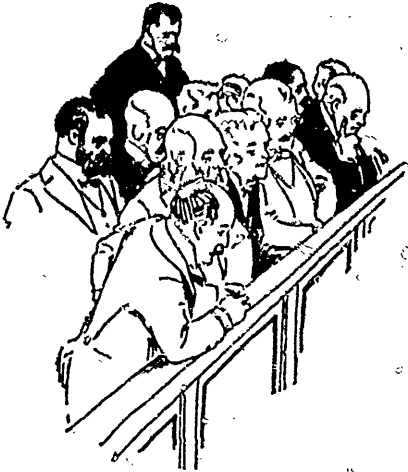


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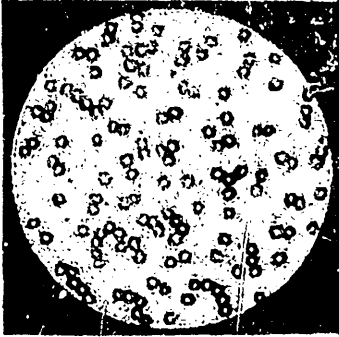
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**OHIO COLLECTIVE INVESTIGATION.**  
 —The collective investigation of the treatment of diphtheria and membranous croup in the State of Ohio for the twelve months ending February 28, 1897, conducted by the Board of Health, report of which is published in the Ohio Sanitary Bulletin under date of June, 1897, was unique and valuable from the fact that comparisons were made between those treated with and those treated without antitoxin. The year was especially favorable for such investigation since diphtheria was very prevalent during a large part of the year and an unusually large percentage of the cases were of laryngeal type. The investigation differed from others made concerning the same disease, also in the fact that all the cases were collected from one well-defined territory, and reports of all cases classed as diphtheria were requested. It is worthy of record that the Board undertook the investigation on a purely scientific basis, having

neither bias in favor of any recognized older course of treatment nor prejudice against any of the newer remedies. In response to over 6,000 blanks distributed through the friendly cooperation of the health officers of the cities and towns of the State, upwards of 3,000 cases of diphtheria occurring in the State during the year were reported. Among these there were nearly 400 deaths. About 500 cases which did not appear from the data submitted to be undoubtedly cases of diphtheria were excluded from the report. Nearly half (44 per cent.) of the cases included had been treated with antitoxic serum. In the latter group the mortality was 11.9 per cent. In the group of cases treated without antitoxin the mortality rate was 16.9 per cent. It is to be noted that many physicians reporting cases had employed antitoxin for the first time, and frequently only when other remedies had been tried without success. Mild cases in many instances



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became grave before the latter was substituted. Consultation cases quite generally received serum treatment and frequently resulted fatally because of the advanced state of the disease when specific treatment was inaugurated. For these reasons the rate of recoveries under antitoxin treatment is not so high as it should be. This fact is most conclusively shown in the report, since in 550 cases treated with antitoxin during the first or second day of the disease there was a death-rate of only 8.3 per cent. while in 218 cases first treated with serum after the fourth day the mortality was more than 24 per cent., which shows the importance of prompt administration of antitoxin. Antitoxin was also found of decided advantage in the 95 incubation cases. Two-thirds of those treated without antitoxin died, while of the cases treated with antitoxin but one-third died. More than half of the cases required but

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THE ALKALOIDS OF COD LIVER OIL IN THE TREATMENT OF PHTHISIS.—(*L. H. Warner, M.D.*)—Successful treatment is the end and aim of all practical medicine, whether preventive, curative or palliative, still it must be treatment and we must proceed by considering the arms at our command to fight with, and how best to use them in our fight with loss of weight in this ravenous dis-

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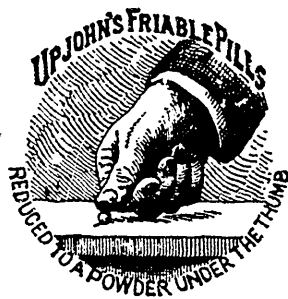
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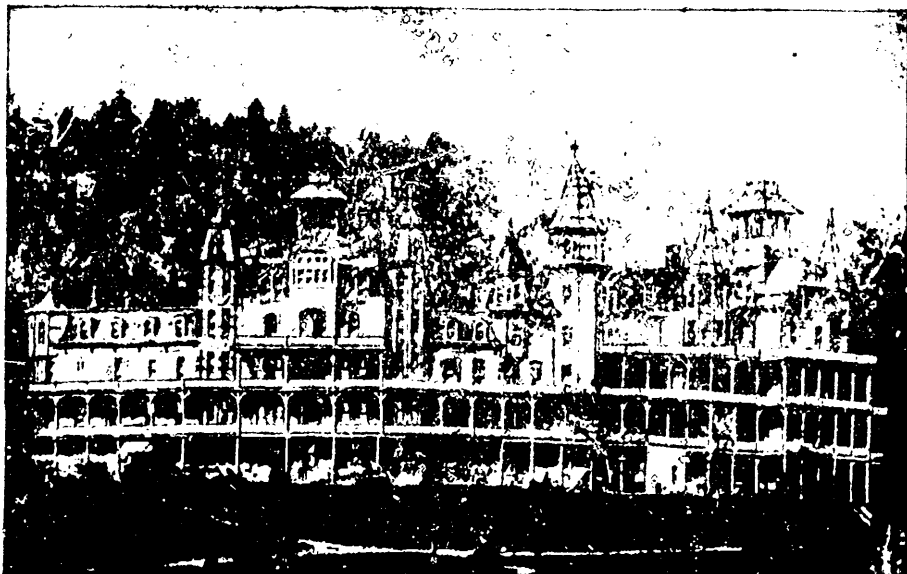
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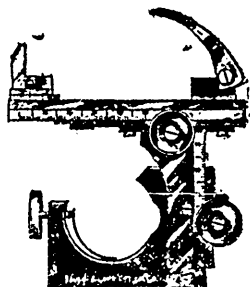
rest and blood contamination from absorption of septic matters.

Physiology and pathology teach us that if by any means whatever the supply of fat from the food to the blood is stopped, sooner or later the tissues must become disintegrated by oxygen. As long as the fat accumulated in the body can be spared for fuel and histogenesis the destructive process of the disease will be delayed. Fatty, starchy and albuminous articles are all capable of being converted into fat. By paying special attention to the administration of remedies which will aid the digestive organs in their functions we aid the emulsification process of fat which has to take place prior to its passing through the lacteals, mesenteric glands, and thoracic duct with the general blood current when it increases the amount of fat in the blood. With this fact before me, as well as the fact that a number of

practitioners have advocated the use of cod liver oil in the treatment of phthisis, I have made observations in a number of phthisical cases to note in which way this remedy would prevent the eight causes of waste as heretofore enumerated. Although by administering cod liver oil we introduce into the system a certain amount of fat, it is generally observed that by so doing we promote cause No. 7, and furthermore disturb the digestive organs. Dr. A. L. Loomis, in his work on diseases of respiratory organs, says: "As the future well-being of every phthisical patient depends upon his powers of digestion, avoid as far as possible everything which may interfere with the healthy action of the digestive organs." This one fact has led me to make researches as to the virtue of cod liver oil and I find corroboration in my results thus obtained by Dr. J. C. Wilson, whosays: "The physiological

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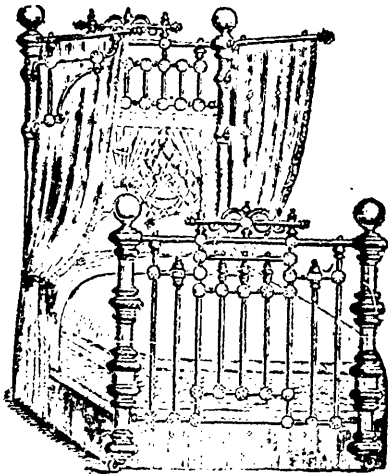
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action of fat is to slow up cell action, while the alteratives stimulate and accelerate cell action, aiding the rebuilding of tissue." The extractives or alkaloids of cod liver oil are alteratives and as such, prove tissue builders. By correcting the defect in digestion and assimilation, by rectifying the functions of the pancreas, the liver and the stomach, we accomplish the first step towards recovery. Cod liver oil is administered to this day in the belief that this form of fat will assimilate when other forms will not, and that it will make up the deficit of fat in a phthisical patient, but it remains doubtful whether these patients not only can take the oil in sufficient quantities per diem to supply the necessary amount of fat required daily for healthy nutrition, but

much larger doses to make up the arrears which were lost prior to treatment. Oil, even when it agrees and passes into the blood, does not completely represent the solid fats of the natural food and therefore cannot permanently take their place, but sooner or later the portal system becomes choked and refuses to absorb more oil, the oil disagrees with the stomach, it rises, it spoils the appetite and thus not only ceases to do good, but does positive harm by preventing the patient from taking as much food as the stomach might otherwise call for and digest. None of these disadvantages occur with the alkaloidal preparations of cod liver oil. The usual defects in primary digestion with phthisical patients is the combination of an excess of acidity

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with a feeble stomach and this is corrected by effervescing draughts of potass and soda, quinine, nuxvomica, etc. The compound syrup of hypophosphites promotes assimilation and contains the above enumerated drugs in combination, its curative power is largely attributable to its stimulant, tonic and nutritive properties, and this combined with the alkaloids of cod liver appeals at once as a suggestive remedy in the treatment of phthisis. Extract of malt will assist in introducing fat-forming and heat-producing materials into the system. Wild cherry is astringent, tonic and sedative; it increases the appetite and promotes digestion, reduces expectoration and cough, strengthens the digestive organs and reduces fever. With the above enumerated remedies we can take a firm stand to attack the eight causes of waste, of which I spoke in the first part of this paper.

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In anæmic phthical patients the administration of anæmiol in conjunction with the above preparation will prove of great benefit. I can cite innumerable cases in which the patient improved generally, gained in weight, etc., under the treatment by these preparations, while prior, under cod liver oil treatment, no improvements were noted.

ACTINOMYCOSIS CURED BY IODIDE OF POTASSIUM.—Duchamp (*Lyon Médical*) records the case of a carpenter, aged twenty-four, who had

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suffered for five months from a swelling in the left cheek, which varied from time to time in volume. Abscess formed and fistulous tracts developed, and opened on the cheek. There was marked trismus, and Duchamp suspected that a wisdom tooth might be the cause of the trouble. Under chloroform the wisdom tooth was extracted; its eruption was imperfect. No pus, however, escaped when it was extracted, and the tooth was healthy. None of the fistulous tracts led to the alveolus around the tooth. These tracts were curetted. The swollen soft parts were as tough as wood, and Duchamp now began to suspect actinomycosis. A few days later tracts formed in the neck, reaching to the sternum; those which had been scraped began to cicatrise; but the patient refused any further application of the curette. He took iodide of potassium, beginning with half a drachm daily, and finally taking over

a drachm and a half. At first cachexia threatened and the tracts increased, but at the end of two months they all cicatrised; the health was good and the trismus had vanished.—*Brit. Med. Jour.*

SANMETTO IN ENURESIS NOCTURNA.—Mrs. H. M. Robertson, M.D., of Middleport, N.Y., writing, says: "I have just received a letter from the mother of the girl to whom I gave the sanmetto for nocturnal enuresis, and she assures me that her little girl has no more trouble of that kind, nor has had for some time, so thinks she is cured. I feel sure this case has been cured by sanmetto, for it was an obstinate case, and did not seem to yield to anything before I gave her the second bottle of sanmetto, although I had tried all the usual remedies. I believe in giving credit where it is due."

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Different doctrines of pathology and therapy are advanced in the elucidation of hydrotherapy that necessitate its connection with the present clinic. (*Journal Amer. Med. Ass.*) This is only another proof of the importance hydrotherapy is obtaining in scientific medicine. America is not behind in the application of this department of medicine. It has long been practised together with massage, mechanical and manual Swedish movements at the Alma Sanitarium Alma, Mich. All classes of chronic organic and nervous diseases are given this advantage in addition to the regular medical treatment. It is usually impracticable to practice hydrotherapeutics at home except to a limited extent. The cost of equipment by the patient and physician is more than is desirable to expend.

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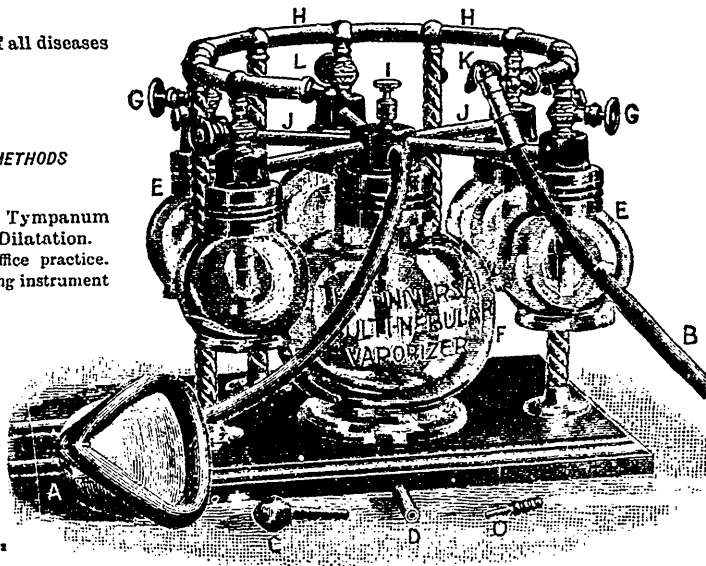
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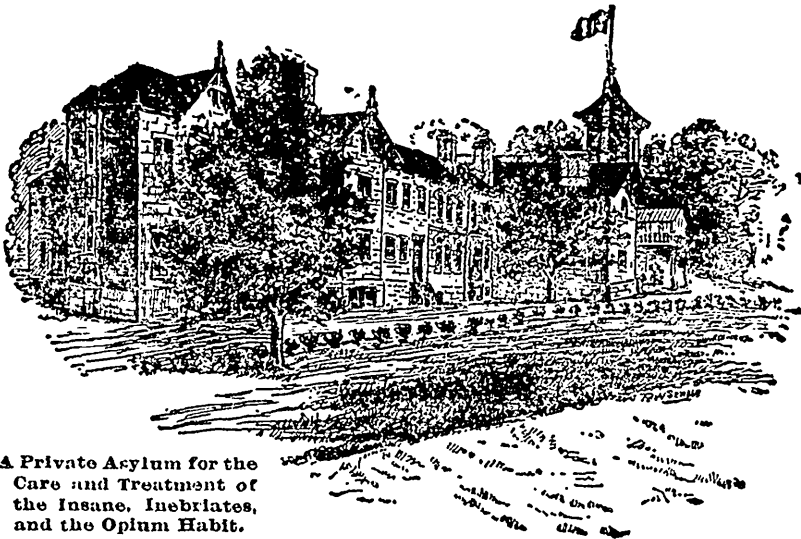
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Vol. VIII.

TORONTO, DECEMBER, 1897.

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**HYDROPHOBIA VERSUS COMMON SENSE.**

By DR. GEO. ARCHIE STODWELL, F.Z.S.

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Twenty-two centuries of medicine and civilization have inculcated little that is new regarding the dread malady known as rabies or hydrophobia. Aside from mere speculative theories, the literature thereof is wholly repetitious, being nothing but revamped collations from the essays of Aristotle, Dioscorides, Cælius Aurelianus and others of the pre-Christian era; further, the teachings of medical schools are obsolete since the superstitions of ancient Egypt and Greece still find place, and the wisdom of the teacher in this one matter is little superior to that of his pupils. This is necessarily the case since less than one-fiftieth of one per cent. of medical men ever encounter the malady, either real or supposed, in animal or man, and the opportunities for acquiring critical and practical knowledge are of the rarest. Worse than all, an ignorance that of itself is venial, is made criminal by the vaporings of an irresponsible general press.

When at a dinner party Sidney Smith was told a certain reverend prelate was unable to be present owing to the bite of a ferocious canine, he remarked he "would like to hear the dog's account of the accident," and it is often a matter of some wonderment what the opinion of our canine friends and "poor relations" must be when a community is laboring under a mad-dog panic, which invariably is founded upon ignorance fostered and aggravated by blind but well-intended efforts at repression.

"Formerly a mad dog was as rare as a black swan," says Prof. Chas. Bell Taylor. "It is an old saying we never have more than one at a time in England, and we have for years been altogether without any. Mr. Paritt, for instance, the Superintendent of the Dogs' Home for seventeen years, never saw a case. But latterly, under the influence of newspaper 'boom,' rabies

has become almost as common as measles; every village seems to have a specimen or two, and each dog owner looks askance at his own poodle expecting him to go mad on the morrow. Sixty thousand dogs have recently been slaughtered in the city of London alone; for months an average of two a day were beaten to death on the streets under the plea they were stark staring mad." So great was the glut of dead canines that it became impossible to dispose of them otherwise than by cremation. And meanwhile, amidst all this carnage, and up to the present day, the English Hydrophobia Commission was inoperative because it could not find a genuinely rabid dog to experiment with!

It is not within the province of this paper to either deny or affirm the existence of rabies as a disease *sui generis*, or to meddle with the doctrines of M. Pasteur, but, if possible, to shed light upon and afford information regarding a subject so shrouded in mystery and uncertainty as to be little understood, even by a respectable minority of medical men; also to allay in some measure the senseless alarm that is constantly arising from the publicity given to cases of most doubtful if not altogether spurious character—cases that have brought about the persecution of innumerable innocent, inoffensive canines, and death to a goodly number of the human race, including many suicides, and now and again a murder most foul, as illustrated by Herbert Maxwell in his "Sports of the Wild West," and also by the following Associated Press despatch:

"Cohoes, N.Y., Feb. 3, 1896.—Sunday night George Waterhouse . . . was taken ill and showed signs of hydrophobia. . . . The physicians, to end his sufferings, ordered he be smothered, *which was done*. He was bitten by a dog *six years ago!*"

Primarily rabies appears only as an affection of the dog family; secondarily and to less degree of other true carnivora. Infectious to some degree, it is *not* contagious, *i.e.*, it is communicable only by the bile of some meat-eating creatures bitten by another meat-eating animal that in turn has been infected by a third, and so on. To secure this infection, the disease must be fully developed in the creature offending, and the virus brought in direct contact with the circulation. Under all other circumstances the poison is innocuous; it may be applied to the flesh, or swallowed; and the flesh and milk of the creature producing it may be employed with impunity as food.

The saliva of the carnivora is the only factor that can ever communicate the disease; it alone contains the virus. This does not apply to the saliva of omnivora, not even of man. An inoculation by other assumed rabid material procures no results that do not with equal certainty accrue to infection with other septic (putrid), non-rabic material. This has been repeatedly proven by the ablest pathologists of the age, including such men as Rienzi and Amoroso, of Italy; Chas. Bell Taylor, of England; Spitzka, of New York, and (especially) Galtier, of France—all well and widely known, and the latter recognized as one of the most thorough, candid and able scientists of any age era. All discovered that while the saliva of rabid dogs *might* inoculate rabbits, guinea pigs, etc., the same product as derived through these creatures *will not*, in turn, infect the dog or any other animal! Experience and experiment, too, aside from the foregoing, demonstrate that rabid poison can be transmitted only by and through animals that depend upon flesh for sustenance, and that are likely to retain in and about the mouth and teeth particles of decaying or putrid matter that, of themselves, are capable of invoking septic processes (blood poisoning) and consequent fatal results. The foregoing leads to the inevitable conclusion that so-called hydrophobia in the great majority of instances is a spurious disorder, one that would never have

been accepted as specific but for the fact that an animal could, directly or indirectly, be linked therewith; also that it is the sequel of functional disturbances of the great nerve centres as the result of simple septic poisoning, or of the fears and imaginings of the patients and friends.

