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-THE-
HEALTH JOURNAL

A Monthly Review and Record of
SANITARY PROGRESS

—EDITED BY—

EDWARD PLAYTER, M.D.

Public Health and National Strength and Wealth.

No. 11.

NOVEMBER, 1889.

Vol. XI.

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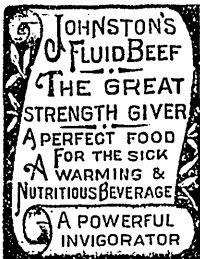
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THE HEALTH JOURNAL.

A Record of Sanitary Progress.

VOL. XI.

NOVEMBER, 1889.

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THE ART OF COOKING, BY EDWARD ATKINSON, LL.D.

EXTRACTS FROM A PRACTICAL PAPER READ AT THE BROOKLYN MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION LAST MONTH.

GOOD health depends in greater measure upon adequate nutrition and upon the conversion of food material into a digestible form than upon any other factor in life. A well-nourished man can bear adverse conditions of life in the dwelling-house, the factory, the mine, and the furnace, to which the ill-nourished man will succumb in a very short time. On the other hand, the capacity of the man to perform his work is as fully dependent upon the quality and adequacy of his food as the capacity of the horse, ox, or mule. The force of the man depends on his food as much as the force of the engine upon the fuel used under the boiler; this is almost as true as to mental as it is to physical power.

There are innumerable treatises upon the feeding of animals; upon the generation of steam; upon the construction and ventilation of buildings; upon the arts which relate to clothing the human body, and upon keeping the dwelling and workshop warm; and, lastly, yet more numerous treatises or cookery-books upon the art of mixing and preparing the food which is to be cooked; there are also many treatises, chemical and physiological, upon the subject of nutrition, and there are one or two treatises on the science of cooking, notably Dr. Mattieu Williams's "Chemistry of Cookery"; yet, so far as the writer has been able to ascertain the facts, there is no receipt-book or cookery-book in common use which deals with the actual art of cooking by directing the right application of heat for a suitable time and at a suitable degree, to the specific food which is to be converted into

a nutritious form by the conversion of its elements into new forms or conditions by the action of heat upon it.

It is possible that greater attention has been given to this matter in England than in this country. After trying in vain to find an oven thermometer in the United States, I lately imported one from England, made by Joseph Davis & Co., Fitzroy Works, London, S. E., and purchased at an agricultural show at retail for seven shillings sixpence, gauged at 200° to 600° Fahrenheit. On this thermometer are marked the respective degrees to which various kinds of food should be subjected, as follows:

Pork.....	320° Fahr.
Veal.....	320 "
Beef.....	310 "
Mutton.....	300 "
Puff pastry.....	340 "
Bread.....	340 "
Pastry ..	320 "
Meat-pie	290 "

These figures agree substantially with my own experiments as to the maximum of heat, but I do not concur with the inference that less than 200° Fahr. may not be permitted, if time be given for the lower degree of heat to do its work. On the contrary, any kind of very tough meat may be reduced to a very tender condition by the long application of heat at 180° to 200°, without loss of flavor or nutritious property, provided the food be put into substantially air tight vessels. The testimony of Dr. Mattieu Williams is conclusive on this point, as well as the special knowledge of the few good cooks of the method of simmering as distinguished

from boiling. Meats and grains may be most nutritiously cooked at less than boiling heat, and eggs should always be ; while most kinds of roots, tubers, and vegetables require a higher degree.

I venture now to give some of the general conclusions which I have reached by the application of somewhat crude methods and inventions on which I have experimented personally in such scraps of time as I could spare from my regular occupation, and on nearly two years' use of my apparatus in my own family.

I will challenge attention and discussion by first submitting some very positive and dogmatic statements, subsequently sustaining them by such proofs as I have to offer.

1. Special apparatus for boiling and frying has been adequately and suitably developed for the use of those who can afford these somewhat wasteful methods of preparing food, yet excellent when skillfully practiced.

2. The ordinary methods of frying are utterly bad and wasteful.

3. Bread may be baked suitably in a brick oven, and also economically, when the work is done on a large scale.

4. It is very difficult to bake bread in a suitable way in the common iron stove or range ; for this, among other reasons, most of the bread consumed in this country is very bad, although we have the greatest abundance of the best material.

5. Meats may be well roasted in a costly manner before an open fire.

6. Aside from the exceptional apparatus or methods named, substantially all the modern cooking stoves and ranges are wasteful and more or less unfit for use. All the ordinary methods of *quick* baking, roasting, and boiling are bad ; and, finally, almost the whole of the coal or oil used in cooking is wasted.

7. The smell of cooking in the ordinary way gives evidence of waste of flavor as well as waste of nutritious properties ; and in most cases the unpleasant smell also gives evidence that the food is being converted into an unwholesome condition, conducive to indigestion and dyspepsia.

8. Nine tenths of the time devoted to watching the process of cooking is wasted ; and the heat and discomfort of the room in which the cooking is done are evidence of worse than waste.

9. The warming of the room or house with the apparatus used for cooking is inconsistent with the best method of cooking, and might be compassed at much less cost if the process of cooking were separated from the process of warming the room or dwelling.

10. No fuel which cannot be wholly consumed is fit to use in the process of cooking, and any chimney which creates a draught upon the fuel when in the process of combustion, like the ordinary chimney of a house, is worst than useless, since it wastes the greater part of the heat generated from the fuel.

The true science of cooking consists in the regulating and controlling application of heat by which flavors are developed and the work of conversion is accomplished. For this purpose a quantity of fuel is required which is almost absurdly small compared to the quantity commonly used.

I now venture to submit the data of a dinner prepared by myself, but little out of the usual course, as an example of the common practice in my own family, and of what may be done substantially with one lamp. The dinner was provided for my own family of seven persons, with five guests, and it also sufficed for four servants—sixteen in all—with something left over. My summer kitchen is fitted with a cooking-stove, as it is more convenient to use the top of the stove, heated with hard-wood chips, for boiling water, heating the soup, and boiling potatoes, than it is to use a kerosene-oil stove of the common kind ; on this stove the soup made the day before in the Aladdin cooker was reheated, the potatoes were boiled, and the hot water was provided.

The dinner cooked in the Aladdin oven consisted of three to four pounds of fresh blue-fish, just caught, cooked in imitation of broiling, one hour ; six or seven pounds leg and loin of lamb, roasted one and three fourth hours ; three tame ducks, weighing

about seven pounds, roasted one hour; squash cooked in its own juice, with but very little water, one and three fourth hours; stuffed tomatoes cooked three quarters of an hour; a large apple *soufflé* pudding baked one hour.

The oven having been previously heated one hour, the lamb and the squash were first put in; later the fish was added; while these were being served, the ducks and the pudding were being cooked; the use of the lamp for the whole service was four hours; the oil consumed, one pint, cost less than two cents; the cook's estimate of the coal which would have been required for the dinner, had it been cooked in the large stove, which has been used in other years, at one and a half to two ordinary hodfuls.

This was an every-day dinner, to which my guests had been invited in order that they might test our common practice.

I assume that the effect of heat upon food material is what may be called chemical conversion, accompanied, when the heat is applied at a low degree only, by partial evaporation of water, but when applied at a high degree, by partial distillation of the juices, by the cracking or dissociation of the fats, and by the diffusion of the volatile parts of the food in bad smells and loss of flavor and waste of some of the nutritious properties of the material. If the cracking or dissociation of the fats is carried to a point which is very common in iron stoves and ranges, the residuum of the fat becomes very indigestible and positively unwholesome. When rightly cooked and not cracked or dissociated, a certain portion of fat is absolutely necessary to adequate nutrition. Is it not true that we take into our stomachs a great deal too much fat, and that it is eaten in the most injurious form?

The preparation of the coffee-berry is the most familiar example of the development of its properties by the right application of heat. If the berry is dried, ground, and made into an infusion without being roasted, no true drinkable coffee can be made from it. If overheated and burned, the infusion is acrid and un-

wholesome. But when the berry is carefully roasted and ground the infusion makes true coffee. The flavor and other properties are the actual product of the heat, when scientifically applied. The flavor of the pea-nut is developed in the same way. In the treatment of grain, none yields so great a difference in flavor, according to the method of cooking, as the meal of maize or Indian corn; but I find the wheaten bread, whether made of whole or bolted flour, yields a much finer flavor when baked two or three hours in my pulp oven at 250° to 300° Fahr., than when quickly baked in a common stove or range in one hour at an unknown but admittedly much higher degree of heat. The flavors of the white kinds of fish, such as cod, haddock, flounder, scup, and the like, which are much impaired by the ordinary methods of cooking, are very finely developed when slowly cooked in my oven; and, lastly, all kinds of meat and poultry develop their respective flavors in the most appetizing manner when roasted in my pulp oven at such low degrees of heat as not to give off any smell or to dissociate any of the volatile elements of the juices of fats, while for game nothing can equal it. Quail and partridge come out rich, juicy, and of almost too full a flavor.

