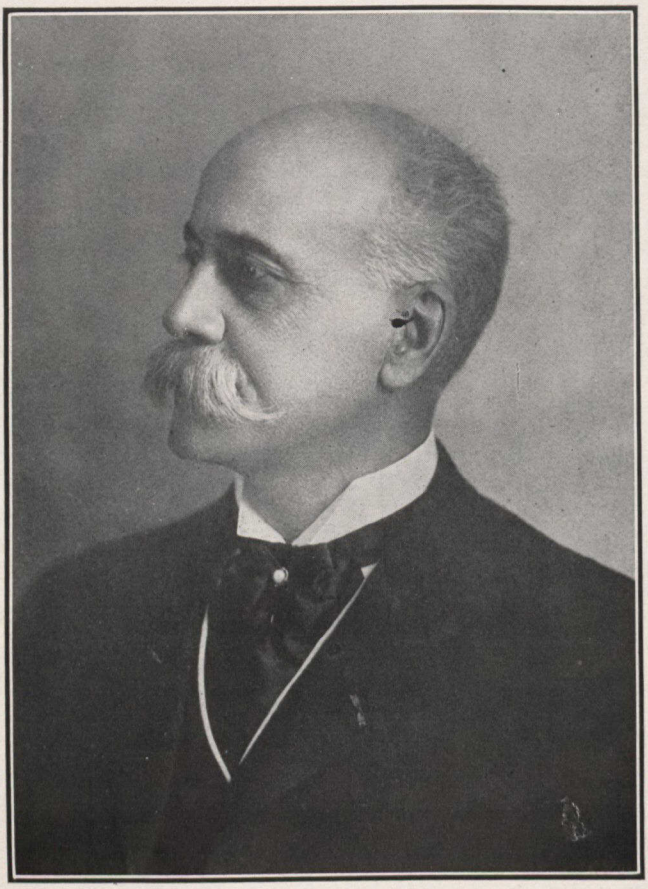
PAGES

MISSING

The Public Health movement is one of the finest examples of social growth known to us. It is the name for a vast organization that as grown out of definite social needs. It has a perfectly definite objective; it has methods that can be analysed down to detail; it is steadily showing itself in new differentiations and integrations; there is no section of society unaffected by the movement; there is no section that can disregard it; there is no meanness of finance that can escape it; there is no inertia that it will not ultimately overcome. Over and over again we see the bitter lesson driven home on the reactionery mind; over and over again the densest imagination must waken up to a local need, that disease disablement and death have revealed; over and over again, the unhealthy locality, the unhealthy house, the death dealing industry, and other innumerable varieties of insanitation have vanished under the tide of hyienic ideas—*W. L. Mackenzie, M.A., M.D., D.P.H., in "Health and Disease."*



M. LE DR. E. PERSILLIER LACHAPELLE,

PRÉSIDENT, CONSEIL D' HYGIÈNE DE LA PROVINCE DE QUÉBEC.

The
Public Health Journal
State Medicine and Sanitary Review

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Editorial

THE CANADIAN PUBLIC HEALTH ASSOCIATION CONGRESS

From December 13th to 15th next, will gather at Montreal in annual session for the first time, the members of this Association, formed a year ago.

It is just twenty-five years since the first Public Health Congress was held in Canada, when the American Public Health Association, which had the year before enlarged its constitution to include Canadian members, held its annual sessions in Toronto in 1886. This was at that time a notable event, creating widespread interest, and proved of great Provincial value, since during the meeting, was organized the Association of Executive Health Officers of Ontario, the reports of whose twenty annual meetings, published by the Provincial Board of Health, form the only compend of practical municipal public health work to be found in Canada to-day.

Yet this Association was limited to Ontario; and Public Health workers in Canada have felt that with the growing sense of nationhood a department of public administration in its essence so peculiarly inter-provincial and national — and, indeed, continental — in its relationships ought to find expression in an organization of national character.

It was this spirit and sense of need for mutual assistance and co-operation, which resulted in the formation in 1900 of the Canadian Association for the Prevention of Tuberculosis, whose Annual Report of 300 pages has just been published, and in which the prefatory note states: "Last year's Report showed a well-marked advance all along the line in the campaign against tuberculosis. The progress thus recorded has continued and is yet more striking."

The growth of the national spirit was still more accentuated when in Ottawa, in October, 1910, at the call of the Commission of Conservation of Canada, a Conference of Federal and Provincial Public Health Officers was held and formally organized for future work.

During this conference, through the exertions of the editors of *The Public Health Journal*, published in Toronto, primarily as the outcome of private funds, given through a patriotic sense of duty, those attending the Conference and others were brought together and after discussion resolved themselves into the Canadian Public Health Association, and adopted the *Journal* as their organ, subject to their official supervision.

A year has passed, and the ideas thus crystallized have broadened into a Public Health Congress, which is to be held in Montreal, and which becomes for Canada the first concrete illustration of the unity of purpose of all interested in the many phases of our national health.

This meeting will be a notable one, more so even than that which instituted the Tuberculosis Association in 1900 under the patronage of Lord Minto, since this first Congress of the Canadian Public Health Association will he held under the distinguished patronage of Field Marshal His Royal Highness the Duke of Connaught, Governor-General.

What the Association proposes is very well outlined in the programme published in this number of the *Journal;* but what it may become to Canada cannot as yet be fully foretold.

The Provinces of Canada were long looked upon as *disjecta membra,* each with its separate interests, working out its own problems in health, as in other matters, largely alone. Everywhere health officers were too often looked upon as necessary evils, like the nuisances they were supposed to abate, rather than as most important elements in the construction of the social fabric of a modern State. The engineer might build highways and construct waterworks, which the business men would finance; but it is to the medical officer to whom it is given to make those researches into the secrets of Nature and of Life, to the biologist, in fact, that we look for that guidance which will lead the people in every sphere to higher planes both of thought and action whether in regard to personal hygiene, the education of the child, work in the field, shop or mine, or in those higher relations which make up our complex social life.

That the field of Public Health is, however, wider than biology is evident when the list of those who have become patrons, honorary officers, officers and members is examined. There will be seen His Royal Highness the Governor-General, the official embodiment of all the administrative wisdom and good will which the King and Imperial Government can send to the people of Canada. There we have Lord Strathcona, the Canadian Nestor, whose ninety years form a book of wisdom, illustrating obedience to every commandment in the decalogue of Hygiene; while the Premier of Canada and the Premiers of all the Provinces, together with their Ministers especially in charge of Public Health services, and the chairman of the Conservation Commission and his chairman of the health committee, are all to found amongst the Honorary Vice-presidents.

In its active membership we find all the professors of Hygiene in the colleges, the officials of the Public Health services of the Dominion and of the Provinces, the Officers of Health of hundreds of municipalities with associated architects, engineers and social workers generally, co-operating with our medical men in every part of Canada.

The people of this country will await with expectant interest the pronouncements of such an association on the many public health problems, the solution of which is of advantage to all.

CANADIAN PUBLIC HEALTH ASSOCIATION.

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PROGRAMME.

Of the First Annual Convention, to be held in Montreal, at McGill University, 13th-15th December, 1911.

Wednesday, 13th December.

10 A.M.—
General business meeting, including the adoption of the Constitution.
Registration of Members.
Meeting of Committees.

2.30 P.M.—1ST GENERAL SESSION—PAPERS.

1. "Military Aspects of Sanitation," Colonel G. Carleton Jones, Director General, Medical Services, Ottawa.
2. "Duties of Authorities and Private Citizens Towards Consumption," C. J. Fagan, Esq., M.D., Provincial Officer of Health, Victoria.
3. "Medical Inspection and Care of Immigrants on Shipboard," J. D. Page, Esq., M.D., Quebec.
4. "Conservation of Food by Cold," P. H. Bryce, Esq., M.A., M.D., Chief Medical Officer, Department of Interior, Ottawa.

5. "Cheese Factory and Farm Well Waters," W. T. Connell, Esq., M.D., Professor of Bacteriology, Queen's University, Kingston.
6. "Tuberculosis a Public Question," Geo. D. Porter, Esq., M.B., Canadian Anti-Tuberculosis Association, Toronto.
7. "Factors in the Spread of Acute Intestinal Epidemics," H. W. Hill, Esq., M.D., D.P.H., Director Epidemiological Division, State Board of Health of Minnesota, Minneapolis.
8. "The Municipalization of Milk Supplies," W. A. Evans, Esq., A.M., M.D., D.P.H., Chicago.
9. "Hygiene of Canadian Waterways," William Oldright, Esq., M.A., M.D., Toronto.
10. A paper by Dr. Rutherford, Department of Agriculture, Ottawa.

8.30 P.M.—

Official opening of the Convention at the Royal Victoria College, Sherbrooke Street, Montreal, by the Patron, Field Marshal, His Royal Highness, the Governor-General.

Address by the Hon. R. L. Borden, P.C., Premier of Canada.

Address of Welcome, by His Worship the Mayor of Montreal.

Address of Welcome by the Hon. Sir Lomer Gouin.

President's Address.

Conversazione.

Thursday, 14th December.

10 A.M.—MEETINGS OF SECTIONS—

Section 1—Medical Officers of Health; Convener, Louis Laberge, Esq., M.D., City Medical Officer of Health, Montreal.

Papers will be read in this section by J. W. S. McCullough, Esq., M.D., Chief Health Officer of Ontario; M. M. Seymour, Esq., M.D., Health Commissioner of Saskatchewan; and several others, names and titles of papers to be announced later.

Section 2—Laboratory Workers; Convener, J. A. Amyot, Esq., M.D., Professor of Hygiene, Toronto University.

Papers will be read in this section by W. T. Connell, Esq., M.D., Professor of Bacteriology, Queen's University, Kingston; C. H. Higgins, Esq., D.V.S., Biological Laboratory, Ottawa; Major H. M. Jacques, Esq., M.D., D.P.H., McGill Hygiene Laboratories; and several others, names, and titles of papers to be announced later.

Section 3.—Sanitary Engineers and Architects:Convener, T. Aird Murray, Esq., C.E., Toronto.

Papers—

1. "Garbage Removal and Destruction," R. H. Knight, Esq., M.D., City Water Department, Toronto.
3. "Chlorination of North Toronto Water Supply, E. A. James, Esq., C.E., Town Engineer, North Toronto.
3. "Gravity Mechanical Filtration at Saskatoon," Geo. Clarke, Esq., C.E., Toronto.
4. "Water Supply by Air Tank Pressure for Small Towns," F. McArthur, Esq., C.E., Town Engineer, Yorkton, Sask.
5. "Mistakes to be Guarded Against in Water and Sewerage Systems for Towns," A. E. Blanchard, Esq., C.E., City Engineer, Lethbridge, Alberta.
6. "Lantern Views of Lethbridge Sewage Disposal System."
7. "Natural Ventilation as Applied to Private Houses, etc.," T. W. Ludlow, Esq., B.Sc., M.A., Professor Architecture, McGill University.