If we lay a wafer upon a bit of highly polished steel—a razor blade, for instance—then breathe thereon, and subsequently repeat the process without the wafer, the outlines of the latter will reappear; and this is true even when months have intervened since the first experiment. If, then, an inert object like a razor-blade is so impressionable to delicate influence, how much more impressionable must needs be the nervous system of man which is especially designed to record such influences! And when we fully consider the influence of shock, fear, joy, anxiety, sorrow—that persons have died suddenly in the midst of robust health, or in a few moments or hours, from these causes; that individuals by the unexpected loss of friends and possessions have been rendered permanently insane, thrown into convulsions, hysterias, epilepsies, catalepsies, and the like, reduced to imbecility, rendered paralytic, and otherwise invalided, perhaps driven to suicide—it can readily be surmised how cases of hydrophobia are manufactured and multiplied, especially where an animal can in most remote degree be cited as a factor. As medical science progresses and further insight is had into the phenomena of multiple maladies having their origin in, or that are made manifest through, the nerve centres, the conclusion is being rapidly forced upon thinking and observant minds that hydrophobia is a development of irritated or vitiated nerves, and may arise from numerous and invariable causes, none of which are necessarily specific. It is well understood by pathologists that changes may take place within the brain and spinal cord so affecting a single nerve of sensation as to procure precisely the same manifestations as are developed by irritants and poisons introduced into the body from without; and no physician, however able or expert, no neurologist however experienced or learned, has ever been permitted to fathom the mysterious workings of the nervous system under profound agitation of the mind, or to discover what influence this perturbed mind may incidentally exert upon nerve centres, and through them upon morbid agents that may already have been implanted in the economy!

The eminent Principal and Professor Dock, of Edinburgh, to the last day of his splendid life maintained hydrophobia is merely a nervous affection independent of the dog and all specific inoculation—induced by fright in fact. Baron Larry, famous among French surgeons and a member of the Emperor Napoleon's household, tells us he saw numerous cases of hydrophobia pure and simple, occasioned by gun-shot wounds, among soldiers in Egypt and Syria; and the same is chronicled by a latter-day colleague anent the war in Algeria. It is well known all the evidences of the disease may be induced by irritation of the medulla of the spinal cord, or the presence of tumors or other unnatural growths; and during the present season, a well-marked case of hydrophobia developed in a London hospital in a patient never bitten or wounded by any animal, as the result of impacted wax in the ear; another in Chicago, arose from the presence of a tape-worm; two in San Francisco in 1887 from chronic ague; an interesting case is recorded by Doctor Thomas Dolan, the well-known editor of *The Scalpel*, and formerly of the *Provincial Medical Journal*, developed by the larvæ of tape-worm, and a like experience accrued to Doctor Branfoot (*Indian Medical Gazette*). Such cases might be multiplied almost indefinitely. Again, one Stephens, in the United States, to uphold his belief that hydrophobia in man is "by fancy bred," never lost a chance of being bitten by a mad dog, and though thus wounded nearly threescore of times, still survives; and a German disciple, one Fisher, in like

manner was bitten nineteen times during two years. Finally, Mr. Mayhew, the eminent veterinary authority, whose opinions are most emphatically endorsed by Youatt and Sir Thomas Watson, tells us:

"Rabies is not only a febrile disease, but the dog is positively eaten up with raging fever; every fibre of his body is inflamed, and the eyes which glow like living coals in the early stage of the malady become bottle green, and slough and fall from their sockets ere death closes the scene."

From the foregoing facts and quotations, it may safely be said that true rabies is as rare as ever; that the present tendency is to accept the malady far too liberally; and that according to modern ideas it is only necessary a dog be ill, excited, eccentric, furious, or mentally afflicted, to be pronounced "mad!"

The proportion of canines, much less human beings, that develop rabies as the result of wounds inflicted by other and really rabid meat-eating creatures is excessively minute—less than two per cent. The poodle of the famous Hertwig was thus inoculated nine times without result; at the schools of Lyons and Alfort in France, dogs have been bitten from thirteen to thirty times in vain; and evidences innumerable might be cited where animals were thus attempted to be infected, all the way from six to sixty times without the slightest manifestation of the malady resulting. Grove declares that not more than one dog of twenty bitten is ever infected; Hamilton says one of twenty-one; John Hunter says one of twenty-four; Neumann one of thirty-five; and the extended experiments of Fabre gave but three infections out of 1,936 bites—yet all these statistics confessedly include many cases of false rabies.

All punctured, incised and cicatricial wounds, regardless of source or age, exhibit a tendency to reopen under impoverished conditions of blood and nervous system, such as scurvy, blood-poisoning, cancerous disease, the excessive ravages of vermin, etc.\* But the theory whereby the rabid virus, is supposed to lie dormant in the vicinity of the wound for periods varying from a week to a quarter of a century is too silly to require comment, involving as it does physiological and pathological impossibilities. It presupposes either the non-existence of capillary circulation, or the circulation at a complete stand-still without any of the manifestations of such phenomenon.† The period of incubation necessary for the development of any poison brought in direct contact with the circulation cannot well exceed forty days, and even this is an unconscionable limit; and a hydrophobia or other disease developing later, no matter what the attendant phenomena or symptoms, is never by any possibility rabid, but merely an incidental, or rather co-incidental development. It must be remembered that coincidences are much more frequent in this world than has ever been suspected or imagined; more frequent than facts, as many an experimenter in the physiological laboratory has found to his chagrin and sorrow.

More than *threescore and ten* diseases peculiar to humanity are constantly being mistaken for evidences of hydrophobia, those of brain and nerve origin

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\* It may not be generally known that the body louse in overwhelming numbers tends to provoke that almost invariably fatal malady known as pernicious anæmia, and the writer is cognizant of several deaths directly traceable to these vermin, and two, personally familiar to him, occurred respectively in the person of a soldier of the 27th Michigan Volunteer Infantry during the late war, and in a *lepero* of the city of Guadalajara, Mexico.

† If this were true, the loafer who engaged in a broil over night in which his optics became the target for his opponent's fists, would have no occasion for raw beef-steaks or vinegar and brown paper to mitigate the black eye he expects the next morning.

more especially. Usually in any malady it is all-sufficient to receive a suggestion of animal (canine) infection in connection therewith, to secure the fell verdict of "hydrophobia," when a fatal result is necessarily a foregone conclusion—the unfortunate invariably succumbs, a victim to his own fears and those of his indiscreet friends, attendants, medical advisers, etc. Under these circumstances, then, particularly, considering the meagre knowledge at his command, the physician who *ever* permits the fatal word *hydrophobia* (or rabies) to escape his lips, no matter what his individual convictions, save in the sanctity and secrecy of professional consultation, is *guilty of gross criminality*.

The universal ignorance of the medical profession, general, veterinary, or special, is no wise remarkable, since the little that has accrued to the knowledge of the disease during more than two thousand years, tends to cast discredit upon its existence as a specific disorder. The great Billroth declared he had viewed scores of cases termed hydrophobia, but was in doubt whether after all, he had ever seen a genuine case; "in not a single instance, either before or subsequent to death, could it be definitely established such was a veritable rabies." If this is the verdict of the greatest surgical pathologist of the age, a man whose medical erudition is the glory not alone of Austria, but of the whole world, what must needs be the value attaching to the contrary assertions so positively put forth by the average practitioner?

Unfortunately for both the human and the canine race, the word hydrophobia inspires the wildest terror, conducing to mental panic, and that, too, in spite of the fact the disease manifests *no symptom, or train of symptoms, peculiar to itself*, not even fatality, and it presents no phenomena that do not with equal certainty obtain to scores of simple maladies. *Post-mortem* evidences are equally fallacious, even in the hands of the most expert. The teachings that are relied upon are, for the most part, mere negations that with equal truth apply to a majority of the diseases flesh is heir to; and the morbid features upon which greatest stress is laid invariably are developed in the dog as a sequel to *excessive fatigue, abject fear, mental torture and overheating!*

Upwards of one hundred and twenty diseases afflicting canines are continually mistaken for rabies: First, because no one knows what rabies *really* is; second, for the reason but trifling attention has been given to the pathology of the dog, the efforts of veterinarians being confined for the most part to creatures deemed of greater importance and higher domestic and economic value. Among the most common maladies of the dog thus mistaken may be enumerated: Intestinal parasites, from which no canine is wholly free; foreign bodies in the stomach and intestines, such as bones, sticks, straw, spools, string, feathers, coals, buttons, leather, marbles, excrement, and other extraneous articles, which are almost always existent on *post-mortem*, a fact generally overlooked by all classes of medical men.\*

All the array of throat, nose, eye, ear, heart, lung, liver, kidney, rheumatic, muscular, intestinal, skin, and generative diseases; starving and improper food; ear-ache, tooth-ache, abscesses, fevers, *epilepsy*, St. Vitus dance (chorea), blood-poisoning, brain inflammations and tumors, certain mineral and vegetable poisons; and, finally, the whole category of nerve and mental maladies to which the canine race is *much more* subject than man—a fact almost unknown or wholly ignored!

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\*Spitka declares, in all his experience in the physiological laboratory, he never found a canine stomach that did not contain foreign bodies, and this the writer can fully corroborate after more than two hundred examinations; this condition is undoubtedly a sequel to playing the part of host to numerous intestinal parasites.

A dog under torture and persecution, or suffering from hallucination and the "tender mercies" (!) of the rabble or mob, is no way responsible for his acts, and under such circumstances, or when violently enraged, his bite is especially prone to develop blood-poisoning as a sequel. It is a well-known physiological fact that the saliva of all creatures, more particularly the carnivoræ and omnivoræ, contains poisonous germs that may be instantaneously abnormally developed under powerful emotion or other causes that stimulate the nerve centres from whence is derived the power to secrete such fluid. Injuries inflicted by the teeth of healthy human subjects, more than once have proved fatal to the individual so wounded; and undue excitement has been known to so develop poisonous qualities in the breast of the mother that the child, on partaking of sustenance therefrom, was immediately stricken with death.\*

*Per contra*, a wound inflicted upon the household pet by some stray canine is no warrant for the sacrifice of either. Dogs are jealous creatures, and one and all are given to resenting patronage or assumption of authority or superiority on the part of others of their kind; and especially is this true of vagrant street curs, the pariahs of canine society. How often one sees two strange dogs meeting, their tails stiffened, noses touching, and after growls interrogative or insulting, fall to fighting. Is there any doubt that they bandy epithets or indulge in criticisms that, if uttered by their biped owners would provoke wrath?

After more than a quarter of a century's experience as physician, student and teacher of comparative physiology and pathology, and likewise as dog owner and breeder, I must confess to never having viewed a case of *true* rabies. During this period, however, I have been brought in contact with some seventy odd cases of supposed hydrophobia in dogs, in several instances the unfortunates, alive or dead, being sent me by veterinarians for inspection, and in *every instance* careful examination and research revealed some commonplace malady! A few years since, at the hands of one of the most eminent veterinarians in North America, I received the heads of three dogs, killed by his order, as "unmistakably rabid," and, after receiving my report, he declared most emphatically he would never believe in rabies as a disease *sui generis* again: One head revealed a deep-seated brain tumor containing a leaden missile, the result of an old gun-shot wound. The other two exhibited brain abscesses as the sequel of the ear disease vulgarly called "canker."

Of half a dozen cases in the human, three were marked by fatality, but the autopsy gave conclusive evidence death ensued as the result of commonplace though unsuspected diseases. The three recoveries are so instructive, I present in brief outline:

Gentleman, forty-five years of age, was bitten six months before seizure, by an Irish setter: Hydrophobia (fear of water) and aërophobia (fear of air in motion) most marked and intense; total inability to swallow. All the evidences accredited to rabies were manifested in most profound manner. Patient made a remarkable recovery when it was discovered the offending canine *had not* been killed, as promised by his owner, but, on the contrary, was in the best of health. Had the dog been sacrificed as demanded, the sequel would assuredly have been less fortunate. In this case were involved the opinions of some thirty medical gentlemen, embracing the best talent of three States, as well as the verdict of a celebrated neurologist from an eastern city.

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\* Carpenter's "Comparative Physiology."

A lady of New Orleans, La., aged twenty-one, was bitten through the thumb by a pet terrier, the wound involving the root of the nail. Three weeks later intense pain was felt in the part bitten; the cicatrix reopened, the arm swelled, the gland thereof to the shoulder became inflamed, with red lines radiating upward from the thumb. Hydrophobia, aerophobia, abhorrence of food, throat spasms, etc., most intensely marked, while the sufferings and the nervous condition of the patient beggar description. Physicians at home and abroad unanimously concurred in a verdict of "rabies," and demanded the death of the dog. But the father, a retired physician, and, moreover, something of a skeptic as to the existence of such disease, declined "to sacrifice both girl and dog to what may be but a superstition, and at best is only an unproven fact." After lingering a fortnight in "trembling balance twixt life and death," the young lady recovered, while the dog died six years later of old age, having never given evidence of any malady more serious than temper.

The next case was pronounced one of "veritable rabies" by a score of physicians:

A stout, healthy, sensible, hard-headed Irishman, of thirty-eight or thereabouts, had been bitten by a pet cub-fox. Careful inquiry precluded any supposition of infection in the animal, as it was only a little more than half grown, and had been brought up from nurslinghood with no opportunity for more dangerous associates than rabbits and guinea-pigs; on killing one of the latter it had been relegated to close confinement, and thereupon began to give evidence of temper and paid the penalty of wounding its owner with its life. On examining Reynard's body the most careful and critical examination failed to reveal any wound or scratch through which rabic or other infection could have entered. A candid statement of the facts, along with the assurance rabies was positively never of spontaneous origin and invariably a product of direct infection, caused the patient to lose his rabic symptoms, to dismiss his fears and also his soul's adviser, for being a Romanist he had already begun the final "duties." This case was as well marked as any ever laid down in text-books, and the man was not a little chagrined to think he had been imposed upon and brought into the very jaws of death as it were by fears of irresponsible individuals superimposed upon his own morbid imaginings.

In conclusion, a few simple axioms, if heeded, will in the majority of instances allay fear and quell the senseless epidemics of *rabiphobia* that threaten from time to time.

1. Rabic dogs do not fear, but court water.
2. Rabies can never arise spontaneously either in animals or man. The absence of *recent* wounds and the good health of the creature inflicting the bite are alike evidence of the non-specific character of the disease.
3. Wounds inflicted by the teeth of non-carnivorous creatures are *never* rabic, though a blood poisoning may be induced. Man cannot communicate the disease to other human beings nor to animals.
4. The saliva of truly rabic carnivora, *alone* is capable of inducing rabies.
5. Excessive saliva in any creature, more especially dogs, is always induced by any affection of the mouth or throat, is the universal sequel of toothache, of inability to swallow from any cause, of paralysis, of throat abscess; paralysis independent of rabic condition is a sequel to numerous local, brain and nerve maladies; twitching of eyes, of eyelids, of lips and muscles, lolling tongue, indrawn tail, updrawn flanks, drooping head, slinking gait, one and all should be included in the same category.

6. Safety lies in preserving the life of the suspected canine, and sequestering for observation; by premature death the only evidence whereby rabies can be definitely and with certainty established, is destroyed—muzzle the creature and examine for recent wounds; if none are exhibited, fear is idle; if it evinces good appetite, and if it partakes of food freely on and after the fourth day it is not rabid; if it dies without paralysis it is not rabid; if it succumbs to paralysis the chances are still a thousand to one its death was due to some natural cause; if it falls into convulsions and froths at the mouth, it is an epileptic and an object of commiseration. Ninety-nine of every hundred dogs pronounced "mad" are epileptics or choreics, and dogs with "fits" are *positively* never rabid; if after ten days confinement the suspected animal evinces a cheerful disposition there is no danger whatever, and it should be released.\* When death supervenes, critical examination of the body—the brain, viscera, etc.—should be made by a competent pathologist to determine whether there is a *cause for death aside from rabies!*

7. The human race, suffering from rabies, *do not* howl, whine, bark, or exhibit other canine characteristics or peculiarities, any more than do cats, fow, sheep, catle, etc.; such phenomena are conclusive evidence the malady is—Hysterical!

8. Intolerance of light and of air in motion, fear of water and bright substances, and spasms of muscles of the throat and neck, far from constituting specific evidence, are common in diphtheria, croup, goitre, sore throat, lock-jaw, pregnancy, hysterics, ear abscess, hay fever, poisoning by certain mineral and vegetable substances; from the use and abuse of narcotics, sedatives and alcoholics; from cancerous affections, certain maladies of the internal ear, the eye affection known as glaucoma, and diseases peculiar to sex, and a multitude of brain and nerve maladies. In no instance would these symptoms excite special comment or alarm were not the dog linked therewith as a factor.

9. Error in judgment is the almost inevitable result of accepting mere negations for their antithesis. Careful examination of the evidence laid down for the distinction of rabies, reveals little aside from mere negations. Until death ensues the weight of evidence is always negative; when dissolution follows it is *very* far from being presumptive of the positive!

10. Since less than three per cent. of infected canines ever contract the malady, the danger to man is several hundred times less than from scarlatina, measles, quinsy, ague and a host of simple maladies. As Professor Charles Bell Taylor remarks, "It is less than one in a million, less than being kicked to death by a horse," to which I may add it is less than the gallows! Atop of all, I may say, that after examining as thoroughly as possible the history of every case of rabies reported as occurring in North America during fifty-five years (and they number about a thousand) I have been unable to find *even one* that was not open to the gravest suspicion as to error. Some, even in so-called "text-books," are unmistakable *forgeries*.

Detroit, Mich.

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\* N.B.—These rules apply to the dog that has inflicted a bite; but one that has received a suspicious wound should be isolated and confined for a month or six weeks, and that, too, in a place where quiet is assured.



## Reports of Societies.

### THE TORONTO CLINICAL SOCIETY.

The first meeting of the Society was held in St. George's Hall, November 10th, Dr. Albert A. MacDonald presiding.

In his opening address Dr. MacDonald alluded to the loss the Society had sustained through the death of Dr. Strange and Dr. Cook. He referred to the great impetus which had been given to scientific work in Canada as a result of the meeting here of the Association for the Advancement of Science and the British Medical Association. He recalled some novel features connected with abdominal surgery which had interested him in his recent visit to Europe. He also discussed the question of the relation medical charities bore to the profession.

Dr. Ryerson, M.P.P., read a paper on "Cerebral Abscess Resulting from Middle Ear Disease." He deprecated the practice, too much in vogue, of allowing cases of middle ear disease to go untreated. His practice was to thoroughly cleanse the ear by gently syringing with a boracic solution and then dropping three or four drops of a nitrate of silver solution into the ear, strength 60 to 120 grains to the ounce.

Dr. H. B. Anderson, from pathological investigation, and Dr. Chas. Trow, from clinical observation, both agreed with the essayist that neglected middle ear disease was altogether too common and often indeed in cerebral abscess.

