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STATE MEDICINE.

EXTRACTS FROM SPEECHES IN THE SENATE ON SANITARY LEGISLATION, JANUARY 25TH, 1881—ADULTERANTS IN FOODS —A HARD HIT AT THE PULLMAN CARS.

In the March number of the JOURNAL we gave the speech of Hon. Dr. Brouse, except the first following paragraph, which was inadvertently omitted. The occasion was that in which the hon. gentleman moved that there be laid before the Senate copies of all resolutions from medical conventions asking for health legislation.

Before concluding, Mr Brouse said: I think, therefore, we have a right to expect that something will be done by the present Government. I am not, hon. gentlemen, wedded to politics to such an extent that I am not prepared to sink everything else for this question, that soars higher than all others together, that of how to save human life. What, then, should be the special function of the department of health? It should be, first, the organization and management of methods of collecting vital statistics; second, the directing of inquiries into the causes of prevailing diseases and epidemics; third, the investigation of permanent sources of sickness in localities, cities and towns; fourth, co-operation with local boards in the abatement of nuisances, and in the improvement of local conditions affecting public health. I may add that, under the last function, this department would be prepared to take cognizance of the important matter of the adulteration of food. The adulteration of food in our country is assuming gigantic proportions. The usual adulterations of food and drink are divided into three classes: dangerous adulterations, deleterious adulterations and fraudulent adulterations. Hon. gentlemen would scarcely credit, unless an analysis was made, the extent to which ourselves and our families are consuming deleterious food day by day. We find lead in canned vegetables and meat; corrosive sublimate in the rind of cheese; poisonous colors (such as arsenite of copper and chromate of lead) in candy and confectionery; caustic lime in lard; analine colors in fruit jellies, preserves, sausages and wine; salts of tin in sugar; *coculus indicus* and tobacco in beer and ale; salts of copper in pickles; sulphuric acid in vinegar; alum in bread and baking powder; oxide of iron in cocoa and chocolate; red lead in cayenne pepper; spirits of turpentine in gin; chromate of lead in mustard; red ferruginous earths in annato; red lead in currie powder; Prussian blue, black lead and salts of copper, in tea, &c. Hon. gentlemen would be astonished to see the fraud that is carried on in

this respect, and these frauds should be looked after by some persons or department responsible for the health of the people. There is also another source of injury to our country which should come under the operation of this department, and that is the practice of sending undeveloped children into manufactories for long hours of labor, and thus destroying valuable lives. There is also the question of sending children to school at too early an age. All these matters should come under the control of a department which should hold itself responsible for the health of the people. I have probably detained the House longer than I should have done, but I am not without hope that something may be done in this matter of public health legislation.

Hon. Dr. Paquet, in French, said—I have seconded with the greatest pleasure the motion of my hon. friend. You have all appreciated, no doubt, as I have, the admirable manner in which he has discharged his duty, and rendered mine comparatively easy, for which I thank him doubly. My hon. friend has perfectly succeeded, I hope, in convincing this hon. House of the necessity of sanitary legislation—that it is necessary there should be an organization, of which Ottawa should be the head, and of which the local legislatures throughout the Dominion should be important members. Consult the history of all civilized countries throughout the world, and it will be perceived that they all appreciate, more or less, the necessity of a similar organization, and it is due to their sanitary measures that we are able to point with satisfaction to the fact that the annual longevity of the human race, which was in 1880 but 28 years, is at present 34 years. Should we be indifferent to a question of such magnitude, and the only country not to recognize the importance of the services which could be rendered to the public by such legislation? No, we cannot ignore or misunderstand our dearest interests in this direction. . . . . Some may raise the question of expense. Well, for my part, I say it would be almost nothing, and there would be no necessity to bleed the public treasury. Have we not already a Department of Agriculture and Statistics; a staff organized which, with a very slight increase, would be able to fill perfectly the blank of which we complain? As for the rest, the expenses would be nothing in comparison with the results. Amongst the benefits which we would secure by such legislation would be improved quarantine, which is much needed; the rendering more healthy of infected centres, the suppression of epidemics, the perfect knowledge of their progress, knowledge of the medical constitution of the different parts of the Dominion, its medical geography, the registration of vital statistics, etc. For the present moment, I would wish that the entire Senate were composed of doctors, and our object would be gained; but I can count as safely upon the high intelligence of its members, belonging, as they do, to all professions and classes of society, who will not desert us in this important matter, and will aid us to achieve success. Let us remember, hon. gentlemen, that we have in our midst contagious zymotic diseases almost constantly, and that the means which we propose to adopt is the only way to

eradicate them. I do not propose to rest my case upon quotations and figures. . . . . I wil content myself with adding that we should not remain behind other legislative bodies throughout the entire world; that all the medical authorities demand the adoption of sanitary laws, and that, in September last, to mention but one fact, the great Medical Convention held here, in Ottawa itself, insisted at great length, and entered upon the minutes of its proceedings, a petition that the Federal Parliament would take such steps as were within its power to establish for the Dominion a central bureau of public health and vital statistics. I unite with them in expressing my most ardent desire that this should be done.

Hon. Dr. Almon said, My professional brother from Prescott has, in his able way, addressed you on this important subject, and covered all the ground. He has left very little for me to say. Much might be done in the way of sanitary legislation. In my native city of Halifax, I remember well when typhus fever was prevalent; and why was it so? The city lots had a frontage of thirty feet and a depth of sixty feet. The houses occupied the full frontage of the lots and extended back about forty feet from the street, leaving a yard twenty by thirty feet, in which could be found a well of drinking water, other buildings necessary for the house and a pig-stye. What was the result? The water that the people drank was contaminated with the sewerage and other ejecta of the house and the soakage from the pig-stye, and typhus fever prevailed. I think almost everyone in Halifax of my acquaintance, when I was a young man, had had typhus fever, and very many were carried away by that disease. But eventually the styes were done away with, and pure water was brought into the city from the lakes, and now the disease has almost disappeared. Malignant diphtheria is a disease which appals every medical man. He feels when it enters a house (I regret to say) that what he can do is often of no avail. What is the cause of it? Invariably I find where it appears that there is something wrong with the drain—there is a leak most commonly in the kitchen sink drain, and a dark mud can be found composed of decomposed vegetation and animal matters from which the disease originates. Under proper supervision that would be prevented. Take a thing which you all know something about, and which certainly, if there was a sanitary commission, or board of health, would be prevented—the condition of Pullman cars. I came up in one from Halifax to Quebec the other day, and paid $5 for the accommodation. What did I find when I entered the car? A thermometer in the car would have stood at 80° or 90°. I appealed to the conductor of the car to lower the temperature, but he said, "It is not too hot; I fink it cool." I appealed to him to open one of the ventilators. He said that he could not do that; there would be a draught on the bald head of an old gentleman who sat under it. I asked how the thermometer stood. He replied there was no thermometer. Then I asked him for a drink of cold water. He took a tumbler that the passengers cleaned their teeth in, and brought me a drink out of the cistern that was within

three feet of the furnace with which this child Shadrach heated the car. I tried to drink it, but found it impossible. I said, "Why don't you put ice in it? He said, "Ice can't be got, although the mercury was below zero, and the snow covered the ground. I asked him to get me a drink from the cistern at the front dressing-room. He said, "I can't get it; ladies there." This was the experience by day. At night you are put into a berth about three times the size of a decent coffin. It is six feet long and about three feet high, the upper berth being let down. You call for the intelligent darkey who assists the conductor, and ask, "Can't that be put up?" He replies, "No; we are not allowed to do that," This is to get another $5 out of you. The poorest beggar in the hospital at Halifax is allowed a certain number of cubic feet of space; but in the Pullman car you are not allowed as many cubic inches. The curtains are closed about you, and thus you are tortured through the night. If those who are connected with the Pullman cars are not made to answer for it in this world, by some commission such as my hon. friend speaks of, they will answer for it in the next. Even in the black hole of Calcutta, such torture was not inflicted upon the prisoners. In the Pullman the upper berth is let down on you in order that you may inhale your own carbonic acid gas. In the night the darkey, with his kerosene lamp, the effluvia of which is strongly suggestive of tomcats, walks up and down the car in front of you. How can you sleep there? I am not a delicate man, but I must confess, after my journey from Halifax, I was laid up for two days from the effects of this torture on the Pullman. Imagine the quality of the air you breathe when you have in the same car with you persons just recovered from small-pox or scarlet fever; how diseases must be spread in that way, and how many deaths must result from these Pullman cars! . . . . You will not prevent these practices until a bureau of health is established.

CONTAGOUS DISEASES AS THEY RELATE TO MEN AND ANIMALS.

READ BEFORE THE TORONTO MEDICAL SOCIETY, BY EDWARD PLAYTER M.D., MARCH, 24th, 1881.