Other papers will also be read at this section, the titles of which will be announced later.

Section 4.—Social Workers: Convener, Mrs. Grace Ritchie England, M.D.

1. "Infant Mortality and Pure Milk," C. Blackader, Esq., M.D., Professor of Pediatrics, McGill University.
2. "Child Welfare," G. J. Adami, Esq., M.D., Professor of Pathology, McGill University.
3. "Defective Children," Miss Helen MacMurchy, M.D., Toronto.
4. "Citizenship in Connection with Public Health," T. A. Sherrard, Esq., Westmount, Que.
5. "Medical Inspection of School Children," Mrs. Smillie, Westmount.
6. "Infant Mortality," Miss Ellen Babbitt, Russel Sage Foundation, Washington, D.C.

2.30 P.M.—2ND GENERAL SESSION.

Symposium on Town Planning and Housing. Papers:

1. "Town Planning and Housing," Chas. A. Hodgetts, Esq., M.D., Medical Adviser Commission on Conservation, Ottawa.
2. "Town Planning and Civic Authorities," J. E. Laberge, Esq., M.D., Superintendent, Infectious Diseases Department, City Hall, Montreal.
3. "Insanitary Housing Conditions," Chas. J. C. O. Hastings, Esq., M.D., City Medical Officer of Health, Toronto.
4. "Insanitary Areas," James Roberts, Esq., M.D., City Health Officer, Hamilton.
5. "Municipal Powers in Dealing With Town Planning Schemes," Rickson A. Outhet, Esq., Architect, Montreal.
6. "Rehousing in Canada," W. D. Lighthall, Esq., K.C., Westmount.
7. "Statistics on Housing," Percy E. Nobbs, Esq., Architect, Montreal.
8. "Town Planning," Colborne P. Meredith, Esq., Architect, Ottawa.

8 P.M.—Annual dinner of the Association for members, delegates, and the ladies accompanying them.

Friday 15th.

10 A.M.—3RD GENERAL SESSION.

Symposium on biological sewage disposal. Papers:

1. "Physical and Economic Aspects of Biological Sewage Disposal Plants," P. H. Bryce, Esq., M.A., M.D., Chief Medical Officer, Department of Interior, Ottawa.
2. "Progress in Canada in Biological Methods of Sewage Disposal During the Last Twenty Years," Willis Chipman, Esq., C.E., Toronto.
3. "Engineering Problems Involved in Biological Methods of Sewage Disposal," T. Aird Murray, Esq., C.E., Toronto.
4. "Chemical Problems Involved in Methods of Sewage Disposal," G. G. Naismith, Esq., Ph.D., Toronto; J. O. Meadows, Esq., C.E., Montreal.
5. "Bacterial Problems Involved in Biological Methods of Sewage Disposal," J. A. Amyot, Esq., M.D., Toronto; T. A. Starkey, Esq., M.D., D.P.H., Montreal; H. W Hill, Esq., M.D., D.P.H., Minneapolis.

12 Noon.—

Business meeting and election of officers for the ensuing year.

2.30 P.M.—

Meeting of new Executive Council.

Members proposing to attend, and sanitary authorities and other organizations sending delegates, are requested to kindly intimate their intention at as early a date as possible to the secretary of the Committee on Local Arrangements, F. C. Douglas, Esq., M.D., D.P.H., 51 Park Ave., Montreal.

In order that members and delegates may get the advantage of reduced railway rates on their return trip, they are requested to obtain standard certificates from their local passenger agents on purchasing their tickets to the Convention.

Special Articles

TORONTO WATER SUPPLY: PREVENTION OF WASTE

BY WILLIAM OLDRIGHT, M.A., M.D.
EMERITUS PROFESSOR OF HYGIENE, UNIVERSITY OF TORONTO

The question of Toronto water supply and prevention of waste is, to her citizens at least, of practical interest at the present time.

Before our filtration plant has got into working shape a proposal is made, and that in high quarters, for an extension of it to even double the area already determined upon. Those who make this proposal have lost sight of the fact that figures show that Toronto wastes an unreasonable quantity of water. From figures collected in the principal cities of Europe and America, for many years we used to consider 75 gallons of water per head per diem a very liberal allowance for all purposes of a city.

From a sanitary engineer well versed in municipal work in England, but now residing in Toronto, I have lately received information that with regard to the highest sanitary needs, a smaller supply than this has in later years been found sufficient, as greater care in safeguarding from waste has been employed, and this, as I have just intimated, without harmful stinting of necessary or helpful use.

I have to thank this gentleman for some particulars of city water supplies, copied from the *Cyclopædia of Civil Engineering* of the American Technical Society. The amounts for the English cities given are all 43 gallons or under; these are London, Manchester, Liverpool, Birmingham, Bradford, Leeds and Sheffield. In Continental Europe, the variations are great — from 11 in Venice, with its exceptional roadways, to 264 in Rome, with its exceptional gushing fountains and exceptional gravity supply. What we wish to know, however, is not how much water other cities can afford to pour out, but with what amount they can provide for ample sanitary requirements; and in no other city except Marseilles is the amount given over 60. In more than half it is less than 50. On this continent the variations are not so extreme in either direction, though still great. Some cities of good report are quoted as approaching the mean: Providence, 57; San Francisco, 63; Worcester, Mass., 66; Rochester, 71; Montreal, 83; Brooklyn, 89; Toronto being quoted at 100. I have visited several of the cities in the list given, and their water works, amongst them Berlin and Paris, and have found their sanitary condition apparently not suffering from the fact that they do not pump as much water as we do.

The amount which is now being pumped, and the amount which it is estimated can be efficiently filtered by our filtering plant is about the same, between 40,000,000 and 50,000,000 gallons per diem. It has been said in the high official quarter to which I have referred that we should look to the future; but the figures just given show that we shall have in the near future provision for more than double our present population if our waterworks engineer be given power to stop the waste that is now going on; and that even with the large allowance of 75 gallons which used to be talked of, we shall have provision for a population of 600,000.

Since commencing this paper I have been given to understand by Mr. Fellowes, waterworks engineer of Toronto, that he made an inspection and test of a district of the city lying between Yonge and Bathurst Streets, south of Wellington to water front.

In the district lying between Queen Street and Gerard Street, and Yonge and Dalhousie Streets, having an area of 1,100 feet by 2,500 feet, the minimum night flow was found to be 400,000 gallons. In another district, that lying between Bloor and College Streets, and St. George and Robert Streets, the minimum flow at night was also 400,000 gallons per 24 hours, while the district between Bloor and College streets, and Bathurst to Robert, shows a minimum flow of 510,000 gallons — 95 per cent. of all these districts being waste in houses from leaky fixtures and wilful waste through allowing taps to run. On one street 12 services were found running to waste 80,000 gallons per 24 hours—29,200,000 gallons per year. This, at 10c. per 1,000 gallons, is chargeable at $2,920, while the revenue derived from these houses amounts to $80 or $90.

One of the first steps towards correcting this evil should be a more extensive investigation, and this might lead to an extension of the metering system. A suggestion worth considering is that the waterworks inspectors should carry with them a supply of washers or such simple contrivances as would not interfere with the trade of the plumbers, and householders would then welcome, rather than resent, the visit of the inspectors.

Into the various sources of waste within and without the household it is not necessary to enter; nor into the various other details which the engineer has in mind for controlling it.

An advantage of reduction of water supplied is not confined to the first cost and facilities of supplying the amount—the wear and tear of machinery, cost of fuel, and capacity and efficiency of filters; but it also has a bearing on the treatment of the sewage effluent. Whatever plan or plans may be adopted for this, whether filtration of it on large tracts of sandy land, as was proposed at a joint meeting of the city and provincial health authorities some years ago, or whether entirely by septic tank, by contact beds, or by chemical treatment, whatever may be done, it will be much easier and more economical to handle a small amount of sewage than a large one, and much of the waste water finds its way into the sewers.

The intimate relations between sewage-disposal and water-supply are well known to readers of *The Public Health Journal*, and it must remain one of the regrets of Toronto sanitarians that our city should have been so long before beginning at the right end — disposing of the sewage so as to keep the water pure. It is, however, some satisfaction to those who for the last twenty-five years, since the early days of the Provincial Board of Health and during the professional lifetime of our city engineering staff, have been pressing this subject,—it is some gratification to find the trunk sewer almost an accomplished fact, and that we may hope, if we do not die too soon, to see a proper disposal of its effluent. May we hope, too, that Toronto citizens will some day drink pure water without an admixture of drugs. Those who have made extensive observations of the effects of different varieties of water on the physical condition of consumers seem to consider that the question of the chemical and mineral ingredients of water is not a matter of indifference.

In looking back over the sanitary history of Toronto one is struck with the disproportion of outside advisers — "experts"— and the results accomplished, and with the effects of the lack of continuity. If at certain times we had relied more upon our own officials, leaving it to them to seek consultation and advice on points in regard to which they needed it, and allowing them to get to work, it would have been much better. The magnates of municipal government come and go, but the engineer's department and the health department have a continuous study and history of the sanitary problems of the city, and a sense of responsibility and a laudable measure of pride. Let us recognize this more.

LE MEDECIN ET L'HYGIENE

PER LE DR. E. PERSILLIER LACHAPELLE
PRESIDENT, CONSÈIL D'HYGIENE DE LA PROVINCE DE QUÉBEC

L'hygiène est devenue une science positive, donnant des résultats certains, toujours les mêmes. Cela est dû en grande partie, aux progrès énormes accomplis par la médecine pasteurienne. Et c'est pour cela que'lle est d'un si grand secours au médecin qui s'efforce de prolonger la vie de ses clients, soit en rétablissant la santé, lorsqu'elle est compromise, soit, ce qui est mieux encore, en empêchant la maladie de compromettre la santé.

Considérons l'hygiène un instant, et voyons quel vas to champ elle couvre. Par l'alimentation, la gymnastique et le travail, elle nous permet de développer la force et de fortifier la santé. C'est elle qui, par des régimes alimentaires spéciaux, par des régles bien comprises des soins à donner aux malades, nous fournit les moyens de soutenir ceux-ci à travers les maladies les plus longues et les plus débilitantes. Bien plus, en formulant les règles de la prophylaxie, elle a, suivant l'heureuse expression du Professeur Brouardel, rendu les maladies contagieuses *évitables,* et fourni ainsi, l'un des moyens les plus sûrs de protéger la santé. On peut rendre à l'hygiène ce témoignage, qu'elle a diminué, dans le monde entier, la mortalité générale, et jamais l'on ne pourra rendre à notre profession, un témoignage plus flatteur.