Dr. Alton Garratt presented a case of stab wound (homicidal) of the heart, made with a pair of scissors in a drunken brawl. The patient lived about ten minutes. The auricular appendage was perforated and also the aorta.

Dr. G. A. Bingham showed a

Spina bifida tumor which he had successfully removed. He described the clinical history of the case and the details of the operation.

### TORONTO MEDICAL SOCIETY.

The regular meeting was held on November 8th.

Dr. T. F. MacMahon presided.

Dr. A. A. Small was elected a member of the Society.

Dr. C. R. Dickson was proposed as a member of the Society.

There were present: Drs. F. Starr, McKeowen, Nevitt, A. H. Wright, Alexander, Oakley, G. Gordon, Bascom, McPhedran, Greig, Webster, Oldright, Peters, H. H. Oldright, Wm. Oldright, G. B. Smith, C. O'Reilly, Macallum, Price Brown, W. J. Wilson, Bryans, Langstaff, Scadding, Carveth, Parsons, MacMahon, Galloway, Hay, Mackenzie, Rudolph, Bray, J. N. Brown, Pond, Mullin, Mayburry, Perry.

Dr. McPhedran presented a young woman suffering from what he thought was syringo myelia. The disease began about two years ago, and was characterized by pain and weakness in the arm and hand of the left side. There was some wasting of the muscles, but none were completely wasted, and none had lost all power. There was some disturbance of sensation. The sensation to painful impressions, as well as that for heat and cold, was decreased in nearly the whole of the forearm. There was also lack of response to electricity. There had been a good deal of fibrillar twitching. The differential diagnosis from progressive muscular atrophy and peripheral neuritis was then pointed out.

Dr. Galloway asked if there had been any scoliosis. Marsh found this deformity present in 50 per cent. of cases of syringo myelia.

Dr. McPhedran said there was not.

Dr. Geo. Peters presented a patient suffering from lymphadenoma of the cervical glands of the right side of the neck. The disease had existed for over six months, beginning in several glands which had become merged together as the mass grew. Enlarged glands could be felt below the clavicle, but none in other parts of the body. The question was, whether he should operate. He was of the opinion that it was still an operable case, and that it would lengthen life somewhat, and the patient would be more comfortable.

Dr. Parsons reported a case similar to this, in that the cervical glands were alone involved. The patient, however, had recurrent attacks of fever, with chills. During intervals of ten days with the defervescence of the fever the enlargement of the glands would subside. Cultures of the blood and urine had been made but nothing found. There was improvement under the use of arsenic.

Dr. Wm. Oldright presented a man aged forty-five, who, for ten months, had complained of pain in the gastric region. In about a month he became jaundiced, which has continued to the present. The liver dulness is considerably increased. He thought the case was probably carcinoma. The differential diagnosis between this and abscess of the liver and echinococcus was discussed.

Dr. G. Gordon said that the absence of much pain, the smoothness of the liver, and the absence of much fever went against the diagnosis of malignancy. He suggested an exploratory laparotomy.

Dr. Scadding said he would not like to give a patient in this condition an anæsthetic.

Dr. MacMahon did not agree that it was necessary to open the belly to make a diagnosis. There was little doubt about the case being malignant.

Dr. McPhedran thought it was carcinoma of the liver. He had noted that it was somewhat nodular

in the lateral region. The presence of some ascites would militate against echinococcus.

Dr. H. C. Scadding read a paper on "The Choice of Anæsthetics." The doctor holds that the anæsthetic *par excellence* for dental work is nitrous oxide. Mixed with oxygen, although more difficult to administer, the amount of dyspnoea is lessened and gives some nine seconds longer anæsthesia. For general anæsthesia, except in certain contra-indicated cases, his practice agreed with that of all the London anæsthetists, viz., to administer ether. Many of the cases of bronchitis and pneumonia following its administration were due to the carelessness of attendants in not keeping the body warm after coming from the warm operating-room to a ward where the temperature was ten or fifteen degrees lower. Sometimes there was pulmonary infection from the inhaler. It should always be cleansed. Ether was more frequently than chloroform the cause of albuminuria, while albuminuria already existent was increased more by administration of the latter. In operations about the mouth, or where the actual cautery was used in that region, chloroform was preferable; although it was possible to supercharge favorable cases with ether so as to allow for operations lasting fifteen minutes. In cases of labor chloroform was most generally acceptable, unless complete anæsthesia was desirable, in which case ether should be used. Patients suffering from emphysema, bronchitis, phthisis, dyspnoea, chloroform was less dangerous. In operations on the neck and in cerebral surgery chloroform was more easily and safely given. The A. C. E. mixture was indicated in heart disease, where patients, were obese, and in certain cases where the chest wall and pleura were to be operated upon. The essayist then gave an analysis of a list of thirty-three cases. The doctor highly recommended Hewitt's apparatus and the giving of nitrous oxide

gas and oxygen as a preliminary to using ether.

Dr. G. A. Peters thought it was a most fortunate thing that we had two such valuable anæsthetics. The giving of the anæsthetic was the most important part of any operative procedure. To have the anæsthetic well given—given with the least loss of time and loss of the patient's vitality, no doubt, had a wonderful influence on the result of the operation. He was quite in accord with the essayist's views on the choice of anæsthetics.

Dr. Primrose said the question was not so much one of a choice of anæsthetics as of anæsthetists.

Dr. Oakley asked if the essayist had stated that one could give ether to a patient in the sitting posture with safety, while this was not the case with chloroform.

Dr. Scadding replied in the affirmative.

The hour of closing having arrived, several members expressed a desire that the whole question of anæsthesia should be brought before the Society. It was moved by Dr. Greig, and seconded, that an advocate of chloroform as a general anæsthetic be requested to read a paper at some future meeting, and that the notice paper contain a short synopsis of Dr. Scadding's paper.—Carried.

The meeting then adjourned.

The Toronto Medical Society held a regular meeting on the 11th, President MacMahon in the chair. There were present Drs. Wm. Oldright, Oakley, C. Starr, Bray, Bryans, Galloway, Fletcher, Russell, G. Smith, A. Watson, Peters, Parsons, MacMahon, Brown and three house surgeons from the Toronto General Hospital.

Dr. Harold Parsons presented an aneurism from an old woman of seventy who had had no symptoms, but had died suddenly while in the water closet. On opening the thoracic cavity the left pleural cavity was found full of blood, partly clotted and partly fluid. On passing the hands

backward into the angle between the ribs and the vertebræ the mass was found. Gerhardt had described this class of aneurism which gave no symptoms. It had been aptly said that aneurisms of the ascending aorta were those of physical signs, and those of the transverse arch those of symptoms. The pain which was felt in aneurisms which involved the descending arch was supposed to be due to erosion of the vertebræ. In the specimen presented the opening could not be found. The adjacent lung was completely atelectatic. It was difficult to say what variety of aneurism it was. There was a great amount of laminated clot and it was pretty firm. Two herniæ were also found at the necropsy—one an umbilical, the other a ventral, lying near each other. They were removed *en masse*. Portions of the omentum, stomach and transverse colon mass were found in the ventral while the umbilical contained omentum only. In the first portion it was interesting to note the way in which fibrous bands were twisted about the intestines which would easily explain the case with which a hernia could sometimes be returned with the abdomen and still be in the sac.

Dr. Wm. Oldright described a case in which he had treated the patient at his first visit for dyspeptic symptoms. Some six months after he prescribed for the same symptoms. Before leaving him the patient incidentally referred to a lump on his breast which proved to be an aneurism, which has absorbed the rib until only a shell was left over it. The man had a short time before passed an examination for life insurance. He died about Thanksgiving Day. One great difficulty the doctor found was to keep his patient quiet. He recalled a second case, the diagnosis of which Dr. H. H. Wright and he had not made, in which there was dilatation of the aorta to the extent of four inches. Cardia hypertrophy had been diagnosed.

Dr. J. A. Watson recalled a case where the patient had been treated for some time for anæmia before the aneurism (an aortic) was discovered.

Dr. B. E. McKenzie read a paper on "Contracted Foot." Schaffer's term "non-deforming club-foot" was applicable to the slighter cases of contracted foot but not to the more advanced. Dr. McKenzie says that vague pains about the foot often precede the deformity. A more advanced case would be recognized by slight or no contact of the arch on smoked paper, a tense condition of the plantar fascia, limitation of dorsal flexion, slight dorsal luxation of the toes. In the far advanced cases these signs are intensified: the foot is strongly arched, the tendo achillis shortened, the toes dislocated dorsally, the metatarsal bones at their distal ends are tilted downward, so that the body weight falls on the heels; the muscles of the leg are atrophied. A valgus or varus condition may complicate the deformity.

In early cases there is pain and tenderness in the arch and the heel, and pain on moving the thigh. The gait lacks elasticity and grace.

Treatment consists, in slight cases, in the application of a night appliance which straps the arch down and keeps the foot at an acute angle with the leg, with good boots in the day time. Fasciotomy and tenotomy are required in older cases. The essayist then described three cases.

The etiology and pathology of the contracted foot are not yet well understood. Some cases are said to follow anterior poliomyelitis and other such diseases. Allingham considered one case to be due to an affection of the crossed pyramidal tract.

Dr. Peters agreed with the treatment outlined by Dr. McKenzie. One saw some curious forms of contractions of the foot. He had operated on one in which there was such a condition of contraction of the extensor tendons of the foot that the toe was drawn up so as to cause a

corn, which made life unbearable. He amputated the one toe, and did a tenotomy of the tendons of the other toes, with great relief. In a second case he had operated for a similar condition of the extensor tendons of one foot. The little toe was drawn up to such an extent as to cause a painful corn to appear. There was no sign of any lesion of the cord, or any previous history of nervous disease that could possibly give rise to the trouble.

Dr. C. Starr said that some of the photographs of the more marked cases the essayist had passed about, looked as though they might be cavus. Schaffer had distinguished between the ordinary corns and non-deforming club-foot, by the fact that it was only the inner portion of the foot that was elevated in contracted foot, whereas in the cavus one got complete upraising of the tarsus from the line of the phalanges back to the tuberosity of the os calcis, and generally tipping up of the tarsus. In his experience, the treatment of the slighter cases by the shoe was quite adequate. But in the more marked cases fasciotomy was necessary, with the application of some apparatus later on. He had never resorted to division of the tendons to relieve the condition.

Dr. H. P. Galloway thought that not unlikely future investigations might show that a number of affections which were at present recognized under different names and which seemed to be produced by a contracted condition of the fascial and tendinous structures in the feet and hands were due to the same pathological condition. The fact that the condition described in the paper was sometimes associated with Dupuytren's contraction of the hands was a very interesting and significant one. One of the most marked cases he had seen was one when this association was present. Schaffer's term "non-deforming club-foot" seemed to him very inappropriate and contradictory, because of the fact that one

always associated deformity with club-foot.

Dr. Oakley asked if the essayist found deformity in achillodynia.

Dr. McKenzie replied.

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## NIAGARA DISTRICT MEDICAL ASSOCIATION.

The meeting was held on October 13th at the American Hotel, Niagara Falls, Ont., and was one of the best attended and most enthusiastic meetings the Association has had.

The President, Dr. Armour, occupied the chair.

Present—Dr. Armour, Clark, Jessup, Merritt and Sheehan, St. Catharines; Vanderburgh, Merritt; Trimble, Queenston; Glasgow and Schooley, Welland; Kellam, Niagara Falls; Thompson and McGarry, Niagara Falls South; Johnston and Campbell, Thorold.

Dr. Merritt read a paper on "Glandular Therapeutics," or the therapeutical agents prepared from animal products, describing the very great extent to which these articles were being lauded and asking for the experience of the members as to their usefulness. All those present took part in the discussion on this subject, and the prevailing opinion was that much more was claimed for these articles than the speaker had been able to prove in practice.

Dr. Sheehan read a very able paper on "The Action of Quinine," which was discussed at length by Drs. Schooley, Clark, Jessup and Kellam.

A resolution of sympathy with Dr. Burgar in his recent affliction (fractured tibia) was passed unanimously.

Drs. Clark and Merritt were appointed auditors for 1897-98.

Dr. Merritt exhibited two specimens, one in which the appendix and a small part of bowel was caught and constricted in internal ring, resulting in death. The amount of bowel constricted was so small that no external

manifestation of it was present and the case was not diagnosed, except as one of obstruction, till the autopsy.

The other specimen was a cyst of the labia about the size of a hen's egg.

Moved by Dr. Johnston, seconded by Dr. Jessup, that thanks of meeting be tendered Drs. Merritt and Sheehan for very able and interesting papers.

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## Special Selections.

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### INTERNAL MEDICINE AS A VOCATION.\*

BY WILLIAM OSLER, M.D., BALTIMORE.  
Professor of Medicine in Johns Hopkins University.

It was with the greatest pleasure that I accepted an invitation to say a few words before this section of the Academy on the importance of internal medicine as a vocation. I wish there were another term to designate the wide field of medical practice which remains after the separation of surgery, midwifery, and gynecology. In itself it is not a specialty, but embraces at least half a dozen, and so its cultivators cannot be called specialists, but bear without reproach the good old name physician, in contradistinction to general practitioners, surgeons, obstetricians, and gynecologists. I have heard the fear expressed that in this country the sphere of the physician proper is becoming more and more restricted, and perhaps this is true, but I maintain (and I hope to convince you) that the opportunities are still great, and that the harvest is truly plentiful, while the laborers, though not few, are scarcely sufficient to meet the demand.

At the outset I would like to emphasize the fact that the student of

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\*Read before the Section on General Medicine of the New York Academy of Medicine, October 19, 1897.

internal medicine cannot be a specialist. The manifestations of almost any one of the important diseases in the course of a few years will "box the compass" of the specialties. Typhoid fever, for example, will not only go the rounds of those embraced in medicine proper, but will carry its student far afield in morbid psychology and sometimes teach him, perhaps at the cost of the patient, a little surgery. So, too, with syphilis, which after the first few weeks I claim as a medical affection. I often tell my students that it is the only disease which they require to study thoroughly. Know syphilis in all its manifestations and relations, and what remains to be learned will not stretch the pia mater of a megalopcephalic senior student.

Each generation has to grow its own consultants. Hossack, Samuel Mitchell, Swett, Alonzo Clark, Austin Flint, Fordyce Barker and Alfred Loomis served their day in this city and then passed on into silence. Their works remain; but enough of a great physician's experience dies with him to justify the saying, "there is no wisdom in the grave." The author of "Rab and His Friends" has a couple of paragraphs on this point which are worth quoting: "Much that made such a man what the community, to their highest profit, found him to be, dies with him. His inborn gifts, and much of what was most valuable in his experience, were necessarily incommunicable to others, this depending much on his forgetting the process by which, in particular cases, he made up his mind and its minute successive steps . . ., but mainly, we believe, because no man can explain directly to another man *how* he does any one practical thing, the doing of which he himself has accomplished not at once or by imitation, or by teaching, but by repeated personal trials, by missing much before ultimately hitting."

Wherewithal shall a young man prepare himself should the ambition

arise in him to follow in the footsteps of such a teacher as, let us say, the late Austin Flint—the young man just starting, and who will from 1915 to 1940 stand in relation to the profession of this city and this country as did Dr. Flint between 1861 and the time of his death. We will assume that he starts with equivalent advantages, though this is taking a great deal for granted, since Austin Flint had a strong hereditary bias toward medicine, and early in life fell under the influence of remarkable men whose teachings moulded his thought to the very end. We must not forget that Dr. Flint was a New Englander, and of the same type of mind as his great teachers—James Jackson and Jacob Bigelow.

Our future consultant has just left the hospital where, for the first time, realizing the possibilities of his profession, he has had his ambition fired.

Shall he go abroad? It is not necessary. The man whom we have chosen as his exemplar did not, but found his opportunities in country practice and in Buffalo and Louisville, then frontier towns, and had a national reputation before he reached New York. But would it be useful to him? Undoubtedly. He will have a broader foundation on which to build, and a year or two in the laboratories and clinics of the great European cities will be most helpful.

To walk the wards of Guy's or St. Bartholomew's, to see the work at the St. Louis and at the Salpêtrière, to have put in a few quiet months of study at one of the German university towns will store the young man's mind with priceless treasures. I assume that he has a mind. I am not heedless of the truth of Shakespeare's sharp taunt,

How much the fool that hath been sent to Rome

Exceeds the fool that hath been kept a home.

At any rate, whether he goes abroad or not, let him early escape from the

besetting sin of the young physician, *chauvinism*, that intolerant attitude of mind which brooks no regard for anything outside his own circle and his own school. If he cannot go abroad let him spend part of his short vacations in seeing how it fares with the brethren in his own country. Even a New Yorker could learn something in the Massachusetts General and the Boston City Hospital. A trip to Philadelphia would be most helpful; there is much to stimulate the mind at the old Pennsylvania Hospital and at the University, and he would be none the worse of a few weeks spent still farther south on the banks of the Chesapeake. The all-important matter is to get breadth of view as early as possible and this is difficult without travel.

Poll the successful consulting physicians of this country to-day and you will find they have been evolved either from general practice or from laboratory and clinical work; many of the most prominent having risen from the ranks of general practitioners. I once heard an eminent consultant rise in wrath because some one had made a remark reflecting upon this class. He declared that no single part of his professional experience had been of such value. But I wish to speak here of the training of men who start with the object of becoming pure physicians. From the vantage ground of more than forty years of hard work, Sir Andrew Clark told me that he had striven ten years for bread, ten years for bread and butter, and twenty years for cakes and ale; and this is really a very good partition of the life of the student of internal medicine, of some at least, since all do not reach the last stage.

It is high time we had our young Lydgate started.† If he has shown

any signs of *nous* during his student and hospital days a dispensary assistantship should be available; anything should be acceptable which brings him into contact with patients. By all means, if possible, let him be a pluralist, and, as he values his future life, let him not get early entangled in the meshes of specialism. Once established as a clinical assistant he can begin his education, and nowadays this is a very complicated matter. There are three lines of work which he may follow, all of the most intense interest, all of the greatest value to him—chemistry, physiology, and morbid anatomy. Professional chemists look askance at physiological chemistry, and physiological chemists criticise pretty sharply the work of some clinical chemists, but there can be no doubt of the value to the physician of a very thorough training in methods and ways of organic chemistry. We sorely want in this country men of this line of training, and the outlook for them has never before been so bright. If at the start he has not had a good chemical training, the other lines should be more closely followed.

Physiology, which for him will mean very largely experimental therapeutics and experimental pathology, will open a wider view and render possible a deeper grasp of the problems of disease. To Traube and men of his stamp, the physiological clinicians, this generation owes much more than to the chemical or *post-mortem*-room group. The training is more difficult to get, and nowadays when physiology is cultivated as a specialty few physicians will graduate into clinical medicine directly from the laboratory. On the other hand the opportunities for work are now more numerous, and the training which a young fellow gets in a laboratory controlled by a pure physiologist will help to give that scientific impress which is only enduring when early received. A thorough chemical training and a complete equip-

†This well-drawn character in George Eliot's "Middlemarch" may be studied with advantage by the physician; one of the most important lessons to be gathered from it is—marry the right woman!

ment in methods of experimental research are less often met with in the clinical physician than a good practical knowledge of morbid anatomy, and if our prospective consultant has to limit his work, chemistry and physiology should yield to the claims of the dead-house. In this dry-bread period he should see autopsies daily if possible. Successful knowledge of the infinite variations of disease can only be obtained by a prolonged study of morbid anatomy. Of special value in training the physician in diagnosis, it also enables him to correct his mistakes, and if he reads his lessons aright it may serve to keep him humble.