My attention was drawn not long ago to a case of disease of a very serious character in a man, contracted from a horse which it appears had the epizootic disease. I suspected at first that the case might have been one of acute glanders. It occurred near Virgil, in the county of Lincoln, and the subject of it was one G. B. W. My attention was first drawn to the case by Dr. H. B. Baker, Secretary of the Michigan State Board of Health, who had noticed a reference to it in a Detroit paper, taken I think from the St. Catharines *Journal*. I wrote to the post master at Virgil, who kindly sent me the name of the patient and of the physician who had attended the case. I have not been able to obtain from the physician the facts relative to the case, but from the subject of it himself I received the following satisfactory particulars: The horse, 8 years old, had had no symptoms of glanders; was very bad with the common epizootic for about ten days; at the time of writing, March 18th, 1881, was quite well. G. B. W. had a "sore" on

his right hand, not larger than a ten cent piece; this was in the latter part of October; he was cleaning the horses head and nose and started the sore to bleeding; he used the cloth with which he had been cleaning the horse to stop the bleeding. The following day the "sore commenced to fester and swell;" "he had cold chills, and could not get warm." The third day had aching pains from wrist to shoulder; by the fifth day the chills left, and he commenced to burn, and to sweat at night. The tenth day he had a sharp burning pain in the arm and shoulder; swelling had extended up the arm and down the side, and the swollen parts were much inflamed; he then for the first time called in a physician. Two days later, the twelfth day, he had a burning feeling all over the body; no appetite; unquenchable thirst; a "gathering" (abscess) commenced to form on the right side; swelling extended all over the body; arm continued aching, and he lost the use of it for a week; legs stiff and cold; had a sickish feeling from the middle of November to the end of it; was light headed and dizzy; mind not clear; "brain burning;" ringing in ears; had to sit propped in a chair most of the time. He had the abscess or "gathering" lanced, but he does not say on what day, and felt easier. The quantity discharged by the abscess was "astonishing." The discharge continued ten weeks; at first it was thick and of a greenish-yellow color, but later on it was thin and watery. He gradually recovered, and on the 18th of March writes that he had "gained wonderfully" in weight; but he could not then raise his hand to his head, and his shoulder ached.

Now it is a question whether this was a case of a specific, contagious disease (a very contagious disease as it relates to the horse) being communicated to man, with both general and local symptoms, as is usually the case in the horse, as seems very probable, or whether it was only a case of blood poisoning, from a local inflammation, accompanied with extreme irritation, in the hand.

As I have said, from what I had heard of this case I suspected glanders. It appears evident however that it was not glanders, but, as regards the horse, a case of ordinary epizootic disease. I have never heard of a case of this disease having been communicated to man, except this one, if it was such, of which I have little doubt; but when glanders is readily communicated to man from the horse, why should not the epizootic be so communicated?

Glanders in man is not a common disease; in this country thus far it is doubtless an uncommon one. It appears however to be becoming too common in some of the neighboring States. Some cases of it have been reported in Michigan, and a report on glanders has been issued there by the Secretary of the State Board of Health, Dr. Baker. Glanders in man is a very fatal disease, and is almost as terrible as hydrophobia. Professor Bollinger, in Ziemssens cyclopoedia, mentions 120 cases, of which 22 or 23 per cent. were fatal. Of 28 acute cases, only one recovered; of 7 subacute cases, 2 recovered; and of 34 chronic cases, 17 recovered. Hauff reported 70 cases, of which only 8 recovered.

It can hardly be doubted that in the city of Toronto there are cases of glandered horses, and it would be worth while for medical practitioners to bear this constantly in mind.

It is said by a veterinary surgeon of Chicago, Mr. Detmers, in a report on diseases of domestic animals, 1869, that a horse may be affected with glanders, and communicate the disease to healthy horses, and itself not show any of the three principal symptons characteristic of the disease, namely—discharge from the nose, ulcers in the nasal cavities (nostrils), and swelled glands; and he gives cases in proof of this.

The contagium is volatile, and may be communicated through the air by inhalation, as well as by actual contact. A Michigan newspaper item reads, "A Grand Rapids milkman has been detected in filling his cans with water from a horse trough. A good way to spread the glanders, with all its physical horrors and certain death."

There is another, and much more common source of danger to the too unsuspecting public, and which is therefore of more importance practically than that from glanders. I refer to phthisis or consumption in cows, fowls, and other domestic animals.

That tubercular consumption may be communicated to man from animals by means of the flesh, or of milk in the case of cows, being used as food, is now it appears to me placed beyond a doubt. The experiments, extending over many years, of Klebs, Bollinger, Fox, Sanderson and others, and their conclusions, are very convincing.

I have observed that the *Farmer's Advocate*, of Western Ontario, has referred to this subject. It says that, though there are, it is true, cases of turberculosis in Canadian cattle, they are comparatively rare. It advises that "the disease should be guarded against as much as possible." In the *National Health Bulletin*, published by the United States National Board of Health, cases are reported by a Mr. Shaw, a veterinary surgeon, that came recently under his notice in Brooklyn, N.Y. [referred to in this JOURNAL some months ago.] In one case, a cow and the owner and his wife were all rapidly sinking under advanced tuberculosis. In the other case, a family cow was afflicted with the disease, and the wife of the owner was consumptive also, and had been making free use of the milk, warm from the cow; she was persuaded to give it up, and underwent an immediate and a decided improvement.

This subject, gentlemen—the contagiousness of consumption, and its probable communicability from animals to man, more especially as it relates to the milk supply, and that too for infants and children, is one which demands the most serious consideration of the members of our profession. It is of much greater consequence than that of the ordinary adulteration of milk. Tubercles in milk is, indeed, an adulteration, if it may be so called, of the very worst and most malignant sort.

It is to be feared that this disease in milch cows is much more common in the cities in this country, where cows are usually kept in dark, dismal, foul stables during the entire winter, almost without seeing daylight, than is even suspected by the citizens, or the *Farmer's Advocate*, above referred to. It is the rule to milk these cows during the winter, while fattening them more or less, at the same time; and they are sold in early spring to the butchers, and we all I suppose help to eat and to digest their flesh..

Now as there are no effects without causes, so, where causes abound we must expect to find effects, more or less marked. Where cows are kept in conditions as above mentioned—in conditions which are known to give rise to tuberculosis, shall we not find the disease, in an incipient stage, at least, amongst such cows? Large numbers of cows kept in a like way in New York city and Brooklyn have been found badly affected with it. Furthermore, if in the cities in Canada there are tuberculous milch cows, we might naturally expect to find, were we to investigate and look for them, cases in which this disease has been communicated to the human organism by means of their milk, or, when fattened and slaughtered, by means of their flesh. Especially would we be likely to find these consequences following the use of such milk by young and delicate children, with unhygienic environments, in whom the powers of resistance to this or any other disease are low—in whom contagions of all sorts find fitting soil or food for development, growth and multiplication.

Now there is reason for believing that *many* of the contagious diseases which affect the human organism may in a more or less modified form affect different animals. If, as seems more than probable, all contagious diseases, or their symptoms, are the effects of the presence in the organism of different sorts and forms of bacteria—of living organisms, it is but reasonable to suppose that these living bacteric parasites may find a fitting place for propagation as well in the fluids of the bodies of some of the inferior animals as in those of man. And when we know for a fact that some diseases which are contagious, such as hydrophobia, glanders, some skin diseases, and, doubtless now, consumption, do affect, and similarly, both animals and men, it is natural to conclude that other contagious diseases, those which often prevail epidemically, such as scarlet-fever, measles, typhoid fever and whooping cough, may sometimes affect the lower animals. If, I say again, the specific contagions of such diseases are minute, living organisms, of the very lowest type, which will, as appears to be well established, accommodate themselves to greatly varied conditions, it seems to be a fair inference that these organisms may find a fitting soil, and take root and grow and multiply, in the bodies of some at least if not all of the domestic animals, and be by these again communicated to men. If such be the case, the fact would help to explain the origin of some cases of the diseases above mentioned which have apparently arisen *de novo*, but which, it is now very generally believed, never do arise purely in this way.

The above may seem to some only pure conjecture, but I think, gentlemen, it is a fair and reasonable inference; and it has been my desire in this brief and imperfect paper to draw more attention, and if possible some investigation, to this important subject of the communicability of the contagiums of diseases from men to animals, and *vice versa*.

Before concluding, I desire to say, in reference to typhoid or enteric fever, if faecal matter is the special soil on or in which the enteric poison or mildew takes root and flourishes, if this excreta is the great substrate which everywhere supplies this poison, especially

when in its highest or original form, as many now believe, may not this mildew poison grow and flourish on the faecal matter of some of the domestic animals whose diet is not very unlike that of man as well as on the faecal matter of man? The toxical properties of the poison might be modified by the qualities of the soil or substrate on which it grew, and when taken, in any way, into the human organism, from sources other than that of human faecal excreta, might cause obscure, modified, or bastard typhoid, which is probably not uncommon.

This low organism, like others of its class, accommodating itself to greatly varied conditions, may grow, as it really seems that it does, either *on a free substrate*, or, probably in a degenerate state, *in fluids containing nitrogen*. And does it not appear quite possible, and even probable, that in its different forms it may give rise in man, when it finds its way into his system with the water, air, or food consumed, to a variety of sets of symptoms and febrile conditions? As favoring this view I will conclude by just drawing attention, briefly, to recently published experiments in reference to hydrophobia. A boy died of this disease in a hospital in Paris, and his saliva, taken four hours after death, was found by M. Pasteur to have remarkable properties, causing what appeared to be a new disease. Two rabbits immediately inoculated with the saliva diluted died in about 36 hours. Other rabbits were inoculated with the saliva or with the blood of the first, and death ensued even more rapidly. The process was several times repeated, and with like effects. The animal became weak and paralyzed, and died of asphyxia. M. Pasteur observed in the blood of the inoculated animals a small organism, or microbe, which (by his method of artificial cultivation) he had good reason to regard as the agent of the malady. It was a very short rod, slightly contracted about the middle; a sort of aureola appeared round it, probably due to mucous substance. It was somewhat like the microbe of chicken cholera, but differed entirely in its effects. Fowls inoculated with it were not in the least affected. The new malady seemed quite distinct from rabies. Dogs inoculated with the boy's saliva died in a few days without the usual symptoms of hydrophobia.