I have frequently served dinners or lunches of four or five courses—soup made the day before, reheated; fish, meat, game, potatoes, cauliflower, asparagus, onions, tomatoes, and custard pudding—all cooked in the same oven at the same time in the dining-room, and served from the oven to the table in the china or earthen dishes in which each had been cooked; the only difference between one dish and another being in respect to the time in which it had been subject to the heat of the lamp or lamps, yet without the least flavor or taint being carried from one kind of food to the other.

It will be apparent that, if cooking can be done in this way, the whole art will consist in preparing the food according to written or printed receipts, and in determining the degree of heat and the time to

which these dishes should be subjected. No watching is needed, and indeed none is possible without danger of cooling off the oven by opening it too often. Of course, it is better to use two ovens than one, devoting one to meat and fish, served by a lamp of moderate power for the right period of time, and the other served by a lamp of higher power for cooking vegetables, puddings and pastry.

I venture to ask you if it is not a fact that bad and wasteful methods of consum-

ing food are not a most potent cost of inability to work to the best advantage? Are they not more promotive of disease, and, in fact, a more subtle cause of want in the midst of abundance, than even the waste on fermented and spirituous liquors.

From my own observations, I am of the opinion that dyspepsia is a cause of more disability than intemperence, although this proposition is not capable of statistical demonstration.—TO BE CONTINUED.

BOVINE ACTINOMYCOSIS IN THE COUNTY OF ADDINGTON.

OWING to the impossibility of obtaining all the facts, we are not able, nor shall be, to give as full a history of the cases of actinomycosis in the herd of cattle belonging to Mr. Delmage, of Camden East, Addington Co., as we had hoped to be, and as mentioned in our August issue. The fact that the disease is infectious and may be communicated to the human organism, gives much interest to the subject.

It may be here noted that, at a recent meeting of the San Francisco Microscopical Society, Dr. Riehl exhibited a slide showing a specimen of this radiating fungus (which the Greek word "actinomyces" signifies) from a patient which had come under his care six days before. The patient had not been well for two years and the doctor had but little hope of his recovery.

It was with a "certain feeling of consternation," it has been said, that every educated man heard of the discovery of Dr. Israel in Berlin, who, in 1877, announced that he had found this disease in several cases among men; although it had been discovered in beasts some years before and was regarded as incurable.

Veterinary surgeons seem to know hardly anything about the disease, in this country, and very little of it appears in England.

The facts, so far as we have been able to learn them, in relation to the cases in Addington Co., are as follows: Among his herd of nearly 20 head of bovines, Mr. Delmage, about the first of October 1889,

observed a cow wheezing, and with a swelling under the jaw, near the throat. She ate well and gave a large quantity of milk, but about the first of December began to fail in flesh and appetite. She was soon separated from the rest of the herd and grew worse, with a dry feeble cough, and in a little time abundant nasal discharge. Becoming alarmed for the others Mr. D. now had the animal killed. He and a neighbor examined her internal organs, but not knowing anything about the disease as he says "they discovered nothing particularly wrong." Mr. D. had also noticed another cow, nearly about the same time, in October, with a small swelling under the jaw. He at length opened this; but "scarcely anything came from it," and the cow appeared to get well. She was milked constantly, and the family used the milk until some time in February. About the first of March she coughed, failed in flesh, and manifested "all the symptoms of the other one." On the 8th of May she was killed in the presence of two veterinary surgeons, who examined her and "found that she was diseased in all parts of the body." "The best language" Mr. D. says "that I can find to describe it, would be to say that she was entirely rotten." The disease commenced in three of the herd nearly about the same time. In all, Mr. D. lost seven head: of these six were killed and one died. At that time the veterinary surgeons, the local physician, an experienced and able practi-

tioner, and Mr. D. himself, all regarded the disease as tuberculosis: the symptoms being much like those of this disease.

Near the latter end of May the editor of this JOURNAL visited the locality and witnessed the shooting of a young animal of the herd, the last one killed. It had been failing, with a swelling at the jaw, but presented no other marked symptoms. The grass had come and others of the herd were seemingly better. A veterinary surgeon who was sent for, removed pathogenic specimens from the lungs, mesenteric glands and other parts and these were sent by the editor to the pathologist of McGill medical department, Montreal. But the fact is, there was very little organic disease present in this young animal, and it probably would have recovered.

The specimens were but slightly altered in structure from the normal tissue. The report from the microscopist states that there were no tubercle bacilli present in them. There were apparently indications of both anthrax, and actinomyces. There were no symptoms during life of anthrax, and if some of the earlier cases were not tuberculous, all were probably caused by the actinomyces fungus. Indeed there is now hardly any doubt of this.

Several others of Mr. Delmage's herd showed marked symptoms of the disease but all seem to have recovered after having been on grass for a time. A few other cases of the disease, some fatal, have been reported. There appears to be no doubt about this disease being communicable to man.

EXTRACTS FROM MEDICAL OFFICERS' REPORTS FOR 1889.

MR. DOBSON, chairman (not a medical officer) of the St. Catharines board of health, reports: The impure water used from many of our wells is, no doubt, a serious cause of a large amount of sickness, yet it is surprising how owners of wells adhere to the idea that the well water is all right, and even go so far as to defy the Board to close them up. The work, however, is gradually going on, and numerous wells are being closed or disused.

The experience of the past year, he says, has convinced me of the necessity of having a Medical Health Officer in connection with the Board, who could be consulted at all times as occasion might require, thereby relieving the Chairman of a large share of responsibility in connection with cases that arise of which the latter may have no knowledge.

DR. VAUX, Medical Officer of Brockville, reports that in that town all plumbers are licensed, all plumbing inspected, and no connections are allowed to be made with sewers until all has been done that scientific knowledge can suggest to render our homes free from the invasion of disease. "Perhaps more has been done this year

towards a systematic cleaning and disinfecting privies than ever before," he says, and yet, I am aware, that very little good has been accomplished. The health by-law provides that this yearly cleaning be done on or before the 15th day of May, parties interested take advantage of this clause and leave for the 15th of May what should have been done in the winter months. I would respectfully suggest that the By-law be so altered or amended as to enable the Board of Health to order a systematic cleaning of all privies, beginning from the 15th day of November and extending to the 15th day of June.

The HEALTH JOURNAL would urge that all such cleaning be done before the 15th of May at least, if not earlier, and cannot understand why the report suggests the 15th of June.

DR. HALL, M. O. of Chatham, reports that "During the year the town council granted sufficient money to purchase a complete set of apparatus for testing milk; they also passed a by-law for the regulation of the sale, quality, etc. Since the purchase I have submitted thirty-seven samples to the various tests (in some cases three or four samples from the same ven-

dor), and found that, in a large number of cases, the samples were not standard milk; but I find that the samples last examined were much better than the first. So far we can confidently state the apparatus has been an advantage to the consumer, and will undoubtedly be a greater one after a few parties who persist in adulterating milk will have been prosecuted."

A NEW and rather funny way of garbage disposal is mentioned by Dr. Hall, as follows: "The disposal of kitchen garbage has given rise to considerable trouble to the inspector, and is a nuisance to many citizens. On one street in particular, householders got into the habit of dumping garbage at night in front of a neighbor's house, and the practice became so universal that almost every householder on the street would find a heap of garbage in front of his residence in the morning. The inspector left a notice at each house on the street warning them to stop the nuisance, calling their attention to the easy method of disposing of kitchen garbage by burning. The practice has since stopped."

MR. BERTRAM, chairman of Dundas Board of Health, reports that the Board had for two or three years back notified the council to keep on hand a supply of copperas, so that vaults should be disinfected immediately after cleaning. Owing to the liberal use of copperas, typhoid fever in Dundas was very much reduced. The Board urged upon the council the question of sewerage, as it is evident that all liquid matter thrown out must either sink into the ground and pollute the wells, or remain in cesspools and contaminate the air. The Board "considers this of vital importance, as the town in another year will have the best water supply in Canada: and the introduction of water services to householders will necessitate some system of drainage."

MR. R. King, Senr., chairman Barrie Board, says that "The removal of certain piggeries and the plentiful use of deodorising material placed the town in a fair sanitary condition, considering the absence of a general or complete sewerage." And

yet, he adds, "a greater number of cases of serious sickness have occurred than during any of the past few years; amongst the number were several cases of typhoid, mostly contracted elsewhere, some resulting fatal. Diphtheria also prevailed, but to a less extent, its victims being children." Evidently something more vigorous is required in Barrie.