This is, of course, a very full program, but in ten years a bright man with what Sydenham calls "the ancient and serious diligence of Hippocrates" will pick up a very fair education, and will be fit to pass from the dispensary to the wards. If he cannot go abroad after his hospital term, let it be an incentive to save money, and with the first \$600 let him take a summer semester in Germany, working quietly at one of the smaller places. Another year spend three months or longer in Paris. Lay schemes in advance and it is surprising how often the circumstances fit in with them. How shall he live meanwhile? On crumbs—on pickings obtained from men in the cakes-and-ale stage (who always can put paying work into the hands of young men), and on fees from classes, journal work, private instruction, and from work in the schools. Any sort of medical practice should be taken, but with caution—too much of it early may prove a good man's ruin. He cannot expect to do more than just eke out a living. He must put his emotions on ice; there must be no "Amaryllis in the shade," and he must beware the tangles of "Nesera's hair." Success during the first ten years means endurance and perseverance; all things come to him who has learned to labor and wait, who

bides his time "ohne hast, aber ohne rast," whose talent develops "in der Stille," in the quiet fruitful years of unselfish devoted work. A few words in addition about this dry-bread decade. He should stick close to the dispensaries. A first-class reputation may be built up in them. Bryon Bramwell's "Atlas of Medicine" largely represents his work while an assistant physician to the Royal Infirmary, Edinburgh. Many of the best-known men in London serve ten, fifteen, or even twenty years in the out-patient departments before getting wards. Lauder Brunton has only recently obtained his full physicianship at St. Bartholomew's after a service of more than twenty years in the out-patient department. During this period let him not lose the substance of ultimate success in grasping at the shadow of present opportunity. Time is now his money, and he must not barter away too much of it in profitless work—profitless so far as his education is concerned, though it may mean ready cash. Too many quiz classes or too much journal work has ruined many a promising clinical physician. While the Pythagorean silence of nearly seven years which the great Louis followed (and broke to burst into a full-blown reputation) cannot be enjoined, the young physician should be careful what and how he writes. Let him take heed to his education, and his reputation will take care of itself, and in a development under the guidance of seniors he will find plenty of material for papers before medical societies and for publication in scientific journals.

I would like to add here a few words on the question of clinical instruction, as with the great prospective increase of it in our schools there will be many chances of employment for young physicians who wish to follow medicine proper as a vocation. To-day this serious problem confronts the professors in many of our schools—how to teach practi-



cal medicine to the large classes; how to give them protracted and systematic ward instruction? I know of no teacher in the country who controls enough clinical material for the instruction of classes of, say, 200 men during the third and fourth years. It seems to me there are two plans open to the schools: The first is to utilize dispensaries for clinical instruction much more than at present is the rule. For this purpose a teaching room for a class of twenty-five or thirty students immediately adjoining the dispensary is essential. For instruction in physical diagnosis, for the objective teaching of disease, and for the instruction of students in the use of their senses, such an arrangement is invaluable, and there are hundreds of dispensaries in which this plan is feasible, and in which the material now is not properly worked up because of the lack of this very stimulus. In the second place I feel sure that ultimately we shall develop a system of extramural teaching similar to that which has been so successful in Edinburgh, and this will give employment to a large number of the younger men. At any large university school of medicine there might be four or five extramural teachers of medicine, selected from men who could prove that they were fully qualified to teach and that they had a sufficient number of beds at their command with proper equipment for clinical work. At Edinburgh there are eight extramural teachers of medicine whose courses qualify the student to present himself for examination either before the Royal Colleges or the University. If we ever are to give our third and fourth year students protracted and complete courses in physical diagnosis and clinical medicine, extending throughout the session, and not in classes of a brief period of six weeks' duration, I am confident that the number of men engaged in teaching must be greatly increased.

Ten years' hard work tells with

colleagues and friends in the profession, and with enlarged clinical facilities the physician enters upon the second, or bread-and-butter period. This, to most men, is the great trial, since the risks are greater, and many now drop out of the race, wearied at the length of the way and drift into specialism or general practice. The physician develops more slowly than the surgeon and success comes later. There are surgeons at forty years in full practice and at the very top of the wave, a time at which the physician is only preparing to reap the harvest of years of patient toil. The surgeon must have hands, and better, young hands. He should have a head, too, but this does not seem so essential to success, and he cannot have an old head with young hands. At the end of twenty years, when about forty-five, our Lydgate should have a first-class reputation in the profession, and a large circle of friends and students. He will probably have precious little capital in the bank, but a very large accumulation of interest-bearing funds in his brain-pan. He has gathered a stock of special knowledge which his friends in the profession appreciate, and they begin to seek his counsel in doubtful cases and gradually learn to lean upon him in times of trial. He may awake some day, perhaps, quite suddenly, to find that twenty years of quiet work, done for love of it, has the a very solid value.

The environment of a large city is not necessary to the growth of a good clinical physician. Even in small towns a man can, if he has it in him, become well versed in methods of work, and with the assistance of an occasional visit to some medical centre he can become an expert diagnostician and reach a position of dignity and worth in the community in which he lives. I wish to plead particularly for the wasted opportunities in the smaller hospitals of our large cities and in those of more moderate size. There are in this

State a score or more of hospitals with from thirty to fifty medical beds, offering splendid material for good men on which to build reputations. Take for example the town of Thelma, which I know well, to which young Rondibilis, a recent resident at the Hôtel Dieu, has just gone. He wrote asking me for a letter of advice from which I take the liberty of extracting one or two paragraphs:

"Your training warrants a high aim. Say to those who ask that you intend to practice medicine only and will not take surgical or midwifery cases. X. has promised that you may help in the dispensary, and as you can count blood and percuss a chest you will be useful to him in the wards which, by the way, he now rarely visits. Be careful with the house physicians, and if you teach them anything do it gently and never crow when you are right. The crow of the young rooster before his spurs are on always jars and antagonizes. Get your own little clinical laboratory in order. Old Dr. Rolando will be sure to visit you, and bear with him as he tells you how he can tell casts from the ascending limb of the loop of Henle. He was once as you are now, a modern, but he crawled up the bank twenty years ago: the stream has left him there, but he does not know it. He means to impress you; be civil and show him the new Nissle-satin preparations and you will have him as a warm friend. His good heart has kept him with a large general practice and he can throw *post-mortems* in your way, and may send for you to sit up with his rich patients. If Y. asks you to help in the teaching, jump at the chance. The school is not what you might wish, but the men are in earnest, and a clinical microscopy-class or a voluntary ward-class with Y.'s cases will put you on the first rung of the ladder. Yes, join both the city and the country society, and never miss a meeting. Keep your mouth shut, too, for a few years, particularly in discussions.

"Foote's (Philadelphia) is the catalogue to which I referred. Let the old men read new books: you read the journals and the old books. Study Lannec this winter; Forbes' 'Translation' can be cheaply obtained, but it will help to keep up your French to read it in the original. The old Sydenham Society editions of the Greek writers and of Sydenham are easily got and are really very helpful. As a teacher you can never get *orientiert* without a knowledge of the Fathers, ancient and modern. And do not forget above all things the famous advice to Backmore, to whom, when he first began the study of physic and asked what books he should read, Sydenham replied, 'Don Quixote,' meaning thereby, as I take it, that the only book of physic suitable for permanent reading is the book of Nature."

A young fellow with staying powers who avoids entanglements may look forward in twenty years to a good consultation practice in any town of 40,000 to 50,000 inhabitants. Some such man, perhaps, in a town far distant, taking care of his education and not of his audiedce, may be the Austin Flint, of New York, in 1930.

"Many are called but few are chosen," and of the many who start out with high aims, few see the goal. Even when reached the final period of "cakes and ale" has serious drawbacks. There are two groups of consultants, the intra- and the extraprofessional; the one gets work through his colleagues, the other, having outgrown the narrow limits of professional reputation, is at the mercy of the *profanum vulgus*. Then for him "farewell the tranquil mind, farewell content." His life becomes an incessant struggle, and between the attempt to carry on an exhausting and irksome practice and to keep abreast with young fellows still in the bread-and-butter stage, the consultant at this period is worthy of our sincerest sympathy.

One thing may save him. It was

the wish of Walter Savage Landor always to walk with Epicurus on the right hand and Epictetus on the left, and I would urge the clinical physician as he travels farther from the East to look well to his companions—to see that they are not of his own age and generation. He must walk with the "boys," else he is lost, irrevocably lost; not all at once, but by easy grades, and everyone perceives his ruin before he, "good, easy man," is aware of it. I would not have him a basil plant, to feed on the brains of the bright young fellows who follow the great wheel uphill, but to keep his mind receptive, plastic and impressionable he must travel with the men who are doing the work of the world, the men between the ages of twenty-five and forty.

In the life of every successful physician there comes the temptation to toy with the Delilah of the press—daily and otherwise. There are times when she may be courted with satisfaction, but beware! sooner or later she is sure to play the harlot, and has left many a man shorn of his strength, viz., the confidence of his professional brethren. Not altogether with justice have some notable members labored under the accusation of pandering too much to the public. When a man reaches the climacteric and has long passed beyond the professional stage of his reputation, we who are still "in the ring" must exercise a good deal of charity, and discount largely the *ou dits* which indiscreet friends circulate. It cannot be denied that in dealings with the public just a little touch of humbug is immensely effective, but it is not necessary. In a large city there were three eminent consultants of world-wide reputation; one was said to be a good physician but no humbug; the second was no physician but a great humbug, the third was a great physician and a great humbug. The first achieved the greatest success, professional and social, possibly not financial,

While living laborious days, happy in his work, happy in the growing recognition which he is receiving from his colleagues, no shadow of doubt haunts the mind of the young physician other than the fear of failure; but I warn him to cherish the days of his freedom, the days when he can follow his bent untrammelled, undisturbed, and not as yet in the coils of the octopus. In a play of Oscar Wilde's one of the characters remarks, "There are only two great tragedies in life, not getting what you want—and getting it;" and I have known consultants whose treadmill-life illustrated the bitterness of this *met*, and whose great success at sixty did not bring the comfort they had anticipated at forty. The mournful echo of the words of the preacher rings in their ears, words which I not long ago heard quoted with deep feeling by a distinguished physician, "Better is a handful with quietness, than both hands full with travail and vexation of spirit."—*Medical News*.

#### THE TREATMENT OF CEREBRAL HEMORRHAGE.

In a recent issue of *Treatment* Byram Bramwell, so well known for his able studies in clinical medicine, gives directions for the treatment of this alarming condition. He thinks that at the commencement of an attack of cerebral hemorrhage the first indication for treatment is to try and arrest the bleeding and limit the extravasation. We should try to carry this indication into effect by employing measures calculated to lessen the activity of the cerebral circulation.

The head and shoulders should be raised rather than lowered, an ice-bag should be applied to the head, warmth applied to the feet with the object of dilating the peripheral vessels, leeches may be applied behind the ear, and a drop or two of croton oil administered with the object of producing a brisk watery evacuation.

Venesection, bleeding from the temporal artery, compression of the common carotid artery, and ligaturing the carotid artery, on the side of the hemorrhage, are other methods which have been recommended.

The value of bleeding (either from a vein or the temporal artery) has been much debated; the author believes it to be useful and especially indicated in those cases in which the face, head and neck are turgid, the pulse hard, full, and slow, and the left ventricle hypertrophied. Bleeding is contraindicated in those cases in which the pulse is feeble, rapid, or irregular, the heart dilated or weak, and the patient very old or debilitated.

The author has no experience of compression of the carotid, a method of treatment which has been recommended by Professor Victor Horsley.

A brisk watery purge acts in very much the same way as a moderate bleeding, but for the production of a brisk watery purge time is required. Consequently in many cases venesection is preferable. In those cases in which the advisability of bleeding is doubtful, a drop or two of croton oil and an enema may be administered.

The common practice of applying a blister to the nape of the neck is of doubtful advantage. It is extremely doubtful if at this stage of the attack counter-irritation does any good. In the severe cases it is useless, and in the slight cases in which the coma is speedily recovered from it is unnecessary (even if it were beneficial), and it may be a source of discomfort to the patient. If a blister is to be applied at all it is probably best applied to the shaved scalp between the ears (*i.e.*, over the top of the head). The ice-bag, which he considers of far more importance, may be applied over the top of the blister.

If there is retention of urine, the bladder should be emptied by the catheter at regular intervals. If there is incontinence, the nurse should see that the patient is kept dry and clean; this is a most important point, for the

development of a bed-sore is one of the chief dangers in cases which do not prove immediately fatal.

It is doubtful if any internal remedies have much influence in arresting the bleeding. Ergot has been recommended for this purpose. Nitrite of amyl, or nitrite of sodium, is perhaps useful in some cases in which the pulse is hard and tense, but venesection is probably a better remedy. Aconite has also been recommended in those cases in which the pulse is full and bounding.

In those cases in which the coma is gradually becoming deeper and deeper, the pulse (though perhaps full and bounding or hard) slower and slower, the respiration more and more affected—in short, in cases in which the intracranial pressure is evidently steadily increasing as the result of a gradually increasing hemorrhage—the advisability of trephining and tapping the hemorrhagic cavity and so preventing rupture into the lateral ventricles—an event which is certainly and rapidly fatal—should be considered. Such cases are comparatively rarely met with.

The second indication is to attend to the condition of the bladder, and to take means to prevent if possible the formation of a bed-sore. The patient should be placed at once, or as soon as he can be removed without risk, upon a water bed. Care must be taken, too, that the hot bottles which are applied to the feet are not too hot. Owing to the comatose or semi-comatose condition the patient will not of course make any complaint (the nurse has, under such circumstances, to feel for him), and owing to the diminished trophic resistance of the skin, a degree of heat which would not be prejudicial to a healthy person may easily blister and burn the skin of a patient suffering from cerebral hemorrhage.

The third indication is to sustain the vital powers by appropriate feeding, and if necessary by the administration of cardiac tonics and stimulants. It is important to avoid giving

anything which is likely to produce vomiting, for the straining which attends the act of vomiting may reopen the ruptured vessel, or, if the bleeding is still going on, increase it. For the same reason stimulants should be withheld, unless they are absolutely required. If the heart is failing, and the pulse rapidly running down, stimulants must of course be administered even at the risk of increasing or re-exciting the hemorrhage.

During the comatose state the administration of food and liquid by the mouth requires to be conducted with great care and caution.

A nutrient enema may be given every four hours, and if necessary it may be supplemented every now and then by a nutrient suppository.

It is unnecessary to say that in those cases in which the sphincters are relaxed rectal feeding cannot be satisfactorily carried out.

During the stage of coma, mucus, saliva, etc., are apt to accumulate in the mouth and pharynx, and to add to the difficulty of the respiration and the tendency to death from asphyxia; for it must be remembered that in some cases the patient dies during the stage of coma from failure of the heart's action, in others from asphyxia and failure of the respiration, in others from the two conditions combined. In others, again, death is preceded or attended by hyperpyrexia.

By attention to position (turning the patient on his side, turning the head to one side, etc.), it is in many cases possible to avoid the accumulation of mucus etc., at the back of the throat and so to diminish the risk of asphyxia. The relief is, however, in most cases merely temporary. In cases of cerebral hemorrhage in which these conditions are developed the result is almost always fatal. It is very different when we are dealing with the status epilepticus. In that condition the author has undoubtedly in more than one case, by preventing the accumulation of mucus, saliva, etc., in the back of the throat, and so

preventing asphyxia, saved the life of the patient.

Provided that the patient can swallow, a teaspoonful or two of milk may from time to time be given by the mouth, but once the bowels have been thoroughly well opened it is better to feed the patient by the rectum. If there is difficulty in swallowing, if the administration of fluids by the mouth produces coughing or choking, the feeding should be entirely rectal. Alcoholic stimulants, digitalis, etc., may be given by the same channel, or strychnine (a drop or two of the liquid every two hours) may be administered hypodermically, the effect being of course carefully watched.

Possibly in some cases in which the respiration is much embarrassed and death from asphyxia seems imminent, oxygen inhalations might be beneficial.

The main objects of treatment during the first stage of cerebral hemorrhage are, then, to arrest the bleeding and to tide the patient through the stage of coma.

If the patient recovers from the stage of coma, the next object is to prevent and allay the secondary cerebritis.

As the patient recovers from the coma absolute rest should be enjoined. A little liquid food (milk) and water may be given by the mouth; the rectal feeding may be still continued; great attention must still be directed to the condition of the bladder and rectum and to the prevention of bed-sores.

At this stage of the case the author has usually commenced the administration of iodide of potassium—five grains three times daily.

When symptoms indicative of secondary cerebritis (a rise in temperature, headache, muscular twittings, rambling, a return of the coma, etc.), develop, a brisk purge may be again administered, cold (an ice-bag) re-applied to the head, and bromide of potassium and chloral hydrate given in addition to the iodide.

If during the stage of secondary

cerebritis the pulse becomes very quick, feeble, or intermittent, cardiac stimulants — digitalis, strophanthus, strychnine, etc.—must be given; alcohol is probably better avoided. If the pulse tension is high the administration of remedies which depress the force and violence of the heart's action, such as aconite or nitrite of sodium, may perhaps be employed with advantage in some cases in addition to purgation.

As the symptoms of secondary cerebritis subside, the bromide of potassium and chloral hydrate should be discontinued.

After the symptoms indicative of secondary cerebritis pass off, complete rest must still be enjoined until the acute changes around the clot have subsided. The iodide of potassium, with perhaps a small dose of carbonate of ammonium, or tincture of nux vomica, should be continued. During this, the early stage of convalescence the patient must be carefully fed, the condition of the bladder and rectum attended to, and any cystitis or bedsores which may have developed treated. At this stage of the case gentle massage is useful. Faradism of the paralyzed muscles, strychnine, and too active attempts at voluntary movement of the paralyzed parts, all of which may be most useful a little later, should be avoided, or if employed, administered with great caution.

Some authorities recommend the application of the constant electric current to the head—one pole being placed just above either mastoid process. The constant current, by its catalytic action is supposed to aid the absorption of inflammatory products and to promote the nutrition and restoration of the damaged nerve elements. It is very doubtful if electricity applied in this way is of any real use. If it is employed the greatest care should be taken to use a weak current, and the effects which the current produces on the patient should be carefully watched.

In severe cases of hemiplegia the tendency to the development of contractures should be remembered, and passive movements (more especially of the fingers, wrist and elbows, for it is at these parts that the contractures are most apt to be developed) carefully and diligently practised.

When there is reason to suppose that the acute changes have subsided—*i.e.*, at the end of six weeks or two months—the treatment appropriate for an ordinary case of hemiplegia may be employed. A more liberal dietary may be allowed; the patient should be encouraged to practise systematic voluntary movements; general tonics, such as quinine and small doses of strychnine, may be given internally; and massage and electricity judiciously and cautiously applied to paralyzed muscles. It is difficult, the author thinks, to overestimate the value of frequently repeated and systematic voluntary efforts in cases of hemiplegia, and indeed in all forms of paralysis.

