MEDICAL SCIENCE

ISSUED MONTHLY | VIDEO MELIORA PROBOQUE | TORONTO, JUNE, 1888

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VIDEO MELIORA PROBOQUE

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ORIGINAL ARTICLES.

WHAT SHOULD BE THE ATTITUDE OF STATE BOARDS OF HEALTH TOWARDS LEPROSY?

BY DR. BENJAMIN LEE, SECRETARY STATE BOARD OF PENNSYLVANIA, READ BEFORE THE INTERNATIONAL CONFERENCE OF STATE AND PROVINCIAL BOARDS OF HEALTH, AT CINCINNATI, MAY 5TH.

CAN the leper change his spots? No more than the leopard can. Can anyone else change or remove his spots for him? All history, from the time of the great author of Leviticus down, returns a sad and solemn negative to this question. The knife may cut out the germinating cancer: a wisely directed regimen may induce the encystment of the tubercle: appropriate medication may stay the devouring ravages of the disease which it is a shame to mention: but for leprosy no method of healing exists. Medical science and the *vis medicatrix naturæ* stand side by side, mute, with folded hands, in its horrid presence, while the wretched, hopeless victim slowly falls to pieces like a crumbling ruin under the devouring teeth of time, a loathed and desolate outcast. Loathed, because he has become an object so abhorrent that pity's self turns from the sight in unwilling disgust; desolate because the unfailing, unwavering testimony of the age is that he who abides with him will himself become a like object of dread and dire decay. More than this, his habitual abiding place soon becomes infected with the contagion of his disease, whose germs flourish and propagate even upon walls of stone. The horrid doom of Tirzah and her mother in the romance of Ben Hur is no mere fancy sketch. Leprosy always has been incurable. Leprosy always has been contagious. Leprosy always has been infectious. Now, is it reasonable to suppose that a disease germ which for four thousand years has had an unbroken history, which for four thousand years has had an unchanging character, will suddenly lose its essential characteristics? That transportation across a few thousand miles of ocean into a climate whose thermometer is somewhat lower is going to deprive it of its contagious and infectious qualities? Have we any analogy in nature for so astonishing a transformation? I certainly know of none. What then has led to the wide-spread incredulity in the medical profession as to its contagiousness in this country and in other temperate climes? Three reasons:

First The well-known fact that while its contagion is sure it is extremely slow.

Second—The fact that the germ does develop more slowly and sluggishly in low temperature than in high. But give it time and depend upon it, it will develop as surely and as relentlessly as under a tropical sun.

Third The fact, not so generally recognized, that there are cycles in disease. That for a period of years greater or less, owing to occult conditions not as yet understood, certain vegetable germs, seeds or spores may become less active and fruitful, and then for a series of years or ages regain their pristine fertility. Now we are in a cycle, it may be, of diminished activity of the germ of leprosy. Let us suppose that a case here and a case there is allowed to wander at will over the country, scattering the seeds broadcast wherever it goes: when the favorable period for the germination of those spores arrives what a frightful harvest will death, the reaper, have to glean.

A recent number of a well-known medical journal says in its editorial columns: "Until a single authentic instance of its communication by contagion in this country can be adduced, it is the height of folly to demand their separation from their

fellows;" while in the very same issue it records the following thoroughly authenticated case reported by Mr. Hillis, the superintendent of the largest leper asylum in the West Indies: "A shopkeeper at Demerara, whose business as contractor for provisions took him frequently to the asylum, became leprous. For at least ten years his wife remained free from any sign of leprosy. The case was well known, and Mr. Hillis had been frequently called on to explain with reference to this very person, how, if leprosy was in any way contagious, this man's wife escaped so long. In May, 1886, this woman came to him with well-marked symptoms of leprosy, and was under treatment when he left the West Indies." Other cases are on record in which the period of incubation was nineteen and twenty years. It will not do to say that because cases of leprosy have existed for a few years in a certain community and no instance of contagion has been discovered (I say discovered because the tendency of the leper is to conceal his malady and he may succeed for a considerable length of time) that *ergo* leprosy is not contagious in that locality. This is an experiment which demands time, a long series of years, and while it is being made such precautions should be observed, that, should the result be in favor of the theory of contagion, numbers of lives will not have been sacrificed to it, nor centres of infection have been established in every centre of population.

It is only theorizers and those who take cursory and distant glances at it who pronounce it harmless. All who have been in a position to study it practically for a lifetime, unite in raising a warning voice against this dangerous delusion.

Daniellson and Bock, who observed the disease in a climate even colder than our own, gave the following as the mature result of their experience. "Our whole theory of lepra rests incontestably upon the sad fact that within the bounds where it commits its ravages, it can be made harmless to the rest of the people only by isolation."

In the short space of forty years, one-tenth of the entire population of the Sandwich Islands has become infected from two individuals.

Mr. Hillis, after twenty years experience, thus formulates his conclusion: "Wherever lepers are allowed to congregate and no attempt is made at isolation, *other cases will in due course assuredly arise*, irrespective of hereditary tendency, peculiarity of diet or locality."

According to H. Besnier, a member of the French Academy of Medicine, leprosy, far from disappearing by degrees, is spreading rapidly. Since the extension of the French colonial possessions, soldiers, sailors, traders, and missionaries have fallen victims to it in large numbers. He, therefore, exhorts physicians in all countries to study the fell disease, in order to find a means of counteracting its ravages, for it has active focuses of infection in every part of the globe.

Thoroughly substantiated cases of its transference by vaccination have been placed on record by Tilbury Fox and Erasmus Wilson. There is a curious tendency in minds which have not had a strictly logical training to give equal weight to positive and negative testimony. But as H. Besnier well says, "In a question of this kind a few positive instances of contagion count for more than an innumerable number of negative instances." From among a large number of positive instances which he cites, I quote only such as have a direct bearing on the question as it concerns our duty, from the fact that they have occurred in climates similar to our own. They are collated in the *British Medical Journal*, Nov. 12th and 19th.

In 1872, Dr. Hawtrey Benson showed to the Dublin Medical Society an Irish leper who had contracted the disease in the Indies, where he had lived twenty-two years. For a year and a half this man's brother, who had left Ireland for a visit to England forty-six years before, slept in the same bed and wore his clothing. He became a leper, and was presented to the Medical Society. There was no leper in the family, and there had been no leprosy in the British Isles for several centuries.

An inhabitant of Sagra established himself at Parcent about 1850. Leprosy was quite unknown there, and the Indian who had the first symptoms of it did not know the gravity of his illness. He went to live with a friend, and a little while after two cases of leprosy were reported. The friends of the first victims were the only ones attacked.

Betty MacCarthy, of Prince Edward Island, was married in 1836, became ill in 1852, and died in 1864, of leprosy. Had five children. *(a.)* Richard died of leprosy after twenty years' illness. *(b.)* John died of leprosy after twelve years' illness. *(c.)* Mike died of leprosy after ten years' illness. *(d.)* William died of leprosy at twenty-one years of age.

(c.) Mary died of leprosy after twenty years' illness. (1.) John Doyle, Mary's husband, died of leprosy after six years' illness. (2.) Two daughters of John and Mary Doyle died of leprosy. (3.) John Brown, who nursed W. MacCarthy during his illness, and washed and buried him after death, became leprous shortly after, and died of this disease. (4.) James Cameron who married Betty MacCarthy's daughter, Suzanna, had two children by her, who were healthy. He was accustomed to sleep with Mike MacCarthy. In 1870 he presented true leprous symptoms, and is now very ill.

Formerly, Dr. White relates, there were lepers in Louisiana. A hospital was founded for them, after which the disease almost completely disappeared. No trace of it was found up to 1866, at which time it appeared in a woman, Madame Ourblanc, whose father originally came from the South of France. She died in 1870, leaving six children. Leprosy appeared in the second son in 1871, in the eldest and fourth sons in 1878. The oldest daughter died of an acute disease, the second became a leper. All of them lived in their mother's house. In 1875 a nephew of the woman, living eight miles away, became leprous.

In 1878 leprosy appeared in a young woman, not related to this family, but who had nursed Madame Ourblanc in the last period of her illness. Finally it was developed in a young man who lived some miles from the residence of the Ourblancs, but who had often slept with the fourth son of the family, in 1875. Other cases of leprosy afterwards developed in the vicinity.

I cannot overlook one argument which has been advanced by those who are disposed to dally with this serious danger. It has been said that we do not isolate persons infected with syphilis and therefore we should not deal more harshly with those suffering from leprosy. This is equivalent to urging that, as we have the foul contagious disease, which is, in the main curable, and the mode of propagation of which is accurately known, firmly fastened upon us, and as, owing to the peculiar method of its propagation we have not yet arrived at a sufficiently high state of civilization to enable us to isolate those infected with it, *therefore*, we should make no attempt to prevent the spread of another infinitely more loathsome disease which is incurable and the mode of propagation of which is not yet known. The argument I conceive needs no other answer than its clear statement.

To our brethren of the Pacific coast this subject comes home more pressingly than to us of the East. Mongolian immigration cannot fail to bring, along with its thousands of healthy, hardy, willing workers, many an individual in whose blood lurks this lethal taint.

I entertain no doubt that the sentiment which is taking possession of the minds of the profession in California will rapidly become the dominant sentiment with us. And I therefore offer for the consideration of the conference the following resolutions based upon the recommendations of a committee appointed by the California State Medical Society of which Dr. W. F. McNutt, of San Francisco, is chairman, first premising that the third resolution or clause which might otherwise seem forced and unnecessary, is founded upon the discovery of Dr. Arning, that the bacillus of leprosy seem to multiply in the bodies of dead lepers, months after they have been buried :—

RESOLVED : That, it is the sense of this conference,

First : That, a strict quarantine should be established against leprosy, and that all lepers attempting to enter this country should be returned to whence they came.

Secondly : That these already here, or developing here, should be rigidly segregated.

Thirdly : That, it is eminently desirable that entirely distinct hospitals should be provided for such cases, and

Fourthly : That, the bodies of deceased lepers be cremated or buried in lime, and their personal effects be destroyed by fire after being treated with powerful disinfectants.

ON THE TREATMENT OF SEVERE FORMS OF CHRONIC ANÆMIA BY SUBCUTANEOUS INJECTIONS OF BLOOD

TRANSLATED BY DR. MCDONAGH, TORONTO.

THE customary intravenous transfusion of blood, it is well known, is so often followed by unfavorable symptoms, such as chills, fever, albuminuria, hæmoglobinuria, etc., that the operation as a curative procedure cannot always be recommended; on the contrary, it must be looked upon as attended with considerable danger to life. The serious results, however, are not so much dependent upon the transfusion of the defibrinated human blood *per se*, but rather almost entirely upon the method adopted for this performance, whereby the blood

made use of is injected with its ferments and the unavoidable admixture of flocculi of fibrin and air globules direct into the vessels. It is quite evident that all these dangers are avoided if the blood be injected into the subcutaneous cellular tissues. One proceeds in the following manner (*v. Ziemssen's Vorträge No. 3, 1887.*): The blood which has been thoroughly defibrinated and with the greatest care kept aseptic and exactly at a temperature between 37° and 40° C. is injected with a small syringe to the depth of 25 centimetres into the subcutaneous connective tissue of the thigh and the part is immediately afterwards vigorously rubbed by an assistant. This massage is a very important part of the performance. As there is considerable pain, especially when larger quantities are introduced, v. Ziemssen advises chloroform anæsthesia as very necessary. For every syringeful a fresh insertion must be made and the process is continued so long as there is any necessity. v. Ziemssen has injected as much as 350 gramm. (over 12 ounces) in 14 insertions; after the operation, if there is much pain an ice bladder may be applied and the patient given rest. The operation is practically free from danger. Only twice has pus been observed to form at the point of introduction and then in consequence of slight and easily avoidable errors. Neither chills, nor fever, nor albuminuria, nor hæmoglobinuria has been observed. The subcutaneous cellular tissue serves as a most efficient filter which retains every coagulum, air globule or ferment, while the red blood corpuscles rapidly and easily pass through. Further, after a few days not a trace of free blood can be found at the point of injection, while in the circulating blood there is at once an abundant evidence of an increase of hæmoglobin, the quantity of which is frequently doubled in twenty-four hours. This amount of increase, however, is not permanent, but during the next four or five days a gradual diminution takes place down to a stationary point which, nevertheless, is always higher than that before injection.

The hæmoglobin becomes more and more increased by every repetition of the operation until finally the normal quantity is reached. The numerical increase of the red blood corpuscles also takes place at the same time. In this manner v. Ziemssen has succeeded in curing different forms of severe chronic anæmia in the course of a month. He has not yet tried this method in cases of acute anæmia from sudden loss of blood, but in these cases also he considers the subcutaneous injection strongly indicated. In cases further where delay would be dangerous, or, when from any reason, the injection of blood cannot be performed, the subcutaneous injection of salt water is recommended. This has the advantage over the intravenous transfusion, it being easier to accomplish and absolutely free from danger. It is not necessary to use distilled water; ordinary spring water, which has been sterilized by boiling, may be unhesitatingly injected. The subcutaneous cellular tissue retains all elementary foreign bodies provided only they are aseptic. The absorption and removal of the fluid goes on very easily so that narcosis may be dispensed with. It only requires four or five insertions to introduce about 600 gramm. of water. If any danger shows itself from the injection of salt water, pointing to paralysis of the heart, the blood injection may be prepared for the next experiment, for, as experience teaches, the salt water injection may be sufficient to delay the end in really severe cases of loss of blood, but not to prevent it entirely. In these cases new blood must be introduced into the body from without, and this can only be accomplished by the blood injection. —*Wiener Medizin. Zeitung.*

EDITORIAL

DANGEROUS DRUG PREPARATIONS AND THE DUTY OF JOURNALS REGARDING THEM.

THE attitude which those who arrogate to themselves the right to become public teachers and leaders of medical thought and education, should take with reference to the well-known tendency there is for advertisers of articles, to say the least, doubtful use, can be no undecided one; since knowing, perhaps, more than any other class, the gullable capacity of the ordinary specimen of the *genus homo*, and still further knowing the pernicious use which may be made of many otherwise useful preparations, they become guilty from the moral standpoint, of gross imposition, should they knowingly countenance by advertising

any hurtful preparation, and a great dereliction of duty, should they fail to denounce what they may be inclined to consider a trade matter, and keep silent regarding such manufactures. At the recent meeting of the American Medical Association, Bartholow delivered a pronunciamento against the sects in Medicine, and alluded to the methods of their propagation, as set forth in the recent pamphlet publications of a St. Louis drug house. He said the multiplicity of drugs was to be deplored, and urged an abridgement of the official list of the pharmacopœia. These views may fairly be considered as representing those of the leading members of the medical profession everywhere, who, while steadily tending to the reduction of the use of drugs as remedial agents, become increasingly anxious to have as complete a knowledge as possible of the physiological action and therapeutic uses of those which they do employ. The need for a firmer protest against the indiscriminate use of remedies must be further apparent to every one who reads the advertisements of the city press, and even of many, if not all, religious journals. To such an extent has this abuse grown in the United States and, if we mistake not, even in Canada, that the Arkansas State Medical Society presented a memorial to the recent meeting, asking the co operation of the National Association and of State Societies, in endeavoring to suppress the evil.