Le médecin, s'il veut remplir sa mission d'une manière efficace, doit être hygiéniste. Non-seulement il doit fixer l'hygiène générale des familles, afin de développer au foyer même la santé et la force; non-seulement il lui faut établir l'hygiène particulière à chaque maladie, s'il ne veut pas que le malade succombe; mais il doit encore, dans les cas de maladies contagieuses, protéger la santé du public. Son rôle ici n'est pas le moins important; car, suivant l'axiome bien connu, "mieux vaut prévenir que guérir."

De toutes les mesures hygiéniques, c'est en effet la prophylaxie qui doit tenir la première place. Cette vérité est démontrée depuis longtemps par les faits. Elle est admise aujourd'hui sans conteste, et les autorités civiles en ont fait la base des organisations sanitaires dans les pays civilisés. L'hygiène internationale à ses lois écrites, et l'établissement des quarantaines aux frontières n'a été que le résultat de la prophylaxie armée, mesure pacifique s'il en fut, puisqu'elle ne vise qu'à sauvegarder la vie des habitants du territoire, mais mesure ayant force de loi tout de même, et à laquelle tout voyageur doit se soumettre.

Les grands centres de population agissent de même, désirant, eux aussi, protéger la santé publique sur leur propre terrain. L'hygiène municipale a ses réglements, qu'elle impose partout où l'autorité civique a le droit d'intervenir. C'est ainsi qu'elle veille à la bonne qualité de l'approvisionnement d'eau, à la propreté des rues, à l'assainissement du sol, à la salubrité des logements, des écoles, des établissements industriels etc. Il est bien qu'il en soit ainsi, puisqu'il s'agit, somme toute, de combattre l'éclosion des maladies, de conserver la vie des contribuables

Mais si l'hygiène internationale, qui relève des gouvernements et l'hygiène municipale, qui ressort de l'adminiistration civique, ont créé pour les médecins des positions dignes d'attirer l'ambition de ceux qui veulent faire, de l'hygiène, une étude particulière et complète, ce n'est pas sur ce terrain spécial que l'hygiène devient une nécessité première au médecin practicien. Sans doute, il agirait contrairement à l'esprit de sa profession s'il ne savait seconder l'action des autorités sanitaires, mais ce n'est pas à la frontière, ni à l'hotel de ville que, dans le cours habituel des choses, on attend de lui une intervention active et efficace; c'est dans la famille, c'est dans son entourage qu'il doit agir. C'est là, que l'hygiène, qu'elle soit générale, spéciale ou prophhylactique, lui fournira les plus sûrs moyens de maintenir la santé et de prolnger la vie.

1. L'HYGIENE GENERAL.

Si la santé des masses dépend de l'hygiène internationale ou de l'hygiène municipale, la santé de la famille repose entierement sur l'hygiène domestique, et c'est

ici que nous entrons dans le domaine propre au médecin praticien.

L'hygiène domestique a aussi ses lois, et ce serait courir un grand péril que de vouloir s'en écarter. Tout le monde doit donc s'y soumettre, depuis le bébé jusqu'au vieillard, s'il veut maintenir sa santé dans un bon état, s'il veutdévelopper et conserver intactes ses fonctions physiologiques. La vie, disait Bichat "c'est l'ensemble des phénomènes qui s'opposent aux causes de mort." Développer et maintenir la santé, c'est-à-dire la vie, c'est donc accroître la résistance, et c'est en somme, la meilleure manière de faire de la prophylaxie.

Aussi que n' a-t-on pas obtenu avec l'hygiène de la première enfance Il a suffi de donner à l'enfant une nourriture appropriée, exempte de toute influence nocive, pour voir disparaître ces troubles digestifs dangereux qui venaient si fréquemment mettre en péril les fonctions physiologiques de ce jeune organisme. La simple aseptie du lait a fait plus, pour sauver la vie des enfants, que tous les traitements les plus en vogue de la gastro-entérite, et cela, par le fait seul qu'elle prenait le contrôle absolu de l'alimentation de l'enfant et qu'elle la mettait à l'abri de tous les germes de mort qui pouvaient l'envahir.

Ce que l'hygiène a fait pour les enfants elle le fait aussi your les adultes. L'enfant ayant grandi, le contrôle des *ingesta* ne sera pas aussi facile à établir. Mais il n'est pas à dire, pour cela, que l'hygiène doive disparaître de la maison. C'est, au contraire, pendant l'âge mûr que l'hygiène devient de plus en plus nécessaire. Prenons, une maison mal chauffée, mal ventilée, mal éclairée, et surtout mal drainée; les plus vigoureux n'y résisteront pas, et si l'hygiène n'intervient pas ; temps, nous les verrons bientot s'anémier et se cachectiser, en dépit de tous les toniques ferrugineux ou authres, que nous pourrions prescrire. L'alimentation doit, à tout âge, être, réglée par des mesures sages et bien comprises, si l'on ne veut pas voir éclater, tantôt des accidents aigus, dûs à des intoxications alimentaires, tantôt des troubles profonds de la nutrition causés par des erreurs prolongées de diète, et qui feront à la longue de nos clients des goutteux, des obèses et des brightiques. Et alors que nous aurons epuisé sur nos patients les ressources limitées d'une thérapeutique souvent impuissante, ceux-ci, s'ils sont jamais mieux renseignés, regretteront amèrement les conseils que nous ne leur aurons pas donnés, et qui les auraient engagés, comme on dit, à mettre un peu d'eau dans le vin. Et que dire du vieillard dont les artères sont envahies par la rouille de l'arterio-sclérose, et que guette au moindre écart l'apoplexie cérébrale? Une diète appropriée, assurant la régularité des intestins, empêchent la formation des ptomaines, ne vaudra-t-elle pas cent fois mieux pour lui que les meilleurs soins prodigués, lorsqu'une hémorrhagie sera venu déchirer son cerveau?

On a besoin de l'hygiène à tout âge, et c'est par elle que l'on assure, dans le milieu familial, mieux que par le luxe et la

2. Hygiene Speciale.

Ce n'est pas que je veuille dire que le rôle du médecin près du malade soit à mépriser, loin de là. Ce ne serait pas tenir comte des immenses services rendus en tout temps par nos grands thérapeutes. Mais ce que j'affirmerai hautement, sans crainte de me tromper, c'est que la thérapeutique ne saurait s'appuyer uniquement sur la matière médicale; c'est que, même dans son rôle de guérisseur, le médecin ne saurait se passer de l'hygiène. Unmalade traité uniquement avec des drogues ne serait qu'à moitié traité; ce serait supprimer, d'un seul coup, les bons effets si nécessaires du *nursing*.

Quel midein n'a pas été surpris de constater combien peu de maladies ont leur remède spécifique, combien la plupart du temps, le traitement doit rester symptomatique.

Nous devons être reconnaissant à la bactériologie de nous avoir si vien renseigné sur les modes de défense de l'organisme, et de nous avoir démontré que, dans la grande majorité des cas, c'est à stimuler les défenses naturelles du corps que le médecin doit s'appliquer dans son traitement. Or, ici encore, l'hygiène vous rendra des services inappréciables, et vous fournira non-seulement le moyen de stimules les centres nerveux, ces grands régulateurs de la physiologie humaine, mais encore d'oxygéner le sang et d'activer l'action des émonctoires. Toute la défense physiologique est là. La ventilation de la chambre du malade, la cure d'air, l'hydrothérapie, la diète, le massage, l'exercice, le repos, sont des traitements hygièn-

iques, qui n'ont pas leur équivalent dans la pharmaceutique le plus élaborée.

Combien de maladies chroniques et des plus graves, ne sauraient relever de la matière médicale. Par quels médicaments par exemple, corrigerez-vous la diathèse arthritique? Avec quelles drogues ferez-vous disparaître les lésions d'un foie cirrhotique, d'une moelle sclérosée, d'un rein brightique? Quel spécifique prescrirez-vous contre la dyspepsie? Cependant la lésion existe, la vie du malade est en danger. N'est-ce pas ici encore l'hygiène qui vous aidera le mieux, et qui, par le régime alimentaire, vous fera ajourner pour une longue période l'échéance fatale d'un mal inguérissable. Une lésion mitrale ne se répare pas, mais l'hygiène du cardiaque aura cela de bon qu'elle maintiendra la compensation, et reculera indéfiniment les indications de la digitale.

Qu'il s'agisse de maladies inflammatoires ou de maladies de la nutrition, je le répète, l'hygiène s'impose. Sans elle, le traitement resterait forcément incomplet, et souvent même, elle seule, peut conjurer les mauvais effets d'un organe dont le fonctionnement fait défault. C'est par une bonne hygiène, plus encore que par des médicaments, qu'on arrive à prolonger la vie des malades.

3. Hygiene Prophylactique.

Mais si l'hygiène, joue, un rôle secondaire, quoique n?cessaire, dans le traitement des maladies inflammatoires et des maladies de la nutrition, ses prescriptions prennent la première place dès qu'il s'agit de maladies contagieuses, ou transmissibles.

C'est qu'ici le danger devient général. Il existe non-seulement pour le malade lui-même, mais encore pour la famille et pour la société. Pour le malade, le danger vient de la nature infectieuse de la maladie, qui l'expose à des complications graves, à des lésions secondaires, à la toxhémie, ce qui exige de la part deceux qui en ont la garde des soins constants et minutieux, un *nursing* de premier ordre. Pour la famille, le danger réside dans la possibilité de la contagion, ou de l'infection, qui peut atteindre tous les enfants au lieu d'un seul, immobiliser les adultes et les travailleurs, mettre en danger la vie des vieillards et, faire de la maison, en même temps du'une salle l'hopital, un foyer de contagion. Et alors un danger sérieux menace la société, puisque cette maladie contagieuse et infectieuse peut franchir le seuil de la maison contaminée, envahir les maisons voisines, pénétrer jusju'à l'école, l'atelier, le grand magasin, gagner bientôt tout un quartier ou toute la ville, et créer, non plus un foyer de contagion, mais un centre d'épidémie. Si certaines maladies contagieuses, comme la coqueluche, par exemple, ou la rougeole, ou les oreillons sont d'une nature plutôt bénigne, qui peut jamais prévoir où s'arrêteront les ravages d'une épidémie de scarlatine, de diphtérie, de variole ou de méningite cérébro-spinale. Il arrive même souvent qu'une maladie contagieuse, sous des apparences bénignes, telle la grippe, soit une occasion aux complications les plus graves et donne un coup de fouet à toutes les tares constitutionnelles. Enfin, nous ne connaissons que trop les terribles ravages exercés par la tuberculose, ce fléau du genre humain, qui rampe sourdement dans toutes les classes de la société, et contribue pour plus d'un sixième à la mortalité générale de l'univers.