MR. DEACON, of Lindsay, chairman of the Board, reports a case of malignant diphtheria from Kinmount. The patient stated that he had been under treatment by Dr. Frost, at Kinmount, who, he said, told him that "he had better get on to Lindsay." Acting on this statement, information was laid against Dr. Frost for contravention of the Ontario Public Health Act, and the matter was investigated by the Police Magistrate of the town of Lindsay, which investigation resulted in the dismissal of the charge without cost. This, probably, from want of satisfactory evidence that Dr. Frost was really responsible for the removal of the case to Lindsay, but the case should be a warning to medical practitioners to exercise caution in regard to like cases.

DR. CLARKE, M.O. of Peterboro, reports: "No outside epidemic has visited the town; there has been a much less proportion of typhoid fever, diphtheria and scarlet fever, not so large a number of complaints as in previous years, and a better compliance with the Statutes than heretofore. No better evidence of this could be given than the steady decreasing death-rate. In 1885 this was 18½ in the thousand; in 1886, 18; in 1887, 17, and during the present year only a shade above 16; a difference of 2 per thousand in the death-rate, which, in a town the size of Peterborough, means a saving in ten years of nearly 200 lives.

AS TO SEWERAGE, Dr. Clarke says: It seems to me that this is a matter for the Dominion or Provincial authorities to take up. It affects not only our town but scores of similar towns springing up all over the country. For a place even to ascertain the best method of sewerage, is not only an expensive matter but a difficult question

in the face of conflicting systems. Sewage farms seem to be making headway at present. Let the matter be investigated thoroughly and decided once for all by the central authority, and towns can adopt the system it recommends modified only to suit the particular necessities. Agricultural legislation is being constantly made by both Governments for the benefit of the farmers, and I don't see why sewerage investigations should not be carried on for the benefit of those living in towns and cities. At any rate the question might be looked into by our Parliamentary representatives. A very sensible suggestion the HEALTH JOURNAL would say.

DR. HUTCHINSON, of London, very properly suggests that the river should always be kept at the same depth. "When this is not done, every time the water is lowered the alluvium deposited along its banks is exposed to the heat and air, creating malaria. Keeping the river always at the same depth should not interfere with the efficient working of the water-works machinery, for, as the water at the drain is lowered, the force exerted against the two turbine wheels is proportionally less, and more water is required to work the engines up to the same power—a useless waste of water. The river is thus lowered five or six inches. Where the banks are steep this matters little, but where the water is shallow, which is the case from Kensington Bridge to the Cove, this fall of a few inches means the periodical exposure of hundreds of square yards of residuary deposit to the action of the air and sun.

DR. EVANS, of Picton, states that a by-law has been passed granting \$30,000 for the construction of water works in Picton. He considers the source from which the water will be taken to be impure and unfit for drinking purposes. No general system of vaccination has been adopted there for the last four years since an outbreak of small-pox at that time; consequently, a great number of the children attending the public schools are unprotected against an attack of this disease. Is not this a common condition

in other towns? The HEALTH JOURNAL would like to know.

DR. HUSBAND, of Preston, "thinks that if it were suggested to the School Board that no pupil be admitted to the school without furnishing proof of successful vaccination, they would add one more to their nearly perfect rules and regulations."

DR. SINCLAIR, of St. Marys, wisely and strongly urges for supervision of the milk supply in that town. "An inspection ought to be made of the cows to see that they are all healthy, that they get a good supply of pure water, that they are properly housed and cared for, that the ventilation of the stables in which they are kept is what it ought to be, that they are kept clean, that no impurities of any kind are in or around the buildings that would have a tendency to taint the milk in any way,—in fact, it is impossible to be too particular upon this one article of diet. It is only necessary for any member of the Board to read section 113, sub-sections 10 and 11 of the Health Act, to ascertain his duty on this very important matter.

DR. HENDERSON of Strathroy calls the attention of the Council to the advisability of securing a building that could be used as a hospital for a time when they are visited by epidemics of malignant diseases, so that isolation could be properly carried out by having those first attacked removed to where they could be properly looked after by a competent nurse or the mother of the family. The head of the family could then follow his usual occupation, and his residence need not be placarded; and very much of this outlay would be required for the support of the family, and the prospects of recovery very much increased.

DR. BOGART, of Whitby, states that: "Owing to the sanitary measures adopted in the fall of 1887, we have had a comparatively healthy year. During the dry hot weather we had a few cases of typhoid fever of a mild type, none proving fatal.

DR. COVENTRY, of Windsor, says the large addition of 8,331 feet of water mains laid last year, will bring the water within the reach of many who

could not hitherto avail themselves of it, and will form circuits where blind ends previously existed. 2,932 feet of brick sewers, of an average diameter of 20 inches, have been constructed in the town.

Dr. Coventry says. "A recent report which I made to the Board of Education shows that in four schools visited there were 880 pupils on the rolls and only 782 seats. The minimum air space laid down by the regulations of the Education Department is 250 cubic feet of air space to each pupil. The average space in the schools mentioned is only 174 feet, and in some it is as low as 94. This combines compulsory education with compulsory suffocation."

DR. MCKAY, of Wootstock, reports that the by-law relative to the dry earth system, which came into operation last May, had been very generally complied with. No less than 150 vaults had been cleaned out and filled up during the year, and the earth closets used instead; "upwards of 400 are now in use, so that the old-fashioned vault is almost a thing of the past." Wootstock is much in need of a pure public water supply. The medical officer urges the importance of it.

DR. MACKINNON, Med. Officer of Alvington village, reports progress in the use of earth closets, but that many of the householders do not continue the use of them, and he points out one special difficulty. What is the chambermaid to do with the bucket she carries outside in the winter season, or for that matter in any season? She cannot pour it into the dry earth box. Nor can she be allowed to throw the contents into any other convenient place. What is she to do? Even in summer the difficulty is not easy to overcome. It is at this point that the system breaks down. It is clear that two receptacles are needed.

THE HEALTH JOURNAL has recommended for the slops, in some circumstances, a large tight barrel, with a large round hole in one end, a large funnel and a long wooden stopper to fit the hole, and which could be put in tightly and removed without much difficulty. After the barrel is filled it could be plugged with the stopper,

turned on its side and rolled away to a convenient distance.

A VERY SAD CASE.—DR. ALGIE, of Caledon, in an interesting report gives the following very sad case, which should act as a warning everywhere. "A plasterer, whose family were living in Alton, had been working in Bracebridge during the winter; he was taken down with a severe illness, the nature of which we did not at that time know but which confined him to bed for many weeks. As soon as he had fairly recovered he came home to his family, and not having had any conversation with him on his return, I was not aware of the nature of his illness. About a week afterwards, I was called to see their little girl, the youngest of the family, and found her suffering from a violent attack of scarlet fever, from which she died in a few days. The following day three other children of the same family were taken down with the same disease, and though their illness was long and tedious they finally recovered. These cases occurring so soon after the father's return, and at a time when there were no other cases in the neighbourhood, aroused my suspicion and I questioned him regarding his illness. He said that the doctor told him he had diphtheria, but stated that in the house where he boarded a child had died from a severe sore throat, accompanied by a rash which he said was exactly like the rash his children had. I then asked him if his clothing had been disinfected, and he said that nothing had been said to him about it, and he was not aware that it was necessary. Here was a father returning home to his family after a protracted and painful absence, and they received him joyfully, glad after many weeks of uncertainty and suspense to see his face again, not knowing that he had brought with him germs of a disease that would place one of the little darlings that ran forth to meet him in her grave, three others on a bed of long and painful suffering, and bring the family to the brink of starvation. By strictest isolation and thorough disinfection not another case occurred. The name of "the doctor" in Bracebridge should have been given to the public.

THE AMERICAN PUBLIC HEALTH ASSOCIATION MEETING.

SEVENTEENTH ANNUAL CONVENTION, HELD IN BROOKLYN, N. Y., OCT. 22, 23, 24, 25, 1889.

THE seventeenth annual convention of the American Public Health Association, held last month in Brooklyn, was regarded as one of the most successful meetings of the association. Many hundreds were present, and Canada was well represented, from but few States in the Union was there a larger number of members present than from Ontario. Among those present were the chairman of the Provincial Board of Health, Dr. Rae, of Oshawa, and several of the members of the Board, Dr. Coventry, of Windsor and Dr. Playter, of Ottawa. Montreal was well represented, by Dr. Luchapelle, Prest. Provincial Bd. of Health, and ex-Ald. Henry R. Gray.