The memorial stated that personal certificates from clergymen, and the editorial endorsations of newspapers gave quackery a standing which otherwise it could not obtain. To accept such advertisements for the support of the paper was doing evil that good might come, and was inconsistent with the moral pretensions of the clergy. These strictures have, unfortunately, too good a foundation in fact, and it were not unwise of the annual meetings of our medical associations to take cognizance of these facts and take action similar to that of the American Medical Association. We wish, however, that the profession, and, still more, the general public should discriminate in their denunciations of all advertised remedies. It would be as untrue as unjust to accuse all of our largest drug manufacturers of fostering this for the sake of the sale of some alkaloid, or extract, as the panacea for some serious disease, and which can alone be prepared by them; since many of these supply to the profession, carefully prepared drugs in such pure, convenient. and palatable forms, as to make them a boon to both physician and patient. Especially is this the case with those preparations as of cod-liver oil, beef extracts, malt extracts, phosphate compounds, as well as of the standard alkaloids, etc. But even these should be subject to supervision and regulation. Pepsins and pancreatives become too often positively injurious, putrefaction having destroyed their active principles; while the retail drug stores are laden with such a profusion of beef-peptones, that a god might well be congratulated, did his mighty brain retain and set forth accurately the superior qualities and virtues of each brand.

But the affair becomes serious when the line of quack nostrums is reached, the cordials, the elixirs, the safe-cures, the pectorals, the bitters, vegetable discoveries, and so *ad infinitum*. The witchs' cauldron of modern days may be found boiling with its pristine force in many a druggist's shop.

> "Witche's mummy,* maw and gulf,
> Of the ravind salt-sea shark,
> Root of hemlock digg'd in the dark,
> Liver of blaspheming Jew,
> Gall of goat and slips of yew, etc."

The druggist shrugs his shoulders, when asked how he can conscientiously keep and sell these innumerable mixtures, and replies, "We are merchants and keep what people wish to buy." The papers, by cleverly worded advertisements, tell the people that these compounds exist, and they go, as we have too frequently seen, to the druggist, and say, "Have you any so-and-so?" "Yes; What do you think of it? is it any good?" "Some," he says, "think so." The better druggists shirk all responsibility, for how can they honestly tell, both from a limited knowledge of the disease, and a still more limited knowledge of the ingredients of the mixture? We have long failed to understand how, morally, a druggist can, by virtue of the fact that he calls himself a merchant of drugs, while the physician calls himself a professional man, be relieved of the responsibility of selling for undiagnosed or misunderstood ailments, or perhaps none at all, remedies which may be asked for, and of

* Sir Thomas Browne says: "The common opinion of the virtues of mummies bred great consumption thereof, and princes and great men contended for this strange panacea wherein Jews dealt largely, manufacturing mummies from dead carcases and giving them the names of kings, while specifics were compounded from cross and gibbet leavings."

which he experimentally knows nothing as to their constituents. That the druggist as at present situated, by law or custom, is surrounded with many difficulties, we readily admit, and that many of them are anxious for the elevation of the business, we know as well, and to such the public owe a debt of gratitude. For instance, in the recent developments of the Druggists' Circular, regarding Dr. Buckland's Scotch oat's "essence," Dr. B. F. Davenport, State analyst, of Massachusetts, thus replied to the circular: "I have analyzed a sealed bottle of Scotch oats essence, double strength, and find that each fluid ounce contains one-quarter of a grain of sulphate of morphine." Since this report was given, Dr. Davenport has continued his investigations with this result: "The 'essence' is sold in three grades of strength. No. 1 contains little or no morphine at all, No. 2 considerable, and in No. 3 there are from 200 to 250 drops of laudanum, or about two teaspoonfuls of laudanum to every wineglass. This is enough to kill an adult not addicted to the use of opium, and two or three drops have been known to be a death dose to an infant, and in the fact that this medicine is freely advertised to be 'beneficial to infant and octogenarian,' the wickedness of the business may be seen without explanation." Of alcohol, Dr. Davenport found the "essence" to contain from 30 per cent. upwards to 45 per cent., the greater in the $5 bottles.

Further, Dr. Davenport reported during the past year to the State Board: "I have to report upon twenty samples of so called opium cures which have been obtained from their proprietors. They have all been tested for the presence of morphine, and they have all responded to the usual reactions therefor, except the 'Keeley's Double Chloride of Gold Cure.' This one, however, gave no reaction for the presence of even a trace of gold therein. The cures were all uniformly obtained as for one who had acquired the habit of taking them, for an opium eater, very moderate quantity of only one grain of morphine per day. It was expected, as proved to be the case, that the cures for even such a mild case would contain enough morphine to furnish unmistakable evidence of its presence, if it contained any at all. As the point sought to be attained was simply the presence or absence, in the opium cure itself, of the morphine, or the active principle of the opium, the very thing for which it was offered as a cure, the several preparations were uniformly tested only in regard to this one particular, and not as to their other constituents."

We confess that the extent of the evils arising from the indiscriminate use of drugs, whether sold over the counter, or in the physician's office, cannot be exactly measured, nor we think even adequately comprehended; but if our calling attention to them shall cause the Ontario Medical Association to appoint a committee to invite co-operation with the Ontario College of Pharmacy, to investigate fully and honestly this whole subject, we cannot but believe that immeasurable good will be the result. Says Garrick in his prologue to "She Stoops to Conquer,"

"All is not gold that glitters,
Pleasures seem sweet but prove a glass of bitters,
When ignorance enters folly is at hand,
Learning is better far than house or land . . .
A doctor aims this night to show his skill,
To cheer her heart and give her muscles motion;
He in five draughts prepared presents a potion:
A kind of magic charm—for be assured
If you will swallow it the maid is cured;
This truth he boasts, will boast it while he lives,
No poisonous drugs are mixed with what he gives."

And we are much inclined to the belief that if the present evil goes on developing, Goldsmith's comedy will be a safer potion than most of our nostrums, even if backed by a parson's credentials.

THE FIRST CONVOCATION OF THE UNIVERSITY MEDICAL FACULTY.

NO matter of what school or college, every physician having uppermost in his heart the elevation and dignity of his own profession, must recognize with pleasure the first systematic effort which, apart from the examinations of the Medical Council, has been made to give to medical education in Ontario, a provincial character, by the establishment of a Teaching Faculty in connection with the University of Toronto. That the idea has taken possession of many of the foremost men of the profession was abundantly witnessed in the interest taken in the Convocation for granting medical degrees and scholarships, held on 25th May. The large and fashionable gathering in old Convocation Hall reminded University men of Commencement day, as, preceded by the badge of authority, the Senate and members of the various teaching staffs, mingled with which were many

physicians, graduates both of the University and other schools, proceeded to the dais, whereon the the popular Vice-Chancellor occupied the curule chair. Without delay, some thirty graduates of the University, whose studies had been carried on in either of the former affiliated schools, renewed amidst the applause of the audience, their allegiance to their *alma mater*, and men who have won through patient endeavor, positions of dignity in different parts of the Province, thereby signified their belief in, and have formally bound themselves to the development of the University idea in matters pertaining to medical science. To the graduating class, the sight must have been inspiring, while the subsequent addresses by the leaders of higher education and thought in the Provinces must have shown them, how closely in the eyes of the general public, Medicine is associated with everything which pertains to the comprehensive idea of a liberal education. While those who have labored for the practical accomplishment of their worthy object, must have been peculiarly gratified at its demonstrated success, as seen at the first Convocation, yet they must feel, too, that a great responsibility has been undertaken by them. To them the profession look for a fulfilment of their pledge, and no half-measures will satisfy those who have given their adhesion to the principle. We are aware how powerful has been the opposition in other old institutions to any change in the existing order of things; and it were unreasonable not to count on their defence of what they consider their rights and privileges, which in some instances, we fear will be interpreted to mean opposition to the progress along University lines of medical education. In most cases, however, we believe that the foremost men of the Province must see that as there must be a limit to the number of successful institutions from the financial standpoint, so there must come a time, when, from the professional standpoint, wisdom will cause them to adopt the principles of a State Faculty of Medicine. Let the University move along showing the same steadfast purpose and enthusiasm with which it has begun, and sometime, we feel assured, the whole profession will have cause to congratulate the Province and themselves on the high position, as a profession, which they hold.

THE ETIOLOGY OF PALUDISM.

AGAIN and again have we seemed to be on the verge of the discovery of the *germ* which is the immediate cause of malaria, but it seems, like the *ignis fatuus* of its dreary paludal abode, to ever elude the searcher. At the recent meeting of the American Medical Association, one session of the Section on State Medicine was occupied with four papers bearing upon various aspects of the malarial problem, one of the most interesting of which was that presented by S. J. Armstrong, U.S. Marine Hospital Service, being an "Abstract of Laveran's Researches on the Hæmatozoon of Malaria." Our readers will remember that in our November number, a very full abstract was given of Prof. Osler's paper on the same subject; and while Laveran deservedly holds the place of honor in researches on this supposed organism, called by him *l'oscillaire malariæ*, it cannot be said that Armstrong's abstract contains more than has been given to our readers in Prof. Osler's monograph. The subject was further elucidated, however, by a translation presented by Dr. Baker, of Michigan, of some recent researches by Dr. Schiavuzzi, of Pola, on the bacillus malariæ of Tommasi-Crudeli which have been cultivated by Ferdinand Cohn, the famous botanist, of Breslau. He declares them decisive, and in publishing the complete work of Schiavuzzi, he accompanies it with photograph cuts taken under his direction. One of these reproduces the bacillus malaria wholly developed, the others the various degenerations which the red globules undergo in the blood of animals inoculated with this bacillus. This was supplemented by a most interesting communication from Tommasi-Crudeli, in answer to some questions asked of him. These latter reiterate the belief, both on theoretical and experimental grounds, in the bacteriological origin of malaria, and naturally oppose the more recent infusorial theory. Added interest is given to the subject by a recent publication by Dr. E. M. C. Maurel, chief physician of the French Marine. The work is in many respects remarkable, and contains a complete exposition of existing theories regarding malaria. At the outset, he defines a malarial soil, or the conditions under which malaria will develop. Of these he places in order (1) a soil, to a certain degree surcharged with organic matters, and especially with vegetable matters in an advanced

stage of decay; (2) that this organic matter be broken up and intimately mixed with mineral matters; (3) that the soil be maintained in a moderate but constant state of humidity. The febrigenous agent being once developed, there are atmospheric movements which carry it from its original locality, it being, however, readily stopped by trees, not travelling more than two or three leagues, and not rising more than two or three hundred metres above the soil. He says there are good reasons for believing this agent to be an organized being; and to-day there are really but two organisms which are set down as being the direct cause of malaria, the bacillus of Tommasi-Crudeli and the infusorian of Laveran. Of the bacillus of Klebs and Tommasi-Crudeli, he says, "It is an *aerobie* living in the air, the water, and the soil of the Pontine marshes. In the soil of marshy regions it appears under the form of motile spores, refracting strongly the light, elongated and oval, its greatest diameter being ninety-five thousandths of a millimetre. But in the living organism and in liquid cultures, its evolution changing, its aspect changes." It is then represented by long filaments which at first homogeneous, divide transversely and in segments which form spores. This gives the fever to the inoculated rabbit, which it sometimes kills, it having a swollen liver with blackish leucocytes and filaments characteristic of the bacillus. The liquid of these cultures is inoffensive if filtered, while the residue produces symptoms of paludism. Cecci has found its spores in the blood of inoculated rabbits, Marchiafava found it in the blood of patients sick with intermittent. Ferraresi, Valenti Piccirilli, found them in the liver even of patients; Klebs and Tommasi-Crudeli reproduce it by the culture of malarial blood. Maurel, thereafter describes Laveran's *oscillaire malariæ*, under the different forms described in Osler's article. He says, "Of these, the filaments are the essential elements, and seem to indicate the adult stage of these microbes of paludism. After having completed their development, they set out to play during a certain period an independent existence in the blood serum." After considering the whole question, Maurel inclines to attribute the appearance of the parasites of Laveran to deformities of leucocytes which come to appear, at a later stage, as the characteristic lesion of fevers, the more marked and general as the fever is more severe.

The second and third parts enter into the technique and description of the personal researches of the author. Some of his conclusions are, that in salubrious districts infusoriæ of a low order are completely absent; those of the least perfect organization are the rarest; amœbæ themselves under the most elementary form are not encountered in such; the same is true of the diatoms, of which one finds only the carapaceæ carried, doubtless, by winds; water from roofs ought to be considered dangerous if it be not properly filtered. The water of our cisterns received from slate or zinc roofs have abundance of living animalculæ, those from wells much fewer, as also those from running water. Wholesome air always presents *bacterium termo* and nearly always some fungoid cells.

This exact and extended work insists upon the necessity for the *micrograph* in order to understand properly normal blood in a cold or temperate climate before studying it in a tropical country, where heat alone deforms leucocytes and renders them unrecognisable, in consequence of their amœboid mobility and their pigmentation. Pigment granules exist in the leucocytes as in the free state, but he has never seen them in the *hematies*. The water of the marshes, though filled with organisms, showed nothing characteristic The air of the marshes is much richer in micro-organisms, especially in bacteria and filamentous algæ. Do these infinitely small forms penetrate into our tissues and blood? His researches in this respect have been in vain. However, Laveran's motile filament is in the blood as an indisputable fact, with movements most like the spirillum. It is necessary to conclude that the paludian amœba is poisonous or emits poisonous products.

The opinion of the author in concluding is, on the whole, that all definitive conclusions are premature, and the latter researches have demonstrated that flageliate bodies can appear in macerations of liquids foreign to the organism, which facilitates the criticism of the hypothesis of Laveran on the subject of the presence in the blood of a sufferer from paludism.

The study of these becomes the necessary precursors of all correct conclusions, regarding the local conditions favoring malaria, and we seek eagerly for solutions of these questions in order that the conditions under which malaria prevails so widely in many parts of the Province may as speedily as possible be removed.

EPIDEMIC INFLUENCES.

"The old order changeth, giving place to new."

WE had thought that in the field of contagious diseases the truth of our Laureate's line had within recent years been made abundantly plain; but in the Milroy Lectures by Inspector-General Robert Lawson, delivered recently before the Royal College of Physicians, London, we have an evidence of the persistency of type. In a course of four lectures this old army surgeon gave the results of his observations, gathered throughout a long period, during which he had been stationed with the army in various parts of the British possessions, from Jamaica to the Cape of Good Hope. The following is found in his introductory lecture:—"From the examination of a large body of evidence in the manifestation of fever in many countries, and extending over many years, it became obvious," the lecturer stated, "that epidemics of that form of disease, which developed at various points from time to time, passed uniformly to the northward until they finally disappeared. The length of the course of individual epidemics varied much, but from the combination of several details the period occupied in passing from the Cape of Good Hope to this country was found to be about six years, and the factor which determined this movement was evidently one of very general operation, and most likely connected with some of the natural forces. It was of great importance to define the position of this influence from time to time, and after a good deal of consideration it was found that this might be effected, approximately at least, by lines of equal magnetic dip."