THE SANITARY CONVENTION AT BATTLE CREEK, MICHIGAN.

A GREAT SUCCESS—OBJECTS OF THE BOARD—CONSUMPTION CONTAGIOUS—CRIMINAL ABORTION—MEDICAL NOSTRUMS.

The Sanitary Convention held last month at Battle Creek, Michigan, was a great success, and was largely attended. Local papers state that the cars brought large numbers from other parts of the States, and that the interest taken in the important work of the convention by the citizens, was evidenced by the the large and intelligent audience that assembled to witness the inauguration of the meeting.

It seems natural for the human family to shrink from a subject that suggests sickness and death, and their abandon in that direction is at times almost criminal.

Until a recent date but few steps have been taken looking towards the dissemination of health information through the medium of public conventions.

It is a pleasure to record Michigan

as being advanced in this philosophic work. The State Board of Health have been untiring in their efforts to place the State prominently in the lead in that direction and they have unquestionably succeeded.

After the mayor's address of welcome, the Rev. J. C. Jacokes delivered an address, of which the following is an extract:—Why is this State Board of Health established? . . . . Here is that wonderfully destructive disease, diphtheria, carrying off little ones by thousands. They want to find out the cause of this so as to avoid it. They cannot tell you how to cure it, that is left to your physician. But is there a possibility of stopping the reach of that terrible disease which is increasing every year? Can we discover any method which will prevent it to save the little ones? That is the great work of the State Board of Health.

Here is the scarlet fever; some people have an idea, "well the little chicks must have it and they might as well have it first as last." I never had it, I never want it. When I look into the face of a little child, I don't want to think, you must have it. We want to see how you can help it. It is the business of the State Board of Health to study these causes and point them out to the people all over this State. Let me illustrate to you. While in the city of Detroit, I had two little tracts on diphtheria. I met two gentlemen, and one of them said, "How do you do?" I replied "I am well." I said, "How do you do?" He said, "Very well; but diphtheria is up in our neighborhood and I am afraid I am going to lose my children." I put my hand in my pocket and gave him one. He said, "Thank you." I said, "take that home and let your wife read it." The other man said, "I guess they will have to have it;" so he did not take it. My friend took his paper home, read it, and his wife read it. They both studied it thoroughly and just applied the needed prevention; and that family are all alive to-day. Right side of him within fifteen feet of the house where he is, the man who said "they must have it," lost the only child he had. We want to know how to prevent, and not how to cure.

CONSUMPTION: IS IT A CONTAGIOUS DISEASE?

On this subject Dr. Cogshall, of Flint, spoke as follows: This is the most important subject engaging the attention of the medical world and the human race, owing to the fact that one-fifth of the whole number die of this great scourge. He said a few physicians from time immemorial had maintained that consumption was a contagious disease, but the theory was not generally believed until Villiman, in 1865, demonstrated by experiments on lower animals, that the disease could be communicated from animal to animal by introducing tuberculous matter under the skin.

He gave experiments of many able observers corroborating the truth of the experiments. He also related several cases under his own observation and others, when the disease had gone through families who were free from the hereditary taint, aud taken one after another, clearly demonstrating that the disease was communicated from one person to another. He gave experiments of Dr. Tapp, even on dogs, to prove that the disease could be communicated by inhaling tuberculous matter floating in the air.

He also maintains, by arguments, backed by experiments of able observers, that the disease could be, and often is, communicated by eating diseased meat and drinking milk from cows affected with consumption. He said the following propositions promulgated by Dr. Budd typified his views on this subject.

First—That tubercle is a true zymotic disease of a specific nature, in the same sense as typhoid fever, scarlet fever, typhus, syphilis, etc.

Second—That, like these diseases, tuberculosis never originates spontaneously, but is perpetuated solely by the law of continuous succession.

Third—That the tuberculous matter itself is (or includes) the specific morbific matter of the disease, and constitutes the material by which phthisis is propagated from one person to another and disseminated throughout society.

Fourth—That the deposits of this matter are therefore of the nature of an eruption, and bear the same relations to the disease, phthisis, as the yellow matter (the stools) for instance, of typhoid fever, do to that disease.

Fifth—That by the destruction of this matter on its issue from the body by means of proper chemicals or otherwise seconded by good sanitary conditions, there is reason to hope that we may eventually, and possibly at no distant day, rid ourselves of this fatal scourge.

He maintained that there ought to be sanitary regulations and sanitary inspectors to examine our meat and milk supplies in order that they may be pure and wholesome and thus prevent the communicability of the disease through this channel,

He maintained that as the disease could undoubtedly be communicated by contact; it was of the utmost importance that those suffering with the disease should be particularly careful to avoid inhaling the breath of the sick ones; should never sleep in the same bed, nor in the same room, unless the room was thoroughly ventilated. They should be in the open air as much as possible, filling their lungs to their utmost capacity with fine pure air.

He maintained that "Consumption Cures" and nostrums were not only useless but injurious; that only through stimulating the functions of nutrition, by proper diet, pure atmosphere, sufficient exercise, bathing, suitable climate, etc., could we hope to arrest the disease.

CRIMINAL ABORTION.

Dr. Cox, Chairman, read the report on this subject:—"The report detailed some of the reasons making the crime so common. In an extensive correspondence with physicians, the committee estimates that there are seventeen abortions in each one hundred pregnancies, and the committee believes that nearly as many more do not come to the knowledge of the physicians, making 34 per cent. of all cases which end in miscarriage.

The report details the injurious effect of this practice upon the health of the mother and children born after its commission.

Agitation and education were believed to be the surest way to counteract this great crime.

The committee respectively recommended the following resolution:

Resolved, That the State Board of Health be requested by this convention to correspond with muni-

cipal Boards of Health, physicians, civil authorities, and such others as it may deem proper for the purpose of obtaining information relative to criminal abortion, to publish in documents and newspapers all things relative thereto proper to be published, and that sanitarians, educators, social scientists, civil authorities, and others be requested to communicate to the Board all information in their possession relative to the same, and that the clergy and press be earnestly solicited to acquaint themselves with the subject and to educate their hearers and readers as to the prevalent causes, consequences, and moral depravity of this great curse of the nineteenth century.

MEDICINAL NOSTRUMS IN THEIR RELATIONS TO PUBLIC HEALTH.

In a paper on this subject Prof. A. B. Prescott, M.D., of Ann Arbor, said, this class of articles are not foods but are taken into the body, and because of this affect the vigor of the common wealth. They are recognized by no responsible persons nor do they receive any regulation from any authority. As they affect the health of the people, they should come under the care of the Boards of Health.

Though known as "patent medicines" only a few are really patented. Although their proprietors are often wealthy, they do not seem to be accountable for the unwarranted statements concerning the merits of their wares.

A few years ago it was estimated that eighty millions of dollars worth of nostrums were sold annually in the United States, or at the rate of two dollars for each man, woman and child in our country. All countries are in infested with them. The catalogue of a single wholesale drug house contained 1,500 kinds of nostrums.

What effect do these have on the people? Cosmetics have been found to contain corrosive sublimate, white lead, etc., and patients have been treated for lead poisoning caused by the use of face powders containing it. Hair dyes come in the same category of evil things, and cures for catarrh displayed some very queer combinations.

It was submitted that the use of nostrums did injury to the health of the people. In order to prevent people purchasing them, begin education against them in the scholars. Let the actual composition of nostrums be published wider among the people.

STUDIES ON THE NATURE OF MALARIA.

TRANSLATED FROM THE *Rivista Clinica de Bologna*, NOVEMBER, 1880, BY HAL C. WYMAN, M. D., PROFESSOR PHYSIOLOGY, DETROIT MEDICAL COLLEGE.

(*From Detroit Lancet.*)

In June, 1879, Professors Edwin Klebs and Tommasi Crudeli published the results of their studies on the nature of malaria.

In March, 1880, the latter gentleman published an account of his observations in Sicily on the nature of the *Bacillus malariae*.

Since then the following gentlemen have been elaborating the subject: Prof. Perroncito, *d'ella Scuola Veterinaria di Torino;* Prof. Ceci, *d'ella Universita di Camerino;* Prof. Cuboni, *Assistente alla Cattedra di Botanica d'ella Universita di Roma;* Prof. Marchiafava, *d'ella Universita di Roma;* Drs. Valenti, Ferraresi, Sciamana and Piccirilli, *Medici Romani.* Here are the results obtained by these new observers:

(1) In the malarial districts about

Rome the *Bacillus malariae* is found fully developed; and there is little difficulty in producing them in large numbers by artificial cultivation. They have not been found in the salubrious districts of Lombardy. (2,) This Bacillus accumulates in such quantities in the air about marshes, during the hot days of summer, that special apparatus is not necessary to collect them. It may be found in abundance in the perspiration on the hands and forehead. (3) During the acme of fever the sporules of *Bacillus malariae* have invariably been found. (*a*) In the blood of rabbits exposed to malarial infection. (*b*) In blood drawn from the veins of men attacked with malarial fever. (*c*) In the blood taken from the spleen of these patients by a process devised by Dr. Sciammana. (*d*) By cultivation, perfectly developed bacteria (*Bacillus malariæ*) have been obtained from this blood. (*e*) The same results have been obtained by cultivation of the spleens of persons dying of pernicious fever. Cultivation of the spleens of persons dying of other diseases in non-malarious districts did not reveal the presence of *Bacillus malariae.* (4) If blood taken from the veins of persons attacked with malarial fever is injected into the subcutaneous tissues of dogs, these animals will be seized with typical malarial fever. (5) In every case when the blood has been taken from the veins of fever patients during the cold stage or period of invasion, it has been found to contain *Bacillus malariæ* fully developed. During the acme of fever, on the contrary, the *Bacillus* gives place to sporules.