The President, Prof. Hosmer A. Johnson, M. D., of Chicago, presided at most of the sessions; Dr. Montizambert, of Quebec, Vice-President, presiding at the others. Many valuable papers were read and discussed, and the whole time—four days—was almost wholly devoted to hard work, with three sessions a day. The Brooklyn people through the local committees treated the delegates in a most liberal manner, conferring upon them almost the "Freedom of the city." A large number of valuable papers were read and discussed. In this issue we give lengthy extracts from one, relating to practical Sanitary Cooking, by Mr. Atkinson of Boston, a healthy, happy, jolly appearing middle aged man, and in future issues we propose to give synopses of and extracts from others, unless more valuable matter chance to be obtainable.

During the first session there was given a paper on

THE OVERSHADOWING OF OUR HOMES, by Dr. W. Thornton Parker. The author said that a soil loaded with roots and shaded from the sun is unfit to live upon. Free drainage, abundant sunlight and pure air in free circulation must be obtained by *thinning out* shade trees. An intermingling of shade and sunshine, not too much of either.

CLOTHING IN ITS RELATION TO HYGIENE was the subject of the next paper, by Dr. James F. Hibberd, of Richmond, Ind., whose years of practical experience are worth centuries of theories. He says that we do not dress properly, so that the functions of the skin may be normally carried on. Many people dress too warmly and it would be much better were the clothing so arranged as to allow free circulation of air and proper ventilation of the exhalations of the skin, without too great loss of heat in cold weather. Children were injured by too much clothing. A feeling of coolness, though not of absolute coldness, on the skin acts as a tonic and was beneficial. A combination of diet and exercise may well be wisely substituted for the heavy and burdensome wraps.

CAUSES AND PREVENTION OF INFANT MORTALITY

was the subject which occupied the afternoon session of Tuesday. Two papers were read: The first by Dr. Jerome Walker, of Brooklyn, and the other, upon the dwellings of the poor, by Mr. A. E. White, C. E., also of that city. Many members took part in the discussion which was highly profitable. It was stated that in Cleveland, the infantile mortality among the Irish is comparatively low. "This is attributed to the fact that the children are nearly always out of doors, where they have plenty of air." Both Dr. Smith and Dr. Janes of New York made the statement that infant mortality is less in the tenement houses of New York than among the better classes in that city, seemingly from the fact that tenement-house babies are nearly always in the open air, while at the same time they are not pampered, fed and confined to overheated rooms as are the offspring of the wealthy.

THE LEVER THAT IS TO RAISE the death-stone of ignorance from the lives of our little ones, according to the opinion of all who spoke on this most im-

portant subject, is POPULAR EDUCATION on the care of infants and young children.

At the close of the discussion Dr. Playter, Editor of this JOURNAL, proposed that in view of the importance of preserving the lives and especially of promoting the health and vigor of the coming generation that a special Committee be appointed to consider and report upon the whole question, such as infants food and the general management of young children, together with the causes of sickness and death among them. A committee was afterwards appointed.

In the evening the Association reconvened in the Academy of Music. The attendance was very large, the great structure being in fact filled, many of the most prominent physicians of the city being present. A profusion of rare plants fringed the stage, and Post's Twenty-third Regiment Band discoursed classical airs between the addresses. There were some happy speeches and the meeting closed at a late hour. On the stage were about 200 of the members of the Association. Here were given the address of welcome on behalf of the city, by the Hon Alfred C. Chapin, Mayor; the Address of Welcome, on behalf of the Medical Profession; and the President's Address. This last was lengthy but instructive and interesting. The president said: "As typhoid fever is a greater calamity than Texas fever, as Asiatic cholera is more to be dreaded than hog cholera, so do we need a Department of Public Health more than a Department of Agriculture; a bureau of vital statistics more than a bureau of animal industry."

The second day's session of the Convention was called to order shortly after 9 o'clock in the morning. The business of the meeting, reading of announcements and reports from Executive Committee, and election of new members, was hurried thorough in order to enable members to make a tour of inspection of Quarantine and East River Hospital Islands, which commenced at eleven o'clock on a special steamer.

Dr. John S. Billings, LL. D., major and surgeon United States Army, Washington D. C., then read a paper on the

U. S. CENSUS IN RELATION TO SANITATION AND VITAL STATISTICS.

Dr. Billings said: Theoretically we all agree that vital statistics are the foundation of public medicine, but practically, I suppose that the majority of sanitarians and physicians think that they are not essential to the work of a health officer or a Board of Health, although they may be desirable: that the main objects in sanitary work are to see that the water supply is pure, that garbage and excreta are promptly removed or destroyed, that no filth is allowed to accumulate in the vicinity of habitations, that contagious diseases are controlled by isolation and disinfection, and that plenty of fresh air be provided in schools, churches, etc., and that all this can and should be done whether death rates are known or not. Occasionally it is possible to get up a cholera or yellow fever or smallpox or typhoid fever scare, and then to get a little money for sewage or for street and alley cleaning, but these spasmodic reforms do not last long, and in most cases do not amount to much. You have got to produce constant undeniable evidence that the work is needed and is useful, evidence that will convince the press and the majority of the community, and this evidence must be mainly, death rates, to which should be added all the sickness rates that can be obtained. To give these death rates you must have a complete registration of deaths and a corresponding enumeration of the population, and you ought to have a complete registration of births. He then dwelt at length on the importance of making the next U. S. census as full and accurate as possible and asked the co-operation of all physicians and sanitarians in this behalf.

After the excursion in the harbor and visit to the quarantines, the following papers were read and discussed:—"Recent Researches Relating to the Etiology of Yellow Fever" (Illustrated with the stereopticon), by George M. Sterenberg, M. D., major and surgeon United States Army, Baltimore, Md.; "Preliminary Observations on the Micro Organism of Texas

Fever," by Dr. Theobald Smith, of Washington, D. C. ; "Some General Observations on Texas Fever" (Illustrated with the stereopticon), by D. E. Salmon, D. V. M., chief of the Bureau of Animal Industry, Washington, D. C.

On the third day, Dr. Ezra M. Hunt, of New Jersey, read a paper on "The Prevention of Phthisis Pulmonalis Discussion was deferred until after the reading of other papers on this subject in the afternoon. Dr. Martin, Health Commissioner of Milwaukee, Wis., then read a paper on the Disposal of Garbage He said: among all the plans for doing this work I do not believe there is one that gives absolute satisfaction, and others I know to be an intolerable nuisance. I was surprised when I examined the crematory in Chicago, for a more abominable nuisance could not well be placed on any half acre than I found on that one. The present system in the city of Milwaukee is the Merz system, which, from June last, has given good satisfaction. The next paper was by Dr. Kilvington, Commissioner of Health at Minneapolis, Minn., on Statistics on River Pollution, with Observations Regarding the Destruction of Garbage. After discussion, Dr. Gibbon of the Marine Hospital offered a resolution providing that the Committee on Garbage be increased from eight members to nine, and be asked to report at the next convention as to the best method of handling refuse, which was adopted.

THE PREVENTION OF TUBERCULOSIS IN MAN.

The afternoon session was held in the large theatre of the Hoagland Laboratory. "The first paper was read by Dr. E. Playter, of Ottawa, Canada. He dwelt chiefly upon the importance of lung development as a means of prevention and favored special systematic exercises in the schools, calculated to produce such development. Similar action might also be wise in the militia training. Lung development, he said, would develop all the other bodily functions—digestion, circulation, etc., and promote general vigor. Dr.

Playter believed that several millions of circulars might profitably be distributed, giving information in a popular form as to the causes of consumption and the best methods of avoiding them. Such leaflets had been sent out by the Health Department of New York City in a form that was highly satisfactory and could not fail to do good. These, however, he said, referred to the infection only as a cause. He would give instructions also in regard to special predisposing causes.—*Brooklyn Cit.*

Dr. P. H. Kretzschmar, of Brooklyn, read the next paper. He said there was no such thing as consumption without bacilli. He had no doubt that the disease could be spread by contagion. Cases where this had undoubtedly occurred, as between husband and wife, were on record. The same sort of bacilli which produced pulmonary consumption in man produced the disease in animals. Every phthisical patient was giving out in his expectoration millions of bacilli. He properly advocated the more general use of spittoons, but did not clearly urge the importance of careful, thorough and frequent disinfection or destruction of their contents, after use, which is of the utmost importance and upon which hangs their value. He treated of the influence and importance of heredity in pulmonary disease, and gave statistics showing the proportion of those who die of consumption which were the offspring of consumptives, and he expressed regret that Mr. Playter in his paper had not laid more stress upon this point.