In the second lecture, and so on to the end, from certain army statistics, which doubtless give facts as regards mortality during the past fifty years, the Inspector-General endeavored to establish some general laws with regard to epidemic cycles, and in lieu of some better explanation, his lines of magnetic dip and fever zones may be a satisfactory explanation of what has occurred; but they have only a little less bearing on the practical question of how epidemic diseases extend, than has the supposed sun-spot influences on the varying amounts of rain in every decade. To-day every executive health officer is too well aware that with magnetic dips, in whatever direction, isolation of first cases is the *sine qua non* to the limitation of outbreaks of contagious diseases. Rauch, of Illinois, in the remarkable exposition several years ago of the introduction of cholera into America, clearly pointed out that only after several cases had been imported did a single case at length, in several epidemics, gain a foothold in American soil, sometimes by New York, sometimes by the St. Lawrence, and again by the Mississippi. Once introduced, it spread rapidly, until strict isolation proved more potent than all supposed magnetic dips in limiting the disease. Three years ago Montreal had some three thousand deaths from smallpox in six months, while Ontario, with 2,000,000 of a population, had a total of nineteen deaths during the same year of twelve months. The disease has been stamped out, but are we to look for the difference in results in some occult planetary influence? Doubtless we must respect the views of an old army officer, but we cannot compliment the College of Physicians in its selection in this year, near the close of the nineteenth century, of a lecturer who, most innocently, would fill the eyes of a credulous medical public with the stuff that passed as current coin thirty years ago. To day we do not, like Boabdil, consult the astrologers as to the fate of our Grenada, but look to the measures which have been taken by Dominion and United States Governments for inspecting, and isolating when introduced cases of contagious diseases, all ships from suspected ports, and fix our belief in the immunity of the country from contagious diseases by means of Troy laundries and the bi-chloride douche. We trust the prominent place which Inspector-General Lawson's lectures have been given will not disturb the equanimity of officers of health who have for years persistently and, more successfully than Sisera, been fighting the stars in their courses, and stamping out first cases of disease by the prosaic methods of disinfection.

ABSTRACTS FROM FOREIGN JOURNALS

Treatment of Variola by Carbolic Acid.

BY DR. ALPHONSE MONTEFUSEO, PHYSICIAN TO HOSPITAL CONTAGNO, NAPLES.

(*Translations by W. B. Nesbitt, B.A., M.D.*)

He says, in *Bull. Gen. de Therapeutic*, that during the epidemic of variola, which lasted for two years, in Naples, he had every opportunity to study this disease, and he was particularly interested in the action of carbolic acid. At the above hospital, phenic acid has been employed externally and internally. Local treatment consisted in applying compresses of a pomade composed of acid carbolic, sweet oil, and chalk (cretæ preparat). These were applied every five or six hours to different parts of the body with the most favourable results.

Internally the results obtained with this method of treatment in a great number of cases have been most satisfactory. The dose was 1 to 2 grammes (15 to 30 grains) in children according to age, 10 to 50 centigrammes (about 1½ to 8 grains). This dose was administered in a potion of 200-300 grammes (7–10ʒ) of water with syrup.

The first effect of the medicament was noticed in the temperature, which, when high, was constantly reduced. After the absorption of a demi-gramme (7¾ grains) the temperature was lowered sometimes two degrees. In the greater number of cases this remained constant, but it was sometimes noticed that after this reduction the temperature rose again, following on violent shivers. This was noticed more frequently when the temperature had not attained a high degree in the course of the disease and also when treatment was commenced about the suppurative stage; on the other hand very high temperatures were almost completely relieved. Along with the lowering of the temperature there was a constant diminution of pulse with augmentation of its force. It is generally supposed that carbolic acid has a bad effect on morbid pulmonary conditions, but the author brings a host of cases of variola complicated with bronchitis, broncho-pneumonia, and pneumonia, to show the contrary.

He says that he has seen but the best results, that is to say, diminution of the quantity of expectoration, greater ease in expectoration and disappearance of bad odors.

In conclusion, he says that carbolic acid is the *only* remedy which has a certain and good effect on the eruption, modifying its virulence and quantity and hastening dessication. In this hæmorrhagic form of variola, carbolic acid, like all other remedies, fails.

Toxic Effects of Tin.

E. Nugar and G. Bodlander *(Zeitschrift fur Hygiene)* speaking of the immense consumption of jams, meats, etc., which are put up in tin cans and which have come into such general use among both the rich and the poor, in town and in country, undertook a series of investigations to determine the effect of salts of tin, given in *small* quantities for some time. They say:

"It has been generally believed that no ill-effects will arise from chemically-pure tin;" but such is not the opinion of these authors. In a paper published in 1882, they showed that such a belief is not rational, since, on the one hand the tin is easily attacked by, and on the other, readily combines with the substances contained in the cans and can then be absorbed by the mucous membrane of the intestines.

Since the above paper they have instituted a series of experiments to determine the effects of the non-caustic salts of tin introduced into the system in small doses. These salts have been administered to dogs both hypodermically and *per orem*. These have always given rise to diseased conditions, the principal symptoms being emaciation, stupefaction, paralysis, and death. The autopsies revealed nothing of interest. Tin thus comes to be placed alongside of lead, copper, antimony, and arsenic, and the canned and preserved meats which we have been so long considering harmless, appear to have a most dangerous effect, and constitute a great danger to the public health, and added to this the substances which, in this antiseptic age, have been added to the contents of the cans to preserve them, such as tartaric acid, saltpetre, alkalies, etc., greatly facilitate the formation and solution of the tin salts.

The Medico-Legal Aspect of the Gonococcus.

Doctor Laber, in the *Bulletin Medical du Nord de la France* in a trial *(cour d'assises de Douai)*

made a demonstration before the jury of the gonococcus by isolation and cultivation. The case was in this wise: "A man had been accused of violating a little girl; upon the linen of the accused and of the plaintiff were spots of pus, these were submitted to two experts, the one a physician, the other a chemist. These reported that the spots were due to gonorrhœal pus. The lawyer for the defendant demanded a search for the gonococcus to be made by other experts, upon their giving a negative answer as the results of their investigations, the case was held over and Dr. Castian, professor of Medical Jurisprudence, (à la Faculté de Médicine de Lille), was appointed to make the inspection. He wished to associate the author with him, and a cultivation of the pus (obtained by macerating the cloth in water) in agar agar, peptonised and sweetened, was attended by such happy results, that they were able to affirm the gonorrhœal nature of the spots. Finally, he says, our researches enabled us to confirm the judgment of the experts, completely in the affirmative.

Study on the Death of Cleopatra.

The above is the title of a thesis by Dr. Viaud Grand-Marais, professor à l'Ecole de Médicine de Nantes. The author does not believe in the scorpion tradition. He thinks that the ordinary methods of poisoning were too disgusting to the charming and passionate queen, who captivated the Consul Anthony. She tried on her slaves all kinds of poisons, especially the venom of serpents, but all that was only a method—method of a woman—to discover the poison surest and most rapid, which would permit her to taste a death quick and easy, and lastly with greatest pleasure. She outstrips thus all pessimism and disillusions of life.

M. Viaud Grand-Marais, after having stated that no scorpion was discovered in the chamber of Cleopatra, that upon the body of the queen could be found no trace of stings, that at the foot of the couch were found dead, or dying, the two women attached to her service, thinks that the poison which was used by Cleopatra was carbonic oxide. [Another case of blowing out the gas.—Ed].

INDEX OF PROGRESS

SURGERY.

Prevention of Syphilis.

The Paris correspondent of the *Medical Press and Circular*, February 15, 1888, states that M. Fournier has presented to the Academy of Medicine the report of the committee appointed to inquire into the best means of preventing the spread of syphilis. The following are the principal articles: 1. The Academy calls the attention of the authorities to the development to which prostitution on the streets has grown, and demands that energetic means be taken to suppress it. 2. The legion of wine shops only assist clandestine prostitution and should be suppressed. 3. A strong and active surveillance should be exercised in the neighbourhood of the colleges, where temptation is rife. 4. A girl proved to be contaminated should be sent to a special sanitary hospital, from which she should not be discharged without being furnished with a medical certificate; at the same time the rules of the hospital should have in nowise the stringent character of the present St. Lazare. 5. The registered women should be visited regularly once a week and once a month by a medical inspector. 6. Instead of increasing the number of beds in certain hospitals in which venereal diseases are treated, new special hospitals should be created outside the walls of Paris, to which free dispensaries should be attached. 7. Every student of three years' standing should have free access to all these institutions, and before presenting his thesis he should produce a certificate justifying a three months' *stage* in one of these services.

MEDICINE.

Transudation and the Influence of the Blood-pressure upon the Behavior of Transudates.

Prof. H. Senator, of Berlin, concludes an article in *Virchow's Archiv*, Bd. cxi, Heft 2, Feb. 1888, with the following statements *(Med. and Surgical Reporter)*:

All transudates, without exception, contain albumin in solution, but in a smaller quantity than the blood-plasma. The quantity of albumin is smallest in normal transudates and in œdema of

the skin. The albumins of the transudate are the same as those of the blood-plasma, namely, serum albumin, serum globulin, and fibrinogen. Concerning their ratio to one another and to the quantity present in blood-plasma, little is known. The quantity of saline constituents in the transudate is pretty nearly the same as that in the blood-plasma, but varies slightly. Not rarely it surpasses that of the blood-plasma in the same person. All transudates contain such other non-colloid bodies as are in solution in the blood, bodies which never pass out in pure glandular secretions, such as biliary coloring matter and hæmoglobin. Substances not preformed in the blood are not found in any transudate, unless the latter has become decomposed. Tissues which produce transudates lack the specific powers of gland cells. Filtration experiments performed outside the living body are not decisive with regard to the influence of blood-pressure upon transudation. Rise in venous pressure effects increase of the quantity of the transudate and of its contained albumins, while the amount of its saline constituents is not materially changed. Rise in arterial pressure (*i.e.*, active hyperæmia) appears in the same manner to increase transudation. Nothing definite is known concerning the quantity of albumin in transudates occurring in simple arterial hyperæmia. Section of the sympathetic nerve seems to increase the quantity of albumin in the area of transudation. The quantity of saline constituents in the transudate is not materially changed in arterial hyperæmia.

THERAPEUTICS.

Some Recent Contributions to the Study of Antipyrin.

We extract the following from the *Medical Analectic*:—"Chouppe, we believe, first asserted that antipyrin was capable of relieving uterine pains after parturition or dysmenorrhœa. In *Le Praticien* for March, 1888, Queirel, of Marseilles, announces that he employs hypodermic injections of five grains of antipyrin, during labor. The medicine acts in twenty-five minutes, and relieves or diminishes the pain without interfering in any way with the labor.

Laget (quoted in *Therapeutic Gazette*, March 15, 1888), in a case where severe labor pains came on in the fifth month of pregnancy, prescribed an enema containing about 30 grains of antipyrin, with the result of relieving the pains slightly. An hour later a similar dose was given, which relieved the pains to a great extent. The uterine contractions continued, however, and in three hours the fœtus was expelled. The patient had no after-pains, and convalesced normally.

Netter testifies also to the fact that antipyrin relieves the pain, but does not diminish the force, of uterine contractions.

In the *Lyon Medical*, of Feb. 19, 1888, Dr. Molliére draws some unfavorable comparisons between the results of the treatment of typhoid fever by cold bathing and antipyrin. In eighty-five unselected cases treated by the cold bath, there were nine deaths, constituting a mortality of 10.5 per cent. Twenty-seven light cases treated by ordinary hydro-therapeutic methods gave a mortality of 7.4 per cent. In fourteen cases, of which four were of the lightest variety, antipyrin alone was used, with a mortality of 14.2 per cent. Throwing out the four light cases, which would have recovered under any treatment, the mortality is raised to 20 per cent.

The author maintains that antipyrin, even in moderate doses, produces toxic effects, which should continually be watched for. He has often seen icterus, stupor, and the characteristic eruption, follow its administration, and other symptoms resembling those produced by carbolic acid, which has been justly discarded in the treatment of typhoid fever. He holds the remedy responsible for death in two of his cases.

Dr. L. C. Armstrong, of Taylorville, Ill., has seen alarming collapse follow the adminstration of 20 grains of antipyrin in a case of puerperal fever. The patient, however, soon responded to stimulants and atropin.

Barr (*Lancet*, Feb 25, 1885; *Medical News*, April 7, 1888) reports a case of collapse and death following the ingestion of from 15 to 30 grains of antipyrin in two doses. It was a case of puerperal fever, in which the antipyrin produced a fall in the temperature of about six degrees, with vomiting and diarrhœa. Rigors now came on, the extremities became livid, and in thirty-two hours the patient died in syncope. At the autopsy the spleen was found contracted and kidneys shrunken, containing infarctions.

According to See, *L'Union Medicale*, Feb. 16 1888, toxic effects following the administration of

antipyrin are extremely rare. They occur, according to him, once in every twelve or fifteen cases among women, and once in fifty cases among men.

Dujardin-Beaumetz states that he has very seldom seen a rash from the administration of the drug, but, on the other hand, has observed quite frequently disturbances of digestion in cases taking the medicine for a considerable time. He suggests that these disagreeable effects may be produced by the benzine which is employed in the preparation of the drug.

Dr. S. Peters, of Cohoes, prescribed two 10-grain powders of antipyrin for a severe headache occurring in a woman of twenty-five, otherwise healthy. A few minutes after the administration of the first dose, she experienced a "snapping" in head, along with an itching and burning in the roof of the mouth and in the throat. This feeling also extended to the eyes, nose, and ears, increased in intensity till she became almost frantic. Sneezing soon commenced and became extremely violent, while the nose and eyes were discharging a very copious watery fluid. She could not breathe through the nostrils for several hours. Exhausted, she finally fell asleep, but recovery was not perfect till the next day.

The *Medical Press*, March 14, 1888, editorially says that antipyrin should be administered with, or immediately after, a meal, otherwise pain, nausea, and discomfort may result from its contact with the walls of the stomach.

In the same journal Huchard recommends antipyrin very highly in the treatment of polyuria. A patient of his drank large quantities of liquid, and passed in twenty-four hours more than twenty quarts of water. Antipyrin was given up to two drachms in twenty-four hours, and the result was a rapid decrease in the amount of urine, until three quarts daily were reached. This effect of antipyrin upon the secretion of urine renders it unfit for administration in certain diseases of the kidneys where their secreting function is already impaired. While antipyrin eases the pain in the neuralgic form of angina pectoris, it would be dangerous to give it in true angina with stenosis of the coronary arteries, as collapse of the heart might result.

Guttmann (quoted by *New York Medical Journal*, March 24, 1888) has seen antipyrin in one case cause violent palpitations, intense cyanosis, and a feeling of the want of air. In another case there was great excitement (pulse 132), with œdema, amaurosis, together with pruritus and urticaria. The dose given was fifteen grains.

Dr. J. P. C. Griffith agrees with Sonnenberger that antipyrin is very efficient when given early in whooping-cough. Neither of them, however, claims a specific action of the drug. In only one case does the author report a total failure of the drug. He gives small doses at frequent intervals.

Thor (quoted by *Med. and Surg. Rep.*, March 31, 1888) finds antipyrin an excellent substitute for bromide of potash in nocturnal emissions. He prescribes from seven to fifteen grains just before going to bed.

Laurencin claims rapid recovery in the severe form of chorea by the administration of nine to fifteen-grain doses of antipyrin.

Ollivier, on the other hand, does not share in the enthusiasm of certain observers concerning the efficiency of this remedy in chorea, having used it on children of seven to eight years of age in daily quantities of one drachm, without modifiying in the least the symptoms.

Dr. W. M. Powell, of Albany, Texas, testifies as to the local hemostatic power of antipyrin, having entirely checked serious hæmorrhage by the application of a four per cent. solution of the drug in a case of circumcision, and in the bleeding following an injury to an old ulcer of the leg."

