatheses. It is in the warm months of the year that most suffer in this way, though many do all the year round. Sometimes this condition affects only the feet, sometimes the armpits, frequently the region of the genitalia, and in women, especially those who are plethoric, the region of the mammary glands. Though in a large proportion of the cases met with no constitutional cause can be discovered, yet if carefully searched for, it will be noticed that there is a condition of anæmia and faulty innervation, and in young girls even chlorosis present, the correction and relief of which by the ordinary remedies will perform a cure. There are, however, many others where the disease seems to be purely local in origin, and frequently, especially when in the feet, almost uncontrollable. Not only is there a hyperidrosis, but sooner or later the excessive secretion becomes foul and disagreeable, rendering the condition one of bromidrosis. The result of this condition in the pedal extremities, sooner or later, is tender feet, rendering locomotion nothing less than painful. The feet swell, the ankles even becoming puffy. In spite of the sufferer wearing fine, pure woollen socks or stockings the condition persists, very frequently to such an extent as to cause the eruption of small blisters or vesicles, which on breaking cause the formation of numerous little ulcers and lay up the person in bed frequently for quite a time. The question that comes to the mind of the physician

in treating so chronic a case is what form of treatment had better be adopted. He, we will say, has tried very frequent salt bathing, the use of dusting powders, astringent lotions, even the application of Hebra's diachylon ointment, with any number of tonics administered internally, even going so far as ordering belladonna in some form to check the excessive sweating, and then has been given little or no relief. By turning to the question of the footwear the physician will find a means of giving great relief to his patient. There is no doubt that many boots are so badly made as to cause local affections of this kind. A system of ventilated shoes has recently been introduced into Canada and to which foot-gear the name of "Respira" has been applied. These shoes are so made that there is a perfect current of air circulating all round the feet all the time. The idea is certainly a capital one. Every time the person walks, the pressure of the foot on an insole of interspaced pure rubber causes a suction process and draws in air through an opening which is in the heel, and which opening can be closed so as to be perfectly air and water tight in cold or wet weather. As soon as the air is drawn in, it is pressed up through a series of holes in the inner sole and reaches the foot itself. In that way, perfect ventilation is given. It will be found that by the use of these shoes the wearer will no longer suffer from so distressing a malady, but on the other hand will get comfort and ease. To the medical profession the introduction by The Kennedy Co., whose headquarters for Toronto will be found in the Manning Arcade, King Street West, of such an article will prove a boon, and also a means of giving relief to a class of patients whose cases in the past have been in many instances difficult to treat.

WHOLESOME FOOD PRODUCTS.

THE modern tendency toward cheapness of price is primarily answerable for much of the adulteration which is so prevalent in every line of manufacture. The popular demand must be supplied, and to meet the existing conditions of things, articles of questionable merit are thrown upon the markets. In no other direction is this deterioration of wares working greater havoc than in the line of food products, as the impurities in such goods not only impose upon the purse of the consumer, but even strike at the very foundation of life itself. It is therefore the duty of every physician to inform himself concerning the purity of food products, as it is the duty of health journals to point out the dangers incident to the use of foods which may be impure and unwholesome, as well as to indicate purity and wholesomeness where such desirable qualities have demonstrated their existence. Hygienic publications in particular are relied upon to furnish such information to their patrons who look to such sources for guidance upon all matters relating to the well-being of themselves and their households.

Whilst the *American Journal of Health* has never hesitated to expose adulterations in food, it has always been desirous to pay tribute to pure food products wherever found, and whilst aiding its readers to escape the dangers of the one, it is ever ready to indicate where the purest and best in every line may be obtained. In keeping with such principles it is a pleasure to call attention to "Shredded Whole Wheat Biscuit," whith has been subjected to the most searching chemical tests with a result of demonstrating its intrinsic value and absolute freedom from all deleterious admixtures.

The samples experimented on were obtained in open market, hence were identical in quality with the goods sold the general consumer, hence every purchaser of this food product may rest assured that in taking such into his family he is insuring the household against the dangers incident to questionable or contaminated articles of food.

In addition to our analytical examination of this food product, we have caused to be instituted a searching investigation of the manufacturers, the Cereal Machine Co., Worcester, Mass., and the report made by editorial representatives assigned to such duty indicates that a more responsible and trustworthy establishment does not exist. Through the operation of our Secret Enquiry Bureau, we have ascertained that the greatest care and cleanliness prevails in the process of manufacturing their several lines of goods, which accounts for the high qualities of their products. Taken altogether, we have never come upon a purer or more wholesome and nutritious article of food, and in making it a subject of especial commendation we do so feeling that we are benefiting every housekeeper who reads these lines.

O. H. TYLER, M.D.

DR. W. P. CAVEN and Mr. Lloyd Wood have just returned from a trip South.

DR. T. S. WEBSTER is moving into a very handsome new house on Spadina Avenue, just above Knox College.

DR. J. MCMASTER has moved from 76 to 114 McCaul Street, the residence of Dr. Leitch previous to his moving to Spadina Ave.

DR. G. S. RYERSON and Dr. G. H. Burnham, of Toronto, attended the meeting at Buffalo, N.Y., of the American Electro-Therapeutic Association last month.

DR. J. J. CASSIDY attended the meeting of The Executive American Health Officers' Association at Ottawa last week, and took an active part in the work there.

DR. C. R. DICKSON, of Sherbourne Street, is to be congratulated upon the result of his year's work as President of the American Electro-Therapeutic Association, which met in Buffalo, N.Y., two weeks ago. Owing to the doctor's efforts the meeting was a distinct success. We hope to give a digest of the meeting next issue.