This circumstance is of great importance, analagous in nature to the *spisillium* which causes typhus fever. It gives us an explanation of the results obtained by Prof. Marchiafava in 1879, who examined immediately after death the blood of five persons who died from malarial fever. In three of these the blood of the heart and veins contained large numbers of fully developed *Bacillus malariæ* while in the other two cases not a single perfect *Bacillus* could be found; but there were great abundance of spores.

Now, the recent observations at Rome lead us to believe that these three first cases died during the cold stage of the fever, and that the two other cases died during the acme or hot stage.

Experiments on animals have demonstrated that the favorite seat of the malarial parasite is the spleen and marrow of bones, organs which show the most important alterations in persons who have died of malarial fever. It is probable that generations of parasites change rapidly and spread in these organs according to the idiosyncrasy of the patient, and perhaps, also, according to the nature of the marshes in which they originate. This may explain the difference observed in the duration of intromissions.

The fever probably begins the moment the parasites leave the spleen or marrow of bones and fill the blood. Possibly the cold stage is due to the irritation of the vaso-motor nerves caused by this army of invaders in the circulating system. The conditions most favorable for their development are found in the blood (elevated temperature, stores of oxygen, etc.,) and it would not be strange if their destruction was likewise accomplished there. Tissue and blood changes as displayed

in the various processes of assimilation, secretion and excretion concern the parasites as well the febrile temperature.

Prof. Tommasi Crudeli is engaged in his laboratory with still higher studies concerning the relations of *Bacillus malariæ* to malarial fevers. He hopes to show that the revolution of the fever is due to the elimination of the spores, and disappearance of the parasites from the circulatory system; and by ingeniously drawing the infected blood from the spleen, ascertain the influence of that organ upon the duration of the intermissions and remissions peculiar to malarial fevers.

THE PUBLIC HEALTH.

HOW THE GOOD WORK GOES ON.

On February 10th a deputation composed of Dr. Canniff, of Toronto, President of the Canada Medical Association, Dr. Playter, of the CANADA HEALTH JOURNAL, and Drs. Sweetland, Grant, Powell, Small, Henderson, Church, Robillard, Frevost, Whiteford, Bentley, Wright, and J. H. Wright, of Ottawa, and Drs. McInnes, Orton, and Bergin, M. P's, waited upon Sir John Macdonald and Sir Chas. Tupper, Hon. Senator Browse was to have been present, but was unavoidably detained at Prescott. The deputation was introduced by Dr. Canniff, who explained the nature of the resolutions recently adopted by the Medical Association urging the establishment of a bureau of sanitary statistics, and the adoption of certain legislation upon sanitary subjects. Dr. Grant spoke at considerable length in relation to the matter, pointing out how necessary it was that Canada should keep abreast of other countries in legislating upon this and other subjects, the object of which was to save the lives of the people. Dr. Orton referred to the possibility of limiting the spread of infectious diseases by proper legislation. He was followed by Drs. Playter, Bergin, and Sweetland. Sir John A. Macdonald, in reply, promised to lay the whole matter speedily before his colleagues, and he expressed the hope that they would be able to meet the views of the deputation. He felt convinced of the great importance of the question and the need of sanitary legislation. Sir Charles Tupper endorsed the Premier's utterances, and the deputation withdrew, returning thanks for the cordial reception granted them.

It appears that the Dominion Government has decided to make a commencement in public health work at an early day. We are not yet clear as to what form of work will be done, but it appears it will be something to lay a good foundation for future public sanitation—a sort of Statistical Bureau, which it is hoped will eventually develop into a Department of Health.

IN THE LOCAL LEGISLATURE (Ont.) the following resolutions were put on the notice paper, but owing to Dr. Baxter, the mover, not being well, and the absence of certain members, they were not taken up in time. Dr. Boulter was to second the resolutions,

"That in the opinion of this House the time has arrived when special attention should be given by the Legislature of this Province to the question of public health, with a

view to prevent as far as possible the loss occasioned by preventable disease.

"That in the opinion of this House the establishment of a Central Board of Health, or some other machinery, for the purpose of collecting statistics, and disseminating information on sanitary matters amongst the inhabitants of this Province, would be a valuable means of promoting this important object."

OZONIFEROUS PLANTS.

Ozone is a mysterious element (*Scientific American*) found in the atmosphere under certain conditions. It long puzzled scientific men as to its nature and composition, but it is now considered to be oxygen in an allotropic state, or the property possessed by some simple bodies, of assuming different qualities when subjected to certain modes of treatment. Its varying quantity in the atmosphere is supposed to affect the health of man. By some it is supposed to be oxygen condensed to two-thirds of its bulk. It is insoluble in water and in solutions of acid and alkalies, except in potassium iodide. It possesses very powerful bleaching and disinfecting powers, corroding cork, caoutchouc, and other organic substances, and rapidly oxidizes iron, copper, silver when moist, iodine, and dry mercury; and also has an irritating effect upon the lungs when in any large quantity in the atmosphere. It has a peculiar, somewhat metallic odor. It is produced when current of electricity is passed through dry oxygen or atmospheric air, and also by different other processes.

Many trees and plants are supposed to evolve ozone, or to aid in producing it in the air, and so by its powerful oxygenizing qualities to destroy the disease-breeding germs floating in the atmosphere. Not that all plants do so, for there are some which are reasonably credited with producing malaria. This power of evolving ozone is strongest in sunlight, and often quite feeble at night. Although ozone is a recent discovery, yet the power of certain trees and plants to prevent malaria was well known centuries ago. A species of thyme was in such high repute for this purpose as to be held sacred to Vishnu. The disciples of Empedocles, one of the Grecian philosophers, planted aromatic and balsamic herbs near their dwellings to ward off malaria. Our English ancestors considered camomile and fever-few to have a similar effect. Places in which the sweet bay tree grew plentifully were considered by the Romans as being secure against infectious diseases. The antimalarial powers of the *Eucalyptus globulus* and other species are fully proven by the effects they have produced in Algeria, Corsica, Cuba, the Cape of Good Hope, Australia, and other places, having rendered almost uninhabitable regions perfectly healthy. Malarial diseases are also rare in sections of country in which pine trees or other coniferæ are abundant. In places where certain odoriferous plants are grown in large quantities, for the purpose of obtaining their essential oils, all such diseases are rare. The essential oils obtained from such plants also have similar effects when exposed to sunlight; and in a lesser degree such perfumes as eau-de-cologne, essence of lavender,

extract of millefleurs, etc., all attributed to their power of producing ozone. Other plants, however, which do not produce essential oils, appear to have a similar power of preventing malarial diseases, or of rendering malarious districts healthy. In some parts of the well-known Campagna, near Rome, immense areas of thistles rendered the localities where they grew quite healthy, but upon their being destroyed, these districts became again unhealthy. In this country, in Holland, in the Mauritus, and other places, the planting and cultivation of the common sunflower has had remarkably beneficial effects in destroying malarial poison.

All odoriferous plants do not produce such effects in destroying the malarial germs in the atmosphere. There are some, such as the *Daphne mezereum*, the oleander, the wall flower, the pride of China (*Melia azedarach*), and others, which are actually deleterious when planted in great numbers. Besides the plants supposed to produce or evolve ozone, and hence called ozoniferous plants, there are others which have powerful disinfectant qualities, but whether they are ozoniferous has not yet been determined. The plants we have already noticed as such give off their emanations into the atmosphere, and the malarial germs are destroyed by the oxidizing power of the ozone burning them up. The plants of which we are about to speak have the power of disinfecting water, or destroying the organisms or gases which are deleterious to health. Whether malarial diseases are produced by infinitesimally minute organisms or by gases, is a matter of dispute, but they are most probably produced by germs which our microscopes have not yet been able to detect. This is becoming more and more the accepted theory. It is very probable that these water-purifying plants give off ozone by means of their leaves and roots, and thus destroy the germs in the water in which they grow. Very few, if any of them, produce essential oils or resins, but, as in the case of thistles and the sunflower, these do not appear to be indispensable in the formation of ozone. Among such plants are nearly all of our various pond weeds, such as float on the surface as well as those that are immersed, and some that are submerged. Many of our bog plants and some of those that grow on the borders of the stream also appear to have the same power. In India, the West Indies, and in Africa, there is a species of duckweed. *Pistia stratiotes*, which possesses this purifying power in a remarkable degree. It will, in a few days, sufficiently purify stagnant water to admit of fish living in it, but at the same time makes it unsuitable for drinking purposes, rendering it so acid as to produce intestinal fluxes.

Now that malarial diseases are so common and produce such a large amount of suffering and death, the mode or means of preventing the development of the germs which produce them should be carefully studied and investigated. If the planting of certain odoriferous plants about our houses, or the stocking of ponds, streams, and marshes with plants producing similar beneficial effects, will destroy them, it certainly ought to be tested in an intelligent way by careful experiment. That some plants will do it is certain; they

may not be desirable to have about our dwellings, but others more desirable and ornamental will no doubt be discovered when sought for. By our strict utilitarians, the study of botany and the culture of flowers are considered to be a waste of time, producing no useful results whatever; but the time is not far distant when they will be considered as highly useful pursuits. Realizing that an ounce of prevention is better than a pound of cure, our medical sanitarians are devoting much time to the study of the prevention of disease. The subject which we have thus so cursorily glanced at is one that commends itself to their attention.