En face d'une maladie contagieuse, le médecin instruit et conscieincieux éprouve un vif sentiment du danger qui existe, de la responsabilité qui lui incombe. Il sait fort bien qu'il ne s'agit plus d'une simple prescription chez le pharmacien mais qu'il y autre chose à faire; qu'il ne doit pas chercher uniquement à sauver la vie du malade, mais qu'il lui faut encore protéger la santé de ceux qui l'entourent, qu'il s'agisse de ses parents, de ses amis ou de ses concitoyens. C'est pourquoi, dans un cas de maladie contagieuse, le médecin qui a conscience de sa responsabilité établit d'abord, et en premier lieu, la prophylaxie.

Nous connaissons les moyens de défense que nous fournit l'hygiène prophhylactique. On peut les ranger sous quatre titres principaux: 1° l'isolement; 2° l'antiseptie et la désinfection; 3° la vaccination; 4° la déclaration aux autorités sanitires. Je n'insiste pas davantage sur ces points, mais ce sur quoi je veux insister, c'est que la preuve de l'efficacité de ces mesures prophylactiques n'est plus à faire. Il suffit de jeter un coup d'oeil sur les résultats obtenus, soit dans les grands centres, soit dans les établissements spéciaux, soit dans la pratique journalière pour s'en convaincre. N'est-ce pas dans les hôpi-

taux que l'isolement, la ventilation, l'antiseptie et la désinfection ont fait disparaître la septicémie, la gangrène, l'érysipèle, ont réduit à leur minimum les complications purulentes des plaies ou des opérations et ont donné, à la chirurgie moderne, toutes ses audaces et tous ses résultats heureux? N'a-t-il pas suffi dans les maternités d'un peu de propreté hygiénique pour enrayer ce fleau des femmes accouchées, la fièvre puerpérale, et cela d'une manière si complète, si évidente que, s'il vous arrive maintenant dans votre pratique d'en avoir un cas, on vous en tiendra responsable? N'est-ce pas avec la simple stérilisation ou même l'aseptie du lait qu'on a transformé les crèches d'enfants, dont la mortalité, de 90 pour cent qu'elle était, est tombée à 20 ou 30 pour cent? N'est-ce pas avec la simple filtration de l'eau qu'on a réduit dans les villes, la fièvre typhoide à son minimum? Que dire de l'efficacité de la vaccination, ce bien-fait de Jenner à l'humanité, qui a fait disparaître la variole de l'Allemagne, et a permis dans les autres pays, de reléguer dans la légende, les grandes épidémies; n'est-ce pas grâce aux mesures d'hygiène si le choléra et la peste bubonique n'ont jamais pu envahir, depuis la création des quarantaines modernes les continents européen et américain, mais sont restés limités à certains quartiers des ports de mer? Voyez ce qu'on a fait en Angleterre pour la tuberculose, c'est en désinfectant les logis infectés et en vulgarisant les notions de l'hygiène moderne sur la prophylaxie de cette maladie qu'on est parvenu dans ce pays à diminuer de 45 pour cent la mortalité de cette maladie.

Non, l'efficacité de l'hygiène est adjourd'hui reconnue; elle a fait ses preuves. Le fait est si bien admis, l'utilité de l'hygiène s'impose à un tel point dans les populations, que partout on met en force les réglements sanitaires, que les gouvernements réalisant la haute importance de l'hygiène, et la nécessité de la mettre en pratique, ont fait de la salubrité publique un département de l'Etat, et qu'une organisation spéciale (bureau d'hygiène, conseils d'hygiène, quarantaine, hôpitaux d'isolement, etc) existe dans tous les pays civilisés.

MODERN FEATURES IN CONNECTION WITH SEWAGE DISPOSAL

BY T. AIRD MURRAY, C.E.

In some quarters an impression prevails that many of the generally acknowledged or accepted standard principles appertaining to sewage disposal are becoming out of date. This impression is not without foundation, but just how far it is true is a subject of practical interest to sanitarians.

Last year the Provincial Board of Health of Alberta issued a circular to municipalities stating in brief that the whole question of sewage disposal was passing through a transition stage; therefore, they generally advised caution. Such a statement is calculated to make those responsible for municipal expenditure pause and wonder just where they are at.

The necessity of efficient sewage disposal is generally acknowledged. It has been acknowledged for years in Great Britain, European countries and in the United States of America. Millions of dollars have been expended in schemes, in experimental work and in collecting data. Books and treatises innumerable have been produced dealing with the subject both from the practical and scientific standpoints. A British Royal Commission recently closed a session extending over several years,

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held 144 meetings, examined 197 expert witnesses, and sent out circular letters all over the world asking for and receiving all kinds of data. This commission published their report, which in 1908 was considered the most complete and authoritative treatise on the subject of sewage disposal. The German Government have been examining into the question and have employed not only expert engineers, but expert chemists and biologists; they have issued from time to time reports and treatises which have been translated and have become common knowledge to the sanitarian. Many of the American States, such as Massachusetts, Ohio, etc., have formed central experimental stations governed by experts, and have issued annual reports for years, handing out the most valuable and exact data and conclusions to the world generally. Many civil engineers and chemists have given their whole time and energy to this question of sewage disposal.

Now it is generally acknowledged that all these authorities are in agreement on certain general principals.

The generally accepted principals may be defined as follows:

(a) Sewage contains quantities of mineral and organic matter. The organic matter is found both in the form of suspended solids and solids in solution, and is liable to putrefaction. The process of putrefaction causes foul odors and is apt to create a nuisance at the point of discharge.

(*b*) Sewage contains the germs or bacteria of certain diseases, especially the infection of typhoid fever. These germs are found mostly in connection with solid matters, particles of animal tissue, etc.

(*c*) The putrefaction of the organic matter will not cause any specific disease. The organic matter, apart from the disease germs it contains, is harmless, and the gases which are given off, causing the foul odors, are likewise harmless, as long as they are not in sufficient quantity to displace the natural oxygen of the air and thus cause asphyxiation. The germs of diseases are not carried by the gases and can only be liberated from the sewage by splashing in the immediate neighborhood of the disturbance. Sewer air (at one time thought otherwise) is not capable of spreading contagion. Contagion or infection is only obtained by direct contact of some particle of sewage, containing the disease germ with food (solid or liquid). If sewage contained no disease germs (no matter how foul the sewage or otherwise) it could not produce typhoid or any other disease even if it came into contact with milk or drinking water. The whole danger to health, the pathogenic danger, or the sanitary danger connected with the distribution of sewage, is entirely due to the specific disease germs which have originally come into contact with the sewage. Sewage in its purely chemical constituents is not dangerous. Sewage in its biological or bacteriological constituents is dangerous.

(*d*) The ultimate aim in sewage disposal may consist of (1st) only dealing with the organic matter in such a way that it will cause no nuisance, viz.: that at the point of discharge no putrefaction shall take place and thus no foul odors will be emitted, (2nd) dealing with the organic matter in such a way that all disease germs are exterminated, so that the power of distributing disease is taken away from the sewage, (3rd) dealing with the organic matter in such a way that both of the above objects are realized.

(*e*) It is known that when the organic matter in sewage comes into contact with a liberal supply of oxygen, that the organic matter undergoes a change which renders it non-putrefactive and no foul odors are emitted. In order to avoid any foul odors or nuisance from sewage all that is required is that it be partly oxidized.

(*f*) The sewage disposal systems which have aimed solely at the avoidance of a nuisance by systems of oxidation have not been sufficiently complete to destroy the germs of disease.

(*g*) In order to exterminate disease germs from sewage it is necessary to go a step further than merely to provide a non-putrefactive sewage, and to provide some efficient system of disinfection.

There is not one of the above general principals which can be picked out and allowed to be in contradiction to the conclusions of all the great authorities upon this subject. These conclusions are not new, they have been understood and acknowledged by scientific man for many years now. Wherein, then, is there any foundation for saying that "Old principles must give way to new?"

The fact of the matter is, it is not a question of principle, a question of what principle, but a question of application of acknowledged principles.

In Great Britain the general aim of sewage disposal has been and is to obtain a non-putrefactive effluent. The aim has been to remove sewage pollution from streams to the extent only of removing a nuisance. Average strength sewage contains approximately 3,000 pounds of dried solid matter per each 1,000,000 gallons of sewage, 200 pounds of which may be mineral and 100 pounds organic.

It has been found that in connection with rivers whose areas are thickly populated, that they cannot digest all this matter and that they become foul in appearance and odor. In Great Britain, with one or two exceptions, the cities and towns do not obtain their domestic water supply from rivers flowing through inhabited areas. The water supply is generally from upland collecting areas or natural lakes where there is no chance whatever of sewage pollution. Hence, efforts in sewage disposal in Great Britain have almost solely been directed to preserve the natural beauty and æsthetic appearance of streams and not to make them fit as sources of water supply.

The city of London is an exception, as it takes its water supply from the upper Thames and its tributaries, which receive sewage only partially treated. The London water supply undergoes most thorough purification treatment before distribution.

A great many of the cities of the United States take their water supply from rivers receiving sewage. It is customary in the States to purify all such water supply and insist only on partial treatment of sewage.

The question of disinfecting sewage—that is, of exterminating the disease germs—is, from the view of application, comparatively speaking, new. It has never been pretended by those who knew, that the generally recognized methods of sewage disposal, produced drinking water. Fakers there have been who have set up such pretensions, but such have been connected solely with commercial ventures. Germany was the first country to apply the principals of sewage disinfection, and the States of America have given more attention to this part of the subject than Great Britain or any other country apart from Germany.

In 1909 E. B. Phelps, of the Massachusetts Institute of Technology, published a report of extensive investigations and experiments in connection with the disinfection of sewage. These investigations and results have brought the whole subject of the disinfection of sewage effluents acutely before sanitarians.