A Physician's Experience in Self Treatment of Phthisis with Creasote.

The *British Medical Journal* of March 10, 1888, quotes the experience of a Russian physician as follows: "The writer, who has been suffering from pulmonary and laryngeal tuberculosis for about two years, had tried the drug on himself in small doses (half a grain four or five times a day) some time ago, but without appreciable benefit. After perusal of the observations of Professors Sommerbrodt (*Berlin klin. Wochenschrift*, Nov. 15, 1887) and Guttmann (*Deutsche med. Zeit.*, No. 42, 1887), however, he again began to take creasote in gradually increasing large doses, beginning with four grains a day, and reaching, in about two months, a daily dose of forty-four grains. There took place, fairly rapidly, an unmistakable and permanent improvement in his symptoms. Fever disappeared in a week; expectoration, cough and dyspnœa

steadily decreased to a considerable degree; laryngeal spasm, which had formerly occurred once or twice every month ceased altogether. As regards the objective signs, however, there was only some diminution of dullness over a certain area with complete disappearance of fine crepitant *rales*. As to tubercle bacilli in the sputum, they remained just as numerous as before the creasote treatment. The latter had lasted in all four months, during which period not less than four ounces and two drachms of pure creasote have been ingested. The drug must be taken in doses of about five grains four times daily, in the form of capsules (filled up *ex tempore*), after meals. With regard to disagreeable after-effects, Dr. Bogdanovitch observed in himself, when, by way of experiment, he took as much as twelve grains at a time, or twenty grains in the course of an hour, only giddiness, cardiac palpitation, small and accelerated pulse, general weakness, pallor, and anxiety; but all these toxic phenomena disappeared spontaneously and completely in about half an hour or an hour. On an empty stomach, however, he experienced epigastric uneasiness and pain even from small doses. Dr. Bogdanovitch resumed of late the use of creasote in order to study the effect of a six month's course.

The Preparation of Food for the Sick.

The *Therapeutic Gazette* says: "In making a beef tea the round of a good piece of beef should always be selected, and cut into small cubes not larger than half an inch in diameter. It should then be put to soak for two hours on the back of the range, in an earthenware pipkin, with one pint of cold water, and allowed to simmer for about fifteen minutes and boil for three minutes. After adding half a teaspoonful of salt and a little pepper, the tea is ready for use.

In the preparation of soups the first thing is the making of the so-called stock or basis for the soup. There are two distinct stocks: one, which may be known as the brown stock, the other as clear, or *consommé*, stock. For the preparation of brown stock take four pounds of shin of beef, four quarts of water, ten whole cloves, four pepper-corns, a bouquet of herbs (sweet marjoram, summer savory, thyme, and sage), one tablespoonful of salt, three small onions, one turnip, one carrot, two stalks of celery, two sprigs of parsley. Cut the meat from the bones, after which place the bones and half of the meat in a soup-kettle and allow to stand for half an hour in cold water. Heat gradually and allow to simmer for six or seven hours. Brown the remainder of the meat in two tablespoonfuls of beef drippings and add with the other meat and with the vegetables chopped fine, when the kettle is put on the fire to simmer. After it has simmered the required time the stock is strained and set aside to cool, the fat being removed from the top. The stock is then ready for use.

Out of the brown stock may be made St. Julienne soup by the following process. In making these soups the stocks must never be allowed to boil, or at most must be brought only for a moment to the boiling point. For St. Julienne put one pint of the brown stock on the fire to heat, after which a pint of finely chopped vegetables (turnip, carrot, etc.), with half a teaspoonful of salt, should be put on with a little water to parboil. This being done, add the vegetables to the stock, season with half a saltspoon of pepper. Vermicelli soup is made by adding half a cup of vermicelli to a pint of the brown stock. Cook the vermicelli for ten minutes in salted boiling water, season with a half-teaspoonful of salt and a half-teaspoonful of pepper, and add to the warm stock.

Consommé stock is to be made in exactly the same way as the brown stock, except that three pounds of the knuckle of veal are to be added to the meat and all the meat is to be put in at once without browning. After the stock has been formed, in order to clear it add the white and shell of one egg, the juice and rind of one lemon, beating them all up together; then put on the fire, bring to the boiling point, strain through a sieve and again through a napkin, without pressure or squeezing, and serve.

For making chicken broth, take three pounds of chicken well cleaned, cover with cold water, boil from three to five hours (until the meat falls to pieces), strain, cool, and skim off the fat. To a pint of this add salt and pepper and two tablespoonfuls of soft rice, which has been previously thoroughly boiled in salt water; bring the broth to a boil. In preparing the rice half a cupful should be boiled for thirty minutes, with a teaspoonful of salt in a pint of water. To make mutton broth, take one pound of lean, juicy mutton, chopped fine."

Cocaine as a Means of Differential Diagnosis.

In a communication to the *Wiener med. Wochenschrift*, Baumgarten expresses the opinion that if an infiltration in the larynx subsides for some time after being painted with cocaine, the diagnosis can be made of a catarrhal trouble. But if the cocaine produces no diminution in the swelling, nor paleness, then the disease is to be regarded as serious; and if no diminution in swelling, nor pallor occur after some days, catarrhal troubles may be excluded.

Formulæ for the Use of Drugs by Atomization in Phthisis.

Dr. O'Brien, in the *Therapeutic Gazette* of February 15, 1888, reports his method of treatment as follows:—

The aparatus which is most satisfactory to me is the vaporizer of Codman & Shurtleff, of Boston. This firm supplies an atomizing apparatus placed in a flask, and the atomizing force is supplied from a gasometer capable of retaining air at the pressure of twenty-five pounds. The compressed air can be supplied by other forms of apparatus, as the Burgess apparatus; the essential principle being to use a dry vapor, which must be inhaled under a certain pressure, say from fifteen to twenty-five pounds. I have found great satisfaction in using one of three formulæ:—

a. ℞.—Carbolic acid . . . gr. xxj.
Compd. tinct. iodine . . *m* xvj.
Glycerin . . . . . ʒss.
Water . . . . . ʒij.—M.

b. ℞.—Terebene . . . . . ʒss.
Fluid cosmoline . . . ʒj.—M.

c. ℞.—Paregoric . . . . . ʒiij.
Ethyl iodidi . . . . . ʒss.
Chloroform . . . . . ʒj
Fluid cosmoline . . . ʒss.—

The first of these solutions seems to be most beneficial in the form of bronchial and lobular desquamative catarrh, combined with softening and apex cavity. Frequently in such cases the temperature can be promptly reduced within an hour after inhalation. When the treatment has been followed steadily, the effect is to modify the processes of bronchial catarrh, suppuration, and softening, and to lessen cough and expectoration, to diminish night-sweats, and most decidedly to influence the temperature. The creasote vapor sometimes produces a sensation of dryness, or irritation of the bronchial mucous membrane, which may necessitate its temporary suspension.

When the cough is very dry and troublesome the vapor of the iodide of ethyl is soothing, or I have found that the following formula, used on the Yeo inhaler, is very efficient:—

℞.—Ethyl, iodidi . . . . ʒiv.
Chloroform . . . . ʒj.
Tr. opii camph. . . . ʒiij.—M.

Sig.—Ten to twenty drops every half-hour for one or two hours several times daily.

I have used the foregoing formula sufficiently often to enable me to speak with precision as to its value, but I have also used the same apparatus in a number of cases with other combinations, such as fir wood oil, one part, and fluid cosmoline, two parts, or the following:—

℞.—Tr. iodinii comp. . . *m* vij.
Tr. coni . . . . *m* xv.
Glycerinæ . . . . ʒiv.
Aq. . . . . ʒiv.

Used in vaporizer

℞.—Acid. carbolic. . . . . ʒj–ʒvij.
Sodæ biborat. . . . . ʒij.
Glycerinæ . . . . . ʒss.
Ad. dest. . . . . ad ʒiv.—

Filter and use in vaporizer.

Saccharin in Diabetes.

Purdy, of Chicago, concludes as follows from his clinical observations upon saccharin, in the *Journal of the American Medical Association*, of February 25, 1888:—

First. That in this product we possess a flavoring agent for food and drink the palatability of which is quite equal to that of finer grades of sugar, and which may be used by diabetic patients with the greatest impunity.

Second. That through its antiseptic properties it retards the abnormal fermentative changes in the stomach so common in diabetic patients—thus promoting digestion and relieving flatulence.

Third. That while as yet we are without sufficient practical data to judge of its blood effects in large doses to diabetic patients, yet both chemistry and physiology would indicate its use for the purpose of favorably influencing some of the more fatal complications of the disease.

OBSTETRICS.

Fifty Aphorisms in Pregnancy.

DR. E. J. KEMPF (*American Practitioner and News:*)

General aphorisms.—1. The safest plan is to consider every woman, whether married or single, who comes to you for treatment, as pregnant until you have satisfied yourself to the contrary.

2. The physician or midwife should inform himself or herself all about the patient's former labors, general physical status, condition of lungs and heart, etc., the presentation and position and condition of the child and the location of the placenta by external manipulation, several weeks before delivery.

3. To find day of confinement, take last day of menstruation, say February 10th, count backwards three months to November 10th and add 7 days—Nov. 17th. An exact reckoning of the date of confinement is impossible, errors of one or two days being sometimes made. [One or two weeks.—ED. M. S.]

4. Direct the pregnant woman to, 1st, keep the bowels regular; 2nd, that the diet be plain and nutritious; 3rd, to take frequent baths; 4th, not to get cold or wet; 5th, to take moderate exercise; 6th, to do the usual light housework; 7th, to be in the open air often; 8th, not to worry or get excited; 9th, that the dress should be warm, loose, and there should be no pressure on the breasts, waist or abdomen; 10th, to wear an abdominal bandage; 11th, to bathe the nipples in some astringent solution if they are sore; 12th, to consult the family physician for any indisposition. (Munde.) [Anoint abdomen with vaseline at night to lessen linea albicantia.—ED. M. S.]

5. Moderate coition is allowable during the first seven months of pregnancy, and fondling of the nipples by the husband during the latter months is advisable. (Spath, Geburtsenkunde, 1857.)

6. *Signs and symptoms of pregnancy.*—Morning sickness occurs during the end of the first month, the second and third months, and sometimes during the fourth and fifth months. Occurring after that it is probably abnormal. (Munde.)

7. Menstrual suppression is the rule during all the months. The menses may occur during the first, second and third months, rarely afterward. Conception may occur when menstruation is normally absent, as in young girls before menstruation is established, and after the change of life and during lactation.

8. At the beginning of the third month mammary areolæ become turgid. This is not a reliable sign, as it may occur in uterine or ovarian disease. (Playfair.)

9. Abdomen begins to enlarge during the third month, and becomes marked during the fourth, when the uterus rises three fingers' breadth above the symphysis pubis; during the fifth it occupies hypogastric region; during the sixth it rises to the umbilicus; during the seventh two inches upward; during the eighth and ninth months it gradually enlarges until it reaches the ensiform cartilage. For about a week before delivery the uterus sinks somewhat into the pelvic cavity. (Playfair.)

10. Fœtal movements start in about the middle of the fifth month. These movements may be simulated by irregular contractions of abdominal muscles or flatus within the bowels. (Playfair.)

11. Ballotment will be of service at the end of the fourth month to the end of the sixth month. (Playfair.)

12. Uterine souffle can be heard at the end of the fourth month, and until the term ends. (Playfair.)

13. Fœtal heart sound can be made out during the fifth, sixth, seventh, eighth and ninth months. The pulsation is likened to the tic-tac of a watch under a pillow. Steinbach makes the beat 131 for male children and 138 for females, but this is not practical. The beat is most easily heard when the back of the child lies to the abdomen of the mother. An accelerated or irregular beat, preceding or during labor, means danger to the child. There is no relation between the fœtal and maternal pulse.

14. The most valuable signs of pregnancy are fœtal heart pulsation, fœtal movements, ballotment and intermittant contractions of the uterus.

15. Miscellaneous signs of pregnancy are dusky hue of the vagina, dentalgia, facial neuralgia, tendency to syncope, salivation, unusual gratification during some particular act of coitus. (Munde.)

16. The unimpregnated uterus measures two and one half inches and weighs one ounce, at term it measures six times as many inches and weighs twenty-four times as many ounces. The cervix uteri does not shorten during pregnancy except during the fortnight preceding delivery, which is due to incipient uterine contraction. The cervix

begins to soften by the end of the fourth month; by the end of the sixth month one-half is thus altered; by the eighth the whole of it. The os is generally patulous. (Playfair.)

17. *Diagnosis of pregnancy by external manipulation.*—By inspection we may learn the general contour or the abdominal enlargement, whether it be of the usual pear shape or broader, as is the case with shoulder presentations. Where there are twins, side by side, there is usually a depression or sulcus between them, and the uterus is broader transversely. If the twins be placed one in front of the other, no difference can be noted in the breadth of the uterus.

18. By percussion we make out the outlines of the uterus.

19. By palpation we feel the outlines of the uterine tumor, the prominent parts of the child, the round, hard, bony head, the soft breech, the knees, the feet, the elbows, the round arched back and the movements of the child.

20. By auscultation we may learn the condition, the presentation, the position, and the sex of the fœtus and the location of the placenta. (Wilson.)

21. The position of the fœtus is generally head downward, and breech towards the fundus uteri. (Playfair.)

22. *Spurious pregnancy.* Pregnancy is simulated by pelvic or abdominal tumors, obesity, ascites, tympanites, distention due to retained menstrual blood, amenorrhœa, etc. A careful physical examination is the only guard against a mistake. (Munde).

23. *Abnormal pregnancy,* extrauterine gestation —early treatment, the faradic current, late treatment, laparotomy—is very dangerous. Molar pregnancy, be it hydatiform, carneous or spurious, calls for complete removal of the mass. Hydramnois may necessitate premature delivery. (Munde.)

24. *Disorders of Pregnancy.* Vomiting of pregnancy, as a rule, needs no treatment, but, if excessive, it is relieved the quickest by the application of cocaine and vaseline (one in fifty) against the os uteri, and by one-sixteenth of a grain of cocaine, internally, frequently repeated. When vomiting of pregnancy becomes so persistent that it resists all treatment and threatens to destroy the pregnant female, abortion or premature labor may become necessary, but should never be undertaken without a consultation. (Munde.)

25. Anæmia—the best treatment for this is good food, light, air, exercise, iron and arsenic, and removal of the cause if possible.

26. Plethora may call for saline laxatives and restriction of albuminoid food.

27. In constipation direct a regular hour of the day for going to the closet, and give compound licorice powder, or cascara sagrada, or enemata.

28. Diarrhœa should never be neglected, as it may lead to abortion or premature labor. Give paregoric and tincture of catechu, or acetate of lead, opium and ipecac, keep the patient quiet.

29. Leucorrhœa calls for vaginal washing with carbolized tepid water.

30. Pruritus, which may be general or local, treat with soda baths if the former, and, if the latter, treat with carbolic acid in glycerine, nitrate of silver in mild solution, cocaine in rose water, hydrate of chloral in water, etc.

31. Frequent micturition may often be relieved by an abdominal supporter. See also incontinence of urine. Strychnia, belladonna, or cantharides may be tried in both troubles.