HOUSE PLANTS AND CONSUMPTION

In a March number of the *Michigan Medical News* is the following on this subject: It is the popular impression, encouraged perhaps to no inconsiderable extent by professional opinion, that the presence of house plants in living, and especially in sleeping, apartments is injurious to health. But notwithstanding this opinion, the prejudice against these chaste and grateful ornaments has never been sufficiently strong to overcome the æsthetic instincts of the people. House plants are consequently not only tolerated, but cultivated to an extent which makes it desirable and necessary for the hygienist to understand to what extent, if any, they are incompatible with health.

Dr. J. M. Anders, in the Philadelphia *Medical Times*, discusses this subject quite fully, and in a manner calculated to convince the reader not only of the innocency of house plants, but of their positive value as hygienic, and even as therapeutic measures. Although three of the chief functions of plant-life are the absorption of carbonic acid, the exhalation of oxygen and the generation of ozone, experiments have conclusively shown that this absorption and exhalation are too slowly conducted to either improve or vitiate the air. There is, however, another process in plants of greater importance than either of these named; viz., that of *transpiration*, or exhalation of moisture by the leaves. The average rate of transpiration for plants having soft thin leaves, as the geranium, lantana, etc., is one and a half ounces (by weight) of watery vapor per square foot of leaf surface for twelve diurnal hours of clear weather. An indoor plant transpires more than half as much as one in the open air. It will thus appear that plants must very materially raise the proportion of aqueous vapour in the air of closed apartments, and the fact has been demonstrated by observation with the hydrometer. The importance of plants in houses heated by dry air furnaces is thus apparent. The peculiar effects of dry air on human beings are well known to the progressive practitioner. With respect to this question, Stillé observes: "A great demand is made upon the system to supply the air with moisture; the skin and pulmonary mucous membrane are dried, and a condition is induced which is expressed in irritability of the nervous system, paleness and susceptibility of the skin to cold, liability to pulmonary diseases, and, in a word, deterioration of all the faculties."

It is chiefly in diseases of a chronic nature, and particularly those of the lungs or air passages, that we should look for benefit from stock-

ing the sick room with growing plants, for it is in such cases that dry heat does the most harm. "But," says Dr. Anders, "it is in the sweeping disease, phthisis, that plants offer the best hope of success as therapeutic agents. The importance of this point demands that it should receive careful attention." Deeming it necessary that the experimental data should receive supporting evidence of an unequivocal character before the efficacy of plants in phthisis would be firmly established, Dr. Anders opened a correspondence with some prominent practitioners, besides instituting inquiries of those in the immediate range of his acquaintance. Only one of the medical gentlemen, however, whom he consulted, Dr. Hiram Corson, of Conshohocken, Pa., had anything definite to offer. He gave the history of his own family, clearly a consumption one, in which there had been many deaths from phthisis. In the case of a sister who had been pronounced a victim of tubercular consumption death was averted, and life prolonged to an old age, apparently through the influence of house plants, of which she was an enthusiastic cultivator. A number of other instances, both of phthisis and other affections, are related in which the beneficial influence of house plants seemed clear.

In order to facilitate a practical application of the data gained by experiment, Dr. Anders gives the following formula:

"Given a room twenty feet long, twelve feet wide, and ceiling twelve feet high, warmed by dry air, a dozen thrifty plants with soft, thin leaves, and a leaf surface of six square feet, each would, if well watered, and so situated as to receive the direct rays of the sun (preferably the morning sun) for at least several hours, raise the proportion of aqueous vapour to about the health standard.

This formula may serve as a guide in the use of plants for hygienic purposes; but under conditions of actual disease it will be necessary to increase the proportion of plants according to the degree of humidity sought, or as the indications of individual cases may demand.

It should be stated that to obtain the best results, both the rooms occupied during the day and the sleeping apartments should contain plants. It was for a long time the opinion of scientific interpreters generally, that plants in sleeping apartments were unwholesome, because of their giving off carbonic acid gas at night; but it has been shown by experience that it would require twenty thrifty plants to produce an amount of the gas equivalent to that exhaled by one baby sleeper; so this is no valid objection to their admission, and not to be compared with the benefit arising from their presence."

In the *Times* of the 26th ult. Dr. Ely McClellan, U. S. A., relates another case in which house plants seem to have exerted a prophylactic influence in a member of a family of a decidedly tubercular diathesis.

The evidence thus far adduced is, of course, scarcely sufficient to establish any hygienic, and much less any therapeutic virtue for house plants, but certainly the facts reported should encourage investigation, and we give them to that end.

HYGIENE OF THE SCHOOL ROOM IN ITS RELATION TO SIGHT.

At a meeting of the Société de Biologie (*Gazette Hebdomadaire,*) Dr. JAVAL, Director of the Laboratory of Ophthalmology at the Sorbonne, read an interesting paper on this subject and summarized his views in the following conclusions:—

1. It is proved that the causes of short-sightedness are habitually a prolonged application of sight during childhood combined with insufficient light.

2. In our climate illumination by diffused light never attains, even in the open air, to an injurious intensity.

3. The belief that bilateral light is injurious to the preservation of sight does not rest on any theoretical basis.

4. According to most recent statistics there are schools in which the light being bilateral, myopia is comparatively rare, and there exist others in which unilateral light is had under most favourable conditions, nevertheless myopia is as frequent as in the worst arranged schools. Experience is certainly not in favour of unilateral light.

5. Sufficient light by means of windows arranged on one side can only be obtained if the width of the room does not exceed the height of the lintels of the windows above the floor.

6. Light from behind, if it comes from above, may be usefully combined with lateral light; the light from a glazed roof is excellent.

7. Bilateral light should be preferred on all accounts. In this system, the width of the schoolroom being for the same height of windows twice as great as in the case of unilateral light, the intensity of the light in the middle of the room, which is the least benefited portion, is double that obtained by the same distance from windows where unilateral light is used. However the width of the schoolroom must, never exceed double the height of the windows.

8. Great importance must be attached to placing the school towards the east, and the axis should be directed from north-northeast, to south-southwest; a deviation of more than 40 degrees from the direction north-south should never be allowed except in exceptional climatic conditions.

9. The master should face the south.

10. Finally it is absolutely indispensable to reserve on every side of the school-room a strip of inalienable ground, of which the width should be double the height of the loftiest buildings that could be erected; allowing for the progress of civilization which has multiplied high storied buildings to an extent hitherto unknown in the country. *This last condition is the most important of all.*

PHYSICIANS AND PATIENTS.

"Can a physician be honest?" The question has been discussed, "Can there be such a thing as an honest lawyer?" I am not prepared to speak on that point now; but I sometimes doubt if there can be a strictly honest physician and he be prosperous in business. You won't let us be honest. You won't patronize or give us credit when we try to be honest. You like to be deceived and humbugged. We hear a great cry about deception and dishonesty and humbuggery, but the great mass of people like to be humbugged. Shall I prove

this to you? Every physician of experience has patients of this character. They will come with some complaint of a simple nature. The physician, after a careful examination, finds nothing requiring active medication, tells them go to bed, or something of that nature, and sends them away. Nine times out of ten such patients are dissatisfied and they go to some less honest physician who doses them thoroughly and bleeds their pocket books as well.

A few years ago I rode eight miles to see a young man who had cut his foot with an axe. He had bled profusely, even to fainting. When I arrived, the wound was nicely bandaged and the bleeding arrested. I could see no use of removing the dressings. I told the friends to "let well enough alone," and what to do if necessary. The boy made a good recovery without any further attention; but to this day they blame me for not "doing something" for the cut foot. I related this circumstance to one of your physicians. "Ah, yes," said he, "you made a big mistake, that is if the patient was able to pay. You should have torn off the bandages, let the blood spirt again, cut down and tied the artery, made a great splurge and a fuss, charged them fifty or seventy-five dollars, and then they would have looked upon you with veneration, and said you was a great surgeon and understood your business."

In our dealings with disease we must be eclectics in the fullest sense. The domain of therapeutics is not confined to any system or pathy. While we denounce exclusive systems we must admit that there is some truth in all so-called schools of practice. It is our duty to select the truth and adopt it wherever and whenever we find it.

The regular physician is not confined to any exclusive system. He can use what little truth there is in homeopathy, hydropathy, thermo bathy, mesmerism, electricity, or employ imagination alone, and yet consistently hold his position as an intelligent, educated regular physician. We have the example of Sir Astley Cooper, of whom it is related that he cured a patient by simply putting the bulb of a thermometer under his tongue once or twice a week.—*Exchange.*

ANTI-SEPTICS AND DISINFECTANTS.