Phelps showed that sewage is amenable to high degrees of disinfection by the use, as a mixture, of very small proportionate amounts of chlorine derived from chloride of lime. He showed that 3 parts per million of chlorine will satisfactorily disinfect the effluents from ordinary sewage works constructed for the removal of putrescibility, the bacteria being removed by 98 to 99 per cent., the cost being from $1 to $1.50 per million gallons of sewage. He also showed that, from 5 to 10 parts per million of chlorine will disinfect screened or settled sewage (that is, sewage from which part of the solids have been removed), at a cost of from $1.50 to $3.50 per million gallons. Phelps showed that absolute sterilization was not necessary, and that partial sterilization or disinfection was sufficient to kill off the disease germs.

These practical investigations and conclusions were interpreted by some as likely to revolutionize sewage disposal processes. They form the only possible foundation for the somewhat vague supposition that "sewage disposal methods are undergoing a transision stage."

Such investigations have, however, had no appreciable effect upon the standard methods of sewage disposal.

The preservation of the natural condition and appearance of a stream and the avoidance of all nuisance from odors is just as an acute question as ever. Disinfection of sewage will not remove or diminish the 3,000 pounds of solids per 1,000,000 gallons of sewage entering a stream. Disinfection may retard putrefaction for a time, but only for a time. Disinfection will not satisfy the person who sees actual filth floating in a stream, no matter how sure he may be that all the germs of typhoid or otherwise have been eliminated. On the other hand, disinfection or elimination of disease germs added to the standard processes for the avoidance of actual nuisance may in many cases prove valu-

able, and prove not a revolution of standard processes but simply a development.

Disinfection of sewage effluents is likely to prove the most prominent and useful of modern features. It must be acknowledged that no sewage effluent if only treated up to the stage of removal of putrescibility has any right to enter a domestic water supply source. In the case of sources which are not available for water supply such may continue to receive either partially treated or even untreated sewage

What are the western conditions, and especially what are the special conditions relative to Saskatchewan?

In this Province we have two large rivers, the north and south branches of the Saskatchewan River, which have their source in the Rocky Mountains. Other streams are small in capacity, mostly running dry in the summer season. This Province, unlike Great Britain, presents no features which will allow of collected upland waters. The annual rainfall is small, the ground porous, the country flat, and evaporation great. Apart from shallow surface wells, and the small creeks or streams, the two main factors of pure water supply are the two branches of the Saskatchewan River and the tributaries connected with them. It is absolutely essential, apart from æsthetic value, apart from the question of nuisance, and apart from any other question, that every effort be made to keep out of our rivers, streams, creeks and other visible sources of water supply all causes of disease infection.

What would you think if it was proposed to any municipality which you represent, that you spend several thousand dollars in avoiding an apparent nuisance to the senses and you were told at the same time that such an expenditure in no way affected the chance or otherwise of spreading typhoid?

Large cities with an abundance of capital available may be warranted in ignoring the question of perfect sewage disposal, because they can afford the expensive luxury of perfect water purification. But they are only warranted as far as the matter affects them locally. The small community, and the individual farmer, cannot afford expensive methods of water purification. A city may obtain its water supply from a polluted river and filter and so treat that water so as to render it pure. The city may receive its milk supply from farmers located on that river where the filtered city water is not available and where the farmer may have to depend upon unfiltered water for domestic purposes, washing of milk cans, etc.

Western Canada can, at the present time, boast of practically pure stream waters, from the sewage contamination point of view. The amount of sewage discharge is yet small; it will, however, be an increasing amount. It is for the western people to determine that they will unite in so treating all sewage effluents, that the greatest available quantity of water possible shall be preserved pure for domestic supply. It is in this connection that disinfection of sewage effluents is of more importance to Saskatchewan and the west, than it is in Great Britain or in many parts of the United States, where the condition of the rivers has become practically hopeless.

The least costly and most efficient method of disinfecting sewage effluents is by the addition of small proportions of chlorine.

Chlorine cannot be economically or efficiently administered to sewage unless a large proportion of the solids are previously removed and the liquid sewage rendered non-putrefactive.

The admixture of chlorine does not revolutionize the standard methods of sewage purification. Where the standard methods were necessary in the past they are still necessary. Chlorine used as a disinfectant simply forms a continuation of the standard methods and forms a useful and practical adjunct to any sewage disposal system discharging an effluent into any body of water which during its course may be or is available as a water supply either to individuals or to communities of individuals.

In Saskatchewan at present the Government is insisting upon the purification of sewage to the extent of the elimination of disease germs where such effluents enter any body or channel or water which may be or is used for domestic water supply. Regina, Moose Jaw, Saskatchewan, Prince Albert, and many of the smaller towns are at present engaged in installing up-to-date systems of sewage disposal which are in accordance with the standard methods

but which have, in addition, the plant necessary for thorough disinfection.

Modern features of sewage disposal may be summed up as follows:

(*a*) The removal of a large proportion of the solid matter by screening and sedimentation in tanks.

(*b*) The removal of the tendency to putrefaction by bringing the liquid sewage into contact with oxygen, generally by use of aerated filters, or, when occasion will allow it, by dilution with large quantities of water containing the necessary dissolved oxygen required to oxidize the organic matter in the sewage.

(*c*) The removal of the tendency of the sewage to spread certain diseases if it comes in contact with food supply, or in other words, the disinfection of sewage by the elimination of disease germs.

Apart from the discharge of sewage into tidal basins it is generally necessary that the processes under (*a*) be followed. With efficient screening and attention much of the matter connected with nuisance production can be retained, and with the further application of sedimentation practically all the solids, apart from very fine particles, can be retained. Such an effluent, after screening and sedimentation, is amenable to disinfection by use of about 7 parts in 1,000,000 of chlorine. The question of leaving out the process of oxidation by means of aerated filters and relying upon oxidation by the body of water receiving the effluent depends as follows:—

(*a*) Upon local conditions, such as, the extent, freshness, flow or circulation of the body of water, and whether used as water supply or otherwise.

(*b*) Or, if disinfection be necessary, a careful study of the capitalized annual cost of the extra chlorine treatment required as against the capital cost necessary to install aerated filters requiring less chlorine.

In connection with inland streams and bodies of water which are required as sources of domestic water supply, it will generally be found that the whole three processes are necessary both from point of view of efficiency and ultimate economy. No cut and dried method of sewage disposal can, however, be laid down which will fit in with all conditions. Within certain limits the whole subject, like most other subjects, is subject to common sense.

FOODS AND THEIR RELATION TO PUBLIC HEALTH

BY P. B. TUSTIN.

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The study of the evolution of man from earliest ages to the present day, shows that any marked improvements or progress made by him were largely due to improved methods of obtaining or preparing his food.

The factors which in prehistoric times determined the food of man are three in number:

1. The kind of food available (the local flora and fauna).
2. The instinctive liking for certain kinds of food.
3. The ability to secure the desired food.

As evolving man became more intelligent, he discovered methods of acquiring and preparing food which greatly increased his supply, such as improved hunting weapons, cooking and agriculture.

In the prehistoric period man's food consisted mostly of seeds, nuts, fruits, roots, seaweed, fungi, and shellfish.

In these ages man had to subject his food to thorough and prolonged mastication in lieu of cooking to break up the indigestible cellulose chambers surrounding the starch protein and

fat cells in his vegetable food, which was very much coarser and rougher than the vegetable foods produced by modern agricultural methods. As the intake of starchy foods in this early period was, therefore, necessarily limited, it will be seen that until the invention of cooking the stomach of evolving man had little acquaintance with undigested starch, it being obvious that it was fully submitted to amylolytic influence, owing to the thorough mastication.

On the invention of cooking, man's food became more plentiful, as by this means he was able to soften his vegetable foods and make many of them more palatable.

The period of agriculture may be divided into two sub-periods:

The migratory — in which small suitable plots of virgin soil were planted after little (if any) preparation, to be abandoned after the harvest had been reaped; and the period of stationary agriculture, which dates back before the flood — in which the ground was scientifically treated, and raised enormous crops, and animals were domesticated and bred for food.

During the last 100 years, however, tremendous strides have been made in methods of preparation, preservation, refrigeration and transportation of food. We are enabled to draw almost on the whole universe for our food supply, there being few parts of the earth's surface so barren or so remote as to yield nothing to the general stock.

In these days of rush and worry, instead of being looked upon as one of the pleasures of life, and meal-times as pleasant breaks in the monotony of the day's work, the business of eating is regarded as more or less of an unfortunate necessity, to be gotten over as quickly as possible. As a consequence, very little thought is given to the use of food, the object only being to get something soft and easily swallowed. Therefore, as the greater bulk of our food has come to be soft cooked starchy material, such as bread, potatoes, cereals, etc., the stomach gets loaded down with undigested starch (due to improper mastication) and as a result the food, instead of being properly assimilated, is the cause of many ailments.

Health depends largely on digestion, this process being carried on in the alimentary canal, which may be regarded simply as a hollow muscular tube richly supplied with blood vessels and bathed with digestive juices, yielded by glands situated along its course, and lined by epithelium from which these glands are developed, and which, along a great part of its length, has the property of absorbing nutritive matter.

The food first, in the process of chewing, is brought into intimate relation with the saliva, and the importance of thorough mastication is shown by the frequency with which indigestion follows, when teeth are lost or food is eaten too rapidly.

Then in the stomach, digestion proper begins, the food being rendered soluble and capable of absorption. It is not sufficient for the material to be broken down and dissolved. The materials will not be absorbed by the intestinal walls, unless certain definite compounds are formed. From the stomach the food passes into the intestines where absorption usually takes place.

If we glance at the vegetable foods of the present day, we find that hardly any of them require mastication. Boiled vegetables are all soft. The starchy foods, such as potatoes (often mashed), bread (mostly new), (and with little crust), porridge, gruel, breakfast foods, milk puddings, of rice, sago, tapioca; pastry, macaroni, blancmange, cakes, biscuits, and other articles too numerous to mention. Of all these, bread crust and biscuits are the only ones that tend to properly excite mastication, but the former are often avoided and the latter often very soft. The rest follow the lines of least resistance, and slide down into the stomach with pernicious ease, and afford little or no exercise for the jaws or salivary glands.

Modern food is also highly concentrated, how very condensed it is, does not seem to be adequately recognized. Milk, eggs, fish and meat are highly nutritioius, the same is true of our more important vegetable foods which contain a high percentage of protein and starch; it would, therefore, be difficult to prescribe an innutritious diet unless of green vegetables and fruits.