In the discussion which ensued on this subject no other member spoke in favor of recognizing the hereditary principle. Dr. Hibberd emphatically asserted his belief that the best means of protection against germ diseases is to be found in so maintaining the general condition of the body by proper clothing and other means that it will be able to resist the action of the germs should they find access thereto. "Dr. Webster, from Maine, thought a most important means of prevention was referred to by Dr. Playter, when he suggested

special systematic lung exercise. He said the Maine St. Bd. of Health had followed, quite recently, the plan of Dr. Playter, of distributing leaflets filled with popular information on ways of preventing the spread or inception of pulmonary disease."

Before the close of the discussion Dr. Playter said a few words in reply to Dr. Kretzschmar. He thought it clear that the best authorities now believed that the influence of heredity had been altogether overestimated, and that the testimony of the entire profession goes towards proving that the disease is not inherited. A predisposition is found in want of general stamina, resulting largely if not mainly from limited respiratory capacity and hence want of due oxygenation of the blood, which is inherited and in which condition the body cannot resist the encroachments of the infecting bacilli. Life insurance companies had found that many applicants, rejected on account of supposed heredity, had out lived accepted risks free from suspicion, and now laid much less stress on the heredity theory. Dr. Playter thought we might about as well regard other infectious diseases as hereditary; as where would we find a case of scarlet fever, for example, in which the patient was not the offspring of parents who also had had this disease. The almost universal fatality of consumption drew more attention to this point of heredity in this affection.

SULPHUROUS DISINFECTION.

Dr. Cryus Edson of New York Board of Health read a paper of much interest on the use of sulphur dioxide as a disinfectant. He had found this of great importance in tenement house work against contagion in New York. A good deal of unnecessary discussion followed; a few throwing doubt on the efficacy of this agent. Mr. Henry R. Gray, of Montreal, told about its use in successfully stamping out the terrible epidemic in that city. He said sulphur dioxide was of doubtful value only in the case of diphtheria. The facts seem to be that sulphur may be relied upon to destroy the germs of scarlet fever, measles and small-pox, but not so surely those of diphtheria.

Dr. Edson explained that in New York when a room was to be disinfected three pounds of sulphur was used for every

1,000 cubic feet of air— $\frac{1}{4}$ flowers of sulphur and $\frac{3}{4}$ stick sulphur. The sulphur was put on a dish in a tub of water, four ounces of alcohol to every three pounds was poured over it, and the alcohol was ignited.

Dr. Durgin, the Medical Officer of Boston, stated that he had used sulphur as a disinfectant for twenty-two years and he was emphatic in his endorsement of it.

Dr. John H. Rauch, of Chicago, sent in the following preamble and resolution: Whereas, Asiatic cholera, leaving its usual restricted bounds threatens to advance by the same lines that it has followed in the last four epidemics, be it, *Resolved* That the American Public Health Association desires to call renewed attention to this fact, and to urge that quarantine authorities on the Atlantic and Pacific seaboards and Boards of Health throughout the country make every effort to prepare for this threatened danger. These have been, it appears, already acted upon.

In the evening, a paper on "Sanitary Entombment," by the Rev. Charles R. Treat, of New York, was presented; another on Railway sanitation by Dr. Samuel W. Latta, medical examiner for the Pennsylvania Railroad Voluntary Relief Department; and a third on the Sanitary Interests of the United States Demanding the Acquisition of Cuba, by Dr. Lee, Secretary of the Pennsylvania State Board of Health. This last, like some of the other papers, although of much interest to the people in the more southern part of the continent, is not of much interest in Canada.

Americans eat more than is required for the maintenance of health, was the pith of the paper on "Food in its Relations to Health," by Prof. W. O. Atwater, of Washington, D. C.

The fourth day was chiefly a sort of business day, and devoted to the appointment of officers, committees, &c., and the discussion and passing of resolutions of various kinds. Dr. Baker., Sect. of the Michigan State Board of Health, was elected president and Dr. Montizambert, chief Dominion Quarantine officer, first vice president. In the afternoon the convention adjourned to meet in Charleston S. C. in November 1890. It is hoped and believed by some that the Association will meet in Montreal in 1891. Why not in Ottawa?

EDITORIAL NOTES.

THE EDUCATION OF THE PUBLIC in regard to the great value of attending to all sanitary requirements in domestic and social life, and in the ways and means of preventing disease, is one of the great necessities of the present age. It is not so much the enactment of sanitary laws and regulations as the enlightenment of the great masses of the people on health subjects. In this way more than in any other, real and lasting happiness and prosperity among the people will be secured. The causes of disease, both individual and public, are caused of inability to achieve prosperity and success. Remove and avoid the causes of the former and we remove one of the most common and universal causes of the latter. Few men or women who have not good health can live a successful, happy life. No man depending for a livelihood upon his daily labor can prosper with cases of sickness frequently in his family. Disease is caused chiefly through ignorance and not wilful neglect of nature's laws.

THE PROPER EDUCATION OF THE MOTHER would soon reduce the enormous infant mortality in our cities. Dr. Moreau Morris of the New York Health Department, who had charge of the summer corps of visiting physicians, in presenting to the Board of Health his final report of the work done by the doctors, says that the testimony of the physicians goes to show that one of the principal causes of the illness and excessive mortality among young children is the ignorance displayed by the mothers in preparing the food for and in looking after their infants. The doctor suggests the organization of a corps of trained and properly-instructed nurses to visit the tenement houses at the approach of the hot weather, and instruct the mothers in the proper manner of preparing food for their young children and the care of them during the heated term.

RELATIVE TO THIS point is the question of teething as a cause of disease. Dr. S. S. Adams (in Arch. of Pediatrics) says: "After careful observation and study of the diseases of infants during the period of dentition, I am free to assert that neither the evolution nor eruption of the teeth has ever been accepted as an etiological factor in any of them. I accept dentition as a purely physiological phenomenon which may be subject to perversion. I would

not be dogmatic in the assertion that dentition is never a cause of disease, but such, indeed, has been my experience in pediatrics. "If those interested in this subject will pursue such an investigation they will eventually conclude that improper alimentionation, and not 'teething,' is the most potent factor in causing the disorders of the alimentary tract of infants. This is in accordance with the views of the medical profession generally.

PROPER NOTIFICATION to the health authorities of Municipalities of all cases of outbreak of infectious disease is indispensable to the prompt suppression of such outbreaks; and their prompt suppression means sickness and death prevented. At the eleventh congress, of the Sanitary Institute of Great Britain, held last month, Mr. G. W. Hastings, M. P., in the course of the presidential address said: this system, after years of trial, has been thoroughly approved by the profession. Notification had, by a recent Act, been made compulsory in the metropolis (London). It now extended over more than eight millions of population; and what was good for so large a proportion of the people must surely be good for the whole. It was to be hoped that the sanitary authorities, both in town and country, would see the expediency of adopting, by every means, this easy and efficacious preventive against the spread of disease. The universal success of this preventive measure depends much more upon education than upon compulsion.

AGAIN, WANT OF PHYSICAL EDUCATION and development is a direct cause of want of self control, and this want of self control is the one great first cause of intemperance in alcoholic spirits, while in the train of such intemperance follows incalculable misery and failure in life. In this connection we would notice M. Paul Sollier's Aubanel prize essay on the "Role of Heredity in Alcoholism" in *Progres Medical*. A more suggestive study for the physician, and a more saddening one for the philanthropist, as the British Medical Journal says, it would be difficult to imagine. "Here is original sin in terms of modern science, and the punishment threatened in the decalogue to 'the third and fourth generation' is exhibited at work in perhaps its most terrible form. By abundant and well-arranged statistics M. Sollier traces

the affliction of the idiot, the epileptic, the imbecile, the hydrocephalic, the choreic, and the mentally debilitated, up to the alcoholic father, mother, or grandparent, in so many and such clearly marked instances that it is quite impossible to deny his conclusions from the data he gives. An alcoholic subject runs a terrible risk of conferring upon his descendants either insanity or tendency to vice, or suicide, or hysteria, the milder nervous disorders. The legacy of evil may miss a generation, and then appear in the next.

THAT THE MORAL CHARACTER of the drunkard becomes degenerated, we are constantly compelled to observe; and perhaps the mildest form in which he transmits the consequences of his vice to his offspring is in the form of a dulled moral sentiment, a hazy mental outlook which, while not always developing to actual turpitude, yet makes the higher forms of manly and womanly nobleness difficult, if not impossible, of attainment. Dr. Bourneville has written a very interesting preface to the essay in which he asks, in view of the sad revelations of the statistics: What is to be done to remedy the evil? He suggests the establishment of special asylums for the treatment of inebriates; much greater supervision of the drink trade, and increased penalties for adulteration; but above all, the making known to the public—the education of the public in regard to—the awful consequences which drinking customs entail, not only on the drinkers themselves, but upon their descendants.