We are till now without any reliable disinfectant, in the sense of being at the same time an antiseptic. The public generally confounds disinfectants, that is to say, compounds capable of destroying bad smells, with substances efficacious to destroy morbid germs. In contagious maladies how frequently has chloride of lime been employed; it destroys, a little, some odors, but more especially marks them by its own—still its action on the germs of contagion is nil. Carbolic acid should be employed in preference, but even this is not efficacious as an anti-putrescent unless diffused in such quantities in an atmosphere as to render respiration impossible, being dangerous. And following Sternbery's experiments, it is not certain if carbolic acid can kill all species of disease germs. Ozone and other oxidants are excellent, but their value depends on their being employed in high doses; and if so employed, they grip the throat and irritate the tissues. Mr. Peyrusson claims to have discovered a product, certain at once as a disinfectant and an anti-septic, while

producing no irritation of the tissues: one-eighth of an ounce is sufficient to disinfect an apartment combining 100 yards. His substance is azotized ether, being the product of a mixture of azotic acid of 36° and four parts of alcohol at 90°. Mr. Peyrusson has placed in vases beaten eggs, blood, meat, etc., and allowed putresence to do its work; he next placed in the vases a bottle, unstoppered, containing azotized ether, and they protected the contents intact from further decay, while a vase left free, advanced to the last stages of decomposition. The experiments were renewed with chloride of lime, carbolic acid and ozone: the first did not stop putrefaction, the second delayed it, the third checked decay at first, but after three days it was inefficacious. The azotized ether proved faultless; but it has also been tried in some hospital wards, and with marked success. At Limoges, in an hospital ward cubing 300 yards, and containing 12 beds, the atmosphere was positively repulsive: 3 ounces of the ether poured out on as many saucers completely purified the air, and hastened the recovery of the inmates. Similar results have taken place in other hospitals.

SCARLET FEVER.—PECULIAR ETIOLOGY.

Dr. E. B. Ward sends the following to the *Detroit Lancet*:—The subtlety of scarlatina virus passes human ken. In a given number of subjects exposed to small-pox we can determine with tolerable correctness what the result will be, but scarlatina obeys no definite rule. It is not uniform in its operation, like small-pox, but the contagion has a tenaciousness and a lurking cussedness not dreamed of by other contagious disorders (supposing them to be asleep).

It lingers in an apartment or clings to a bit of flannel or cast-off garment of any kind to an unlimited extent, so far as we know; whereas, the small-pox virus disappears by free exposure to fresh air, in a comparatively short time.

In proof of this statement, I present the following cases which occurred in my practice last month:

Some time during the winter of 1875 a malignant form of scarlatina appeared south of this village, and fairly decimated the families throughout a certain neighborhood.

Last spring one of the farmers, in whose family the disease had occurred, sold to a man whose family consisted of a wife and three children, who occupied the house in peace until some time in December last, I was called to attend the children, who the messenger told me, "had a rash and were mighty sick."

I found the eruption, the sore throat and strawberry tongue of scarlatina, and began to inquire as to where the exposure could have taken place, but elicited nothing, as the mother declared that they hadn't been away or had any company which could account for the phenomena. Further, there was no scarlet fever in the vicinity.

Finally, it transpired that the father had cleaned out the attic about ten days previous, and among the rubbish were certain clothes and a rag doll and pictures which were recognized by the neighbors as some that were used in the sick room to amuse the little patients five years before. The little newcomers utilized them. I was prepared to believe that the poison of

scarlatina might linger around a house for a year or so, but I could account for the disease in these cases only on the supposition that it had been contracted from poison which had been retained in those old rags *five years.*

The children all came down at once, showing simultaneous exposure to the virus, and all went through the routine at once.

Desquamation was very decided, and they amused themselves by pealing strips of cuticle off their fingers for some time. Acute Bright's disease followed one of the cases, but was easily controlled, and all made a good recovery.

The diseased children were immediately isolated when the nature of the malady was discovered, and there was no spread of the contagion.

Now let some one who is better versed in eggs and embryology, fomites and bacteria go on and give a parallel case, or account for the thing in any other way.

APHORISMS ON THE CULTURE OF CHILDREN.

BY DR. P. H. CHAVASSE, F.R.C.S., ETC., ENG.

"None has yet penetrated into the mystery of a mother's influence over her child. Science is beginning to show how all important is this influence before birth, but science has not yet found out what germs of character are earliest developed and fostered by the magnetism of a mother's love, in its direct bearing on the physical and mental growth.

"A little child can only judge of you by your action. It is no use preaching *at* or to him. Your actions towards him speak more volubly, forcibly and effectually than words can.

"Boys ought never to be allowed to sleep with [female] servants. Many a pure, innocent boy has had his body weakened and his mind corrupted for life by this practice being allowed.

"When a child is unusually naughty and cross, the chances are that he is not well.... Let him have a run and a romp out of doors, and, if posssble in the green fields.

"Never deceive your child. If you once do, he will never believe you again; and mischief will be done which years will not repair.

"The best physicians for many complaints are—Dr. Diet, Dr. Quiet and Dr. Merryman;—diet, rest and cheerfulness.

"Every child ought to have his flower garden—a plot of ground that he might call his own—his very own—that he might, to his hearts content, dig and delve, and plant and sow.

"A quacking mother (one who is always dosing her children) is a misfortune to her child, and makes plenty of work for the doctors.

"Some mothers deserve a whipping more than do their children; she, having encouraged a fault by bad management, is the real offender.

"Temperance, early rising and sponging the whole of the body every morning, either with tepid or with cold water, are preventives of cold, provocatives of health, helps to longevity and sharpeners of the intellect. "The method by which," says Sir Astley Cooper, "I preserve my own health, are temperance, early rising and sponging the body every morning with cold water immediately after getting out of bed, a practice which I have adopted for thirty years, and although I go from the hot theatre

into the wards of the hospital on the severest winter nights with merely silk stockings on my legs, I scarcely ever had a cold."

COMPARATIVE HEALTH STATISTICS.

It is interesting to observe the great difference in the average length of life in different cities in the United States. The cities which made weekly sanitary reports to the National Board of Health last year numbered sixty-eight. The Bulletin of the Board for February 19, contains in tabular for the aggregate results of reports so received, from which table it appears that Vallejo, California, was the healthiest place reported in 1880, and Norfolk, Va., the unhealthiest. The average life in Vallejo, was 83·5 years, and only one person in 1,000 of population died of consumption, while in Norfolk the average life was only 27·9 years, and one person in 241 of population died of consumption. The aggregate population of the sixty-eight cities is 7,359,937, the average duration of life in them was 44·5 years, and there was one death from consumption for every 326 of population, and one death from acute disease of the lungs for every 429 of populatian. In other words, of every 100 deaths 24·4 were from lung diseases, and of these 14 were from consumption and 10·4 from acute diseases of the lungs. Four of the best cities for health were Yonkers, N. Y., average life, 70 years; Omaha, Neb., average 68 years; Utica, N. Y., 67·5 years; Keokuk, Iowa, 67.1 years; and four of the worst cities were Jacksonville, Fla., 35 years; Vicksburg, Miss., 34.5 years; Charleston, S. C., 31·3 years; and Savannah, Ga., 30·6 years. In Boston the average life was 42·5 years, deaths by consumption one in 246, by acute lung disease one in 336 of population; in New York, average life 37 years, death by consumption one in 254, and in acute lung disease one in 260; in Philadelphia, life 47·8 years, consumption one in 314, acute disease one in 844; in Cincinnati, life 47·8, consumption 346, acuse disease 494; Louisville, life 47·6, consumption 300, acute disease 410; Indianapolis, life 47·8, consumption 446, acute disease 381; Chicago, life 48, consumption 593 acute disease 453; St. Paul, life 58·5 consumption 561, acute disease 715; San Francisco, life 51·8, consumption 295, acute disease 459; New Orleans, life 41-3, consumption 2:6, acute disease 584; St. Louis, life 52, consumption 447, acute disease 580. The difference between New York and Philadelphia in the general death rate and in that from consumption is great; in that from acute lung disease it is striking. Next to lung diseases diarrheal disorders cause the greater number of deaths. In every 100 deaths from all causes in the sixty-eight cities, 10 are from diarrheal disturbances, and there is one death from this source in every 436 inhabitants.

SEA SICKNESS.

The best remedy for sea sickness, the proverb says, is to "stay at home." But sea voyages many are obliged to take on account of business; others take them on account of ill-health, especially from over work — the voyage actually enforcing rest; and many restless ones take them for pleasure, undeterred by this disagreable malady.

Sea sickness has been charged to various organs: to the liver and to the nervous system, and even to the imagination. An endless number and variety of remedies have been suggested and tried. One advises one thing, and another something as different as possible: as, one a full stomach, and another an empty stomach; one, plenty of brandy, another "total abstinence," and so on.

There is one remedy of which we have not heard, but which we should like to see tried: that is, abstinence, or great moderation, in regard to diet, for a few days or a week before commencing the voyage. Most people, it is almost universally admitted, habitually eat more than is required by the system, and all the digestive organs are more or less over-taxed and loaded with crudities. The forced abstinence and thorough evacuation consequent upon the sea sickness give great relief, and after three or four days, the traveller is usually sick no more, but greatly improved in health.

If the liver and stomach, and other organs of supply, were to get a rest and permission to unload themselves just previous to the voyage, by means of a judicious diet and great moderation in the quantity of food consumed, it is quite probable that, in many cases, the sea sickness would be deprived of most of its terrors, if, indeed, it presented itself at all.

The remedy amounts simply to this: the placing of the digestive organs, with which the nervous system so strongly sympathizes, in perfect working trim, by a period of rest and a little "training"—a week on a very moderate allowance of the simplest and most digestible of food, as, say, good bread and beefsteak.

MILK-SUPPLY REGULATIONS IN GLASGOW.

The following new regulations for dairies and milk shops have been issued by the Magistrates' Committee of Glasgow:—"1. The walls of all dairies, milk stores, and milk shops shall be kept at all times thoroughly clean and in good order, and shall be lime-washed or size-coloured every three months. Paint or varnish shall be washed at least every month, and renewed every two years.