Man has learned to separate the nutritious and energy-yielding foodstuffs from their natural combinations, and we now get practically pure protein fat, starch and sugar in the form of butter, cheese, sage and tapioca, beet and cane sugar. This extreme concentration of modern diet seems

responsible for the present prevalence of constipation by promoting overeating and having a tendency to weaken the whole digestive system. Seldom does the city man of to-day sit down to a meal really hungry, owing to the sedentary nature of his work. In early days when man had to hunt his food, it meant a great deal of exercise; game had to be hunted and roots, fruits and nuts gathered; and although he may have had his periods of gourmandizing, he also had his periods of fasting. Even in those primitive races remaining in the world to-day, such as Bushmen of Africa, and the aborigines of Australia, obesity and decayed teeth are unknown.

The dietetic instinct undergoes marked changes during advancing years, children show a fondness for sugar and starchy foods, but there is a marked decrease in this class of food, as middle life is reached.

The modern wife and housekeeper does not consider the reputation as a culinary artist, as something to be proud of, and seldom is able to show her friends into a well-stocked pantry or storeroom, filled with the results of her own work. The very nature of the food in middle-class households is changing; instead of coarse oatmeal porridge, some extensively advertised cereal (perhaps pre-digested) is found in many instances, the wholesome joints and stews of a generation ago are replaced by chops and steaks, and jams, preserves and cakes are bought, instead of being home-made. All this is done to save time, and what little knowledge they really had regarding their food is rapidly being lost.

Children are given anything for which they ask or cry for, many being regularly fed on the same food as adults, which food is quite unsuitable for them. Babies are *artificially* reared in the vast majority of cases, and all these conditions are bound to have a great effect on future generations.

The question now that arises is "What is the ideal dietary for a healthy man?" It would be impossible for the physiologist to draw up a table of foods and say "That is the correct diet for a healthy man." Consideration has to be taken of the idiosyncracies of individuals — for instance: a lumberjack consumes a great deal of energy and his muscles produce much waste, whereas, a bank manager has little muscular work, but much thought and anxiety; the diet of the lumberjack must therefore be not only larger in quantity to supply energy to his muscles, but different in kind to that demanded by the brain of the banker. The lumberjack requires large quantities of carbo-hydrates, but with the banker (if not an active man) a small quantity is advisable.

An ideal diet is a diet where the protein fat, etc., are properly balanced and sufficient to maintain the individual at the lightest weight consistent with perfect health. It should be simple in quality, consisting of plain bread, vegetables, meats, fish, puddings, etc., cooked without highly spiced condiments and sauces. A simple diet excludes alcohol and strong spices.

The starchy foods of the ideal diet should be taken in a form compelling vigorous mastication and a certain amount of uncooked fruit or vegetables (such as apples, celery or lettuce) should be eaten daily raw. Water should be the staple drink. Digestive troubles are rarely met with in the army, navy, workhouse and prisons, where the food is simple and the meals regular.

Man would avoid many of the ills of the day if he were to give his own diet the same consideration that the horse owner gives to the diet of a favorite animal.

Most men would have far better health and get more pleasure out of life, if they ate and drank according to their actual requirements. Excesses in the matter of diet lead to a long train of disagreeable symptoms — indigestion, constipation and often serious diseases. The proper time should be taken over meals, and cheerful subjects discussed. "Dollars and real estate" are not conducive to good digestion, and subjects concerning the source of the food supply and many interesting factors concerning its preparation (if discussed at meal times before children) would prove a valuable means of education. It comes as a surprise to most people to learn that they draw on the whole universe for their daily food. Many diseases can be cured and prevented by proper diet, which will not yield to drugs or physic, and the physician should make himself familiar with the values of the necessary foods and a table such as found in text books will enable one to prescribe a suitable dietary for both rich and poor.

In a field that has been over-fertilized

by putting too much manure on it, we get a rank growth of weeds, but in a field that has just sufficient fertilizer, the weeds are kept down and a healthy crop is the result; so with our bodies, if any disease germs get into the blood stream and if, instead of being carried by the blood cells to the lungs to be oxidized, they are deposited in some congested portion of the system, over-fertilized with nutritive matter, they find a favorable field for growth, and disease is the result.

Purgatives and aperients may empty the intestines, but they do not remove the excess of nutritive matter in the blood, restricting the diet is the only treatment. I think that there is a great field of useful work open, to educate the public on matters dietetic, and the need of it may be perhaps best illustrated by giving an ordinary every day case which will also show the close relation between food and disease: "An expectant mother is advised by well-meaning but ignorant friends to eat for two; and increases her ordinary diet by perhaps one-half to three-quarters of one pound per diem; when we realize that she carries the unborn child for the period of nine months (and the average child when born weighs 8 or 9 pounds), the increase of one-half pound per day in her diet for that period is out of all proportion, and as a result her body gets much congested and paturition troubles follow. The child, when born, is probably raised artificially on the bottle; the milk, perhaps, has been exposed to the air, in an open jug some hours before use, or to contact of flies; consequently it contains millions of bacteria, and summer complaint and diarrohœa follow:

After weaning, at the school age, the child is often, in this country, allowed to partake of practically the same food as that of the parents, which in most cases is quite unsuitable, and it is a common practice to give candies and cakes between meals, etc. Most people are very particular about the course of study their children undergo, what the subjects are to be, etc., and a parent that told his son to choose his own education and pick out his own subjects, would be considered mentally unsound. How, then, I ask, can a child be expected to choose the most suitable diet for himself, and yet many parents let their children eat just what they like, whether suitable or not. From school age onward we find the same detrimental thing, the hurried meal at the lunch counter and restaurant, indulgence in banquets, late suppers and alcohol at various times between meals or otherwise. Is it to be wondered that nature revolts at such ill-usage?

In conclusion, I would say that the best and only natural way to obtain the greatest benefit from our food is to eat moderately, masticate thoroughly, and allow sufficient time for the stomach to digest one meal before partaking of another.

THE NEW PUBLIC HEALTH ACT AS IT AFFECTS PROVINCIAL MUNICIPALITIES

BY E. M. WOOD

SECRETARY OF THE MANITOBA BOARD OF HEALTH

It is a matter for congratulation that at the last session of the Manitoba Legislature a comprehensive Health Act was enacted. Its provisions embrace adequate essentials to provide for and improve the sanitary conditions of the Province and to better control infectious and contagious diseases and protect human life. Prior to the passing of the present Act the provisions theretofore in force were glaringly deficient in this respect, and in other ways necessary to deal with the varied problems of public health. Exceedingly satisfactory, therefore, is it that we now have a Health Act carefully compiled and which cannot fail to accomplish a decided improvement in public health administration throughout the Province. Already, although it has only been in effect a few months, a

decided improvement is noticeable. The new Act contains about 120 pages of printed matter, and deals with every possible matter likely to arise. The functions of the Health Board have been very materially amplified, power being given to the Board to make regulations dealing with a large variety of cases for the prevention, treatment, mitigation and suppression of diseases, comprising the abatement of nuisances, the cleansing, purification and ventilating of houses, the inspection of public institutions and places, the construction of drains, the carrying on of offensive trades, the construction and maintenance of slaughter houses, the isolation of infectious diseases, the equipment and management of creameries, the pollution of streams and in a large number of additional cases. These provisions are in addition to the direct requirements of the Act in such cases, and have been introduced for the purpose of giving the Health Board power to amplify the same by specific and direct regulation should occasion require such action. Greater power has also been given the health officer in matters affecting the administration of the provisions of the Act. Under the old provisions the machinery was most cumbersome, the health officer in many important cases being permitted to act only in conjunction with and by the consent of the mayor or reeve, which was impracticable. Upon the health officer has been placed the performance of many important duties; the position or office of a municipal health officer has now been made a most important one, and is this not a step in the right direction? What municipal office is more important than to teach the people the essentials of good sanitation and the value of the preservation of health and the prevention of disease? In the past the old teaching was based on the cure of disease. Under the more modern conditions the prevention of disease is emphasized. At one time our whole concern was about the sick; we now think about the well, as it naturally follows that if people can be kept well by living under favorable conditions, sickness will materially diminish. Most important is it, therefore, that every municipality should have an energetic health officer. The value of such an official is beyond measure. The compensation advantages in such cases not only involve the wealth and progress of communities but their health and life.

Passing on to other provisions of the new Act, most drastic enactments are introduced for the suppression of nuisances. In the past nuisances were created by individuals to the detriment and injury of the public health. Heavy penalties now exist for practices of this kind, and proper is it that the law so provides, as what more objectionable conditions in a community can possibly exist than the indiscriminate creation of nuisances? It has been well said: "If you desire to know what kind of people live in a community and their standard of health, examine the back yards and alleys." It is an unerring test of the character and health of the people. Municipalities, therefore, should take pride in maintaining strict sanitary methods — it will not only preserve the public health, but will be a strong factor in attracting others to such localities.

The matter of the food supply to the people is also fully dealt with under the new Act. The exposing or selling of impure articles of food unfit for human consumption is strongly provided for and heavy penalties provided for violations. It is also necessary for all meat shops and other places where food is kept for sale to be inspected and for such places to comply with certain sanitary requirements. Bakeshops are also similarly dealt with. A standard of milk is also provided, which must consist of not less than .25 per cent. of milk fat and not less than 8.50 per cent. of milk solids other than fat. Milk houses and creameries are subject to inspection and such premises must comply with the requirements as to construction before a license can be obtained. The provisions as to the handling of this class of food product are most drastic, and most properly so, as there is no kind of food more important to have pure and free from disease germs than milk. Particularly is this accentuated in view of the recent report of scientists that consumption is transmissible to man from animals.

The proper sanitation of restaurants, laundries, livery stables are also adequately dealt with.

Another most important introduction in the new Act is the prohibition of the construction of the hole-in-the-ground privy — of all the causes of the spread of

infection this constitutes the worst. It is now made unlawful to construct any kind of privy other than that prescribed by the Act. In future they must be constructed with concrete or brick pits lined with cement, so as to be perfectly water tight. A full specification as to size, etc., of this class of building is set forth. Diagrams will be furnished by me on application.

With the view of preventing the creation of overcrowding, and eventually slums in the larger centres of population, very comprehensive provisions have been enacted as to the erection of tenement or apartment houses. It is now provided that no tenement or apartment building shall hereafter be constructed which shall occupy more than 75 per cent. of the area of a corner lot, or more than 80 per cent. of the area of any other lot. This will have a decidedly deterrent effect upon persons crowding buildings for residential purposes upon the whole area of lots with the view of gain and without regard to the inmates of such places.

Most full and complete provisions appear relative to the control of infectious and contagious diseases. The health officer is clothed with the widest powers in this respect. The proper embalming and transportation of dead bodies is also fully covered. Provisions for vaccination and the free supply of vaccine and anti-toxin for diphtheria are also inserted —also as to tuberculosis, the sanitation of railway cars and a variety of other subjects all vitally important in public health administration.