The treatment (amount of exercise, etc.), must of course be carefully and judiciously regulated in accordance with the conditions which are present in each individual patient (the severity of the paralysis, etc.), the state of the heart, kidneys, etc., being taken into account.

If the exaggerated myotatic irritability (spastic condition, exaggerated reflex action) which is usually developed is excessive, dilute hydrobromic acid, bromide of potassium, etc., may be administered; in these cases strychnine, nux vomica, and the faradic current are usually better avoided. It is in those cases in which the muscular atrophy is considerable that electricity and strychnine are most useful. In many cases in which muscular atrophy and myotatic irritability are combined a combination of dilute hydrobromic acid or bromide of potassium with strychnine or nux vomica is, he thinks, useful.

It has been shown that in the ordinary form of cerebral hemorrhage (that

due to miliary aneurisms and high blood-pressure in the arterial system, cirrhosis of the kidneys, etc.), it is practically certain that if the patient lives sufficiently long and is not cut off by some other disease or inter-current complication, a second attack of cerebral hemorrhage will sooner or later occur. A great deal, however, can in many cases be done to prevent and defer a second rupture. Everything which is likely to act as an exciting cause should so far as possible be avoided. It is especially important to reduce the blood-pressure when the pulse tension is excessive, and to avoid everything, such as sudden efforts mental excitement, sudden exposure to cold, straining at stool, etc., which is apt to produce a rapid rise in the intracranial blood-pressure. A patient who has had an attack of cerebral hemorrhage, however slight, should lead a quiet, routine life; he should be made to realize that he is not the man he was before. If he is a business man, more especially if his business entails much bodily exertion, mental strain or excitement, he should be advised to give it up if he can by any possibility do so. An attack of cerebral hemorrhage, however slight, is a danger signal which cannot be ignored. Work which entails active exercise, bodily exertion or mental strain and excitement is in such cases dangerous. The author makes this statement advisedly well knowing that in many cases it is a mistake to advise a patient to give up his life's work. Some people are only happy so long as they are at work. Some men if advised to give up a busy and active existence for a life of idleness and humdrum routine, more especially if they have no hobbies or sources of recreation to fall back upon, are miserable. In such cases it is usually preferable to allow the patient to continue to work, perhaps in a modified way, than to worry in his idleness. Each case must be judged of on its own individual merits: the temperament of the patient

and the nature of the disease have to be carefully considered; the risks entailed by the work and the risks entailed by his idleness and want of occupation have to be weighed one against the other. But after an attack of cerebral hemorrhage there is in most cases little or no choice.

The diet should be light and nutritious; if the patient is gouty, if his kidneys are cirrhotic, if his blood-pressure is high, a non-nitrogenous diet is best; in such cases iodide of potassium, salicylate of soda, etc., may be given internally. In these cases, and in fact in almost all cases in which a cerebral hemorrhage has occurred, alcohol should be prohibited. A certain amount of tobacco, however, may be allowed. Care should be taken that the skin and bowels functionate regularly and actively. The patient should be well clothed. He should not be allowed to suddenly expose himself to cold, more especially after being in a warm atmosphere. When the arteries are atheromatous special care must of course be taken to avoid any sudden exertion or strain. The amount of exercise which the patient should be permitted to take depends, of course, upon circumstances. So far as the condition of his general health is concerned, a certain amount of gentle walking (outdoor) exercise is beneficial; but sudden exertion, running for trains, straining at stool, etc., anything which produces overfatigue, anything which places a sudden strain on the cerebral vessels—and in this connection mental agitation and excitement is probably quite as prejudicial as too violent physical exertion—should be rigidly avoided.—*The Therapeutic Gazette.*

A PRESCRIPTION FOR ASTHMA.—  
The *Journal de Médecine de Paris*, of April 14, 1897, gives the following prescription:

℞ Tincture of opium . . . 1 drachm.  
Sulphuric ether . . . 2 drachms.

Fifty drops every half hour until the patient is relieved.

### CHLOROFORM VS. ETHER.

From Dr. Waller's valuable paper on "The Action of Anæsthetics, Ether and Chloroform" (*Brit. Med. Jour.*, November 20th), which is worth the serious perusal of every medical man, we give a few of his conclusions.

You have witnessed in the rough the action of chloroform and of ether: the immobilization of a nerve by ether is complete but temporary; that by chloroform is far more profound and apt to be final.

With regard to the two principal reagents the most important results have been these:

(a) Using ether and chloroform at an indefinite but high degree of concentration (about 40 per cent. and 10 per cent. respectively) the nerve has nearly always been anæsthetized (temporarily immobilized) by ether; killed (finally immobilized by chloroform.)

(b) Using ether and chloroform at various definite degrees of concentration (5 to 40 per cent. of the former, 1 to 5 per cent. of the latter), the action of chloroform has been seven times that of ether.

(c) The action of mixtures of ether and chloroform (7 parts of ether to 1 part of chloroform) is cumulative—the sum of the action of the constituents.

Of these four statements that upon which I lay most stress as being of the most central importance is under *b*, the 7 to 1 ratio between chloroform and ether. Thus again the root question, as I present the case, is one of quantity, and not at all, or not yet, one of any specific difference between the two agents. The questions answered by statements *c* and *d* fall equally under this root question of quantity.

Let me illustrate how, and at the same time deal with, what I hold to be an unfortunate misconception as to the danger of chloroform plus CO<sub>2</sub>. A properly

anæsthetized patient is substantially a reservoir within which it is required to maintain the chloroform or ether at some unknown optimum percentage and quantity. This percentage and the absolute quantity of chloroform or ether in his body are the resultants of the stream into his lungs and of the stream out of his lungs, and experience alone, not measurements, enables you to adjust the stream into his lungs so that the quantity within the reservoir shall not fluctuate excessively above or below the unknown optimum value.

We admit (on the authority of Snow and of Paul Bert) that the lethal quantity of chloroform is double the full anæsthetic quantity.

Let us further admit (on the authority of Snow) that the anæsthetic quantity is 18 minims (or about 1 c.cm. of liquid chloroform, that is, about 300 c.cm. of chloroform vapour), and that the lethal quantity is 36 minims (or about 2 c.cm. of liquid).

Finally, let us admit (from the present experiments) that chloroform is seven times as powerful as ether.

It is clear, in the first place, that we require a far more voluminous ingoing stream of ether vapour than of chloroform vapour to our reservoir, or patient, in order to reach the optimum quantity. It is equally clear that the chance of accidental fluctuation above the limits of that optimum will be far greater in the case of chloroform than in that of ether.

The limits are far more narrowly separated in the case of chloroform than in that of ether—one seventh for the sake of argument—certainly very narrow in relation to possible sources of fluctuation. Picture a case now, put in figures, in which chloroform is used. Your patient breathes quietly and regularly, and all goes well. He remains at or near the optimum mean quantity, at say 1½ c.cm. of chloroform in his body. But he breathes irregularly, worst of all he holds his breath, struggles, and tempts you to press the chloroform,



and takes one or two deep breaths. Whereas the vapour from a towel at a short distance from his face was at something or other below 5 per cent., that inspired by him from a towel held close to the face more probably reaches 10 per cent. The capacity of his lungs is say 5000 c.cm., so that in a few deep breaths he may have taken as much as 500 c.cm. into his lungs. Now 500 c.cm. of chloroform vapour =  $1\frac{2}{3}$  c.cm. of fluid chloroform. Considering that he has already some chloroform in his system, that during his deep breathing it is pouring in through his lungs, can his death be called surprising? Is that a justifiable death?

I do not hold an opinion altogether adverse to the employment of chloroform.

I believe chloroform to be seven times as powerful as ether, therefore more dangerous.

I am greatly astonished that in the face of the clinical experience of the past fifty years, chloroform should still be frequently employed for the purpose of minor surgery.

I am well aware of the superior convenience of chloroform over ether, and that there are cases and circumstances rendering its use justifiably preferable to that of ether. But I believe that the proportion of such cases is very small in comparison with the actual number of cases in which it is habitually employed.

With reference to the admittedly large number of deaths by chloroform, there seems to me to be no escape from the two horns of a dilemma. Such deaths are the result (a) of an agent, dangerous under all circumstances, or (b) of an agent dangerous only when unskillfully administered.

(a) If chloroform is dangerous under all circumstances, it may not be employed in minor surgery. Death in this class of cases is therefore unjustifiable, and should be considered as a criminal offence.

(b) If chloroform is dangerous only

when unskillfully administered, then again death by chloroform is unjustifiable, and ought to be considered as a criminal offence.

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## MEDICAL MEN AND THEIR HEALTH.

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At this season when so many other portions of the community are planning vacations, relaxation, shorter working-hours, it is well that the doctor, who spends all the rest of the year caring for the health of others, should take stock of his own and consider whether he is sufficiently solicitous for improving, or at least for keeping good, his own physical condition, for there is no laborer in any walk of life for whom such care is more essential.

Under the above head, Dr. John W. Teale, in the *Lancet*, offers some useful suggestions which physicians would do well to ponder. In response to a hypothetical question, "What will most conduce to the success of a general practitioner?" he replies, "Power of concentration and command of temper."

By power of concentration he would mean that power by which a man, however wearied, on entering a house is able at once to abstract his brain from everything that has already happened, and to concentrate his mental faculties on the case that is before him. Patients are naturally somewhat selfish and are very quick to observe if they do not get full attention, and if, when the finger is on the pulse, the mind is not on the patient.

Secondly, command of temper. To the quick, high-strung, sensitive man, exhausted by the worry and anxiety of daily life, thorough command of temper with testy, querulous, exacting patients can only be obtained by rigid self-control commenced in early life. To be forever bearing in mind that the patient is the sufferer, that testiness and ill-temper are due to

physical weariness and distress, and not to disloyalty to the doctor, is a task that will try the strongest nature.

In order to cultivate and obtain this concentration and command of temper, the physician should live as far as possible a simple out-door life in constant physical training. "Why," he asks, "should a man become stout and short of wind because he has reached fifty?" Simply because he is struggling with his life work when his physical condition is not fit to grapple with it.

The exercises which Dr. Teale recommends are performed with light Indian clubs; these or with dumbbells or the ordinary parlor gymnastics, constitute a kind of training which students are apt to drop when they leave college, but which can profitably be kept up during the whole life. It may be said that many medical men do not need these exercises, their physical powers being sufficiently tested every day on their bicycle and in other ways. Some in the country do a little at sawing or splitting wood in the morning to keep themselves in trim. It is a mistake to suppose that the busy man wants a great deal of physical exercise. His ordinary day's work, with what it involves in taxing mind and body, is generally enough for him. One writer, moreover, suggests that it is well for the physician to cultivate the art of sleeping for a few minutes at any time. A man can only live safely on the interest of his vital strength. Any withdrawal of principal should be promptly replaced.

Dr. Teale advises that two good meals and one moderate one be taken each day, and thinks that a late dinner is preferable, for if taken in the middle of the work, either the meal or the patient must suffer. It is possible to be too busy to dine, in which event a cup of soup, or a sandwich and a glass of wine is better than a hearty meal. A good dinner implies leisure for digestion. Half an hour's leisure before dinner will often enable

a man to eat a hearty meal. Everything that is good is wholesome, taken at proper times and in proper quantities. After a man is twenty-five or thirty, he only wants as much food as will maintain his weight and not add to it.

Like St. Paul he believes in a little wine, taken diluted at meals (provided it be good wine)—some good people will resent this advice—and thinks that spirits are useful when one is jaded and exhausted, but are unnecessary and hurtful when taken between meals or at bedtime, except for special reasons. "Three hundred and sixty-five glasses of whiskey taken in one year at bedtime are an unnecessary and a severe tax on the liver when its work is in full swing."

With regard to baths, an ordinary healthy man may take a cold bath daily almost up to any age; but as the object is not only to get up a reaction but to keep it, most hardworking men require that cheapest of all luxuries, a fire in the dressing-room and a hot bath-towel. If this is followed by a course of Indian clubs in his flannels, a man will be fit to face any weather. The same underclothing should be worn summer and winter, of wool, and only the outer clothing varied. This advice is better suited to England than to New England. Colds are generally caught either in ill-warmed rooms or through ill-protected feet. "If chilled through by a cold drive, walk home, if possible, the last mile or two, keeping on your heavy wraps to restore your circulation. . . . Light your fire whenever you can endure it; it is the cheapest and best health-giver in the world, especially in cold, thundery weather in the summer; with a well-arranged room and a proper fire-place most healthy people can learn to sleep with their windows open, winter and summer."

Dr. Teale cautions against badly aired beds, and says, "the risk will be best guarded against by carrying in the travelling-bag a light flannel

dressing-gown to put on the damp sheets."

With regard to turning out of bed at night, no amount of precaution can make this otherwise than dangerous. But if an arrangement can be made by which the clothes can be kept aired and warm, and a cup of hot milk with a teaspoonful of brandy can be procured, the risk can be reduced to the minimum.

There is a timely word about holidays. Every medical man, if possible, should have an out-door sport of some kind; golf and cycling are good, but perhaps the best is fly fishing. It takes one usually into a beautiful country, the exercise is gentle and varied, the interest absorbing, and it is better for the jaded practitioner than scampering half over Europe in a hurry in a second-class railway carriage in charge of a party of tourists.

Much of the above is what judicious medical advisers are constantly telling their patients; but it is not amiss that somebody should tell it to the medical advisers themselves. The doctor is apt to have less attention paid him, whether sick or well, than anyone else.—*Boston Med. and Surg. Jour.*

## INCONTINENCE OF URINE IN CHILDREN.

The difficulty of overcoming certain cases of incontinence in children is recalled by a somewhat elaborate, well-systematized paper by Rochet and Jourdanet (*Gazette des Hopitaux*, January 9, 1897), who classify cases of incontinence in children under two general headings:

1. Those in which incontinence is the expression of a distinct local lesion, or those in which it develops in the course of a general disease, of which it is an expression of minor importance. Such forms of the disease are called symptomatic. The appropriate treatment is that directed to the

general condition, as post-typhoidal adynamia, or to the local exciting cause, as a rectal polyp or balanoposthitis.

2. Those in which incontinence is the only symptom. Such cases are called essential, though in reality they more correctly would be named neurotic. The term "incontinence" is misleading, since this implies a constant dribbling; whereas in children it nearly always assumes the form of involuntary urination.

The essential incontinence of children is always associated with a neurosis, usually hereditary; indeed Guyon considers wetting the bed a pathognomonic sign of this condition. It may be, perchance, the only sign, though it is often associated with other manifestations even more characteristic. The condition itself may be directly brought about by undue contractility of an irritable detrusor muscle, or by hyperesthesia of the mucous membrane of the prostatic urethra, or by thoughts or ideas which produce frequent urination by day and incontinence by night.

In the class of cases in which the neurosis is manifested in the form of spasm of the vesicle sphincter, this may result in either partial retention, which necessarily favors wetting the bed, or of complete retention, which would cause a true diurnal and nocturnal dribbling (retention with overflow). Very exceptionally the neurosis may be expressed in the form of a paresis of the sphincters; this also would give rise to constant dribbling. In examining patients it is important to bear in mind the possibility of retention with overflow. This condition would be detected at once by catheterization, and if the rejected fluid were returned through the catheter with slight force the surgeon would at once suspect paresis in the detrusor muscles. The introduction of a catheter will also detect atony or hyperesthesia and spasm of the urethral sphincters. In case urethral exploration remains negative, abnor-

mal sensibility to distention would be suggested as a possible cause of incontinence. Injection into the bladder would at once settle this question, since the viscus if hypersensitive to tension would reject the liquid when but a small amount had been driven in. In case exploration remains negative the incontinence may be classed as psychic.

The treatment should, of course, be primarily that applicable to neuropathies. Belladonna is particularly indicated in those cases which are probably due to an over-excitability of the detrusor muscles of the bladder. No one has been able to suggest a better means of administration than that suggested by Trousseau. The initial dose is one-sixth of a grain of the extract given in the evening at bed time. After several days this dose is doubled, the patient finally taking as much as from one-half to one grain, the surgeon carefully watching for toxic symptoms and stopping the medicine very gradually if the desired effects are obtained. Other medications, possibly serviceable in the same condition, are bromides, chloral, camphor, lupulin, lactucarium and opium.

When the cause of incontinence is immediately traceable to a hyperesthetic condition of the mucous membrane of the posterior urethra, general sedatives are still serviceable. Local treatment is, however, especially indicated, instillations of cocaine or silver nitrate and the repeated passage of a cold full-sized sound being particularly useful.

The very rare cases of incontinence due to anesthesia of the urethro-vesical region, practically always due to lesions of the spinal cord, are said to be benefited by cauterization of the posterior urethra. Trousseau's advice for atony of the vesical sphincters is that strychnia should be given in fairly full doses morning and evening, continuing the medicine for two days and then allowing two days of rest. The quantity of the drug is gradually

increased. Guyon in this class of cases has been particularly successful with electricity. An electrode is introduced, insulated excepting at the end. The other electrode is placed either upon the pubis or the lumbar spine, and the faradic current with slow interruptions is employed. Each treatment should last about five minutes; this directly exercises the weakened muscles and restores their tonicity. To control the psychic influences, especially the dream of micturating, various means are serviceable. Thus, the slumber may be rendered less profound by means of tea or coffee. These agents are, however, not to be commended in the treatment of neuropaths. Another method is to wake children regularly through the night. This method gradually accustoms the bladder to regular evacuations. The number of wakings should be proportionate to the quantity of urine secreted and to the frequency of micturition during the day. Punishment is successful in some cases, since it makes a powerful impression on the brain. Suggestion has been utilized in other ways; thus painful subcutaneous injections have been employed, or operations have been threatened. Finally hypnotic suggestion has been used, Liebeault having claimed by this to have cured cases. The first step in this treatment is to procure hypnotic sleep. It is then suggested that the child should rise at certain hours to urinate, gradually the number of risings by night is diminished until finally they are abolished entirely, the child being forbidden to urinate until it wakes in the morning.

The pure psychopathic incontinence dependent upon dreaming of micturition is probably the most troublesome of all to cure. Psychic treatment is alone efficient. The cure is usually spontaneous in these patients and accomplished about the time of puberty, when amorous dreams replace those of micturition. These patients often become congenital hypochondriacs who swell the ranks of those

who suppose themselves suffering from spermatorrhea, and who after gonorrhœa hypnotize themselves concerning the urethra and are thus able to see a constant discharge of semen.

The cases of incontinence due to retention of spasmodic origin are readily cured by the regular passage of catheters and sounds. Once daily the bladder is completely evacuated. Once or twice a week full sized sounds are passed after the catheter. Treatment is continued for about a month, amelioration is usually rapid, and the cure complete. Should incontinence of overflow result not from spasm of the sphincter but from paresis of the detrusors, the only treatment would, of course, be faradization.—*Therapeutic Gazette*.

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### THE NEURON.

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Until within comparatively recent years the generally adopted conception of the nervous system was that its essential tissue was made up of two distinct morphologic elements—nerve-cells and nerve-fibers. The nerve-cells were supposed to originate, send, receive, and modify impulses. These were conveyed from one nerve-cell to another by the nerve-fibers, acting as conducting agents, and serving to connect nerve-cell with nerve-cell. This transmission of impulses presupposed continuity of structure. We now know, however, that the nervous system is not made up of a number of nerve-cells maintained in continuity by nerve-fibres, but that it is composed of a number of distinct and independent neurologic units called *neurons*.