32. In varicose veins, besides applying a flannel bandage or a silk stocking, instruct the woman how to apply a compress and bandage in case of rupture of a vein, as the hemorrhage may be great.

33. Diabetes, albuminuria, jaundice, neuralgia, hemorrhoids, etc., during pregnancy, call for the same treatment as when occurring at other times.

34. Uterine displacements call for replacement, followed by the application of an appropriate pessary and supporter.

35. False pains may come on at any time during pregnancy, and cannot be told from true pains, except that the former are relieved by opium.

36. High temperature in the mother is not necessarily incompatible with fœtal life.

37. *Immature Delivery.* Abortion is the expulsion of the ovum before the formation of the placenta (twelfth week); miscarriage its expulsion before the period of viability (twenty-eighth week;) premature delivery, its expulsion between the twenty-eighth and thirty-eighth week. (Munde.)

38. Causes of immature delivery are predisposing, dependant on constitutional affections, and exciting, dependant on mechanical and emotional violence. Symptoms are pain and hemorrhage and dilation of the os uteri. Dangers to mother from sepsis, fatal hemorrhage, perimetric inflammation, carneous moles. Dangers to child—want of viability.

39. Treatment is prophylactic by fluid extract black haw, and removal or avoidance of cause; preventive by rest, opium and black haw; and, in inevitable cases of abortion, empty the uterus and check the bleeding by rest and ergot, by tampon, and after dilation of cervix by finger or dull curette. (Munde.)

40. Miscarriage should be treated like abortion, and premature labor like labor at full term.

41. Artificial abortion is best performed, up to the fifth month, by dilation of the cervix with the steel branched dilator; it is done because, 1, persistent vomiting, 2, organic viseral lesion, 3, incarcerated uterus, 4, deformity of pelvis, 5, presence of large tumors. (Munde.)

42. Premature labor is best induced by catheterization of the uterus—not rupture of membranes, for 1, dyspnœa from enormous distention of the abdomen from any cause, 2, homorrhage from placenta prævia, 3, uncontrollable vomiting, 4, organic heart trouble, 5, habitual death of the fœtus, 6, pelvic contraction of moderate degree, 7, hopeless condition of the mother, 8, where in previous labors there have been unusually large children. (Munde.)

43. *Fœtus.* Fœtus at first month is rarely to be detected in abortions. At second month it weighs sixty grains, measures six to eight lines, head and extremities are visible, eyes are two black spots on side of head, umbilical cord is straight, the clavicle and inferior maxillary bone begin to ossify. At third month the embryo weighs from seventy to three hundred grains, measures from two to three inches, forearm is formed, fingers can be traced, placenta is formed. At fourth month weight is from four to six ounces, length six inches, sex of the child can be made out. At fifth month weight ten ounces, length ten inches; hair and nails beginning. At six months weight one pound, length eleven to twelve inches; membrana pupillaris; eyebrows. At seven months weight three or four pounds, length thirteen to fifteen inches; eyelids are open; testicles in scrotum; clitoris prominent. At eight months four to five pounds, length sixteen to eighteen inches; nails; membrana pupillaris has disappeared. At nine months six to eight pounds, length nineteen to twenty inches; males somewhat heavier than female. (Playfair.)

44. *Signs of death of Fœtus.* Before labor the signs of death of the fœtus are, 1st, loss of fœtal heart-beat, 2nd, loss of fœtal motion, 3rd, sense of dull weight in the uterine region felt by mother, 4th, sense of coldness in the womb, 5th, putrescent fœtor in the discharges, 6th, discharge of flatus from the uterus.

45. *The Placenta, Liquor Amnii, etc.* The placenta supplies nutriment to and aerates the blood of the fœtus. It may be situated anywhere in the uterine cavity. The umbilical cord is the channel of communication between the fœtus and placenta. The placenta at full term is a moist mass, contains a great deal of blood; spongy in texture; about seven inches in diameter; usually oval; one surface smooth, facing the cavity in which the fœtus lies, the other surface rough, fastened to the walls of the uterus. The color is reddish but varies according to the condition of the blood.

46. Liquor amnii is secreted by the amnion and the allantois, it affords a fluid medium in which the fœtus floats, and so is protected from shocks and jars, it saves the uterus from injury from the movements of the fœtus, and in labor it lubricates the passages. It has nothing to do with the nourishment of the fœtus. (?)

47. The uterine and placental murmurs are not usually taken notice of in the diagnosis of pregnancy.

48. Knots in the umbilical cord are brought about by the passage of the child through a loop in the cord, generally during labor.

49. In twins, triplets, etc., there may be one placenta or more than one. If two fœti, they may be joined by two cords to one placenta. This cannot be made out during pregnancy.

50. So-called maternal impressions, monstrosities, marks, etc., are the result of arrest of evolution due to pressure by amniotic bands, pressure by the umbilical cord, adhesions of the placenta, or to some pathological condition of the fœtus or its membranes, or to heredity.

DISEASES OF CHILDREN.

Rectal Alimentation in Children.

Jacobi, in the *Archives of Pediatrics*, advises as follows:

The rectum absorbs but it does not digest. Whatever, therefore, is to enter the circulation through the lower end of the alimentary canal must be dissolved before being injected. Suspension alone does not usually suffice. Water can be introduced in quantities of from twenty-five to one hundred grammes (one to three ounces), every one, two or three hours, and may thus save life by

adding to the contents of the thirsty lymph ducts and empty blood vessels. Salts in a mild solution will thus be absorbed. Food must be more or less peptonized before being injected. The peptones mentioned above are readily absorbed when fairly diluted. When too thick they are not absorbed, become putrid, and a source of irritation. Milk ought to be peptonized. The white of eggs becomes absorbed through the addition of chloride of sodium. Kussmaul beats two or three eggs with water, keeps the mixture through twelve hours, and injects it with some starch decoction. The latter is partly changed into dextrin. Fat, when mixed with alcohol, becomes apt to be partly absorbed. Andrew H. Smith recommends the injection of blood. Its soluble albumen, salts and water are readily absorbed, more we ought not to expect. Still, he has observed that the evacuations of the next day contained none of the injected blood. Whatever we do, however, and be the rectum ever so tolerent, not more than one-fourth part of the food required for sustaining life can be obtained by rectal injections, and inanition will follow, though it be greatly delayed. Finally, children are not so favorably situated in regard to nutritious enemata as adults. In these the lengthening of the nozzle of the syringe by means of an elastic catheter permits of the introduction of a large quantity of liquid; indeed, a pint can be injected, and will be retained. But the great normal length of the sigmoid flexure in the infant and child, which results in its being bent upon itself, prevents the introduction of an instrument to a considerable height. It will bend upon itself; besides, a large amount of contents will be expelled by the feeble or resisting young patient. When a solid instrument is used, it is apt to be felt high up in the abdomen. This is the result of a large portion of the intestine being pushed upward.

Dilatation of the Stomach in Children.

Machon (*Centr. f. Kinderh, ibid.*):

This subject was extensively treated by Demme, and the author's observations have been made since that time. The anatomy of the child's stomach shows a relatively defective development of the fundus, great diameter of the cardiac orifice, and deep position within the abdominal cavity. These facts have an important bearing upon the capacity of the organ, and the influence which is exercised by the condition of fulness and by the extension of its wall. Its histological structure also shows only slight development of the muscular coat, especially of the valve-like muscle of the pylorus. Upon the mucous membrane there is also a greater development of the mucous than of the peptic glands. In the new born infant the stomach is fixed only at its two extremities, the cardiac end being at the level of the tenth costal cartilage, and the pylorus not extending beyond the middle line of the body. When the organ is full the pylorus is its lowest point, and is always covered with liver tissue; the upper half of the lesser curvature runs parallel with the left side of the vertebral column, and its lower portion lies transversely across its anterior aspect. The angle which is thus formed varies greatly with the different movements of the organ. Dilatation of the stomach may be acute or chronic, and the chronic process may involve the whole or only a portion of the organ. There may also be a functional and an organic dilatation, and one which is due to primary diseases of its wall. Among the functional dilatations the most important is that which is based upon the disturbance of the nervous system. This may be a lesion of the central nervous system, for example, tuberculous meningitis, or hypertrophy of the brain; or the nerves of the stomach itself may be at fault. It may also occur in connection with chlorosis, the cachexias, or relaxation of the muscular structure in consequence of chronic cartarrh. Secondary dilatation of the stomach of the organic variety rarely occurs. Narrowing of the pylorus is always the causative factor, and to this may be added a congenital weakness of the muscular structure of the organ. Imperfect development of the muscular coat and insufficient nutrition in the first months of life are also causative elements which occasionally exist. Cases are also recorded by Demme which were caused by keeping the child in bed to much of the time, and by rachitis, this disease being one which predisposes to disorders of the digestive tract.

The symptoms of dilatation of the stomach in children are partly local and partly general, and are similar to those which are observed in adults. The diagnosis can be readily made by inspection of the abdomen, by palpitation, or examination with a sound. Diagnosis by percussion is not always reliable.

Functional dilatation, which is caused by nerve diorders, usually disappears with the primary cause.

The prognosis in primary organic dilatation also depends upon the success with which the fundamental disturbance is treated. Prophylaxis should be the primary consideration in the therapeutics of this condition. When the condition is present stomachics are indicated, or the use of the gastric sound, as recommended by Epstein. The electric current and cold applications are indicated only in the functional form of the condition. General treatment must also receive careful attention.

REPORTS OF SOCIETIES.

Meeting of the Ontario Medical Association.

The following programme has kindly been supplied us by Dr. J. E White, secretary of the association:

Papers to be read by guests.—Dr. Wyeth, New York, on "Plastic operations for closure of urethral rectal fistulæ"; "Observations on intestinal sutures." Dr. A. W. Johnstone, Danville, Kentucky. On "Soft myoma." Dr. C. C. Rice, New York.

Papers on subjects selected.—"Intestinal sections and sutures in cases of gunshot wounds." Dr. Oldright. "Coroner's Inquest." Dr. J. H. Richardson. "Bacteria: their influence on the blood." Dr. C. Sheard. "Neurasthenia." Dr. D. Clark. "Range of usefulness of pessaries." Dr. Temple. "Laparotomy in intestinal obstruction" Dr. McFarlane."

Discussion on Medicine.—"Malaria as the cause of disease." Opened by Dr. Mullin, Hamilton.

Discussion in Surgery.—"Urethral discharges." Dr. Grassett.

Discussion on Obstetrics.—"The diagnosis of obscure pelvic ailments." Dr. A. A. McDonald.

Discussion in Opthalmology and Otology.—"Some diseases of the eye of interest to the general practitioner." Dr. Burnham.

Papers contributed by members. "The so-called moral insanity." Dr. J Workman, Toronto. "Idiopathic glossitis." Dr. Hunt. Clarksburg. "Congenital goitre." Dr. McKenzie, Wingham. "Pathological Notes for 1887, of clinical interest." Dr. MacCallum, London. "Inguinal hernia." Dr. Robinson, Brampton. "Compound fracture of humerus, illustrating extension as secured by a modification of Sayer's short top splint." "Rest in neurasthenia." Dr. A. H. Walker, Dundas. "Craniotomy." Dr. Harrison. Selkirk. "Intubation in laryngeal diphtheria." Dr. Stark, Hamilton. "Empyema." Dr Whiteman, Shakespeare. "Antiseptic treatment of wounds of hand." Dr. Olmstead, Hamilton. "Life insurance and the relations of the profession thereto." Dr. J. Thorburn, Toronto. "Operations on bone." Dr. Dupuis, Kingstone. "Pilo carpin in the treatment of puerperal eclampsia." Dr. Irving, Kirkton. "Uterine electrolytic apparatus." Dr. A. M. Rosebrugh. "Leucocythemia." Dr. McPhedran.

These comprise the list received by Dr. White up to the time of going to press.

Notes on the meeting. The committee on arrangements are untiring in their efforts to make this meeting exceed all preceding ones. The enclosure of the special railroad certificate in envelope of its own is a good feature, and will be a great convenience to the members.

The programme this year is one of the finest specimens of the printer's art ever presented. Dr. Powell of Ottawa, who was to have opened the discussion in obstetrics, has been compelled to take an ocean voyage for his health.

The committee on ethics is going to strike out hard this year, certainly commercialism, itinerancy, and goody goody advertising are gaining daily and need attention.

The committee on publication are printing a large number of copies of the by laws and the code of ethics is to be included, and every member will receive a copy, so that ignorance of the code cannot hereafter be pleaded for any transgression. The Association this year will likely take action to have the tax removed from surgical instruments, a consummation devoutly to be wished. The necessity for an inebriate asylum will probably also prompt the Association to take up the question.

Dr. J. Stewart, of Montreal, leaves for England about the middle of June.

The names of Dr. McLean of Goderich, and Dr. McArthur of London, are mentioned as candidates for the Tecumseh and Malahide division, as Dr. Edward's successor. Dr. Bruce Smith, Seaforth,

and Dr. Fraser of London, declined nomination.

The medical council meet simultaneously. It is expected they will take the opportunity of being present during the afternoons of the Association meeting.

The guests of the Association this year are: Drs. Wyeth, Leonard Corning, G. W. Fox, C. C. Rice, of New York; A. W. Johnston, Danville, Kentucky, and Dr. Tremaine, Buffalo. Our Montreal confreres are always welcome. Several are expected, among them Drs. Ross, Cameron, Sheppard, and Gardner. Sir James Grant, Ottawa, and Hon. M. Sullivan, Kingston, intend to be present. Already twenty-eight subjects are to be discussed, and there will be little time for anything but good, solid, honest work. Where are the gynæcologists, this is evidently a surgery year.

Annual Meeting of the American Medical Association

(BY OUR CORRESPONDENT.)

This, the thirty-ninth meeting of the Association, was held in Cincinnati, beginning on the 8th of May, and its sessions continued throughout the week. Wide as is the area of the United States, it is not too wide to prevent some six hundred physicians, representing every State in the union, from meeting together and holding council, and at which questions relating to the advancement of medical science and the elevation of the status of the profession were seriously discussed. As with all American associations, one was especially struck with the bigness of the meeting, and perhaps more by this than by the high standing, as a whole, of the physicians who were gathered together. With the polished eastern men represented by those from Philadelphia and Washington, were many from the younger and proverbially agressive west, to which, in very considerable numbers, were added Kentuckians, and Carolinians, with a gentlemanly dignity, in keeping with their whole antecedents. Amongst the more prominent members of the profession present, were such men as E M. Moore, of Rochester, who delivered the admirable address on "Surgery," A. M. P. Garnett, of Washington, the President, who delivered the Annual Address, and spoke of the special mission of the Association, Pepper of Philadelphia, who addressed the Section on Medicine on the diagnosis of diseases of the stomach, A. M. Davis, of Chicago, the Nestor of the Association, who occupied half an hour criticizing Whittaker's, of Cincinnati, paper on "Pneumonia," and who exhibited a western vigor and practical sense, which did credit to his years. Ochterlony, of Louisville, figured prominently in the discussions on general medicine, while Shattuck, of Boston, assuming an attitude indicative of American freedom rather than Boston repose of manner, spoke admirably in the discussion on Prof. Pepper's paper. It were perhaps injudicious to single out from the many present any one for special mention, but it is impossible to omit the reference to a notable man, Dr. Battey of Rome, Georgia, who interested more than any other, our correspondent. Battey's operation had long been familiar to him, but to see the man who had dared the operation before the years of antiseptic surgery, was a pleasure as rare as it was unexpected. Above the common height, slightly stooped, with a somewhat thin and closely curling beard surrounding a face, rather sallow and worn but filled with kindly benevolence and marked lines of deep thought, Dr. Battey, with a long, opening coat like a summer serge, appeared perhaps more like a simple unaffected parson than an illustrious surgeon and gynæcologist, who had studied in European hospitals thirty years ago. and who could claim the friendship of Simpson, Ferguson, and Wells. In his Southern home in his private hospital, Battey still continues his beneficent work, and if less ostentatious in publishing his successes than are others who have come later, he labors with a perhaps more conscientious solicitude to elucidate the mysterious influences which make his operations often a necessity, while too frequently rendering their apparently good results, delusive.