A SOURCE OF DISCOURAGEMENT is the reflection that few, if any, of our schemes for ameliorating the condition of our fellow men do more than touch the surface of the evils attacked, leaving their obscure and deep-seated cause to go on producing a like train of ills entirely uninfluenced by our efforts; this chiefly from want of education. Some one asked Dr. Oliver Wendell Holmes if it were not the fact that every disease could be cured if the doctor were called early enough? "Yes," he replied, "but early enough would commonly be two hundred years in advance." That Moorish doctor spoke like a philosopher when he prayed: 'Oh God, be kind to the wicked! Thou hast been sufficiently kind to the good in making them good.' We must all have sometimes wished that the human race could be propagated with as much care as breeders bestow

upon horses and cattle; and no thinking man of our profession can contemplate without pain the marriages of consumptives, siphilitics, neurotics, or drunkards.

THAT CRIME AND MENTAL DISEASE are simply the effects of criminal or cerebral atypism and therefore anatomically necessitated, has been very vigorously attacked in an able paper which Dr. George Gould recently read before the Medical Jurisprudence Society of Philadelphia. He maintained not only that this theory is not proved, but that it is disproved by unanswerable facts and arguments, and that modern civilisation is bringing about its own ruin by worshipping the hideous creation of its own fancies. If we look for atypism, it may be that we would find it both in criminals and the insane. Why? Because we cannot find a perfectly symmetrical skull or a perfectly typical brain in the world. Are there no sane folk, with atypical skulls? Dr. Gould has the gravest misgivings as to whether or no we are cultivating crime and insanity; and he quotes Dr. Farr and Professor Graham Bell to show how we are contributing to race deterioration in permitting the imbecile, idle, criminal, and defective classes to breed *ad libitum*.

THE AUTHOR MAINTAINS that all lunacy and all crime have resulted from slight repetitive but always conscious departures; from right living and thinking, and sound medicine has to check the departures. "The lie is not in the brain; it is in the liar. Evolution is dead against the modern Frankenstein; but Society says of its pet criminal, 'Poor fellow, he was crazy; let's build him a nice big asylum, and feed him, and hire attendants and doctors to wait on him.'" The Chinese regard insanity not as an extenuating, but as an aggravating, circumstance in connection with crime.

SOCIETY MUST LOOK FOR INSTRUCTORS and administrators mainly to members of our profession who have exceptional opportunities for forming just views as to the origin and transmission of insane and criminal tendencies, says the above mentioned journal. "The best hope lies in prevention." "The criminal class exists, and it is an evil that it is permitted to multiply itself by reproduction, but the greater evil is that it is being continually recruited from above; by the operation of disease—of alcoholism, and syphilis especially—and of unhealthy surroundings, using that phrase in its widest

sence, a process of degeneration is continually at work side by side with that process of elevation which society fondly believes is the main effect of civilisation."

IN A RECENT PAPER before the Medical Faculty of Maryland, on Inebriety as a Disease, Dr C. G. Hill said: "What we want, first, is a State Insane Asylum set apart for this purpose. And, most important of all, we should have the power of commitment so simplified that the testimony of two or more physicians, as is done in cases of insanity, would be sufficient to commit any inebriate, *volens volens*, to such an institution for a sufficient time to guarantee a thorough trial of the efficiency of treatment, and if he persists in returning to his old habit on being released, for the sake of himself and his family, for the sake of society, for the sake of humanity, let him be detained there throughout the term of his natural life, rather than have him propagate a race of neurotics who would probably become drunkards like himself, and after setting a terrible example and wasting his means and impoverishing his family go down at last into a drunkards grave.

IN A RECENT LECTURE by Dr. Deschamps, of Paris, he successively reviewed the neuroses and showed that the neurasthenic was a social invalid who appeared at the commencement of the nineteenth century; scientific discoveries, the revolution that electricity and steam have made in industry and commerce, the equality of individuals before the law, and the power of money, had progressively developed the ambition and desires. The derangement of the sensibility and weakening of the will were the two principal causes of the general diseased condition of society. The physical causes were located in hereditary or acquired faults, such as alcoholism, hysteria, epilepsy and morphinomania. He asked if the century did not lean to fatality. Was not pessimism the crisis? The pessimist, convinced of the inutility of effort, preached general renunciation; consequently the exercise of the will mastered him. The question was, solely, to conquer the pathological state of the senses, that the will should triumph. He would not modify actual, social and physiological conditions from top to bottom, but he would transform them by education and hygiene—toughen the muscles and strengthen the mind.

SIR ANDREW CLARK, the indefatigable President of the Royal College of Physicians, delivered a lecture before a large audience in Wribben hall (Worcestershire), where sir Andrew with his family were staying during the holidays. The lecturer chose as his subject, The Constitution of Man, with a Glance at its Relations to Health, Knowledge, and Religion, and gave a most admirable discourse. He first dwelt on man's environment, the varied face of the earth, the sky, and the starry hosts of heaven, and considered that there is nothing in all nature so suggestive of the Divine Ruler of the whole as the man who is gazing at this world and these stars. Then, asking, What is the constitution of man? he referred to his triune nature—man's body, mind, and spirit, and remarked that he possesses a spirit in common only with God. Body and mind are subject to the ordinary unalterable and inviolable physical law of Nature; but in regard to the spiritual part of man these laws cease to act; and for the physical law there is substituted a moral law alterable and violable by the will of man, and implying that man has free will. But this freedom implies responsibility. Right and wrong are distinguishable by conscience, which itself is illuminated by the Divine light. Man also has causal power, which, by taking the laws of nature, can combine them so as to produce results exactly the same as if he were causing them from the laws themselves. The possession of this causal power makes man at his highest and best a model in miniature of the Eternal God Himself.

HEALTH is the highest development of the bodily life; that of the mind, knowledge; and that of the spirit, holiness. Sir Andrew remarked that the laws of health are very simple. It is hard for doctors to think that they live by the sins, the ignorance, and follies of mankind; for with Nature there is no forgiveness of sins, the time of payment might be deferred, but it is nevertheless certainly exacted. As to knowledge, he doubted if this was a great age of education; it was undoubtedly an age of cramming, of merely storing the mind with facts. But true education consists in the development of the faculties in fit relation to each other. As to holiness, it is the sustained effort to die to one's self that one may live to God. Finally, the lecturer spoke at length of the ma-

terialistic and spiritual views of life, and advised all to choose the latter : but said that it entailed a perpetual self-sacrifice—the denying themselves every hour of the day, and every day of their lives. As to difficulties, without those of the body where would man's strength be? Without intellectual difficulties, where knowledge? Without spiritual difficulties, difficulties of faith, where would faith be? Worthless. He rejoiced that no man of competent powers of observation at the present day was an Atheist.

FIFTEEN YEARS AGO, in a paper read before the York County Medical Society, the Editor of this JOURNAL suggested a change in general medical practice, from cure to prevention ; the first suggestion of the kind ever made public it appears in Canada, if not on this continent. Since that time it is gratifying to find many advocates of the plan, and the subject has been brought before many Medical societies in both Europe and America. The public, communities and families, must be educated up to it. Physicians do not like to offer their services in this way ; although they might frequently discuss such a change with their patients. For the physician, if paid a fixed sum yearly for attending families when well, and endeavoring to keep them well, it would be a much pleasanter and easier practice, and he would know what amount of income he could rely upon, which is often a great advantage. To the families so attended it would be an incalculable benefit. The writer attended families in this way more than a quarter of a century ago, and it is most surprising that a general change is not coming about more rapidly. We wonder if this method of medical attendance has been practiced by any of our readers.

TO SPEAK PLAINLY, said Dr. Wilson, president of the Section of Sanitary Science of the Sanitary Congress of Great Britain, in his address at the recent meeting, "there was no disguising the fact that so long as the family medical practitioner continued to be paid to attend only on people when they were ill, and not to conserve the health of the household, there would be a constant drag on public health progress. He earned his living by disease, and so far as he prevented it he was placed in the unfortunate position of being out of pocket. He was, therefore, exposed to the temptation

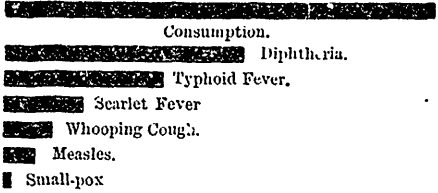
—a temptation which was happily scorned by the profession generally—that, when called upon to treat cases of preventible disease, whether social, sanitary, of communicable, he need give no warning, nor insist upon any precautions. He did not blame. The fault lay in a system of practice which depended upon the regrettable fact that, in spite of advancing knowledge, public credulity in the power of cure still reigned paramount, while public faith in prevention was practically dormant.