Each neuron originates as a unit, structurally independent of every other neuron, and as such it remains, despite its subsequent morphologic complexity. The essential parts of each neuron are the *nerve-cell* (in a restricted sense), the *axon* (axis-cylinder process), and the terminals of the axon—the *end-tufts*. The nerve-cells

are of various shapes, and have received applications in conformity therewith. The axon is a differentiated process of the cell-body. It may preserve its individuality, and proceed as the axis-cylinder of a nerve-fiber, or it may immediately break up into numerous fine filaments. The axon always terminates in a free extremity—*end-tufts* or *end-bushes*. Further, there proceed from the cell-body other processes known as *dendrons* or *dendrites*; and from the axon other processes known as *collaterals*. On the dendrites there are fine hair-like projections called *lateral buds* or *gemmulæ*, and at the branching of the dendrites thickenings known as *varicosities*. It is of a multitude of such neurons that the nervous system is made up.

Each neuron is always structurally unconnected with any other neuron. The relation that one bears to another is simply that of propinquity, or possibly contact. The function of the gemmulæ is to receive the nervous impulses from the end-tufts of the axon (for instance), and transmit them to the dendrites, whence they are conveyed to the cell-body proper. The impulse is further carried throughout the neuron by the axon, which thus serves as a cellifugal conducting apparatus; the dendrites transmitting impulses cellipitally. The impulse is delivered to a muscle-fiber, for instance, occasioning contraction by the terminals of the axon, which, in order that it may distribute the impulse over a large area, divides into numerous fine filaments, the end-tufts. These latter, therefore, serve as *organs of emission* or *deliverance* for the impulse. The collaterals functionate as do the axons.

Without doubt the most important part of the neuron is the nerve-cell, with the dendrites, being the nutritional, trophic, receptive and impulsive elements. The dendrites are parts of the cell-body, being split-up portions of its periphery. They resemble the cell-body in structure and

in function. The nerve-cell has been aptly termed the vital part of the neuron. The axons, collaterals and end-tufts, outgrowths of the cell-body proper, are of secondary importance. They conduct and deliver impulses to neighboring regions. The processes of the neuron are, as it were, projections of the cell-body in the various motor and sensory regions of the body. Thus, without regard to its topographic situation, there is no one part of the nervous system that is not in direct association with every other part. There is no one part that functionates absolutely independently of every other part.

The theory of the motility of the neuron aptly explains certain hysterical, hypnotic and other functional states (sleep), and may also serve to account for certain morbid manifestations, the nature of which we do not understand (tachycardia). Various so-called system-diseases of the nervous system are now known to be due to disease of neurons functionally allied—a system of neurons. The fact that the more distal part of any axon (as the axis-cylinder of a nerve-fiber) is the least resistant to the morbid influence of various agencies, permits of our comprehending the occurrence of peripheral neuritis, due to alcohol, arsenic, etc. We have also been able to discover the anatomic basis of certain mental diseases. —*The Medical and Surgical Reporter*.

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## VICTORIAN ORDER OF NURSES.

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The *Montreal Witness* speaking editorially on the above subject the day following the laying, by Lord Lister, of the corner stone of the Montreal General Hospital Jubilee Nurses' Home, said:

The Montreal General Hospital Jubilee Nurses' Home, the corner stone of which was laid yesterday, is in part at least in affiliation with the Victorian Order, as it is intended to

do for Montreal exactly the work which the Victorian Order will do for the outlying and distant regions of the Dominion, in which the need is greater out of all comparison owing to their remoteness from medical aid.

With this fact in view, it is not at all surprising that every one of those who took part in the proceedings yesterday took advantage of the opportunity to commend the Victorian Order and urge upon the public-spirited people of the Dominion in this annus mirabilis of Canada, the year of progress and prosperity of hope and confidence, this jubilee year, the establishment of the project. There has, we fear, been some apprehension on the part of the public that the Victorian Order had not the support of medical opinion. Some of the most eminent men of the Dominion are connected with the project in an official capacity. If this is not sufficient we are sure that the testimony of Lord Lister, who stands among those of the very first rank in medical science in the world, will be accepted as convincing. Lord Lister is thus reported:

He had been informed that the nursing staff did not confine their operations to the hospital, but that there was a liberal arrangement made by the hospital authorities by which the nurses might be sent out in the town generally; and where the circumstances of the family were such that they could not pay the nurse properly, the funds were contributed by the hospital to aid in the payment of the nurses. That seemed to him a most noble idea, and he could not but think that if it could be extended, not only to all parts of the city but to the remote outlying parts of the country it would be a most valuable thing for Canada. Her Excellency Lady Aberdeen had this matter much at heart, and he was sure that if her idea of the Victorian Order of Nurses could be carried out, with due regard to the efficient training of the nurses, and also to the efficiency of their su-

pervision, the matter would commend itself to all medical men.

Dr. Roddick, referring apparently to the necessity remarked upon by Lord Lister of efficient training of the nurses, declared that the establishment of the Victorian Order would aid in the work of the training school of nurses. Of Dr. Roddick's speech in this connection the following summary was given: "He spoke of the project for establishing a Victorian Order of Nurses, the system which Her Excellency Lady Aberdeen had suggested. He thought such a system would not interfere in any way with a training school of the kind in contemplation in the present work, but would greatly help it."

Lord Mount Royal, Mr. Wolferstan Thomas and the Mayor also heartily supported the Victorian Order, and seemed confident that the project would be carried through. Certainly, one shudders when one considers the possibility of the sick and helpless of the country districts left to such nursing perhaps as Dr. Roddick described as being what even the General Hospital had to rely upon thirty years ago, before trained nurses were introduced:

He had been house surgeon in the hospital for six years, beginning in 1868 and ending in 1874. He remembered very well the conditions of nursing in those old days. He remembered when they had had some characters connected with the nursing staff whom, he was sure, Dickens would have been delighted to have made the acquaintance of, who possessed some most decided characteristics of the Sarah Gamp type. He remembered very well how the late Dr. Ross and himself used to occasionally have their attention directed to these characteristics. He had seen nurses starting into the ward with the medicines to be administered internally in the right hand and those to be rubbed in externally in the other, and if an accident had occurred on the

way and the bottles had got mixed, he had no doubt that some very extraordinary cases of sudden death would have taken place.

If such dangers existed where strict medical supervision was possible, what must be the danger in remote country districts were supervision by the one medical practitioner in perhaps a district of twenty or forty, or even a hundred square miles, must necessarily be scanty? The Victorian Order of Nurses should be heartily taken up and carried through in this jubilee year, which has been one of such progress and rejoicing to the people of Canada.

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### SHOULD MINISTERS PAY DOCTORS?

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The *Medical Record* answers this question in the affirmative. Speaking of the custom in this country of treating ministers free, that journal says:

"This custom has been in existence for so long a time that the fact seems to have been forgotten that this free service is only an act of courtesy on the part of the physician, and not, as the minister imagines, by any means binding. The explanation for this state of affairs is not easy to give. In bygone times there may have been fairly cogent reasons why the doctor should thus favor the clergyman. Then it might perhaps have been argued that in many instances the medical man received a *quid pro quo*—he was repaid to a certain extent by the introduction of patients. Times, however, have changed and that argument now will hardly stand. Again, the relative financial positions of the two professions have greatly altered. At one time, before acute competition had reduced his earnings, the doctor was both able and willing to lend a helping hand to the poor minister. Nowadays it may be said with truth that their respective positions are reversed, and that the minis-

ter is as well able to pay for as the doctor is to give his services. The clergyman may not be much richer, but it is very certain that the doctor is a great deal poorer.

"Still, when all has been said and done, it is not so much the custom itself as the abuse of it that hurts both the feelings and pockets of the doctor. For example, take a popular summer resort, to which the people flock for a short time and where the resident practitioners hope to make their harvest, often indeed chiefly depending upon their earnings at this season to carry them through the remainder of the year. Numerous clergy with their wives and families will visit the place, many of whom will require medical attendance. Surely in such cases it is hard on the unfortunate doctor that he should be expected to attend these absolute strangers as a matter of obligation. He will not greatly object to giving his services to the resident preachers, but that he should not feel sore at wasting his time on people he may never see again is rather too much to look for from poor human nature. A line should be drawn somewhere.

"There is also said to be a lamentable lack of reciprocity about this custom; thus if a physician who has been attending a minister and any one of his family wishes to get married by him, he will in all likelihood be called upon for a fee. This is not exactly doing unto others as ye would they should do unto you.

"In England the custom of free medical attendance exists, but to a much more limited extent than here. It is there regarded as a question of courtesy and not of obligation. Most of the consultants in the large towns do not take fees from clergymen, simply because they think the latter cannot afford to pay and not because they consider themselves in any way bound to give them free advice. In the country districts, however, of Great Britain, the clergyman pays the doctor just as he would his lawyer or

his tradesman. This matter should be placed in its true light. It is not obligatory on the doctor to attend the minister without payment, nor is there any unwritten law to that effect. If he does so it is altogether from kindness, and it is galling to him to have the action regarded otherwise. Why should not ministers be classed in the same category as ordinary individuals? Those who cannot afford to pay should be attended free of charge, not as claiming such attendance as a right, but in the exercise of pure benevolence. On the other hand, there are no reasons why those who are able to pay should not do so. Perhaps the subject is misunderstood by them, and the true position of affairs is not thoroughly appreciated. They imagine that free attendance is their right. If their minds were disabused of this idea, and if they were convinced that by not paying they were in a manner accepting alms, with the consequent loss of self-respect, their views might undergo a considerable alteration."

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### ON THE TREATMENT OF DILATED STOMACH.

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In *Treatment* of June 24th, 1897, Wynter expresses the view that the treatment of such cases may be divided into the removal of those causes which lead to and maintain dilatation, and the adoption of such means as we possess for promoting the contraction of the organ after dilatation has already occurred.

Among the more common causes of dilatation of the stomach may be mentioned the introduction of excessive quantities of food or drink, of which instances are afforded by vegetable feeders, and those frequent cases which arise among German students from their practice of swallowing many liters of weak beer at their "Kneipen"; the ingestion of food which, by its nature, or through im-



perfect mastication, is slow of solution; this being still further delayed by feebleness of the digestive juices, by sleep, or by undue activity immediately after meals. The absence of opposing molars, hurry in taking food, and irregularity in meals, or their following too closely upon one another, are frequent sources of the accumulation of rancid and fermenting residues in the stomach, and ultimate dilatation.

The naturally suggested remedy consists in correcting these defects, and in supplying the patient with moderate quantities of easily digested food at proper intervals. In slight cases, and those of short standing, these measures may be sufficient, but in more severe ones, and especially such as are of long duration, it is necessary in addition to wash out the stomach thoroughly before meals for a day or two, and then before bedtime two or three times a week, so as to get rid of fermenting residues and accumulation of partly digested food. The pylorus forms a very effective barrier to solid masses, and tough bodies like thick grape skins, and the pulp of an orange, have been known to remain for as long as three, or even six, months in the stomach—the cause of continuous irritation and fermentation. There is no doubt that emetics would be very effectual in many instances, but complete emptying of the stomach by such a process is neither comfortable nor easy to achieve, especially as these patients are rarely young, and the stomach is often sluggish as regards muscular contraction.

Provision having been made for emptying and cleansing the stomach from time to time, its contraction may be promoted by the administration of a preprandial pill, consisting of strychnine 1-25 grain, liquor arsenicalis 4 minims, creosote 1 minim, and extract of gentian 2 grains, twice a day. In extreme cases it is useful to apply the constant current either through the middle of the back or

internally by means of a wire protected in the vulcanite tube, except for an aperture at the extremity, the second electrode being placed in either case over the epigastrium. A strong current can be borne without inconvenience if gradually increased and diminished, and can be relied upon to allay the pain of vomiting, and to produce contraction of the organ. Another useful measure is massage, really deep and careful pommeling of the epigastric and umbilical regions. This affords a safe and convenient method of rousing contraction and emptying the stomach, regard being had to the position it occupies, and the fact that it is commonly dragged down by the weight of its contents, the pylorus remaining looped up and somewhat kinked by the gastro-hepatic omentum.—*The Therapeutic Gazette.*

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### THE VICTORIAN ORDER OF NURSES DISCUSSED.

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About one hundred and fifty city medical men assembled on the evening of Dec. 1st, at St. George's Hall, Elm Street, on the invitation of Dr. Worcester, of Waltham, Mass., acting for her Excellency Lady Aberdeen, and discussed cigars, coffee, sandwiches, and the Victorian Order of Nurses. Dr. Thorburn presided, and the speakers of the evening were Drs. Worcester, Grasett, Temple, Wagner, O'Reilly, Machell, G. S. Ryerson, Oldright, Starr, Macdonald, Price-Brown, Powell, Bryce, McCallum, J. E. Graham, McPhedran, Stenhouse, Fotheringham, Britton, Cameron and Barrick.

At the opening of the meeting Dr. Worcester outlined the constitution as revised and put forth a strong plea for the organization of the Victorian Order of Nurses, but did not succeed in convincing more than a couple of those present that the scheme as at present proposed was practical.

Dr. Bryce, the Provincial Health Officer, thought that in the case of contagious diseases, as in a sparsely settled country like Manitoba and the North-West Territories, the removal of the patients to one of the hospitals was preferable. Dr. McCaillum stated that there were hospitals in nearly every large town and city in the Dominion, and that people who were unable to pay a trained nurse, could receive as careful attention there as in their own homes. He did not think the scheme necessary in Ontario. Dr. J. E. Graham would have no nurses enter the order who did not have hospital training for at least two years. Dr. Stenhouse thought the ground pretty well covered now, and spoke very highly of the Nursing-at-Home mission.

Dr. Britton was opposed to the method proposed by the constitution to appoint the Board of Governors. According to it, he said, the majority of those on the board would be chosen from outside the medical profession. He urged upon those present the necessity of having the organization closely associated with the medical profession. After Dr. O'Reilly had spoken, Dr. Worcester asked them not to condemn the scheme on the ground that it was not needed in Toronto. It was needed in some other parts of the Province and the Dominion. It was working in England and in this country. He came here to agitate the movement because of his love for it, and for the Queen.

Dr. Cameron also spoke in favor of the scheme, and Dr. Barrick vigorously opposed it.

As they had met on the invitation of her Excellency the gentlemen did not think it would be advisable to pass any resolution. However, the general feeling seemed to be that while they fully appreciated the high motive which actuated her Excellency and other promoters of the scheme, they thought it as yet too indefinite for indorsement. They also

seemed to think that it would be advisable that a committee composed of medical men and lady superintendents of hospitals should be appointed to revise the proposed constitution, and submit a report to meetings of members of the medical profession in various parts of the province for endorsement.—*Mail and Empire*.

## THE TREATMENT OF CRIME.\*

The scientific study of crime was initiated by the criminal anthropology of Lombroso and his followers. Dr. James was of opinion, however, that criminal anthropology had been of use not so much in itself as in the fact that it had been the initiating factor of something better—namely, the study of the criminal from the sociologic standpoint. Crime, he held, like disease, insanity and pauperism, was the result of the action of social factors. In social evolution, as in all evolutions, we had to recognize the survival of the fittest. The man who, from faults of heredity or strain of environment, was, as it was termed, unfit, must succumb and became a victim of disease, a lunatic, a pauper, or a criminal, according to the circumstances of his constitutional condition or of his surroundings. The author then considered together disease, lunacy, crime and pauperism, and showed that year by year a certain fairly constant amount of each was fated to exist. He showed how they were all influenced by age, season of year, conditions of trade, etc. The interrelations of these were also demonstrated. From statistics, it was shown how, for example, crime, lunacy and nervous diseases of all kinds were most prevalent at those seasons of the year when the death-rate and when pauperism were lowest,

\* Extract by the *Medical and Surgical Reporter* of paper by A. James, M.D., in *British Medical Journal*.

and *vice versa* at other seasons; how, during cold weather, crimes against property prevailed; how, during warm weather there was a preponderance of crimes against persons. All these results pointed to the truth of what Quetelet had long ago enunciated—namely, “that the crime is the fault of society, the criminal is only the instrument.” The means of best dealing with crime were then referred to, and the first indication in this matter seemed to be that the particular crime should be regarded as of less importance than the harmfulness or usefulness of the criminal to the society in which he lived. Those training for criminal law should be educated in physiology, medicine and psychology, and the practical study of criminals by clinics in jails should be instituted, just as at present the practical study of disease and insanity was carried out in hospitals and asylums. All criminal investigations should be as public as possible, and for commercial crimes, such as fraudulent bankruptcy, breaches of trust, etc., publicity as regards income, working capital, etc., would be of value. He was strongly in favor of indeterminate sentences, and he held that the governors of prisons should all be trained in medicine and psychology.

**THE NUMBER OF PHYSICIANS AND MEDICAL SCHOOLS IN THE UNITED STATES.**

An interesting statistical article on the medical colleges, physicians, etc., of the United States, based on the last edition of Polk's Medical and Surgical Register and the census of 1890, appears in the *Virginia Medical Semi-Monthly* of August 21st.

According to the above authority the ratio of physicians of all kinds in the United States is about one to six hundred and thirteen of population. This estimate is based on a population of sixty-five millions, and one

hundred and six thousand of the physicians are thought to come under the head of “regular,” while twenty-six thousand represent the eclectic, homœopathic, physio-medico and other sects, together with professional quacks and irregulars in general. They are distributed throughout the Union, in the various States and territories as follows:

State.	Population.	No. of physicians.	Ratio of population.
Alabama.....	1,513,017	1,609	1: 940.3
Alaska.....	32,052	5	1: 6,410.9
Arizona.....	59,620	95	1: 638.1
Arkansas.....	1,128,179	2,841	1: 558.5
California.....	1,208,130	3,152	1: 383.4
Colorado.....	412,193	918	1: 449.0
Connecticut.....	740,253	1,139	1: 636.9
Delaware.....	168,493	239	1: 704.6
District of Columbia.....	230,392	857	1: 264.2
Florida.....	391,422	764	1: 512.3
Georgia.....	1,837,353	2,021	1: 900.5
Idaho.....	84,385	109	1: 772.3
Illinois.....	8,820,351	7,331	1: 521.9
Indiana.....	2,192,404	4,778	1: 453.8
Indian Territory.....	172,321	291	1: 592.3
Iowa.....	1,911,806	8,400	1: 502.4
Kansas.....	1,427,036	2,210	1: 645.0
Kentucky.....	1,858,035	3,104	7: 588.8
Louisiana.....	1,818,687	1,460	1: 766.2
Maine.....	361,036	1,104	1: 567.9
Maryland.....	1,042,390	2,003	1: 520.4
Massachusetts.....	2,238,943	4,032	1: 555.2
Michigan.....	2,093,889	3,730	1: 561.8
Minnesota.....	1,301,328	1,576	1: 820.0
Mississippi.....	1,288,600	1,397	1: 943.3
Missouri.....	2,679,184	4,736	1: 565.7
Montana.....	182,159	247	1: 573.5
Nebraska.....	1,058,919	1,695	1: 693.8
Nevada.....	45,761	48	1: 953.3
New Hampshire.....	370,580	859	1: 562.6
New Jersey.....	1,444,433	1,814	1: 783.5
New Mexico.....	153,593	97	1: 1,684.6
New York.....	5,997,883	11,132	1: 538.7
North Carolina.....	1,617,947	1,358	1: 1,191.4
North Dakota.....	182,719	203	1: 900.1
Ohio.....	3,672,316	7,575	1: 484.7
Oklahoma.....	61,834	326	1: 189.7
Oregon.....	313,767	653	1: 480.5
Pennsylvania.....	5,258,014	8,439	1: 623.0
Rhode Island.....	545,506	543	1: 536.3
South Carolina.....	1,151,149	1,000	1: 991.7
South Dakota.....	328,808	304	1: 903.4
Tennessee.....	1,767,518	3,079	1: 574.0
Texas.....	2,226,523	4,617	1: 484.2
Utah.....	207,905	254	1: 818.5
Vermont.....	332,422	628	1: 531.0
Virginia.....	1,655,690	1,978	1: 847.3
Washington.....	349,390	650	1: 537.5
West Virginia.....	762,794	1,236	1: 536.4
Wisconsin.....	1,086,880	1,974	1: 554.9
Wyoming.....	60,705	60	1: 1,011.7

The medical schools number about one hundred and seventy-five. Of these one hundred and twenty are regular, nineteen homœopathic, seven eclectic, two physio-medico, and twelve unclassified. Eight are for women specially; five of these being regular, two homœopathic, and one eclectic. In eight of the other colleges women are permitted to matriculate, and four are exclusively for colored people.