In a brief space I have endeavored to shortly point out the salient features of the new Manitoba Health Act. The Board of Health are alive to the importance of its proper application, and the public may be assured that it will be applied in every manner possible in order to bring about improved conditions. To accomplish great results, however, the sympathetic support and co-operation of the public is necessary; and this must follow education and persuasion, upon which to a very large extent public health depends.

Library and Laboratory

BOOK REVIEWS

"School Planning at Home and Abroad," Health and Disease," "Crime and Insanity," "Medico-Legal Aspects of Moral Offences," "Hygiene and Public Health," "Mercks Manual of the Materia Medica," "A Practical Medical Dictionary," "Tuberculosis Directory," "High Potential and High Frequency Current," "Prevention of Infectious Diseases," "What to Eat and Why," "Architectural Hygiene," "Rural Neurasthenia."

"School Planning at Home and Abroad."

This interesting little book, which merits a wide and careful study, is a revision and finely illustrated extension of a paper entitled "Large Public Elementary Schools in Town Districts," read by the author, William H. Webb, at the 25th annual congress of the Royal Sanitary Institute. Mr. Webb describes, with the assistance of numerous plans, the prevailing English type of large public school, and compares it with American, Danish, German, French, Norwegian, Swedish, and Swiss types — to the manifest advantage of the latter. He points out, however, that the recently designed Durnsford School at Wimbledon conforms more closely to modern hygienic principles, as shown in the five illustrations which accompany the work and are drawn to scale.—*School Planning at Home and Abroad. A Resume of English, Continental, and American Practise. By William H. Webb, Licentiate R.I.B.A., M.R. San.I. With numerous illustrations. London: The Sanitary Publishing Company, Ltd., 5 Fetter Lane, Fleet Street, London, E.C. 1911.* v/ *nett.*

"Health and Disease."

W. Leslie Mackenzie's originality of thought and expression is well demonstrated in a recent contribution, entitled "Health and Disease," No. 17, to the Home University Library. "It is the note of youth," he writes in his first chapter, asking What is Disease? " when the claim to health is strongest. It is the note of middle age when fear of lost health begins. It is the note of mature age when the memories of youth begin once more to predominate. Science has no place for an ideal of absolute health. All that science, which is the sum of experience, permits us to entertain, is a normal balance of functions relative to a place in the world."

Dr. Mackenzie then points out that health is the name given to total average of the highest physiological efficiency; the mainitenance of the physiological normals at their highest potency being health.

The remaining chapters of the book deal with: The Causes of Death; Death rates and their Interpretation; Fever; Infectious Diseases and Epidemics; Study of Toxic Infection and its Antitoxin; How Antitoxins are Produced and Prepared; Immunity; A Study of the Tubercular Diathesis; The Administrative Aspects of Tuberculosis; The International Infections; Other Preventable Diseases; The Hygienics of a Staple Food (Milk); The House as Immediate Family Environment or Home; Disease and Destitution; Insurance Methods of Preventing Sickness; and, The Evolution of the Health Movement.—*Health and Disease, by W. Leslie MacKenzie, M.A., M.D., D.P.H., F.R.C.P., Ed., Medical member of the Local Government Board for Scotland. 254 pages. London: Williams and Norgate, 14 Henrietta St., Covent Gardens, W.C. 1/ Nett in Cloth. 2 6 Leather Gilt.*

"Crime and Insanity."

Here we have number 22 of the Home University Library of Modern Knowledge, and a very excellent little book it is.

Dr. Charles Mercier, the author, during

the course of his extensive professional experience among the mentally aberrant has arrived at conclusions regarding the nature of insanity, which are logical and interesting. He proves that the relation between crime and insanity is a biological one and based upon the three fundamental incentives of action: Perpetuation of the Race, The Conservation of Individual Wealth, and the Conservation of Society.

In defining crime and defining insanity, Dr. Mercier writes that crime, in the wide sense, consists of acts that are forbidden by law — and law forbids these acts that are inimical to the cohesion of society — and that insanity is disorder of the process of adjusting the self to the circumstances, it being primarily manifested in disorder not only of the mind but of the conduct. In true insanity the insane person does not recognize that either mind or conduct is disordered.

This consideration of crime and insanity is divided into nine chapters, followed by a note on books of reference — the chapter headings being: Insanity and Crime; Self Advantageous Offences Committed to Gratify Malice and for Personal Gain; Private Offences, Family and Racial; Crime and Insanity.

Dr. Mercier dedicates his book "To David Yellowlees, M.D., LL.D., in token that the widest differences of opinion are compatible with the warmest friendship. — *Crime and Insanity, by Charles Mercier, M.D., F.R.C.P., F.R.C.S., Physician for Mental Diseases to Charing Cross Hospital. Visitor to the State Inebriate Reformatory. London: Williams and Norgate, 14 Henrietta Stree, Covent Garden, W.C. 1/ Net in Cloth. 2/ in Leather Gilt.*

"Medico-legal Aspects of Moral Offences."

After reading Dr. Charles Mercier's "Crime and Insanity," reviewed above, one appreciates to the fullest extent the manner in which Medico-legal aspects of moral offences are handled in the book of that name, by Professor L. Thoinot, translated into English and enlarged from the original ("Attentats Aux Mœurs et Perversions du Seus Gential"), by Dr. Arthur W. Weysse.

In the light of fuller knowledge of the fundamental incentives to human conduct, such perversions of the sexual instinct as described in Professor Thoinot's work, take on a wider meaning; and one is impressed with the possibility of methods of prophylaxis.

Medico-legal Aspects of Moral Offences is published for and restricted to the medical and legal professions. It deals with: Anatomical Facts; Rape; Indecent Assaults; False Assaults; Public Offences Against Decency; Perversions of the Sexual Instinct; Inversion of the Sexual Instinct; Uranism; Exhibitionism; Fetichism; Sadism; Masochism; Bestiality; Necrophilia; Nymphomania; Satyrasis; Erotamania. These subjects are presented more fully than has been the practise in English and American professional schools. — *Medico-legal Aspects of Moral Offences, by L. Thoinet, M.D., Professor in the Medical Faculty of Paris; Physician to Lœnnec Hospital. Expert to the Tribunal of the Seine. Member of the Academy of Medicine and of the Society of Legal Medicine of France. Translated from the original French and enlarged by Arthur W. Weysse, A.M., P.H.D. (Harvard), M.D. (Basel). Illustrated with 17 engravings, including 4 charts and diagrams. Only authorized translation into English. Cloth, 487 pages. Philadelphia: F. A. Davis and Co., Publishers. 1911.*

"Hygiene and Public Health."

In the words of the authors, the object of this elementary manual is to summarize, in a condensed and succint form, the most important applications of preventive medicine, especially as they concern the routine duties of the medical officer of health and the school medical officer. The present new revised and enlarged edition is the twelfth; and this in itself speaks well for the popularity of the work. In bringing *Hygiene and Public Health* fully up to date, its enlargement was required by the necessity of dealing with the recently improved methods and appliances, fuller and later statistics and researches, and larger knowledge of the eteology of disease and of the conditions of its progress and prevention. Elucidating the subjects of its twenty-two chapters are fifty illustrations —the chapters taking up in order: Air; Meteorology; Water; Food; Soil; Build-

ings; School and School Hygiene; Hospitals; Drainage and Removal of Refuse; Disposal of the Dead; Animal Parasites; Infection and Immunity; Specific Diseases; Tropical Diseases; Prevention of Infectious Diseases; Disinfection; Medical Officers of Health; Sanitary Inspectors; Sanitary Law; Factories and Workshops; Military and Naval Hygiene; By-Laws and Regulations; and, Vital Statistics.

The appendices consist of tabulated information of special value.—*Hygiene and Public Health, by Sir Arthur Whitelegge, K.C.B., M.D., B.Sc., Lond., F.R.C.P., D.P.H., and Sir George Newman, M.D., D.P.H., F.R.S.E. Illustrated. Twelfth edition, revised throughout. 760 pages. London: Cassell and Co. 1911. $2.50. Toronto: D. T. McAinsh and Co.*

"Merck's Manual of the Materia Medica"

The fourth edition of this ready reference pocket book for the physician and surgeon, comes to us containing a comprehensive list of chemicals and drugs not confined to Merck's, with their synonyms, solubilities, physiological effects, therapeutic uses, doses, incompatibles, antidotes, etc.; a table of therapeutic indications with interspersed paragraphs on bedside attendance, and a collection of prescription formulæ (beginning under the indication "Abortion," and ending with "Yellow Fever"); a classification of medicaments and miscellany comprising poisoning and its treatment, and an extensive dose table; a chapter on urinalysis; and, various other tables.

While compiled for the use of physicians there is much in Merck's Manual regarding the Materia Medica, Doses, Uranalysis, etc., to make it a serviceable reference work for pharmiciets also.—*Merck and Company, 45 Park Place, New York. 1911. 493 pages. Sent on receipt of forwarding charges of 10 cents, to any physician or pharmacist, or to students enrolled in any college of medicine or pharmacy in Canada or the United States.*

"A Practical Medical Dictionary."

The high place occupied by Thomas Lathrop Stedman in the world of medical and general science is sufficient to mark any reference work of his as the *sine qua non* of a working library. "A Practical Medical Dictionary" comes to us under such auspicies. It is a beautifully bound handbook, well printed, adequately illustrated and generally attractive; and the fact of its publication by William Wood and Company is an additional incentive to purchase.

Dr. Steadman has incorporated in this dictionary everything usually found in a work of its class, and more. And he has adopted the reasonable policy of a conservative lexicographer in throwing the weight of his authority on the side of etymologically correct terms while not neglecting the sufficient treatment of those commonly used words of questionable parentage which have crept into the language, as it were, unawares.

A splendid feature of the work is the attention paid to synonyms; another, the lists in distinctive type following a term defined, where required, and recording the various conditions associated with the part which may be indicated.