"2. All floors, shelves, counters, &c., shall be washed daily, and kept thoroughly clean at all times. No washing, sweeping, or dusting shall be carried out while milk is exposed in open vessels.

"3. No milk shop, milk store, dairy, place or premises where milk is kept, stored, or exposed for sale, shall be used as a dwelling or sleeping apartment, or be in direct communication with a dwelling room or sleeping apartment, nor shall be used for any purpose whatever, other than that for which it is registered.

"4. Clothes shall not be washed nor mangled where milk is stored or exposed for sale, nor in any apartment communicating therewith.

"5. All barrels, butts, cans, and other vessels of whatever kind, used to convey, store, distribute, or for any purpose to contain milk for sale, including bungs, bung-cloths, lids, &c., shall be scalded with boiling water, or steam under pressure, immediately after use, and shall thereafter be dripped, so that no water shall be left therein.

"6. All barrels, butts, or other

vessels used for the conveyance of milk from a distance shall be in like manner scalded and cleaned before being returned.

"7. No boiler, tank, steam-chest, or other receptacle used for scalding or washing such vessels shall be employed for any other purpose."

RETURNS OF DEATHS FOR FIRST QUARTER OF 1881, ENDING MARCH 31.

City or Town.	Population according to last assessor's return	Total No. deaths registered for the quarter.	Diphtheria.	Dysentery.	Diarrhœa.	Typhoid fever.	Scarlet fever.	Other fevers.	Phthisis (Consumption).	Brain disease.	Heart disease.	Pneumonia.	Other lung dis.	Old age.	Other causes.	Total No deaths per 1,000 living per annum.
Toronto	77,034	309	12	....	2	4	...	4	28	14	18	16	24	17	170	16
Ottawa	25,000	38	1	1	....	..		1	14	....	...	1	4	....	16	6
Hamilton	35,009	131	3	....	...	1	....	....	17	1	10	4	3	6	97	15
London	19,941	69	...	....	...	....	1	1	10	2	1	1	6	7	42	14
Kingston..about	18,554	82	1	....	....	2	2	1	6	....	5	2	3	2	36	15
Guelph	10,100	32	..	...		....	3	1	7	2	3	1	2	3	10	13
Brantford	10,668	52	2	....	1	..	15	....	6	2	4	2	8	1	11	20
Belleville	9,978	36	1	1	3	3	...	1	6	1	2	2	7	6	2	14·5
St. Catharines	9,384	49	2	1	....	2	1	....	16	....	8	2	3	3	11	20
Stratford	8,904	22	...	...	....	1	2	1	1	1	2		1	...	13	10
St. Thomas	8,068	14	...	...	....	....	....	....	1	3	....	....	2	1	7	7
Brockville	7,441	25	5	1	....	1	....	4	4	1	....	1	3	1	4	13
Chatham	7,572	22	3	..		1	....	....	5	....	....	....	3	2	8	12
Windsor	5,826	22	....	1	..	1	....	....	2	1	....	....	2	2	14	15
Peterborough	6,800	17	....	....	.	1	1	....	4	....	....	....	....	1	9	10
Lindsay	5,371	16	.	...	....	....	....	....	1	....	....	2	....	1	12	12
Woodstock	5,382	16	.	..	....	....	....	1	2	....	2	....	1	2	8	12
Cobourg	5,118	15	...	....	....	....	....	....	3	1	....	3	....	1	7	12
Port Hope	5,324	11	....	....	....	....	....	....	....	....	....	....	....	....	11	9
Barrie	4,818	17	....	...	...	2	..	..	6	.	....	....	2	2	5	14
St. Mary's	3,382	11	...		....	....	1	2	1	2	1	1	....	1	2	14
Totals	283689	936	39	5	6	19	26	17	140	31	57	38	74			13

The above table shows that the registered death-rate for the 21 largest cities and towns in Ontario, with an aggregate population of 283,689, for the first quarter of the present year, was only 13 per 1000 living, per annum, This doubtless is lower than the real death-rate, and some of the places require the presence of the Inspector. Brantford and St. Catharines give the fullest returns and show the highest mortality; namely, 20 per 1000 living, per annum. In Brantford, 15 of the 52 deaths registered in the quarter were from scarlet fever. With a system of registration of contagious diseases, and proper isolation, this would not occur. When will this come into operation in Canada? There were 26 deaths from this disease in the 21 places, In St. Catharines, 16 of the 49 deaths registered, about one-third, were from consumption, sufficient to demand enquiry. This certain and constant destroyer of many lives caused 140 deaths in a total of 936 (in the 21 towns), or 1 in about every six and a half. In Toronto one death in every 11 was from this disease; in Hamilton, one in 8; in London, 1 in 7; in Barrie, 1 in less than three. There were in all 38 deaths from inflammation of the lungs, 16 of which were in Toronto, with a population considerably over one-fourth of the whole of the 21 places. From other lung diseases there were 74 deaths, 24 of which were in Toronto. From brain disease 31 deaths, 14 of which were in Toronto. From heart disease 57 deaths, with 18 of them in Toronto. From diphtheria 30 deaths, with twelve of them in Toronto. This city therefore shows a proportionately high mortality from these last five named diseases—lung disease, heart and brain disease, and diphtheria. Thus, while in the whole of the 21 towns there was 1 death from lung disease in every 2,500 of the population; in Toronto there was one death in every 1,900 of the population. In Brantford and Belleville, however, the mortality from these diseases was much higher than in Toronto; or about 1 in 1,100 of population. From brain disease there was one death in about 9,000 of population, in all the towns collectively; while in Toronto there was one in 5,500. In two of the other towns the proportion was quite as great as in this city. Only 19 deaths in all were from typhoid fever, and only 4 of these were in Toronto; while there were no deaths in this city from scarlet fever. The total death rate, as registered, in Toronto, was 16 per 1000 living, per annum.

PROFESSOR HUXLEY AND DIPHTHERIA.

Professor Huxley has had diphtheria in his family. Acting as chairman recently on the occasion of a paper being read on the "Sanitary Protection Association for London," before the Society of Arts, he said that, although, as a physiologist, he had always taken a theoretical interest in questions of sanitation, he was led about three years ago to take also a practical interest in them, when three of his children were attacked by diphtheria. His children were poisoned from milk. From the careful inquiries he was led to make at that time the conviction was very strongly enforced upon him that the original source of evil and mischief is to be found in a preposterous inattention to the conditions necessary for the proper drainage of a large and populous district. He therefore resolved that, should he have an opportunity of doing anything to serve the cause of sanitation, and bring home to the London public the importance of healthy houses, he would do it; and that was the motive which had prompted him to step out of his own particular department of natural history to become a member of the Council of the Sanitary Protection Association.

WORK OF THE INTERNATIONAL CONGRESS.

The section of State Medicine of the International Medical Congress which meets in London, Aug. 2—9, 1881, has adopted the following programme of subjects for papers and discussion:

I. Measures by which to prevent the diffusion of different communicable diseases from country to country, or within the limits of any single country—*e.g.*,

1. Yellow Fever, Cholera, Plague.
2. Enteric Fever, Scarlet Fever, Measles, Whooping Cough, Diphtheria.
3. Syphillis.
4. Glanders, Hydrophobia, Anthrax.

II. Influence of various articles of food (not including water) in spreading Parasitic, Zymotic, Tubercular, and other diseases.

III. Conditions to be imposed on the legally-qualified practitioners of one country, who may seek authority to practice in another country.

IV. Precautions to be taken in medical nomenclature and classifications to guard against false statistical conclusions.

Book Notices.

THE MENTAL CULTURE AND TRAINING OF CHILDREN, APHORISMS ON, by Pye Henry Chavasse, F.R.C.S. England, author of "Advice to a Wife on the Management of her Health," "Advice to a Mother," etc., Lindsay & Blakeston, Philadelphia.

This is an admirable book of 280 pages, written in a simple, clear style, and printed in clear, plain type on good paper. Price $1.00. It should have a large circulation.

The author says in his preface, "The care and management of the body should go hand-in-hand with the culture and training of the mind. Anything that improves the one conduces to the advantage of the other. I have, in these pages, instilled into the minds of mothers the great importance of training their boys to be manly and their girls to be useful. There is, alas! need for such advice; for boys, now-a-days, are made effeminate by luxury, and girls useless by having nothing to do."

The aphorisms are arranged alphabetically. On another page we give extracts from a few, which are samples of those with which the book is filled.

HAND-BOOK OF URINARY ANALYSIS; CHEMICAL AND MICROSCOPICAL: For the use of Physicians, Medical Students, and Clinical Assistants. By Frank M. Deems, M.D., Laboratory Instructor in the Medical Department of the University of New

York ; Member of the N. Y. County Medical Society; Member of the New York Microscopical Society, etc. 12 mo,, Limp Cloth, 25 cents. New York : Industrial Publication Co.

This Manual presents a plan for the systematic examination of urine, urinary deposits, and calculi. It is compiled with the intention of supplying a concise guide, which from its small compass and tabulated arrangement, readers it admirably adapted for use, both as a bed-side reference book and a work-table companion. The author has had for several years a very extended experience as a teacher of this important branch of physical diagnosis, and he has compiled a manual which will serve to lessen the difficulties in the way of the beginner, and save valuable time to the busy practitioner.

THE CHRISTIAN REPORTER, A RECORD OF CHRISTIAN THOUGHT AND LABOR : Bengough & Moore, publishers, Toronto, 75 cts. per year.