Other names, less well known, may be mentioned, as those of Dr. Dawson, of Cincinnati, the president elect, and Dr. Harvey, of Indianapolis, the genial and whole-souled leader of medical opinion in his city, and a brilliant operator. Amongst the representatives in the State Medicine Section, were such men as Rauch, of Illinois, J. B. Hamilton, of Washington; Walcott, of Boston, Baker; of Michigan, Benjamin Lee, of Philadelphia; Orme, of California, who had been in attendance at the Inter-State Conference of Executive officers of Health. The work laid out for the various Sec-

tions was as large and varied in its character, as was the quality of the papers presented. Reference has already been made to several papers and their authors, but others of much interest were read before the different Sections. A marked feature of the address of the President, was the reference to the enemies of the Association. "At no period since the formation of the Association had its enemies been so bold so, reckless, and so unscrupulous in efforts to destroy its influence and power." He indicated that in its paternal aspect to other and smaller associations of the Union it had special duties and responsibilities laid upon it as the conservator "of all that pertained to the preservation and advancement of professional interests, as well as to medical science *per se*." To this end, for concentrating the energies and aims of the Association, he submitted a number of propositions for the establishment of district committees, to report on and to urge methods for creation of registrations of practitioners in the various States, and the elevation of the standards of medical colleges and for lessening their number. While in the first regard, we in Canada, may fairly consider ourselves advanced, in the latter regard, we have, like them, room for improvement. The references in the address were, perhaps, directed to the misunderstandings preceding the meeting of the Washington International of last year. They are not wholly forgotten, but the evidence that many of those who stood aloof last year, are willing to let by-gones be by-gones, was seen in their presence at the Cincinnati meeting, and their taking an active part in their proceedings. Further, there was an invitation presented by Dr. S. W. Gross, from the Philadelphia County Medical Society to the Association, to hold its next meeting in that city. Dr. Robert Bartholow's address in Medicine, was, to say the least, disappointing. He referred to abuses without creating any enthusiasm or suggesting seriously, methods for the removal of them. The address naturally, was along the line of therapeutics and some pertinent remarks regarding the physiological action of medicine and of electricity, were made.

The social side of the Association was, as usual, its most pleasant, if not most useful feature. An informal reception on the evening of the opening day at the Burnet House, made every one acquainted, while the final reception and soirée at the Art Museum was a delightful affair, where the élite of Cincinnati entertained the visiting Association. Dr. W. W. Dawson, Cincinnati, is the president for the coming year, while most of the executive officers were re-elected. Next year's meeting is fixed for Newport, Rhode Island, while fortunate selections for the general addresses were made, that on General Medicine, being by Prof. William Pepper, Pennsylvania, that in Surgery, by P. S. Conner, of Ohio, and that in State Medicine by Dr. W. H. Welch, of Maryland.

International Conference of State and Provincial Boards.

This meeting, which might with propriety be called the cholera conference, originating as it did in 1884, when in St. Louis, the State Boards discussed cholera which was then at Toulon and Marseilles, and was expected to reach with certainty America the coming year, held its annual sessions in Cincinnati on May 4, 5, 6. There was a large number of delegates present being presided over by Dr. J. N. McCormack, of Bowling Green, Ky., while Dr. C. O. Probst, of Ohio, acted as secretary in the absence of Dr. Lindsley, Connecticut.

The following physicians were present at the first night's meeting:—Drs. John D. Jones, N. P. Dandridge, William Carson, of Cincinnati; H. S. Orme, California; R. S. Goodwin, Connecticut; J. H. Rauch, Illinois; S. R. Searight, W. A. Fritsch, S. S. Roots, J. M. Taylor, Indiana; Pinckney Thompson, Kentucky; J. N. McCormack, Kentucky; R. W. Llewelyn, Iowa; H. S. Schenk, Kansas; Welch, Kansas; H. B. Baker, Michigan; C. N. Hewitt, Minnesota; C. O. Probst, Ohio; Benjamin Lee, Philadelphia; David Engelman, Pennsylvania; James Evans, South Carolina; J. T. Reeve, Wisconsin; B. O. Reynolds, Wisconsin, and P. H. Bryce, Province of Ontario, Canada.

Dr. McCormack, the president of the Association, read his brief annual address, the particular point of which lay in the stress with which he mentioned the fact, so well known east, that the quarantine facilities of New York are totally inadequate to the demands of the service. The topic for the evening's discussion was then read. It was: "Duties of the Conference in urging the erection of isolated hospitals for infectious diseases, as a more economical and effective method than placarding houses and quarantining diseased families."

Dr. P. H. Bryce, of Ontario, chairman of the committee on interstate notification of infectious diseases, introduced his report for the year by referring to the fact that nearly all of the States, excepting New York, had become signatories to the arrangement to notify by telegraph or mail contiguous Boards or those on common lines of travel of cases of smallpox, cholera, etc. He went on then to speak of the provisions which State and Provincial Boards should urge upon the Local Boards to make, thereby causingall the States feel that not only was notification of outbreaks carried out, but also that what was more important, the prompt isolation of cases was being thoroughly performed Not only were isolat on hospitals a necessity in smallpox and cholera, but he urged the importance of the isolation of all cases of diphtheria, scarlatina, and other infectious diseases of that type, and stated that the only means by which the necessary isolation could be obtained was by the establishment and maintenance of hospitals of that nature by town and rural municipalities. He admitted that when the proper isolation could be obtained in private residences a removal to the hospital was unnecessary, but contended that as a general thing isolation was not to be had, especially among the poor people of the large cities. His conclusions were, that where notification with attempted isolation in the houses of the people had failed to limit these diseases, then that economy of time, lives, and money which was the result of the prompt isolation of first cases by removing them from the houses which become infected by their continued presence in them, reasonable the demand for such removal.

Dr. Probst agreed that isolated hospitals for the treatment of infectious diseases would be a good thing, but he doubted its practicability. Dr. Taylor, of Indiana, coincided with Dr. Bryce as to the results to be obtained by his plan, but doubted that it could be carried out. It might be practicable in large cities where superb hospital conveniences were abundant, but in small towns and sparsely settled districts it would be impracticable, the effect of removal long distances being dangerous. Dr. Thompson, of Kentucky, supported Dr. Taylor. Dr. Lee, Philadelphia, agreed with Dr. Bryce in his conclusions as to the practicability of the plan proposed, as also did Dr. Hewitt, of Minnesota. Dr. H. S. Orme, of California, also advocated the plan. The Chair appointed Dr. Orme, Dr. Hewitt, and Dr. Bryce as a committee to investigate the subject and report further.

The next of a series was included in the questions, "Should the National Government assume the control of quarantines at all ports of entry?" "Under which control should quarantine be both in Canada and the Union, under National Government or under State Governments?" which occupied the time of the conference at the next morning session. Dr. Lee, of Philadelphia, an eminent Pennsylvania authority on sanitation, advocated the strict regulation and control by the Government of all ports on the coasts where it was at all possible that infectious diseases could be imported.

Dr. Lee offered the following resolution, which was referred to the regular standing committee:

"Resolved, that this conference, recognizing the failure of local authorities to administer quarantines effectually in a large number of cases, respectfully urges upon the National Goverment the duty of assuming the control of quarantine at all ports of entry."

Dr. Hewitt said, in reference to the resolution, that it was impossible to look to Congress for action in the premises; that no appropriation was available for adequate quarantine protection, and that if anything was to be done it must be done separately by the State Boards of Health.

Dr. Rauch, Illinois, agreed with Dr. Hewitt as to the inability of obtaining the necessary national legislation in quarantining the coasts. He was, of course, in favor of a national system of protective quarantine from pestilential diseases, but he was opposed to putting them, if obtainable, in the hands of the U. S. Marine Hospital Service.

Dr. Baker, had no confidence in the efficiency or practicibility of a national system of coast quarantine. He favored the continuance of action on the part of the State Governments, and the obtaining of national aid in emergencies therefor if it were possible. In support of his statement he quoted the well-known—to physicians—efficiency of the New Orleans quarantine station, which is under the control of the local authorities, an efficiency which, he said, would be weakened were the national authorities to be placed in control.

The New York quarantine service was notably inefficient, but if the proper efforts were made the service would be brought up to the degree of efficiency of the New Orleans stations. Dr. Baker

sarcastically said that he did not believe there was a skilled sanitarian in all the National Marine Hospital service.

Dr. Kennedy stated that he was not at all impressed with the value of the inland quarantine system, and said that he feared an epidemic of yellow fever and cholera this year, but the doctor did not state the basis of his fears, though he rather intimated that they were due to lack of an effective system of quarantine.

Dr. Bryce described the admirable workings of the Canadian quarantine system, and pointed out the desirability and necessity for the unification of the methods from the quarantine of the General Government through that of State and Provincial down to port and local authorities generally.

Dr. Hewitt asked the Chair to appoint a committee to confer and correspond with and visit the maritime quarantine systems, to investigate and ascertain the best methods of quarantining from infectious diseases. The Chair will announce the committee.

The question proposed by the State Board of Health of Vermont, "What legal authority ought State Boards of Health to possess in the absence of Local Boards?" was widely discussed by the conference, the discussion consisting of a statement of the laws and systems in effect and in use in the different States.

Dr. Hewitt, of Minnesota, states the vigorous measures used in the State to suppress and stamp out infectious diseases. He said that in Minneapolis there occurred a small epidemic of seventy cases of small-pox. The Board took immediate and vigorous action, and before even the reporters ascertained the fact that small-pox existed in the State. Others spoke regarding the local methods in their respective States and Provinces. Dr. B. Lee, Secretary, State of Pennsylvania, then read a paper, appearing elsewhere in this number, on "The attitude of State Boards towards Leprosy." A committee consisting of Drs. Lee, Orme, of California, and Dr. Bryce, Ontario, were appointed to examine yet more fully into the introduction of it to this continent and its contagious tendency, to report at the next annual meeting.

The conference, in renewing the discussion on Dr. Hewitt's proposition, appointed a committee to nominate a special committee to examine into the quarantine methods along the various coastlines, and to take such action in the interval before next annual conference, as the natural safety against small-pox, cholera, or yellow fever might demand.

The Ontario Medical Library Association.

BY D. J. GIBB WISHART, B.A., M.B., SECRETARY.

To the Editor:

TORONTO, May 24th, 1888.

Dear Sir:—Regarding our newly formed Library Association, I desire to give the following facts:—

Aim.—This Association has been formed to provide a Reference Medical Library for the use of the profession throughout the Province. All engaged in original investigations or desirous of making contributions to medical literature, must have felt in the past the pressing need that existed for such a collection of books, which as occasion arose, they could consult. Valuable libraries are frequently broken up under the hammer of the auctioneer, which should find a fitting resting place upon the shelves of our Institution, and not only confer benefit upon the profession at large, but serve as a lasting memorial to the physicians who laboriously collect them at great expense.

Organization.—By the concerted action of several bodies representing the profession in Ontario—*i. e.*, the Council of the College of Physicians and Surgeons, the Ontario Medical Association, and the Toronto Medical Society, a committee was appointed in 1887, whose members have secured incorporation under the above title, in compliance with the statute regulating Library Associations. This provisional board has elected interim officers, and is engaged in the preparation of a constitution and by-laws, which will be submitted to the first annual meeting.

Financial Position.—Stock books having been opened, a canvas of the local profession was made and upwards of $3,000.00 have so far been secured.

The shares are placed at $5.00 each. The nominal capital is $10,000.00, all of which, it is hoped, will shortly be subscribed for

Location.—The Council of the College of Physicians and Surgeons has shown its cordial and practical sympathy with the objects of the Association, in placing at its disposal at a nominal rental, a large and well-lighted room, situated in its magnificent and commodious building, recently erected at the corner of Bay and Richmond Streets, Toronto.

This room is on the first floor of the building, adjacent to the elevator, and hence easy of access at all times. It has been provided with shelving, and is steam heated.

Annual Meeting.—The first annual meeting of shareholders will be held on Wednesday, the 13th of June, at 5 o'clock in the afternoon, in the Library of the Normal School, during the session of the Ontario Medical Association, so as to give every member of the same an opportunity to be present.

Opening.—It is hoped that arrangements will be so far completed that the Library and Reading Room may be opened by the 1st of July, with a full list of the best medical journals upon the tables, and more than a thousand volumes upon the shelves. These latter will include complete series of the leading journals for the past fifteen years.

Most pressing needs.—Donations of books, journals, reprints, pamphlets, etc., in fact of everything bearing upon, or treating of, medical science, are required, and will be doubly valuable if sent in at once. No publication, however small or seemingly unimportant, will come amiss, as it may be used in completing sets, or for the exchange list. Probably every physician in Ontario has some books or journals, which he can easily spare to aid in making this library complete. The approaching meeting of the Provincial Medical Association will bring many to the city. It will greatly aid the committee if each physician bring with him whatever he can spare for the Library. Donations of books should be sent to the curator, 295 Simcoe St., Toronto, and he will be very glad to send to any part of the city for parcels, of which he may receive notification by post card.

The provisional board of trustees is composed as follows:—President, Dr. Graham; Vice-Presidents, Drs. Arnot, Burns, and Henderson; Secretary, Dr. Wishart; Curator, Dr. N. A. Powell; Treasurer, Dr. McPhedran; Librarian, Dr. Pyne; Members, Drs. Rosebrugh, Mullin, and Nevitt, to any of whom subscriptions or donations of books may be sent.

The Medical Alumni Society of the University of Toronto.

This Society, the preliminary organization of which was referred to in our editorial columns last month, was formally organized on the day of Convocation, May 25th, and a constitution of which the following is a copy, was, after careful consideration, adopted:—

Draft of Constitution.

NAME.

This Society shall be called "The Medical Alumni Society of the University of Toronto."

OBJECTS.

The objects of the Society are to promote the Science of Medicine, to enlarge the usefulness and influence of the Provincial University, to maintain the interest of graduates in their *alma mater*, and to cultivate good fellowship amongst its members.

MEMBERS.

The Society shall consist of two classes of members—Ordinary and Honorary.

ORDINARY MEMBERS.

Ordinary members shall consist of graduates in Medicine, of either the University of Toronto, or of Victoria College, or other federated Colleges.

HONORARY MEMBERS.

Honorary members shall include all ex-presidents of the Society, and such other physicians as may from time to time be elected by a two-third's vote at the Regular Annual Meeting of the Society. Ex-presidents, however, retain the privileges of ordinary members.

OFFICERS.

The officers of the Society shall consist of a President, five Vice-Presidents, a Secretary, and a Treasurer.

THE COUNCIL.

The Council shall consist of the officers of the Society, and ten elective councillors.

ELECTION OF ORDINARY MEMBERS.