At the last session of the American Public Health Association, Dr. Hibbert Hill, Toronto, '93, now of the Board of Health, Brooklyn, read a paper on "Analytical Work on Public Water Supply," showing an instrument for the collection of samples of water for chemic, microscopic and bacteriologic analysis. This apparatus designed by Dr. Hill for use in the Rockville Center Laboratory, established for the sanitary supervision of the Brooklyn water supply, has stood the practical test for constant use for a year. Its strength, simplicity and ease of manipulation commend it to those who require samples of water from ponds, rivers or streams where a sample of the water is desired at depths from two or three inches to fifteen or twenty feet. The depth, in fact, is only limited by the convenient length of the pole attached. The apparatus may be further modified so as to allow of collection of samples at any depth by the use of cords and weights.

The apparatus consists of a holder for the bottle and a device for the withdrawal of the stopper, when the bottle is submerged to the desired depth.

The holder is shaped like half a hollow cylinder and is of such dimensions as will fit the bottle usually employed. It has a circular bottom with a raised edge and upon this the bottom rests. The holder is made of galvanized iron. The bottle is secured to the iron case by a strap of brass, hinged on one side of the holder and fastened by a catch on the other. The bottom piece of the holder is perforated to permit the ready passage of the water through it, and in consequence there is greater ease in handling when under the surface. Holes at the side on a level with the mouth of the bottle when it is in position, allow free access of the water from every direction, while the bottle is being filled.

The device for the withdrawal of the stopper from the bottle consists

of an upright rod passing through two brass rings, which are rigidly secured at right angles to the inner side of the iron holder. These supporters are so placed as to centre the end to the wooden rod over the mouth of the bottle. The wooden rod has a spiral spring of brass wire wound about it and fastened at the lower end to the rod of wood, and at the opposite end to the upper brass ring through which the rod passes.

The rod upon which its lower end has the clamp device for holding the stopper. This is composed of three brass strips bent in such a manner as to grip the top of the stopper tightly. The style of stopper used in all the bottles for which this kind of grip was made, is known as the mushroom stopper, and as they differ slightly in shape in different styles and shapes of bottles, require a slightly different bending of the brass grips in order to hold the stopper firmly.

The largest of the three collectors designed has one of its brass grips hinged and snapped down over the stopper, holding it firmly. The other two have rigid grips and depend upon their spring to hold the stopper in place.

The upper end of the wooden rod carrying the clamp for the stopper, has a wire attached to it by means of a ring. The wire passes up the pole, which is clamped to the iron holder. It is by means of this wire that the stopper is raised or lowered in the bottle.

The operation of collecting the sample consists in placing the bottle in the iron holder and securing it by the brass strap around the middle of the bottle. The clamp for the stopper is at the same time properly secured. The apparatus is then lowered into the water to the desired depth by means of the pole, the wire pulled and held, thus raising and holding the stopper until the water has filled the bottle. The wire is then released and the spring upon the wooden rod, before described, forces the stopper

back into place quite securely. This does not allow of any more water entering the bottle while being drawn to the surface, even if the bottle is only partially filled with water.

The apparatus is then drawn from the water, the bottle removed and another substituted, and the operation repeated as often as desired.

The strength of the apparatus permits of very rough handling in the exigencies of sample collection, under all sorts and conditions of weather, temperature and travel. Its simple construction makes repair easy, should any accident occur, and insures rapidity in the work of collection, which is an important detail in routine work on an extensive scale. The uniformity of collection secured by this means is extremely desirable where serial and parallel microscopic, bacterial and endemic samples are being taken.

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THE *Medical Record* for November 20th has a long allegorical communication, by Thos. J. Hillis, of New York, entitled, "What Must We Do to be Saved?" being an inquiry into, and a brief summary of the causes leading to the hospital and dispensary abuse of medical charity. The writer, in summarizing the causes leading to the abuse of charity, speaks of the first as Dr. Youngblood, whom he stigmatizes as the incarnation of the pernicious activity and commonplace audacity with which the medical profession is to-day honeycombed, undermined and disgraced. The Youngbloods have made our calling the jest of the people; they have so injected the element of fakir and three-card monteman into the current of medical thought that the honest and intelligent practitioner blushes while contemplating the future of his profession. These Youngbloods have divided, demoralized and prostituted our profession to their own selfish ends, so that it is an easy prey for the wily hospital governor to feed on, or

the philosopher to base a truth or point a moral with. Mr. Broadcast is the soul and embodiment of the unscrupulous, dishonorable editor, who will stoop to anything to further and advance his individual interests. While one sheet of his journal is devoted to editorials, eulogizing fair business dealings, the other side is full of fraudulent advertisements; with one hand he smites the usurer and locks the embezzler in a cell, while with the other he receives the reward of conspiracy and cunning from his partnership with the dishonest business man, the impostor and the quack.

The Rev. Mr. Mayflower is a type of the clergymen who are preaching from their pulpits and proclaiming from the lecture platform their sympathy with the poor, and the efforts they are making to advance the interests and better the condition of the laboring classes. These clergymen are loud in their condemnation of any scheme to improve the condition of the general practitioner, who, they say, has no grievance, and whose business it is, night or day, to answer the call of all who may apply at his doorbell, without being inquisitive as to whether he will receive a compensation for his services. These reverend gentlemen claim that the physician has no moral right to ask for a reward for his labor. "This should be left to the generosity or judgment of the patient," say these obliging gentlemen. By preaching such doctrines and emphasizing these absurd assertions in private and public, they have inflicted a hardship on the medical profession, and largely contribute to make the poor poorer and the discontented more discontent. They, more than any other cause, have helped to fill the waiting-rooms of the hospitals and dispensaries with medical paupers; and, worse yet, they put seditious words in their mouths and revolutionary ideas in their heads about the rights of the poor and the duty of the

government. The anarchist, strange to say, is largely the product of the social teachings of the Mayflower brand of clergyman, who is careful to run away from trouble himself and better his condition whenever an opportunity offers. He is perfectly willing to leave his old flock to shift for itself, to hope and pray as best it can.

Dr. Dash is a sample of that moral reptile known as the advertising quack. The effrontery of this man is remarkable. By organized fraud and misrepresentation he reaps his harvest of dollars and flourishes like a green bay tree, notwithstanding that the searchlight of an aroused public opinion is directed on his methods. He still reposes with a beautiful serenity in the confidence of his victims, and, like the surgeon of the Free-to-All Dispensary, hides behind the fog of legal technicalities placed on the track of justice by Mr. Sharp, his attorney.

The pernicious influence of the Youngbloods, Mayflowers, Broadcasts, Redflames and Dashes must be destroyed before any diminution in charity abuse is possible. The combined influence of these men is the moral Saint Lawrence feeding the gulf of charity. Behind this gulf is a perverted public sentiment, fed by millionaires and some well-meaning philanthropists—as the teeming waters of the St. Lawrence are fed by the great chain of North American lakes.

The hospital governor is only a condition, a mere incident in this Niagara of charity, a sort of caretaker at the Falls, so to speak. The poor, helpless man is as unable to shoot these rapids as was Dr. Goodman or the Rev. Mr. Mayflower; indeed, he must use extreme caution that he is not drawn into the vortex and swallowed in the maelstrom of the seething waters of the abyss below. He is ultimately in as much danger for his life as was old Dr. White in being swept away by the human tide that

rushed through the thoroughfare to the Free-to-All Dispensary.

The hospital and its adopted child, the dispensary, will collapse, shrinking to their normal proportions, when rich men are convinced that it is not to their interest to contribute further to the maintenance of these institutions. Rich men, as a rule, are selfish. It is the lack of generosity and kindness in their natures, as much if not more than business ability, that contributes so largely to their success. In order to acquire their wealth, what human wrecks are strewn in their wake! what a cyclone of misery has been the companion of their triumphal march!

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HÆMATURIA IN CHRONIC NEPHRITIS. — Dieulafoy (*Journ. de Méd.*) insists upon the importance of hæmaturia in the prognosis of chronic nephritis. After pointing out its frequent occurrence in acute nephritis, and its slight importance as regards the future, he shows that its appearance in cases of renal disease, already established, is of grave import. Thus a former pupil of his own, who was the subject of Bright's disease, maintained a high degree of health by means of strict attention to diet and climate for several years. Slight hæmaturia appeared one day, and he rapidly lost ground from that time. The author quotes similar cases, and from these he concludes that any appearance of blood, however slight, in chronic nephritis is the beginning of the end.

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MICROBE OF AMBERGRIS. — According to Professor Beauregard, the intestinal concretions of the cachalot are caused by a microbe very similar to the comma bacillus of cholera. Here is a new field for the enterprising pharmacist; he might inoculate a few sperm whales in confinement and patiently await the formation of the calculi. The difficulty is, as usual, first to catch the cachalot.

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**THE CHOICE OF AN ANÆSTHETIC.**

It is generally conceded that of the two anæsthetics, ether and chloroform, the former, in the greater number of cases, is much the safer to administer. This has been demonstrated by physiological experiment, quite recently, by Leonard Hill and Waller. Hill's experiments showed that chloroform is fifty times stronger than ether; Waller's, that it is, at least, on nerve tissue, seven times stronger. As a matter of clinical observation, too, the same conclusion has been arrived at, that ether, in most cases, is the safer anæsthetic. In St. Bartholomew's, between 1884 and 1895, there were 22,219 chloroform administrations, with 14 deaths; and 17,067 ether administrations, with 1 death. Professor Joilliar, for the first fifteen years of his surgical practice, employed chloroform only, with 1 death in 1,000 cases. In the twenty subsequent years of his practice he

gave ether only, with no death in 3,654 administrations.

In Ontario, we believe chloroform has always been almost the universal anæsthetic. But now a movement in favor of ether is coming over the profession. In our largest institution, the Toronto General Hospital, ether is the choice, except in a minority of contra-indicated cases. In St. Michael's it is given in probably one-half the cases. The anæsthetists who have given the ether a fair trial are, we believe, strongly in favor of its use as a general anæsthetic.

While ether is supplanting chloroform in the large institutions it may be some time before the general practitioner will adopt its use. This is because the apparatus for administering it in the best way is somewhat costly in comparison with that (a towel, cork and bottle) for chloroform, and will require more or less

care to keep in order. The anæsthetist will probably note that the patient resists and struggles more while going under than with chloroform; and, perhaps, through being allowed too strong an inhalation, coughs and chokes and vomits, leading the neophyte to abandon the ether for his old reliable chloroform. But these are weak objections. No conscientious man will scruple about ten dollars for an inhaler, if it will save life. And no man will, if he be a hundred-fold rewarded, whether as operator or anæsthetist, by a feeling of almost perfect safety. If a patient has no bronchial or renal trouble, it is possible to super-charge him with ether so as to allow a fifteen or twenty minute operation (say, about the nose or mouth) without giving another whiff. This would be impossible with chloroform. Then, in case the patient struggles, a few moments' careful restraint by an assistant will tide him to the non-resisting stage. By a gradual increase of dose the administration will not usually cause much discomfort to the patient. Of course, with the use of Hewitt's apparatus nitrous oxide may be used as preliminary to ether, by which one is able to have the patient anæsthetized in about two minutes.

We strongly hold that every practitioner should possess an ether inhaler, if not Clover's, say, a more simple one, such as Allis', and give the ether a fair trial. If he does, we are convinced he will follow the practice which is well-nigh universal in Old London, and becoming so in the institutions of the medical centre of this Province.

The *British Medical Journal* editorially says:

Now we learn that not only does chloroform destroy muscular tissue and narcotise the nervous centres through its influence on the blood, but actually attacks nerve fibrillæ, and destroys their irritability.

From this point of view it is some-

what startling to find that, dose for dose, chloroform is seven times more deadly than ether when tried upon isolated nerve—that is, upon a highly specialized protoplasm. And what appeals to the practical man is that these figures show how narrow a margin in the case of chloroform there is between a non-lethal and a lethal dose, while seven times that margin exists when ether is in use. . . . . Accepting nerve tissue as a criterion of the vitality of the constituents of the body, these experiments are very striking, and reveal in a clearer light the profoundly powerful character of chloroform.

In the statistics of deaths under these two anæsthetics ether stands better than the proportion of seven to one. The proportion in its favor is about thirteen to one, but, as Dr. Waller pointed out, the problem of the action of narcotics on the whole organism, although exemplified tersely by a nerve experiment, is in itself far more complex. It is often stated that the after effects of ether are far more fatal than those due to chloroform; but no foundation in experiment or statistic exists to prove this, and, as Dr. Waller cogently puts it, the use of chloroform, if it be dangerous under all circumstances, is, unless under exceptional circumstances, unjustifiable; and if it is only dangerous when unskillfully given, its deaths amount to homicide. This is Dr. Waller's chloroform dilemma.

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## THE BUSINESS OF MEDICINE.

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It is becoming a matter of everyday remark, how unpromising is the financial outlook for the medical man. Constantly one hears of the hard pull the physician is having. Accounting for this condition of affairs is heard, among other things, disconsolate references to the epidemic of good health; to the terribly overcrowded state of the profession; to the flourishing existence in our midst of



certain fake institutions; to the inability of getting out to practice in other provinces of our country because of the stupid indifference and opposition which certain influential men have held against inter-provincial reciprocity, although nine out of every ten medical men in Canada have favored the project during the past twenty-five years in which it has been discussed; to that horrible *bête noir*—lodge practice; to the local jealousies and unethical practices of certain of the profession; and to the general hard times which the physician has, on account of his long credits, felt most keenly. And through this gloomy outlook ahead they see no gleam of light; for they see in Paris many a poor doctor starving; in London, medicine supplied for 12 cents, and calls for 24 cents; while the average general practitioner makes only a bare competence, although his training has cost him \$3,000 at least.

#### MEDICAL SOCIETIES.

With the coming on of winter there has been, along with the opening of the medical colleges, a resumption of the meetings of the various medical societies. We are glad to note the marked interest shown by the officers and members of the different societies of the Province.

During the past year or so several new district and county societies have been established, which, in their monthly or quarterly sessions, are doing much good work. There is a number of districts yet in which the interest in medicine has not yet apparently reached the society-forming point. We would gladly see a local medical society in every county and city of the Province, whose object should be to keep men brightened up in their work, to foster a spirit of fraternity among them, and to discuss ways by which their interests may be maintained and advanced.

#### The Physician's Library.

*Spinal Caries* (Spondylitis, or Potts' Disease of the Spinal Column). By NOBLE SMITH, F.R.C.S. Ed.; Surgeon to the City Orthopædic Hospital, London, Eng. Second edition. London: Smith, Elder & Co.; 1897. Crown 8vo pp. 153; 89 illustrations. 5s.

Orthopædists and others interested in spinal disease will welcome this addition to the literature of Potts' disease. The author looks on these cases in an optimistic spirit. He recommends absolute fixation of the spine. He draws attention to the advantages of a head-piece he has adopted over the supports advised by Davis and Sayre. The introduction of strict antiseptics, in cases of laminectomy has robbed this critical operation of much of its terror; but the author holds that mechanical fixation, if well done, will do away with the necessity for operative procedure

*A Handbook of Therapeutics.* By SYDNEY RINGER, M.D., F.R.S., and HARRINGTON SAINSBURY, M.D., F.R.C. 13th Edition. London: H. K. Lewis, 136, Gower Street, W.C. 1897.

This new edition of the well-known author will prove a valuable edition to every physician, as its special feature, as was its predecessors, is the subject of therapeutics from a clinical standpoint. A careful selection has been made of the many new drugs which have been introduced since the publication of the last edition. A special chapter has been added on Serum Therapeutics, and in connection with the Invalid Dietary a short section upon the use of the digestive ferments. The introductory chapters are devoted to a study of tongue, pulse, skin and temperature. Following, there are several sections on hydrotherapy (reference being made to the new Nan-

heim Schott treatment). Then comes a discussion on poultices, the use of ice, enemata, counter-irritation, etc. The body of the book is taken up with a discussion of the standard drugs and the clinical indications for their use. We can commend this volume to every student and practitioner of medicine.

*Cutaneous Medicine: A Systematic Treatise on Diseases of the Skin.*  
By LOUIS A. DUHRING, M.D.,  
Professor of Diseases of the Skin  
in the University of Pennsylvania.  
Part II. Classification, Anæmias,  
Hyperæmias, Inflammations. Illus-  
trated. Philadelphia: J. B. Lippin-  
cot Company. London: 6 Hen-  
rietta Street, Covent Garden. 1898.

The author in the commencement of this volume discusses the classification of skin diseases. He maintains that questions of etiology, although important, should be excluded from the framework of a classification. Prominence is given rather to the clinical features, and to the normal and pathological anatomy. His main classes are: Anæmias, congestions, inflammations, hæmorrhages, hypertrophies, atrophies, new formations, anomalies of secretion of the glands, and neuroses. This volume deals with the first two classes and the following divisions of the third class—the erythemas, the urticarias, œdema, eczema, the impetigoes, ecthyma, dermatitis herpetiformis, pemphigus, pompholyx, herpes simplex and zoster. We have only words of adulation for the thorough and lucid discussion of these interesting diseases. The many pictures of the various lesions make a valuable feature of the work. The sectional drawings representing the histological anatomy are especially good. While every specialist will, no doubt, have the work of which this is a volume, there can be no question of its value to the general practitioner who is so often called upon to treat skin cases himself, being

unable, by reason of his distance from them, to transfer his cases to the specialists for diagnosis and treatment.

*Twentieth Century Practice.* An International Encyclopædia of Modern Medical Science, by Leading Authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D., New York City. In Twenty Volumes. Vol. XII.: Mental Diseases, Childhood, and Old Age. New York: William Wood and Company. 1897.