ALL THING WAS REQUIRED to bring about the change was that the ordinary medical attendant should be paid by an annual stipend or retaining fee, and not according to the number of visits which he might deem it necessary to make during illness. That system was largely followed in India and other places abroad, and no difficulty was experienced in settling what should be the annual fee for professional services rendered in that way. It was true that in this country the same kind of practice prevailed to a certain extent. For example, the proprietors of mines and other large works paid medical men so much a year to attend on their workpeople, while members of sick clubs, friendly societies, provident dispensaries, and paupers were also attended in that way ; but the misfortune was that the great majority of those appointments were scandalously underpaid, because they were regarded by medical men stepping-stones to general practice.

AS TO THE ADVANTAGES of the system of medical providence—of health assurance as it had been called, from a preventive point of view, the medical attendant would inquire into the health history of the household, so that he might take precautions against inherited tendencies, or warn against bad habits, errors in diet and clothing, and the numerous risks to health which were common in daily life. He would interest himself in the sanitary condition of the home and its surroundings, so that any defects might be inquired into and remedied. He would make it his duty to call from time to time without being sent for to see how the different members of the household were going on, and would thus have the opportunity of sometimes detecting ailments in the bud, which if not attended to at once, might lead to serious illness ; and he would take every

precaution in cases of infectious disease, and give timely warning to the sanitary officials for the protection of the public health.

THE "GREAT WHITE PLAGUE," is what an exchange aptly terms that ever present scourge, consumption. The accompanying diagram from the office of the Michigan State Board of Health represents graphically the relative number of deaths from various contagious diseases in Michigan, as compared with the deaths from consumption. In Ontario the proportion would probably be about the same :



About as many die of consumption as of diphtheria, typhoid fever, and scarlet fever combined. And yet how little effort, either public or private, is made to suppress this great white plague. While, when a case of small-pox is learned of by the authorities, there is "hurrying to and fro," and the "Mustering squadron" is put "forward with impetuous speed."

THE PREDISPOSITION to consumption, especially that given by the contracted chest and hence want of vigor—particularly referred to by the Editor of this JOURNAL in a paper read by him at the recent meeting in Brooklyn of the American Public Health Association, and the infection of the disease, are two great points which should be attacked in our war against it. The infection from animals must receive special attention, as well as that from the human body. At the recent sanitary congress in Great Britain, Mr. W. E. A. Axon, in a paper, said : "Most important of all, there can now be no doubt that man may become the victim of tuberculosis from eating the flesh of animals infected with that disease." And again : "The undisputed fact that tuberculosis can be imparted to the human subject by the use of the flesh of cattle affected by tubercle is one of the greatest and gravest importance; for a large proportion of cattle have the disease."

QUITE RECENT EXPERIMENTS have been made by a German physician, Hirschberger: Milk was shown to be infectious not only when the tuberculosis of the cow had become general, or when the udder was affected, but infectiousness was often shown in cows with the disease

localized or in its early stage. In cows which were much emaciated, the milk was almost always infectious; when the animals were in good condition infectiousness was present in about thirty per cent. of the cases. Fifty-five per cent. of all the animals experimented upon (by injection of milk under the skin) contracted tuberculosis.

MR HASTINGS, M. P., President of the Sanitary Institute of Great Britain, at the eleventh Annual Congress, opened Sept. 27, 1889, in referring to the fruits of the proceedings of such associations, through the education of the people thereby, said : the Sanitary laws could be much better enforced by such means,—i.e. by the educational process, than by new legislation with the view of coercion,

THE EMPIRE of a recent date says :—"The prevalence of typhoid fever in Quebec has unearthed a story which, if true, ought to send the guilty person down among the criminals. A milk vendor's son had died of typhoid fever in the house from which the milk was sent, the well water had become infected it appears, and although the milk itself was pure, the milk vessels had been washed with the foul water. In eighteen out of twenty-seven families supplied by the milkman the disease broke out. It is but the 'old, old story,' rarely, yet, 'found out' in this Country, where general inspection and investigations into such outbreaks has not been practiced, but common in England.

"DOWN AMONG THE CRIMINALS" the milk vendor should be sent, if he were not entirely ignorant of the manner in which the disease might be spread. Inspection in this case might easily have prevented the outbreak, but as the Empire further says : "There are scores of unhealthy conditions which the closest inspection might unwittingly overlook, and where the conscience of the citizen must be trusted." Here is one case where the education we have referred to is indispensable. The citizen cannot be trusted unless he is possessed of at least the necessary knowledge of how to act. Hence, the great need of the education.

ANOTHER OUTBREAK of a similar character is reported in the last number of the British Medical Journal (Oct. 26). Eleven cases of typhoid fever occurred between Sept. 17 and 24, among the consumers of milk from a dairy of a farmer, six members of whose family had been down with the fever previous to the 17th of Sept. But a peculiarity in this case was that the Medical Officer, after a most careful investigation, was quite unable to account for the first outbreak of

the fever in the farm house—which was in a boy aged 9 years who sickened on Aug. 5th. At length however the doctor learned that eighty pigs on the farm had suffered from swine fever for about a month or six weeks, the last of them having been killed and buried on August 8th. The boy was constantly with his father amongst these, watching the treatment, and assisting to bury the animals which died. The farmer's family had consumed some pork of an apparently healthy animal during the prevalence of the swine fever. It would be rash, as the British Medical Journal says, to attempt to draw any definite conclusions at present from the facts of this epidemic, "but the suspicion that swine fever or contagious pneumo-enteritis may be identical with human enteric fever is not entirely novel.

A FREE WATER SUPPLY has been advocated by sanitarians, and alderman O'Leary is advocating a good sanitary measure when he advocates a reduction in the price of Ottawa water. As a rule the cheaper it is the more people will use of it. We are inclined to the principle of raising a revenue for water in some other way and making water as cheap as air. When the source of the Ottawa water supply is made good, by all means let the price be lowered if possible.

AN ENGINEER, we understand, has stated that it will not be necessary to carry out the new pipe so far as was at first contemplated. Now a few feet more of steel pipe is of small consideration in comparison with the importance of obtaining the purest water possible, and we protest against any false economy in this regard. Engineers are not always well posted on the peculiarities and possibilities of water contamination, and we would prefer to be guided by the city water works Engineer, who has so far manifested caution and wisdom in looking to the purity of the water supply.

AS FURTHER EVIDENCE, if it were needed, that the water and not the impure air has been the chief cause of the typhoid fever which has been prevalent here, we note that Dr. Edson, long chief inspector of the New York Health Department, sums up his conclusions in regard to typhoid fever, as follows: First, that typhoid fever never infects the atmosphere: second that it never arises *de novo*; and third, that the causes of the disease, in order of their frequency, are as follows: First, infected water; second, infected milk; third, infected ice: fourth, digital infection; fifth, infected meat.

AGAIN, at the recent Congress of the Sanitary Institute of Great Britain, it was strongly asserted by a number present that "much of the complaining about sewer gas was groundless;" "that the ill effects of sewer gas had been much

exaggerated"; and that "it would be to prove that it was a source of typhoid fever, as some persons asserted."

SANITARY PROGRESS is not rapid, but to many discouragingly slow, especially is this the case with regard to individual hygiene. The cause is indicated in the Arkansas traveller's story about the leaky roof, which could not be repaired in the rain, and which did not need repairing when it was not raining. When sickness overtakes the people, they are unable to observe the laws of health, and when they are well they do not think it necessary.

BROWN-SEQUARD'S "elixir" is believed to owe what virtue it possesses, and we have no doubt that there is virtue in it, to an alkaloid called spermine, obtained, from the juice used, by Park, Davis & Co., Scientific chemists, of Detroit, according to the American Lancet. Spermine is also found in the brain, in eggs, oysters, and fish ova and milt.

IN THIS CONNECTION, however, the following funny bit (from the Pacific Rec. of Med., San Francisco) is pretty good: Into the foreleg of an old horse, that was so worthless on account of age that in another day he would have been in the soup—the mock turtle soup of Paris—Dr. Brown-Sequard injected his elixir. In an hour afterward, with bright red nostrils and tail neatly draped over the dashboard, he sailed up the Shonz Eleeza knocking spokes out of valuable carriages all the way up the Arc of Triumph, where he chipped out about five cents' worth of the corner of that great work and piled up Dr. Brown-Sequard in a chaos of clothes and contusions. The Dr.'s first anxiety was to find out, of course, whether the hyphen had been knocked out of his name. Finding that it had not he returned to his experiments.