This is a 16 page monthly, containing much instructive matter. "It is not," the publishers say, the "exponent of any sect, party or denomination," and as such we trust it may promote Christian Union, so much to be desired. An interesting feature of the paper each month is a portrait and biographical sketch of some noted person ; in the February and March numbers are those of Thomas Carlyle & Gustave Dore; and in the latter a brief description of Dore's two magnificent paintings, "Christ leaving the Prætorium" and the "Dream" of Pilate's wife.

THE CANADA LUMBERMAN ; The only paper published in Canada devoted to the Lumber and Timber Industries of the Dominion.—TOKER & Co.. Peterborough.

The value of these industries as factors in the development of our country, should alone command for the publication cordial recognition and encouragement. It is a very respectable appearing paper of 10 four column pages ; $2 per annum, $1 for 6 months.

THE ILLUSTRATED SCIENTIFIC NEWS: Is one of the handsomest of publications. Published monthly by Munn & Co., 37 Park Row, New York, at $1.50 a year. and sold by all newsdealers.

Every number contains thirty-two pages, full of engravings of novelties in science and the useful arts. Ornamental wood work, pottery, vases and objects of modern and ancient art are finely done up. It also contains many valuable recipes for artisans and housekeepers. The April number is just out, and among the various subjects illustrated are an engraving of the late Emperor of Russia's steam yacht Livadia and Prof. Secchi's solar photographic apparatus, with six distinct views of the sun with sun spots taken by this instrument.

This publication will be found instructive and entertaining to all classes, but will be best appreciated by the most intelligent.

Editor's Special Corner.

INTERNATIONAL PUBLIC HYGIENE.—The following resolutions were agreed upon by the International Sanitary Conference recently held at Washington. They have been submitted to the consideration of the Governments represented, of which Canada is one :—

1. Each Government shall have such organized internal service as will enable it to be regularly informed of the state of public health throughout the whole of its territory.

2. Each Government shall publish a weekly bulletin of statistics of the mortality in its principal cities and ports, and give such Bulletins the largest possible publicity.

The third resolution provides that the sanitary authorities of the countries represented may communicate directly with each other but must at the same time furnish certain information to the consuls in their repective jurisdictions.

The fourth resolution provides for the establishment in Vienna and Havana of a permanent international sanitary agency of notification.

Other resolutions provide for bills of health, commissioners, &c.

We trust the Government of Canada will not fail to be up with other Governments in this very important international sanitary work.

IT IS QUITE ASIDE from the province of this JOURNAL to give puffs on anything or any place, but we step aside with pleasure to notice that, before the close of the late session of Parliament at Ottawa the Senators and members of the House of Commons resident at the "Grand Union hotel" there, met in the ladies' waiting room and presented an address and a purse of money to Mr. Wells,

the manager. Much of the success of the hotel during the season was attributed to his energy, attention and courtesy. Having been a resident of the same hotel for a short time, we desire to bear witness to the admirable manner in which it was conducted, and to the superiority of the establishment generally. Clean, sweet rooms and beds, with speaking tube from each room to main office; bill of fare presenting everything that anyone could reasonably desire; food well cooked and served and with agreeable, attentive waiters; and all it appeared to us at unusually reasonable charges.

SCARLET FEVER SPREAD BY MILK.—An alarming outbreak of scarlet fever in the borough of Halifax, at the commencement of the present year, having been brought to the notice of the Sanitary Committee of that town, the Medical Officer of Health, Dr. Daniel Ainley, was instructed to institute an enquiry into its origin, and the result of his investigations has been embodied in a report which has been recently published. From this it would appear that after ascertaining that neither the drainage nor the water-supply could be considered responsible for the outbreak, accident revealed the fact that sickness prevailed in the family of a carrier of milk who supplied nearly all the families attacked. A visit to this man's house resulted in the discovery that four of his children were suffering from scarlet fever, and as he went straight from his house every morning to milk his cows, and afterwards distributed the milk to his master's customers, the origin of the outbreak was not far to seek.

THE DEATH-RATE OF CHILDREN IN CITIES.—At a meeting of the Society of Medical Officers of Health, recently, Mr. Browning read a paper on the above subject, of which the following is an abstract:—(*Med. Times and Gazette.*) A generally high death-rate may sometimes be entirely due to an extremely high child-rate, the adult age being low. as lately exemplified by the vital statistics of the borough of Leicester. Among the poorer population of our large cities the child death-rate usually amounts to half (50 per cent.) of the total deaths at all ages, and occasionally exceeds 60 per cent. of those total deaths, while in all England the child death-rate is only 25 per cent. of the total deaths, and is, as a rule, less than this in the healthy districts and among families comfortably well off. In nine large orphan asylums near London, whose inmates are, as a class, naturally of the feeblest constitutional type, mostly inheriting scrofulous, syphilitic, and alcoholismic diatheses, the average annual mortality is but 3 per 1000, or 0·3 per cent. In proportion to the higher social position of the parents, the child death-rate is everywhere diminished, so that among 100 children of the upper and middle classes it does not average more than four casualties yearly, while it ranges from 10 to 26, 70, and even 90, in some of the poor places 920,000, working-class children, out of each 1,000,000 born, fail to reach the age of five years.

"CAFE DES GOURMETS," or French coffee, as used in Paris, is said to be the "highest perfection" of this berry. In this preparation the coffee is roasted and ground in a patent apparatus, and is packed while hot, and hermetically sealed, thereby retaining the full aroma, flavor and strength of the coffee. With care this makes an elegant, clear fluid, with full aroma. It is much stronger than ordinary coffee, and much less of it is required to make a given quantity.

ROWNTREE'S ROCK COCOA surpasses in strength and delicacy of flavor any preparation for making this wholesome, nutritious beverage, "cocoa," which we ever have tried. It is put up in tin boxes, each containing one pound of the prepartaion, in sort of crystallized pieces. It makes a most delicious breakfast beverage.

Wm. Johnson & Co., 77 St. James Street, Montreal, are Canadian agents for the above preparations.

HIGHER DEATH-RATE IN VALLEYS.—Dr. Gatling (in the *Medical and Surgical Journal*) says:—In supervising the census of North Georgia, I have had ample confirmation of an observation which I long since made, of the increased ratio of mortality in narrow valleys. Such valleys, especially in mountainous countries, are hotter by day and colder by night than more open areas. The nights, too, are characterized by dense fogs, which contribute to render the cold night air

more chilling. What with the confined air and the heat by day, and the chilly dampness of night, the mortality from both fevers and consumption is increased.

COST OF PREVENTION.—If we accept the authority of Dr. J. S. Billings, says *the Proceedings*, the ratio between prevention and charity is not very different from that which the adage gives as existing between prevention and cure. Dr. Billings says: "The interest on the money which, during the past fifteen years, has been raised by voluntary contributions in the North to aid Southern communities affected with yellow fever, would more than pay all the expenses" of quarantine measures for the exclusion of that disease from Southern ports. The ounce bears about the same arithmetical proportion to the pound that interest (at six per centum) does to principal.

THE JEWISH SANITARY CODE.—Dr. Richardson recently delivered a lecture on the Jewish Sanitary Code, in the Chapter-house of St. Paul's Cathedral, (*Medical Times and Gazette*). The opening remarks explained a series of facts relative to the present distribution of the Jewish races throughout the world, and dwelt on the phenomenon of vitality as illustrated in the Jewish people, indicating the greater vitality which they presented as compared with that of other races among whom they were cast. From this Dr. Richardson passed to consider the cause of the vitality, and argued that it depended mainly on the observance of certain parts of the Mosaic sanitary laws. Among other aids to health suggested from the source named, he deduced five in chief, viz., Passover cleaning, rest from labour once in seven days, chastity and good domestic life, temperance and great circumspection in regard to foods, and care of the enfeebled and destitute of all ages of life.

MOULD-POISONING.—In the *Revue d Hygiene*, January, 1881, (*Medical Times* and *Gazette*,) M. Megnin narrates an interesting case of poisoning by mouldy biscuits. Two cavalry horses in Algiers, who had consumed about half a kilogramme (somewhat over a pound), manifested very remarkable symptoms, as colic, followed by attacks of vertigo, alternating with profound coma, accompanied by general anæsthesia and complete muscular relaxation, also atony of the urinary bladder, loss of sight, and profuse cold sweats. He adduced a number of other cases among men and animals of poisoning by mouldy or rancid provisions, notably those of two pigs, who, after eating a quantity of spoilt bread, died with colic, cerebral symptoms, and blindness; and comes to the conclusion that the most virulent and characteristic of these mould-poisons is the *Ascophora nigricans*—the *Oidium aurantiacum* polymorphic with *Erysiphe aur.*, ranking next; the *Mucor mucedo* and *Aspergillus glaucus*, which develops into *Eurotium herbariorum*, being comparatively innocent.

TO PUBLISHERS OF PAPERS.—We desire to convey our sincere thanks for notices of the JOURNAL, some so highly complimentary, and to say at the same time, however, that it is not for the purpose of an exchange that we send the JOURNAL to so many. It is easy to understand that we cannot possibly look through, even, much less read, the hundreds of papers sent weekly to the JOURNAL, and what we want is notices of it monthly and proper acknowledgment when articles are copied, which some fail to give, while others give only partial acknowledgment, as "*Health Journal.*" We are always glad to have any thing in the JOURNAL copied into local papers and hope friends will not fail to send us a marked copy of their paper containing any such, or any notice of the JOURNAL. Sanitary work is yet almost a work of *charity* in this country, and we respectfully ask the utmost "consideration."