The following distinguished contributors to this volume make one feel sure it is pregnant with good material, which a perusal confirms: J. Boy-Teissier, Marseilles; G. Fielding Blandford, London; Jules Comby, Paris; Cesare Lombroso, Turin; Paul H. Sollier, Paris. The first 250 pages will be read with much interest, being an up-to-date epitome of the literature on each of the leading types of insanity. The next hundred pages deal with the subject of idiocy fully and clearly. A discussion on "Criminal Anthropology," by Lombroso, the author of "The Female Offender" and "The Man of Genius," etc., follows, and is of extreme interest. The subject, "Old Age," comes next by Boy-Teissier. This period of life, he characterizes as that during which, without being a sick man, the senescent, has need of the guidance of the physician in order that he may not grow old too rapidly, or in an irregular manner. A brief, though comprehensive view, is then given of "The Diseases of Childhood," by Comby.

#### PAMPHLETS RECEIVED.

"Surgical Melange." By B. MERRILL RICKETTS, Ph.B., M.D. Cincinnati O Paper.

"Urinary Antiseptics in Cystitis." By ARTHUR R. ELLIOTT, C.M., M.D. Chicago. Paper. 7 pages.

"Recurrent Gall-stones." Angioma of Spleen. Excision of Cæcum. By JOHN HOMANS, M.D. Paper. 8 pages.

"The Hemiplegic State, and Its Treatment." By ARCH. CHURCH, M.D. Paper. Reprinted from the Chicago *Medical Recorder*.

"Bunion; Its Ætiology, Anatomy and Operative Treatment." By PARKER SYMS, M.D. Paper. 8 pages. Reprinted from the *New York Medical Journal*.

"A Plea for a Uniform Diastase Test." By C. C. FITE, M.D. New York. Paper. 8 pages. Reprinted from the Journal of the American Medical Association.

"When to Call a Surgeon in Appendicitis." By GEORGE W. GAY, A.M., M.D. Boston. Paper. 18 pages. Reprinted from the Boston *Medical and Surgical Journal*.

"Strophanthu -A Clinical Study." By REYNOLD W. WILCOX, M.D., LL.D. New York. Paper. 19 pages. Reprinted from the Journal of the American Medical Association.

"Anæmia; Its Cause and Treatment with Pepto-Mangan (Dr. Gude's). By GEORGE D. BARNEY, M.D. Paper. 13 pages. Reprinted from the *New York Medical Journal*.

"The Nature of the Leucocytosis, Produced by Nucleinic Acid." A preliminary experimental study. 19 pages. Paper. Reprinted from the Journal of the American Medical Association.

"Ligation of the Common Carotid Artery, for Trifacial Neuralgia, with Experiments and Observations upon Dogs." By B. MERRILL RICKETTS, Ph.B., M.D. Cincinnati, O. Paper. 7 pages. Reprinted from the Journal of the American Medical Association.

"The Rational Treatment of Gastric and Intestinal Disorders." By CHARLES MARCHAND. Paper. 28 pages.

"Appendicitis." Report of four cases. Craniectomies, with report of cases. Abdominal Incision for Ascites. By B. MERRILL RICKETTS, Ph.B., M.D., Cincinnati, O. Reprinted from the Cincinnati *Lancet-Clinic*.

"Experimental Basis of the Dietetic and Medicinal Treatment of Hyperacidity and Gastritis." By JOHN C. HEMMETER, M.B., M.D., Ph.D. Baltimore. Paper. 20 pages. Reprinted from the Journal of the American Medical Association.

"Criminal Abortion—Its Prevalence, Its Prevention, and Its Relation to the Medical Examiner," based on the "Summary of the Vital Statistics of the New England States for the year 1892," by the six secretaries of the New England State Boards of Health. By Dr. H. R. STORER, Newport, R.I. Paper. 34 pages. Reprinted from the *Atlantic Medical Weekly*.

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## Miscellaneous.

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PATHOGENY OF RELAPSING APPENDICITIS.—Mdlle. von Mayer (*Rev. Med. de la Suisse Rom.*) finds that none of the older theories as to the cause of relapsing appendicitis, such as its being due to tuberculous, dysenteric, or typhoid ulcers, are borne out by statistics. Roux, in 1895, was the first to bring forward the theory that micro-organisms find a suitable nidus in which to remain latent in the adenoid structures of the appendix and in residual cicatrices and adhesions. The author has endeavored to prove this theory, and has examined forty appendices directly after removal during life. (1) Bacteriology of the

secretions from the lumen, perforations, empyemata, and extra-appendicular abscesses. Plate cultures from these remained sterile in more than half the cases (twenty-five). The non-sterile cases produced very diverse organisms, various bacilli and diplococci. (2) Bacteriology of sections: Micro-organisms were found localised in the thickened serosa, in the lymphatic spaces of all the layers of the appendix, and even in the non-ulcerated mucosa, in adhesions, etc., in fifty-one per cent. of the cases (twenty-three times). These latent organisms were present, not only in appendices removed in the quiescent stage six to eight weeks after an attack, but sometimes in those removed eight months after. On the other hand, cases where no bacteria were present in the tissues (seventeen cases) included some of those removed only three to six months after, or even during an attack. Either the bacteria had perished or, more probably were absent from the special portions of tissue examined. An acute outbreak always starts in the remains of inflammation; cicatricial foci being more easily penetrated by micro-organisms than healthy tissues. As regards the kind of organism present in the tissues, the *B. coli* was found in two cases, *B. coli* with other organisms in one, and a tubercle bacillus in one. In the remaining nineteen cases the bacillus described by Tavel and Lanz in their work on the etiology of peritonitis was present either alone or with the coccus conglomeratus. The author concludes: (1) The principal causes of relapses are micro-organisms, which are latent in the thickened walls of the appendix, in fibrous strictures of it, and in peri-appendicular adhesions. (2) After one attack the whole appendix remains a *locus resistentiæ minoris*, even if there has been an apparently complete *restitutio ad integrum*. There is left either a stricture, a cicatrix, adhesions, or an incomplete restoration of the mucosa, together with

constant fatty degeneration of all its tissues, which, infected during the first attack, remain infected, as proved by microscopical examinations. (3) These alterations in structure are accompanied constantly by a new formation and dilatation of vessels, which favor active and passive congestion from slight causes, whereby the tissues lose their power of resistance, and, the latent organisms again becoming pathogenic, a relapse occurs. (4) The organisms found in the secretions generally differ from those in the tissues. This possibly points to symbiosis and a mixed infection during the acute relapse in many cases.—*Brit. Med. Jour.*

THE INFLUENCE OF THE THYROID GLAND AND THAT OF THE TESTICLES ON THE STATURE.—At a recent meeting of the Lyons National Society of Medicine (*Gazette hebdomadaire de médecine et de chirurgie*, July 29th) Delore presented a dwarf, twenty-five years old, who appeared to have no thyroid gland. On the other hand, his testicles were much larger than natural. He looked like a boy twelve or fourteen years old, he was less than four feet in stature, and he was defective in intelligence. He came from a goitrous locality and one of his brothers had goitre. His growth had been normal up to the age of fourteen years, and then it had stopped, so probably his athyreoidism was acquired rather than congenital. Such a case, Delore remarked, would go to sustain Poncet's opinion that abundance of the testicular juice diminishes the growth, while excess of thyroid secretion increases it.—*N. Y. Medical Journal.*

THE SPITTING NUISANCE.—A fine of \$10 is imposed on anyone found expectorating in a street-car or public building under Government control in the District of Columbia.

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A CASE IN WHICH IMPERIAL GRANUM ONLY WAS USED AS FOOD.—About the 1st of July, 1897, a woman came to my office with a baby seven months old. She was indigent. After giving the child a thorough and radical examination and well catechising its mother, I found it had been ill for several months, and that it had already received various kinds of treatment from four physicians with no permanent improvement. I decided to send it to the city hospital as I was well engaged and looked on the case as an absolutely unpromising one unless a great amount of good care, attention and the best of medical skill should be used. For a number of reasons, therefore, I at first refused to take the case; but the woman urged so hard that I finally did so. The baby was very much emaciated and attenuated, and had as anxious and senile a look on its face as I have ever seen

in my practice. Its T. was 105°, P. 180, R. 40, and very shallow; bowels loose, having eight to twelve passages a day, crying all the time, and would rub its head continually against its mother and would not eat. I put the child on aconite, belladonna creosote, hops on chest, quinine, phenacetin, with a mixture for diarrhoea, with ice-cold baths and enemas, and using Imperial Granum as food and absolutely nothing else in the way of pabulum. I soon had the child in a more comfortable condition and willing to take some nourishment. The child slowly improved and at the end of a week I withdrew all the medicine except the quinine and creosote, with Imperial Granum as food, at which time the child seemed out of danger. At the middle of the third week, I withdrew all except the Imperial Granum and creosote. On the 20th of August, I saw the child and it was well and happy with a large accumu-

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lation of flesh; and certainly so transformed that it would not be taken for the same baby. I have used the Imperial Granum in about thirty cases and have found it, in conjunction with proper treatment, most valuable. My experience is that the stomach will not reject this food and that it acts at once to nourish and strengthen the digestive tracts—a point of great value. It is of potent value to the puny and senile, and while sustaining in a remarkable and weird manner in all cases, it does not tax the atonic, asthenic and devitalized digestive apparatus of the patient. The importance of so pre-eminent a nutriment and stimulant for the functions of the stomach and intestines, both for invalids and convalescents and for babies is only appreciated when such a food is needed. This dietetic preparation can be relied upon for its efficaciousness in cholera infantum, malnutrition of teething infants, inanition, typhoid fever, etc., and its

purity is unrivalled. Its merits and success are proven by its use.—*William Hooker Vail, M.D.*

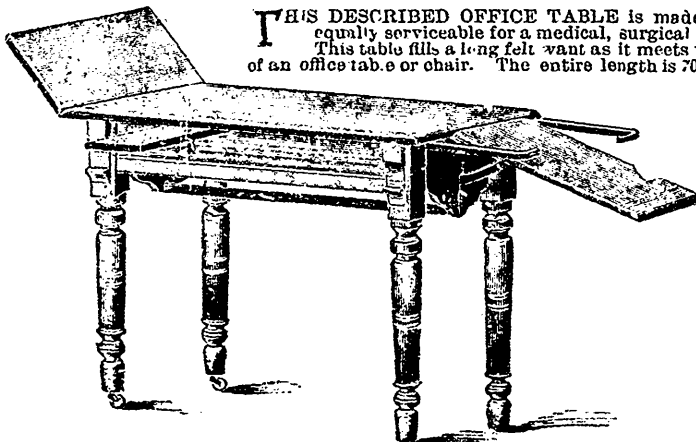
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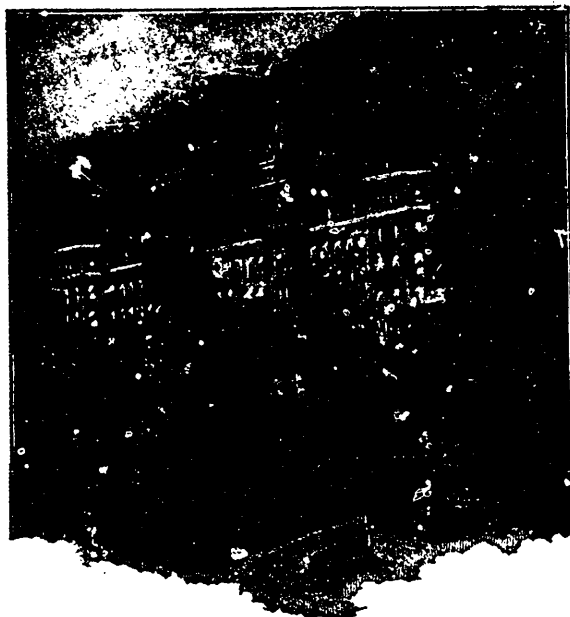
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ULCERATION CASE CXIII: FISTULA IV. —John Hatter, of Stamford, Conn., American, aged 39; admitted at Sound View, September 6th, 1897. Examination revealed a complete fistula in ano, two and a half inches in length, of large calibre, and of ten years standing. Around the anus, a complete ring of hæmorrhoids. Beyond this, two inches up within the rectum, were four ulcers, from the size of a split pea to that of a dime. Patient had been a large man, weighing 195 pounds, with great strength and vitality; but notwithstanding this, and the efforts of many physicians with many and various treatments during the last ten years, the course of the case had been steadily downward. Complicating this pathological picture, there was chronic constipation, with hepatic torpor. The patient being in an extremely nervous condition, it was decided to put him on a few days, preparatory treatment

before operating. After regulating the secretions, he was put on two drachms phosphate of soda in hot water, night and morning, and a diet of bovine and milk, with rice; the bovine, a teaspoonful in half a glass of milk, every two hours; the rice three times a day. September 14th, after preparing the patient by thoroughly washing out and sterilizing the parts, and anæsthetizing him, a double operation was performed, which consisted in a division of the sphincter muscle through the fistula and scraping out the sinus; after which, a modified Whitehead operation, one inch of gut being removed. The two larger ulcers, an inch and a quarter from the anus, remained. These were touched up with a 25 per cent. solution of pyrozone. The wound made by removal of the fistulous sinus was then thoroughly irrigated with hot Thiersch solution, and packed, as well as the rectum,

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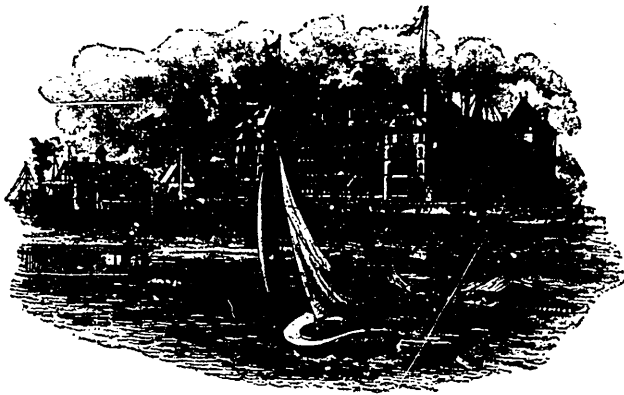
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destroyed at 85° C. A trace of formic acid increases its liquefying power. The liquid resulting from the action of the ferment on the caroubin jelly is rich in a reducing sugar precipitated by alcohol and soluble in water, the solution being strongly dextrorotatory. Treated with dilute mineral acids, it gives a peculiar sugar, aroubinose.

**CAUSES OF EPIDEMIC TYPHOID.**

—F. Harbitz (*Norsk Mag. f. Laegevidensk*) gives the history of a severe epidemic of typhoid fever which attacked Christiania in the autumn of 1896. During August and the first half of September, ninety-five persons were attacked; there was then a period in which few cases occurred, and then in the latter half of October there was a recrudescence of virulence, 146 persons being affected. The cases occurred specially in certain localities, and even in individual

buildings such as prisons and hospitals. The author proves satisfactorily that the drinking water could not have been the vehicle of infection, and believes that the milk supply was at fault. All the centres of the outbreak were supplied by the one milk supply association. It was, however, impossible to trace the infection further back, as the association drew its supplies of milk from widely scattered and distant districts. —*Brit. Med. Jour.*

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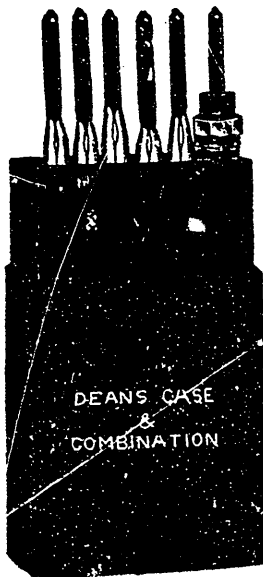


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Styrax	- - - -	1	Scruple
Olibanum	- - - -	1	"
Cclopphony	- - - -	9	Ounces
Phenol	- - - -	3	"

The formula here given you for **Styra-Phenol** is a rational departure from the usual composition of ointments, and seems to possess certain desirable properties to which I would particularly invite your investigation :

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- 3rd. It has immediate anodynous effect, when applied to burns, inflamed ulcers, suppurating sores or wounds ; and by aiding in the repair of any injury, it reduces inflammation rapidly.
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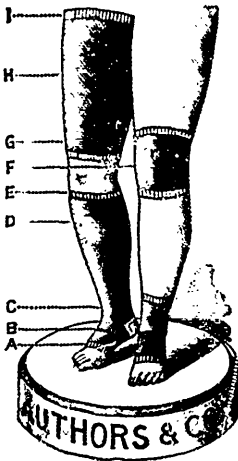
gestive that Messrs Wm. R. Warner & Co. have been very successful.  
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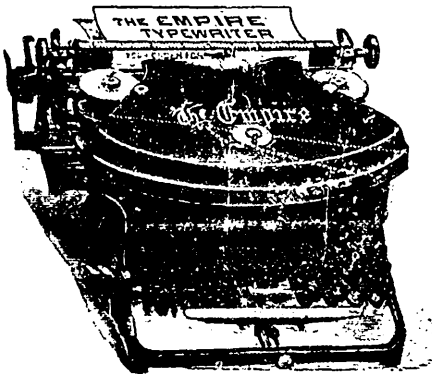
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**DELIRIUM TREMENS DUE TO PARALDEHYDE.**—Reinhold (*Therapeutische Monatshefte*, June 1897, *Wiener medizinische Blätter*, July 29, 1897) relates the case of a patient, forty-one years old, who was addicted to taking paraldehyde, and had taken as much as two ounces in the twenty-four hours preceding his admission. He was very much depressed, his speech was labored, and there was decided tremor of the tongue and hands. On

his being deprived of paraldehyde, epileptoid attacks occurred. Wine, diuretics, bromides and lukewarm baths were prescribed. There were transitory periods of agitation with delusions of persecution and visual illusions. Reinhold advises against the free usage of alcohol and bromides in such cases and says that, if they are not employed, the epileptoid seizures may perhaps be avoided altogether. Sleep is to be procured by means of sodium bromide and trional. The diet should be generous, the bowels carefully regulated, and metabolism promoted by hydiatic measures. The patient should not be dismissed until his sleep is normal.—*N. Y. Medical Journal*.

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slowly, swallowing the saliva. Exhibited in the grinding pains which precede and follow labor; in the uterine contractions which often lead to abortion; as well as in the nocturnal pains of syphilis, the results obtained are most satisfactory. In the various neuralgias, and in all neuroses due to irregularities of menstruation this combination affords immediate relief, and the relief is not merely temporary and palliative, but in very many cases curative. In these last conditions, always instruct that tablets be crushed before taking.

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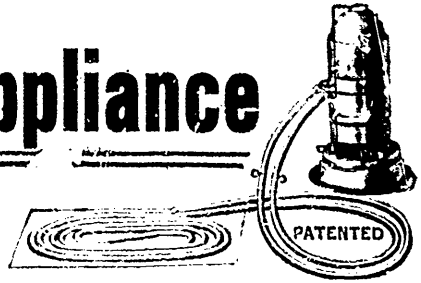
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**BUTTER AND MARGARINE.**—J. Hoffman finds that when a drop of ten per cent. ethereal solution of butter is allowed to fall from a height of one-half millimetre on to a sheet of

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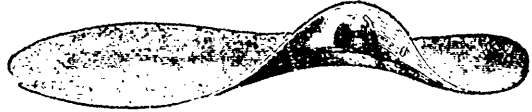
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