ON THE SERIOUS side we would add, which too is due to the eminent physiologist, what Dr. Brown-Sequard said recently to a correspondent of the Illustrated London News: "I thought I knew my countrymen, but it seems I was mistaken. It never occurred to me that so many would go off at 'half-cock,' as it were, and undertake experiments without first mastering details. I never made use of the word 'elixir,' still less of the words, 'elixir of life'.... It quacks in America have killed people, as stated, they would have avoided murder had they paid attention to the most elementary rules as regards the sub-cutaneous injection of animal substances." The Dr. is now studying to accomplish for women what he claims has been reached in the case of men.

MRS MAYBRICK, the Sanitary Volunteer says, may have been an accessory in the murder of her husband, but since an English medical journal has published a statement of the drugs that were administered to him during his illness, we feel positive that she could not have been the principal. The list comprises the names of over 20 compounds, among which are Fowlers, solution of arsenic, nitro-glycerine and nux vomica,

DR. CRICHTON BROWNE regards the exercise of the imagination as a preventive of insanity. "The lunatic, as a rule, has no imagination at all—he is the victim of fixed ideas of a certain sort. Hence mental health calls for a proper exercise of the imagination.

A NOVEL tobacco and whiskey drinking antidote is mentioned by the New York Medical Times, as below indicated: those who smoke their first cigarette say at seven o'clock in the morning, begin by putting it off just ten minutes past the hour for a few days, then make it fifteen or twenty minutes, and so on, until it will be noon and then night before the first one is smoked. If it is slow it is certainly sure.

THE N. Y. MEDICAL JOURNAL thinks that one cause of the ill-health of women is the excessive weight and size of all household or kitchen utensils, boilers, pots, tubs, pails &c. It says that these were made for men rather than women. Hence, he who reduces these to the proportionate size and strength of women, will have conferred a lasting benefit upon the race.

AT its last meeting, the General Assembly of the Presbyterian Church, by resolution, disapproved of all those advertisements in religious journals which are dishonest in form, fraudulent in substance, or prejudicial to the refinement, modesty and purity of the home life.

RELATIVE to kidney disease and excess of nitrogenous foods, it said by an authority that in whichever direction we leave the temperature range of climate we find albuminuria less common. It is the compatriot of wheat and barley [and perhaps a larger supply of animal food] rather than of the vine and the olive. Great Britain an eastern United States represent a principal field for this disease, while California, especially Southern California, represents the nearest approximation to immunity from it.

FORMERLY Munich had a high mortality from typhoid fever. Since Pettenkofer instituted his measures of reform, this fever has become so rare that medical teachers are at a loss to find cases to show their classes. Thus, from being one of the most unhealthy cities in Europe it has become one of the healthiest. All due to the practical application of sanitary science.

MEMPHIS Tenn., in like manner, has been changed from a notoriously unhealthy town to a city with as low a mortality as almost any city having the same population.

DURING the convalescence of typhoid fever patients, the Sanitary Inspector wisely reminds its readers, the greatest precautions should be taken by the nurses and other attendants against indiscretions in eating on the part of the patient. Carelessness in this direction is very frequently the cause of sudden death, even after the physician congratulates himself on pulling the patient through the disease."

THE EMPIRE says, "the coupling pin must go say the breakmen. Figures show a frightful mortality from this cause. In the state of Iowa with 6,000 miles of road, 2,224 breakmen have been killed in ten years" an average of from 4 to 5 a week. In the same period 50,000 brake-men have lost their lives in the United States. Nearly 100 a week. It is time.

In Columbus, Ohio, during the year 1888, forty-seven arrests were made for violations of the sanitary rules and health laws.

A DEATH was lately chronicled, by one of the medical journals, of a boy of thirteen years as the result of smoking one or two strong cigarettes.

ALBANY (N. Y.) County Medical Society has a standing Committee on "Hygiene and the Relations of the Profession to the Public," which makes valuable suggestive reports from year to year. A good example for Medical Societies to follow.

THE HEALTH authorities of Hungary have decided that the sale of oleo-margarine should be prohibited in that country, since it is digested with great difficulty and causes disease of the stomach. Besides it is difficult to ensure its purity, and therefore permission to make and sell it would only encourage fraud.

THE VIEW is gaining ground amongst the magistracy that it is not necessary under the Public Health Act or Nuisances Removal Act to prove injury to health in order to constitute a nuisance. This view—or rather the opinion that a nuisance is that which may be injurious to health, and not necessarily that which has been—was taken by the Court of Appeal in the Bishop Auckland case.

THE "British Medical Journal" contains an analysis of a report of the Royal Agricultural Department for 1888, dealing largely with four diseases—tuberculosis, actinomycosis, anthrax, and rabies—which have a direct relation to preventive medicine and human pathology.

TYPHOID FEVER in domestic animals, is the subject of a communication in the *British Medical Journal*. The writer refers to the prevalence of typhoid amongst oxen and dogs in Natal in 1880. The typical lesions of typhoid were found in several cases examined, of these animals that had died with all the symptoms of the disease. In fresh encampments there during 1879 and 1880, the cattle were first attacked with diarrhoea, hæmorrhage, "redwater," and "lung sickness." After a few weeks the men were down with genuine typhoid, suggesting a progressive development of the virus.

THE MEDICAL AND SURGICAL SANITARIUM at Battle Creek, Michigan, which we have commended on several occasions, as being a first class institution, in every respect, is not carried on with the view of making money. All employees and assistants, or all connected with it in this way, are employed at a moderate salary and all the earnings of the institution have been forever assigned by the stock holders to the improvement and enlargement of it from time to time and for admitting a certain number free who are not in a position to pay.

CURRENT LITERATURE.

INEBRIETY, its pathology, Treatment and Jurisprudence, By Norman Kerr, M. D., F. L. S. (Second edition: London, H. K. Lewis 136 Gowen st.), is the most elaborate and systematic work on inebriety which we believe has been yet published. It is concise and practical, and free from discussion of the temperance question; the subject being treated strictly from the scientists standpoint. The author is one of those who take the view that inebriety is a disease, calling for medical, mental and moral treatment. He says "there is a departure from health, in the form of some obscure condition of the nervous system, which craves for the temporary relief afforded by some stimulant or narcotic." He does not hold that all drunkenness is a disease, as some drink doubtless from sheer "cussedness." Inebriate indulgence is not limited to alcohol.

THE ILLUSTRATED LONDON NEWS has given, during the last few weeks, the usual number of excellent illustrations, with most useful and interesting reading matter. "In Clover" is a charming full page picture; so also is "A Seaside Reverie." "In the Atrium" is fine, and "The Shrine of Venus" is very attractive—double page, from a picture by L. Alma Tadema, R. A. Another, double page, gives a very fine view of the great new Railway bridge across the Fourth at Queen's ferry, Scotland—another "Wonder of the World"—with

a portion of the river and scenery beyond. There are a great number of other illustrations. Sir Andrew Wilson contributes some excellent articles.

THE POPLAR SCIENCE MONTHLY provided advance sheets of Mr. Edward Atkinson's paper on the Art of Cooking to the members of the American Health Association immediately after the reading of the paper, which was published in full in the Monthly for November.

THE DESCENDANTS OF PALÆOLITHIC MAN IN AMERICA is the subject of an article, by Dr. CHARLES C. ABBOTT, which will open the December "Popular Science Monthly." It describes the surroundings and occupations of the men who made the rough pottery and the implements of slaty rock which Dr. Abbott has found so abundantly in the Delaware valley.

IN ST. NICHOLAS, during the coming year, athletics and outdoor sports will be a special feature (contributed by Walter Camp, of Yale, and others), and there will be stories of character and adventure, sketches of information and travel, outdoor papers, suggestive talks on natural history, and the march of events. Both the December and January numbers are to be holiday issues.

THE CENTURY MAGAZINE during 1890 will publish the long looked for Autobiography of Joseph Jefferson, whose "Rip Van Winkle" has made his name a household word. Prof. George P. Fisher, of Yale University, is to write a series on "The Nature and Method of Revelation," which will attract every Bible student. Bishop Potter of New York will be one of several prominent writers who are to contribute a series of "Present-day Papers" on living topics, and there will be art papers, timely articles, etc., etc., and the choicest pictures that the greatest artists and engravers can produce.

THE CANADIAN QUEEN. This elegant home magazine is sure to please every Canadian woman. It is devoted to Fashion, Art Literature, Flowers, the Toilet, and Household Matters. It is handsomely illustrated, and is equal to any of the high-priced foreign publications. The imported designs for Fancy Work, and Home Decoration, are worth, alone, the entire year's subscription. No intelligent housewife can afford to keep house without its "Hints on Cooking," so ably conducted by the superintendent of the Toronto Cooking School. It already has a circulation from Nova Scotia to British Columbia and every lady pronounces it "Charming." To introduce it into every cultivated home *at once*, it will be sent on *trial* for three months for only 25 Cents. Address,—The Canadian Queen, Toronto, Ontario.