All persons eligible as ordinary members shall notify, at any regular meeting, any member of the Council of the Society of their desire to become members. All such applications shall be submitted to the Council for its approval.

ELECTION OF COUNCIL.

The election of the members of the Council shall be by ballot, and shall take place at the Annual Meeting. No candidate for the office of President, Secretary, or Treasurer, shall be declared elected, unless he has obtained a majority of all the ballots cast. In the instance of Vice-Presidents and Councillors, the five candidates for the former, and the ten for the latter, receiving the highest number of votes shall be declared elected. In case of a tie, the President shall decide.

MEETINGS.

There shall be general and special meetings of the Society, to be called by the President at the request of the Council, or ten ordinary members. One of the general meetings, to be called for a date fixed upon by the Council, shall be the Annual Meeting. Notice of any meeting must be given at least one week before such meeting is held.

FILLING OF VACANCIES IN THE COUNCIL.

If any office become vacant before the expiration of the term thereof, the vacancy may be filled by the Council.

ALTERATION OF CONSTITUTION.

Proposed changes in the Constitution must accompany the notice calling the Annual Meeting. Such changes shall be made only by a two-thirds vote of the members present at said Annual Meeting.

RULES OF ORDER.

The proceedings of the Society shall be governed by the usual rules of order which obtain in similar organizations, and all questions of order shall be decided by the Chairman.

EXPULSION OF A MEMBER.

It shall be competent for the Society, upon the vote of two-thirds of the members present at a meeting, to expel any member who has been guilty of conduct unbecoming in any member of the Society, due notice of at least fourteen days having been given to all members and to the accused. But no charge of this nature shall be allowed to come before the Society, unless it has been previously submitted to, and sanctioned by the Council.

QUORUM.

Twenty members shall constitute a quorum at any Annual Meeting, ten at an ordinary meeting, and five members shall be a quorum of the Council.

FEES.

There shall be a membership fee of one doliar, payable annually.

The following officers were then elected:—President, Dr. J. H. Richardson, Toronto; 1st Vice-President, Dr. J. Thorburn, Toronto; 2nd Vice-President, Dr. J. Tye, Chatham; 3rd Vice-President, Dr. J. Eccles, London; 4th Vice-President, Dr. F. Rae, Oshawa; 5th Vice-President, Dr. G. Shaw, Hamilton; Secretary, Dr. McPhedran, Toronto; Treasurer, Dr. J. F. W. Ross, Toronto. Councillors—Drs. Oldright, Toronto; W. Burt, Paris; W. H. Cameron, Toronto; C. Barnhart, Owen Sound; J. Smale, Wroxeter; J. Mullin, Hamilton; J. H. Duncan, Chatham; A. Robinson, Unionville; C. McLellan, Trenton; C. Spohn, Penetanguishene.

The idea, as evinced by the large number of alumni present at the meeting, has been enthusiastically received, and the representation of outside men, while small, was well distributed. Letters of regret at their inability to be present, were read from a number of old graduates of the University.

The Annual Dinner which took place in the Queen's Hotel, was a great success, some fifty alumni being present. It was strictly private in character, being, so to speak, a family affair, and as such was wholly informal. The genial President, Dr. Richardson,—or Old Rick, as best known to the graduates of olden times—graciously did honor to the chair. After the generous repast had been paid due court to, the president proposed the one formal toast, "The Queen!" after which the following ode, amid much good-natured criticism and banter, was read by P. H. Bryce, M.A., M.D., Toronto:—

Aliquid pro Nobis Sociis.

Tempora mutantur et nos illis
Mutamur: You say but how is this?
Some old saw sayeth that in seven years
This *corpus mutabile* once disappears,
Disjecta membra we are thus become;
Our whole of discrete molecules a sum.
Some raging Eurus them has quickly borne
North, south and west; as, from us rudely torn,
Our vital parts have gone, from first to last,
"Into the infinite azure of the Past."
But we of primal undefined clay
Re this broad statement must demand our say:
Of nineteenth-century material are we,
And claim our right t' agree or disagree.
Is it of *epiblast*, of skin and hair,
That we so quickly become worse of wear?
An eyelash gone? For this our Dinah weeps
As in the porridge matutinal it steeps;
Or epithelial pavement layer, which,
By process osculatory 'll enrich
The choicest viands of our Dulcinea,
And form the base of oromatopœia?
Surely these sages of earth's early prime
Were sadly out in measurement of time!
No Ephemerides are we; we lack
Their spotted wing, their parti-coloured back!
Yet some of those old cynics strangely hit—
Were transcendentalists without knowing it—
Upon the real essences of things:
For *laminæ dorsales*, those modal wings
Which inturn, forming that medullary groove,
For tissue cerebral, whose convulsions move
Our higher selves to nobler action, fraught
With argosies of good through lofty thought,
Are epiblastic too: So it's not strange
If our past years, in some thrice seven, should change
The thoughts which give the outward seeming to our lives.
But in the cells of this to-day survives
The impress of those earlier years, to each
A life ideal, and to-night we reach,
Hand over hand, as men of following years
Join hands together, till to each appears
In memory the joyance of his college days
As one great present; and lingering it stays,
Making him strong to act and labour for the good
Which, yet, is nascent, though he fainly would
See it in his own time, the ripened fruit.

To-night in pleasant mood we here recruit
The somewhat worn and tired epiblastic cells,
Or what remains of them, in magic spells
Cast over us by incense from the fires

On Cuban hill-sides set. When such expires—
My friends, I pray you, let it not be yet!
We'll smoke the homely but more soothing calumet!

Songs then became the order of the evening, Dr. A. Baines, Dr. W. H. Ellis, Dr. B. Spencer, Dr. A. A. Macdonald, Dr. W. A. Richardson, rendering songs appreciated as such can be only amongst a lot of college men. The president's song capped the climax.

Further social entertainment was engaged in till up-town cars and early morning trains reminded all that the evening was growing old; when hearty good-byes and mutual congratulations on the success of the first annual gathering of the alumni brought the meeting to a close.

STATE MEDICINE

GENERAL HYGIENE.

Dangers of Pork as an Article of Food.

BY I. C. MINOR, M.D., FORMERLY MEDICAL HEALTH OFFICER OF CINCINNATI.

In an extended article on this subject, the writer says on the sanitary aspect of the question:—

Few writers in America have studied the question of diseases communicated by pork aside from the single cause of trichinosis. Dr. G. P. Bissell, in a paper published in Philadelphia in 1817, claimed that enlargement of the glands in the hog is not more frequent than in the cow, and endeavored to prove that scrofula prevails where the swine is unknown.

In 1838, Dr. W. Pepper, of the same city, published a fatal case of pork poisoning, accompanied by severe inflammation of the stomach and intestines, with an autopsy and remarks. Dr. Pepper states that cholera morbus is induced by such food.

In 1865, Dr. Walter Dupuy, of Carrollton, Illinois, reported a fatal case of pork poisoning.

In 1865, a certain Wm. McAdoo, of Brookville, Pennsylvania, published one of the most curious pamphlets ever issued in regard to the pork question. This little work takes the theological side of the argument, and is full of originality, and not without merit. It was this same McAdoo who was called a Jew by a lady on account of his strong prejudice against the use of pork and who wittily retorted, "If you want to find the word Jew look after Solomon's day. He speaks of the hog but not much to his honor. (See Proverbs, chap. 11, verse 22), 'as a jewel in a swine's ear, so is a fair woman without discretion. Both look bad, but far better let the swine have the jewel of gold than the fair woman be without discretion.'" McAdoo also gives a short history of the Jews of Syria who were so cruelly murdered by the Christians because they would not eat pork; this was during the reign of the tyrant Antiochus. To McAdoo the swine is as typical of the devil as is the serpent, the latter is always relished by hogs.

It may not be generally known that a sect of Baptists, of the Seventh Day order, who number some thousands of members in the United States, Great Britain, and Australia, issued pamphlets in opposition to pork eating.

Says this pamphlet, or Health Tract: "So numerous have been the cases of sudden death occurring during the past winter, the immediate cause of which was unmistakably traceable to the eating of pork, that the most observing people are beginning to entertain many very serious doubts as to the propriety of using as an article of diet that which is liable to produce direful consequences. The various forms of pork are largely used in America. In the case of no other animal is so large a portion of the carcass used as food. Yet this beast is not only unfit to be eaten, but is the prime cause of many loathsome diseases." The author then goes into such a realistic description of the filthy habits of the animals as to nauseate the healthiest stomach. Under the heading of "A dead hog examined" comes the startling inquiry, what is lard?:

"Just under the foul and putrid skin we find a mass of fat from two to six inches in thickness, covering a large portion of the body. What is this? Lard, says one, animal oil; animal oil, truly, and we will add as synonyms, scrofula, torpid liver, erysipelas, etc., etc. So gross are the habits of the animal, so great has been the foulness of its body, the excreting organs—its liver, lungs, kidneys, skin—have been entirely unable to carry away all the impurities, which the animal has been a lifetime accumulating. Delectable article— a slice of fat pork; concentrated, consolidated filth."

No person with a delicate stomach will ever con-

sume hog lard after reading this Battle Creek Seventh-Day Baptist pamphlet. In Great Britain, as in the United States, the sanitary side of the pork question has not been extensively studied. In Edinburg, in 1836, Dr. J. McDivitt, in a letter to Professor Christison, shows how, in Germany, sausage and brawn produce deleterious effects, and that such effects from sausage meat were due to the development of fatty acids therein. Says McDivitt: "Fresh pork, especially to those who are not accustomed to its use, is apt to produce diarrhœa and griping pains in the intestinal canal." The writer then gives cases of colic, diarrhœa, peritoneal and abdominal affections resembling peritonitis, due to the use of fresh pork, either boiled or roasted, and that such complaints appear to be due to the fat or lard of the pork. Hog lard produces such effects the world over.

In Cork, in 1857, Dr. Fleming of Queen's College Hospital, published a very readable paper on the "Merits of the pig and the wholesomeness as food for man of measly pork." This paper was called out by the provision dealers of Cork, who represented the pork side of the question. The doctor claims that the cause of tape-worm being so prevalent in Ireland is due to the fact that "Pat keeps the pig in his cabin as a dung scavenger."

Dr. Fleming reports six cases of tape-worm in Irishmen of his acquaintance, produced from eating raw fresh pork, but does not appear to think that measly pork produces effects if well cooked. Dr. Fleming rather imposes on our credulity when he asserts: "I am informed that in Cincinnati, United States, the largest pork market in the world, that measly pork is unknown." Inasmuch as the writer has known of several hundred pounds of measly pork to be seized in Cincinnati in a single day, the Hibernian physician's statement may be taken in the sense of a "go away from home to hear the news."

Dr. E. Mackey, of Hampton, England, published in 1873, the cases of sixteen persons attacked with vomiting, purging, burning in the throat, and inflammation of the eyes, from eating pork hams. This pork was of English origin, and apparently healthy; killed on Wednesday, cooked on Thursday, boiled on Friday, eaten on Saturday. It would seem from this statement that British hog fat is about as poisonous as Scotch lard of animal origin. Acids fats, as in the case of sausage poisoning mentioned by Christison, probably caused this semi-epidemic outbreak.

How many cases of cholera morbus are induced by diseased hog flesh; how many stomachs are ruined with dyspepsia induced by hog lard: remarks an American writer on this subject.

In the *Southern Practitioner* of last month appears an able editorial entitled "A Problem for Sanitarians and Humanitarians." It is a melancholy picture of the condition of the colored people of the South, an inoffensive and good tempered race, who have suffered for years since the war, victims at the hand of the provision dealer, notably the makers of barreled meats, especially spoiled recured measly pork. The writer states: "The food supply of the negro is far different now to what it was formerly; while, in a few instances, among the more provident, thrifty, and energetic, it may be more varied and of a more appetizing character, as a class the negroes receive a far different food supply, they being the largest consumers of decayed and decaying animal and vegetable food in all the large cities of the South. It is only the fecundity of the negro race that prevents its extermination. From the last *Bulletin of the Tennessee State Board of Health* we give the following table of the death-rate in the principal cities and towns of the State. A similar state of affairs exists in others cities and towns of the South:

DEATH RATE PER 1,000 FOR THE YEAR ENDING DECEMBER 31, 1887.

	White.	Colored.
Nashville	12.83	23.93
Memphis	16.73	25.57
Chattanooga	14.33	33.69
Knoxville	15.94	31.80
Columbia	13.80	18.82
Clarksville	16.20	32.33

For the careful study of medical men in the South we commend the last two National Censuses on Vital Statistics. Under the rather ambiguous heading of "Worms," a large mortality is reported in the South. The explanation is simple: the South eats the refuse measly pork of the country. There is no system of meat inspection, such as is frequently practiced in large northern cities. The connecting link between measly pork and the tape-worm is only too apparent. The South, too, buys a low grade article of so-called hog lard, whence this article is derived only the Almighty, in His

infinite knowledge, knows. A few weeks since, in a large western city, a fertilizing establishment, on a river bank, was destroyed by fire, and the city's papers announced that the fire soon extended to the lard room. Now, the connection between a stink factory rendering animal oils from diseased horses, cows, dogs, cats, rats and sheep, and smothered hogs, measly pork, and cholera-wasted swine with prime leaf lard, is only too apparent.

There are honorable men in all businesses, and the pork trade forms no exception to the rule. Many pork packers sell what they deem to be sound fresh meat, but such men do not use the microscope in order to find the cysticercus or the more deadly trichina; they are the innocent murderers of their fellow-citizens, they perpetrate crime unconsciously, the victims of a moral hypnotism. The pork packer has killed more people than all the great generals of history combined. Where one man in a modern army was slain by the bullet four died at the hands of the meat contractor, from poisonous pork and filthy hog fat. See the "Medical and Surgical History of the War of the Rebellion," and count the innumerable thousands of victims, sick and dead, from intestinal disorders.

Alcohol is considered a poison in many parts of the country and a prohibition wave has swept over the South, yet the mischief caused by alcohol is discounted ten times by pork lard, that is the physical mischief. Most stomachs can tolerate an occasional dose of alcohol in its various admixtures; no stomach can long be tolerant of pork in any form and not be a sufferer. Why is dyspepsia so common in the South? The medical distribution of dyspepsia in the United States covers the same lines occupied by the consumers of pork. It would be well that national and local legislation be applied not only to alcohol, but to the so-called pork industry. Every State should be provided with honest and conscientious meat inspectors, and these appointments should not be political. The failure of the oleomargarine inspection is due to the incompetency of political appointees—and in alluding to oleomargarine we class it along with other manufactured animal fats. Perfection in oleaginous products is only attained by using the vegetable oils, which are free from diseases and contaminating taint. When the South discontinues the use of pork and hog lard and consumes only its pure cotton-seed oil for culinary purposes the death-rate among whites and blacks will be equalized.

How many negroes die in the South annually from trichina, an exceedingly common form of worm engendered in pork? When this terrible creature enters the alimentary canal of the human being it causes violent symptoms without much immediate danger; but permit it to enter the muscular system and what horrible effects follow—the victim is literally eaten alive by worms. It is only the high temperature of modern cookery that destroys these disease propagating forms of animal life in pork and its products. If the negro will eat bacon and ham fat he should be obliged to subject it to a high temperature.

The recent startling and disgusting revelations of the pork packers before a Congressional committee at Washington throw a flood of light on the question of hog lard as an article of diet—few Americans will desire any extra prime or pure leaf in their kitchens hereafter.

Moses made no mistake when he wrote—and we repeat the truthful sanitary axiom:

"And the swine, though he divide the hoof and be cloven-footed, yet he cheweth not the cud; he is unclean to you."

"Of their flesh shall ye not eat, and their carcass shall ye not touch; they are unclean to you."

[The writer of this diatribe, living in a city celebrated as the home of the pork-packing industry, must have been thoroughly in earnest and convinced of the truthfulness of his statements before bringing upon himself the vengeance of the pork king.—ED.]

MUNICIPAL HYGIENE.

City Filth and Garbage Destructors.

This naturally falls into four sub-divisions, street sweepings, night soil, dead animals, and garbage. Within the last few years a new method of disposing of garbage has been practically tested. It is the method of destroying it by furnaces, specially constructed for that purpose. When rightly constructed they have done their work satisfactorily and generally at considerably less expense than had hitherto been incurred in disposing of garbage obtained. In England this method has proved a success. In America the evolution of these furnaces has proceeded steadily. It was first attempted at Governor's Island, New York harbor, followed by Wheeling, Virginia. Des Moines, Iowa, has built an Engle furnace and Montreal has closely

followed in the Mann furnace with satisfactory results. At Pittsburg, a Rider furnace has been erected, while at Chicago a Mann furnace is being completed. Everywhere, indeed, the necessity for this work is becoming more apparent. In a recently published report of the Local Government Board, Great Britain, is given in detail the construction of the best furnaces there. At Glasgow the system has been developed in all its details; at Birmingham the utilization of the dust-bin refuse as fuel for the reduction to poudrette of the contents of middens, has been most successful and economical in its results, while the Burnley bee-hive cremator has steadily grown in popular favor. In Ontario these systems have already been introduced. At Hamilton a somewhat crude cremator for dead animals has for two years been in operation, and Toronto has with some dubiety been considering the various systems. With so many successful experiments elsewhere we trust that energy will be exhibited in this direction, and that many of the larger towns and cities will, ere long, be consuming their refuse with advantage to the public health and economy to the municipalities.

Waterworks and Sewerage Systems.

Cornwall has under contemplation the construction of a system of sewerage devised by Mr. Willis Chipman, C.E., of Brockville. He adopts the principle of separate sewers as the most desirable for the town, although in deference to the wishes of the ratepayers of one street, he advises a larger pipe for carrying off storm water. Automatic flushing tanks are recommended, situated at the head of each, for preventing accumulation should the ordinary flow prove insufficient for cleansing. With reference to the plumbing he says: "Unless these works are done in accordance with modern methods, the benefits to be derived from sewers are more than doubtful. The gas from a self-cleansing sewer is not dangerous to health and is inoffensive if diluted with air even in small quantities. Any sewage entering the pipe will be discharged into the St. Lawrence within eighty minutes. It will then be seen that all sewage of the town will be discharged before the commencement of putrefaction."

He adopts the Waring idea that with such sewers no traps be placed on the house drain, but that it be unobstructed from its junction with the street sewer to its opening above the roof of the building, serving thus as a main ventilator for the whole house system. Speaking of the popular belief that a four-inch pipe is not large enough for large buildings Mr. Chipman says: "when in Schenectady, N.Y., last year examining their sewer system, then in operation three years, I was shown what is probably the largest building in America drained by a four inch pipe. This building is 50 feet wide by 100 feet long, supplied with 23 water closets, the roof of the building being surrounded with a parapet from two to six feet high. All the sewage from this building and all the roof water was carried through a four inch pipe to the street sewer. Even with the heaviest showers it has never been known to run full. We congratulate Cornwall on the likelihood of having a system which will do it credit.

Peterborough has under contemplation a system of sewerage, and has issued a circular asking for competitors in making plans for a complete system of sewerage; a prize to be awarded to him who has satisfied the demands of impartially selected examiners.

COLLEGE CLOSING

COLLEGE CLOSINGS AND CONFERMENT OF DEGREES.

The annual closing of the various medical colleges and schools has taken place, and there will be found below complete lists of the graduates. Of those who have taken degrees, a very considerable number presented for examination before the Royal College of Physicians and Surgeons of Ontario, while the following obtained a license to practice:—

LICENTIATES.—E. C. Arthur, Brighton; A. E. Ardagh, Barrie; C. N. Anderson, Comber; L. Auld, Toronto; G. H. Bowlby, Berlin; G. Bell, Owen Sound; E. R. Bishop, Brantford; D. Bechard, Stoney Lake; W. J. Bradley, Ottawa; F. T. Bibby, Brighton; W. C. Barber, Toronto; S. T. Bell, Alliston; L. F. Cline, Springfield; D. M. Campbell, St. Thomas; Miss S. Carson, Strathroy; W. P. Chamberlain, Morrisburg; S. Cummings, Hamilton; J. C. Connell, Kingston; Frank P.

Cowan, Toronto; Miss Agnes Craine, C. P. Conroy, Martintown; W. J. Campeau, Amherstburg; D. W. Campbell, Port Huron; W. H. Clutton, Dunlop; Miss A. Dickson, Kingston; W. H. Downing, Kingston; J. M. Eaton, Lakeview; Elizabeth Embury, Napanee; G. A. Fere, Toronto; J. H. C. F. Fisher, Bailieboro'; A. J. Fisher, Wiarton; C. H. Francey, Gormley; J. G. Ferguson, Cookstown; T. Ferguson, Toronto; J. C. C. Grassett, Simcoe; N. D. Gunne, Seaforth; A. J. Hunter, Rochester; A. N. Hotson, Innerkip; J. F. Hart, Prescott; W. H. Harris, Canton; C. W. Haentschell, Pembroke; E. H. Harsey, Ottawa; C. B. H. Harvey, St. Thomas; L. J. Hyttenrauch, London; W. H. Jeffs, Hoards; D. Jamieson, Kars; C. J. W. Karn, Woodstock; D. A. Kidd, Beaverton; J. H. Kennedy, Lindsay; C. B. Langford, Kent Bridge; B. Lammiman, Solina; T. H. Little, Owen Sound; Miss A. Lawyer, Morrisburg; A. Myers, Barrie; W. H. Merritt, St. Catharines; D. C. Meyers, Toronto; C. N. Mallory, Escutt; J. H. O. Marling, Toronto; P. MacNaughton, Norwood; A. B. McCallum, Toronto; R. D. Moffatt. West Winchester; C. Morrow, Russell; A. J. Macdonnell, Morrisburg; A. W. McCordick, North Gower; J. B. H. McClinton, Black Bank; P. McLaughlin, Dundela; Miss M. McKay, Stellarton, N.S.; E. McGraith, Campbellford; Miss A. McLaughlin, Toronto; M. A. McFarlane, Arnprior; J. A. McDonald, Kintell; L. G. McKibbon, Toronto; J. McGillawee, Shakespeare; D. McLennon, Renfrew; D. R. McMartin, Martintown; J. G. McCarthy, Sorel, Que.; D. D. McDonald, North Lancaster; John A. Neff, Springfield; T. O'Neil, Belleville; J. H. Palling, Allandale; J. C. Patton, Toronto; Mrs. A. L. Pickering, Toronto; John Proudfoot, London; P. C. Park, Durham; E. H. Robinson, Hamilton; E. Heavly, Port Robinson; M. Steele, Avonbank; W. H. Smith, Toronto; E. Sisley, Toronto; J. A. Scott, McIntyre; A. W. Stinson, Goodrington; D. J. Sinclair. Ann Arbor, Mich.; R. B. Struthers, Montreal; O. Taylor, Princeton; P. W. Thompson, Toronto; F. G. Thompson, Queensboro'; A. F. Tuffard, Aylmer; H. B. Thomson, Barrie; R. E. Towle, Elmtore; J. P. Vrooman, Yarker; J. S. Wardlaw, Galt; T. P. Weir, Toronto; G. R. Watson, Woodstock; R. E. Walker, Orillia; A. W. Whitney, Morrisburg.

In last month's MEDICAL SCIENCE were inserted the class lists of Trinity, and we notice that some fifty-three gentlemen passed their final examination. In the following list is found those (42 in all) who graduated at the Royal College, Kingston, affiliated with Queen's University:—

DOCTORS OF MEDICINE AND MASTERS OF SURGERY.—T. C. Baker, Wolfe Island; W. P. Chamberlain, Morrisburg; J. C. Connell, M. A., Dundas; W. H. Cooke, North Gower; Miss A. G. Crane, Smith's Falls; W. H. Downing, Kingston; Miss Elizabeth Embury, Napanee; J. B. Fraser, Brock- A. R. Guillis, Rowena; E. H. Horsey, Ottawa; D. Jamieson, Kars; T. J. Jamieson, Kars; F. H. Koyle, Brockville; Miss Annie Lover, Morrisburg; J. S. Livingston, Belleville; C. O. Mabee, Odessa; C. Mallory, Escott; W. J. Maxwell, Brockville; E. S. Mitchell, Montreal; S. H. McCammon, Kingston; T. S. McGillivray, Kingston; E. McGrath, Campbellford; Miss Nettie Ogilvie; Kingston, Jamaica; T. O'Neill, Belleville; W. F. Pratt, Ottawa; Wilton Pratt, Toledo; J. W. Robertson, Milhaven; R. P. Robinson, New Boyne; P. J. Scott, Southampton; D. McK. Smellie, Chesley; A. D. Walker, Belleville; A. W. Whitney, Iroquois; T. A. Wright, Westmeath; Rev. James F. Smith, Latour; Francis J. Bateman, Wm. E. Harding, Kenneth Henderson, Chas. James, Frederich H. Kalbfleisch, Thomas P. McCullough, Hiram B. Thompson, W. R. Wake, James S. Wardlaw. The last-named nine seek graduation here, but without giving their addresses.

Succeeding these is the list of graduates of the Western University, of London, some eight in all:

MEDICAL GRADUATES.—J. Hotson, J. T. McLachlan, H. T. H. Williams, J. D. Kennedy, L. J. A. Hyttenrauch, J. Proudfoot, T. A. Patrick, A. McKellar. The following honors were also awarded:—Gold medal, J. M. Hotson; silver medal, J. Y. McLachlin; third year scholarship, R. H. Horner; second year scholarship, A. L. Reed; first year scholarship, P. J. Kennedy.

McGill College, of Montreal, had its quota up for examination before the Council, while Toronto University Medical Faculty, have, at this, their first convocation, added to their list of graduates in Medicine, some thirty M.B.s. There are also those M.B.s who took the higher M.D. degree either by examination or by right through the expiry of three years since their graduation, whose names are found in the list below:—

DEGREE OF M.B.—W. C. Barber, George Bell,

F. T. Bibby, W. H. Clutton. S. Cummings, F. J. Dawson, G. A. Fere, J. G. Ferguson, T. A. Ferguson, J. Galloway, J. Grant, W. Hamilton, T. A. Hardie, G. F. Jones, F. W. Kitchen, C. B. Langford, T. H. Little, J. T. Manes, J. McGillawee, Anthony Ochs, J. C. Patton, J. A. Scott. E. Sisley, W. H. Smith, A. W. Stinson, F. W. Thompson, R. E. Towle, T. P. Weir, J. W. Willmott, J. D. Willmott.

DEGREE OF M.D.—M. H. Aikins. C. H. Britton, P. H. Bryce, J. H. Burns, W. MCconnell, W. H. Duck, J. Ferguson, J. G. Head, D. S. Hoig, P. G. Meldrum, H. T. Machell, A. A. Macdonald, G. B. McDonagh, L. McFarlane, A. F. McKenzie, C. McLellan, J. B. Newman, G. A. Pettigrew, S. C. Pollard, E. Prouse, J. W. Bay, W. T. Robson, J. F. W. Ross, A. Scott, G. M. Shaw, S. B. Smale, A. Taylor, R. J. Trimble, J. E. White, A. H. Wright.

The profession generally have, as we have had occasion to remark before, been thinking that, as, the travelled young man in the play of "Guvnor," was accustomed to say as his cicerone told him of some additional natural wonder, *e.g.*, the Niagara Falls, "This here thing is being done to death, you know." The Council is to be commended for the stiff stand it has taken, in an endeavor to elevate the standard of licentiates. We trust that they will soon find it expedient to take the next great step, which in a very admirable address, recently delivered by Rev. Dr. Kellogg, Toronto, has been taken for a high standard of education for the ministry, viz.: the requisite of a high literary and scientific training before the special study of Medicine is taken up.

GENERAL NOTES.

Subscriptions to the Dr. Leslie Fund.

The response to the request from the medical practitioners of Hamilton, supported by a resolution of the Toronto Medical Society, for funds wherewith to defray the legal expenses imposed upon Dr. Leslie who successfully defended the suit brought against him, has been fair, but as will be seen from the subjoined list, there ought to be a further and more general subscribing. Let the members of the profession, coming to the Ontario Medical Association, hand in their subscriptions to one of the following: Dr. Graham, Dr. Nevitt, Dr. Bryce, or Dr. J. Davidson.

Toronto: Drs. Reeve, Temple, Cameron, Graham, $10 each; Wagner, Thorburn, Nevitt, Strathy, Bryce, Burnham, W. B. Geikie, A. H. Wright, A. A. McDonald, $5 each; Atherton, Toronto, $4; Riordan, $2; Hamilton, $2. Hamilton: H. T. Ridley, Geo. L. Mackelcan, John A. Mullin, Wm. Geddes Stark, James White, Herbert S. Griffin. J. W. Rosebrugh, Thos. Millar, William Philps, E. H. Gaviller, J. H. Wilson, G. E. Husband, E. H. Dillabough, $20 each; A. Woolverton, G. M. Shaw, A. C. Reid, J. Lafferty, R. N. Wallace, G. S. Bingham, E. Verum, A. E. Mallock, James Russell, Drs. Anderson and Bates, $10 each; T. W. Burgess, T. W. Reynolds, J. Ryall, L. W. Cockburn, F. G. Johnston, Sarnia, D. G. Storms, T. W. McConnachee, E. P. Hillyer, T. W. Biggar, and James Anderson, $5 each. Powers, Port Hope, $5; Henderson, Kingston, $5.

A trial of Maignen's water "filtre rapide" convinces us that it supersedes any household filter that we have met with. A chemical test showed that oxidation of organic matter had actually taken place by passing the water through the filter.

The Dr. Marshall Hall prize awarded every fifth year for original researches on the nervous system, has been awarded a third time. The first time it was to Dr. Hughlings Jackson, the second to Dr. Ferrier, and this year it has been awarded to Dr. Walter H. Gaskell, F. R. S., Lecturer on Physiology, Cambridge.

Dr. J. D. Macdonald, Hamilton, a member of the Provincial Board of Health, has sailed to spend several months in Europe. He will attend the Glasgow meeting of the British Medical Association, as also the Foreign Mission Committee of the Pan-Presbyterian Council.

Matthew Arnold was told twenty-five years ago, by Sir Andrew Clark, that he had valvular disease of the heart, but advised, that with care, it would not interfere with his career. He worked hard and lived carefully; but he died from what is a remarkably family tendency.

The following gentlemen have been by Order in Council, dated May 22nd, re-appointed members of the Provincial Board of Health:—C. W. Covernton, M.D., Toronto; J. J. Cassidy, M.D., Toronto; H. P. Yeomans, BA., M.D., Mount Forest.