Other excellent features are the preference given to the Basle Anatomical Nomenclature, the definition of terms peculiar to the various medical sects (happily under the influence of public health investigation, and the better understanding brought about by such definition, now losing distinction), the preference given to simpler spelling, the introduction (to help the reader who may be rusty in his chemistry) of common chemical formulæ, as main titles followed by simple definitions, and the inclusion, among the terms considered, of those likely to be met with from botanical, dental, veterinary and other sciences.—*A Practical Medical Dictionary, of words used in medicine with their derivation and pronunciation, including Dental, Veterinary, Chemical, Botanical, Electrical, Life Insurance and other special terms; anatomical tables of the titles in general use, and those sanctioned by the Basle Anatomical Convention; Pharmaceutical preparations official in the British and U. S. Pharmacopeia and contained in the National Formulary; Chemical and therapeutic information as to mineral springs of America and Europe; and, comprehensive lists of synonyms. By Thomas Lathhrop Steadman, A.M., M.D., Editor of "Twentieth Century Practice of Medicine"; Editor of the "Medical Record". Illustrated. 1,000 pages. Bound in lea-*

ther. New York: William Wood and Company, 51 Fifth Avenue. 1911. $5.00 Net Indexed. $4.50 Net Plain.

"Tuberculosis Directory."

The publication of the present directory follows that of 1908 and no effort has been spared by the National Association for the Study and Prevention of Tuberculosis, to make this edition as complete as possible; at the same time an attempt has been made to exclude all private institutions of an undesirable character.

The anti-tuberculosis agencies of Canada have been grouped in an independent section, which is, perhaps, a better arrangement than that formerly adopted.

From statistics published in the new directory, it is ascertained that over 600 cities and towns of the United States, besides about 100 in Canada, are engaged in the war against consumption, and that on April 1st there were nearly 1,500 different agencies at work in the crusade, an increase of nearly 700 per cent. in the last seven years.

The new Directory lists 421 tuberculosis sanatoria, hospitals, and day camps; 511 associations and committees for the prevention of tuberculosis; 342 special dispensaries; 68 open air schools; 98 hospitals for the insane and penal institutions making special provision for their tuberculosis inmates; besides giving an account of the anti-tuberculosis legislation in every state and in about 250 cities. The Directory, which is the third of its kind that has ever been published on the continent, gives the most complete survey of the anti-tuberculosis movement that can be secured, and shows the remarkable growth of this campaign in the last seven years.

The first Directory in 1904 showed only 183 organizations and institutions in the entire country. The second Directory, in 1908, reported 649 different agencies, as compared with 1,440 in the new book. Taking these figures as a basis, the anti-tuberculosis movement has increased in force since 1904, nearly 700 per cent., and since 1908, over 105 per cent.

The following table shows the growth of the movement along the principal lines of activity for each year since 1905:

Year.	Associations.	Sanatoria and Hospitals.	Dispensaries.	Open Air Schools.
Established before 1905	18	111	18	..
Established during 1905	15	18	6	..
Established during 1906	18	16	14	..
Established during 1907	46	30	45	1
Established during 1908	109	45	118	2
Established during 1909	167	67	59	10
Established during 1910	117	68	62	16
Established during 1911 (April 1)	21	66	20	39
Total	511	421	342	68

—A Tuberculosis Directory, containing a list of institutions, associations and other agencies dealing with tuberculosis in the United States and Canada. Compiled by Philip P. Jacobs, Ph.D. New York: The National Association for the Study and Prevention of Tuberculosis. 1911. 50c. postpaid.

"High Potential and High Frequency Currents."

This work contains the results of the author's personal researches and investigations, and includes most that is valuable on the subject of High potential Currents. The developments in the subject of hypertension and its treatment by the d'Arsonval current, as well as the employment of direct d'Arsonvalization in the treatment of infection, have been thoroughly considered in this edition.—*Currents of High Potential of High and Other Frequencies, Second Edition, by William Benham Snow, M.D. Author of "A Manual of Electro-Static Modes of Application, Therapeutics, Radiography, and Radiotherapy," "Therapeutics of Radiant Light and Heat and Convective Heat," Editor of the Journal of Advanced Therapeutics, and late Instructor of Electro-Therapeutics in the N. Y. Post Graduate School and Hospital,*

etc. New York: The Scientific Authors' Publishing Co., 329 West 57th Street. 275 pages. 260 illustrations. $3.00 net.

"The Prevention of Infectious Diseases."

"Prevention of Infectious Diseases," is written in Dr. Doty's logically attractive style, and convinces the reader at once of the legitimacy of its claim to be authoritative.

The author deals with his subject from a practical standpoint, presenting the latest knowledge relative to transmission of infectious diseases with proved methods of prophylaxis bearing on the same; not neglecting, however, to emphasize the fallacy he finds in fomities and other theories, long acceptance of which has aided, he believes, in the extension of infectious diseases rather than their prevention.

The views Dr. Doty expresses, strongly based on his own official experience, while iconocolastic would undoubtedbly be corroborated by the majority of practical sanitariums; and are certainly not to be ignored by any who lay claim to efficiency in either medical inspection or general practice. — *Prevention of Infectious Diseases, by Alvah H. Doty, M.D., Health Officer, Port of New York. Crown 8vo. 281 pages, with full index.. New York: D. Appleton and Company. 1911. Cloth, $2.50 net.*

"What to Eat and Why."

The desire of the author in writing this book is to place before the student and the practitioner the principles underlying therapeutic uses of foods. He points out that the general questions to be settled in arranging the proper diet of the patient are two: "How much protein shall be given?" and "What the proportion of carbo-hydrates shall be?"

In Dr. Smith's remarks on the question of the use of alcohol, which will be undoubtedly approved by the majority of practicing physicians, he does not recommend its use for young adults; but for the active business man who has passed middle life and is subject to mental and strenuous physical activity, at times causing exhaustion that cannot always be practically treated in the most desirable way by rest and sleep, the stimulus of alcohol seems, he believes, to afford the necessary prop and is less harmful than giving up the struggle in the business world would be. In dealing with alcohol the author recapitulates in order not to be misunderstood, as follows: 1st, "Alcohol, except in diseases, is unnecessary and to be avoided in persons, male or female, under 30 years of age." 2nd, "Its occasional use in middle adult life as a stimulant, prophylactic and anæsthetic, is advisable, and should be used under the doctor's direction, who knows its food value and danger of habit." 3rd, "After fifty it may be used in some cases with benefit, but always in moderation. Most of the disadvantages of its use now no longer obtain. At this age, however, it disagrees with many people, and should be used by such only as medicine." 4th, "Alcohol should never be given in excess, except for its anæsthetic effect, as it weakens the will power." 5th, "When alcohol is given it should always be in the purest form. Whiskey, sherry and Rhine wines are among the best. Strong liquor should always be well diluted with water."—*What to Eat and Why, by G. Carroll Smith, M.D., of Boston, Mass. Octavo of 310 pages. Philadelphia and London. W. B. Saunders Company. 1911. Cloth, $2.50 net. The J. F. Hartz Co., Ltd., Toronto.*

"Architectural Hygiene."

This little book is one of the most useful that it has ever been our pleasure to come across. It treats of the subject in all its branches, as it effects architects, surveyors, engineers, medical officers of health, sanitary inspectors, plumbers, and students generally.

The authors rightly point out that the hygiene of architecture is one of the most important subjects which the architectural student has to study, for on its proper application in the buildings erected under his supervision depends not only the health and well being of his clients, but often their very existence. And sanitary science is the bridge connecting the architectural and medical professions.

The chapter heads, as follows, give one an idea of the extent and value of the work: Sanitary Legislation; The Site and Foundation; The Plan in Regard to Health and Convenience; Sanitary Con-

struction; House Drainage; Drain Ventilation, including Siphonage and Traps; Sanitary Fittings; The Collection and Disposal of Refuse and Sewage; Typical Drainage Plans; Water Supply and Pollution; Water Supply Fittings; Ventilation; Heating; Ventilation and Heating Schemes; Lighting; Sanitary Inspection; Surveys and Reports; Sanitation of a Country House; Lighting, Heating, and Ventilating a City Company's Banqueting Hall.—*Architectural Hygiene or Sanitary Science Applied to Buildings. A Text-book for Architects, Surveyors, Engineers, Medical Officers of Health, Sanitary Inspectors and Students. Written and fully illustrated by Banister F. Fletcher, Architect, Fellow of the Royal Institute of British Architects; Fellow of the Surveyor's Institution, Barrister-at-law of the Inner Temple; and H. Phillips Fletcher, Architect, Member of the Royal Institute of British Architects, Fellow of the Surveyor's Institution, Associate Member of the Institute of Civil Engineers, Barrister-at-law of the Middle Temple. 284 pages. Published by Whittaker and Company, 2 White Hart St., Paternoster Sq., London, England: The Sanitary Publishing Co., 5 Fetter Lane. 1911. 5/ net.*

"Rural Neurasthenia."

Rural districts have been the scapegoat for many years to be loaded with all the ailments that man is heir to, typhoid and infections in general, but the finishing straw comes now in the discussion by Dr. Raymond Belbeze, who has issued a little book on *Rural Neurasthenia*. It has been believed that the country is the place to which to fly for rest and quiet, it is recommended for those who have nerves, and it must come as a shock if the statement of Dr. Belbeze can have authoritative backing, "that thirty per cent. of the peasants of France have neurasthenia and the ratio is increasing from year to year." The studies of the physician have been made during the past four or five years in the Garonne region between Agen and Montauban, a district central in the width of this Pyrenean neck of France and somewhat more than one hundred miles north of the sounthern mountain boundary. The departments are Tarn-and-Garonne, through which the river flows, Lot-and-Garonne, the department next down the river, and Gers, the adjacent county to the south. The disclosures are startling, in that this is suggested to have close relations with the depopulation of France, and the much discussed decline in the birth rate. Tarn-and-Garonne as early as 1842 showed an excess of 179 in deaths over births in the annual figuring, and since 1870 "this excess has done nothing but grow," reaching 834 in 1899. In the 57 included years the department lost 40,000 inhabitants.

As to the condition of these people, Dr. Belbeze depicts it in discouraging terms. The malady presents first physical symptoms, insomnia and disturbing dreams, head ails, digestive troubles and those of the circulation and hypochondria. "The mental symptoms," he notes, "are not less marked: lack of will, emotional condition such that the mere receipt of a letter is sufficient to upset the existence, and the like." Nothing is wanting in the picture shown and the peasants are represented as ignoring no one of the mental anguishes or physical ailments that have till now been the especial perquisite of the refined who live in the turmoil of the cities.

The story needs but one more embellishment to round it out to full measure, and that the French physician does not fail to furnish; that the symptoms and effects should be in the country more marked and severe than in the town. "Slowness of decision, not unusual among peasants, becomes impossibility of any decision." The physician has seen his farmers neglect, through morbid hesitation, even to harvest their crops when ripened. He has known them to leave the fields for the villages to avoid risks more or less imaginary. Such shirking of responsibility leads later to avoiding other responsibilities to the family and the nation, hence the proverbial single child, in whose uniqueness there is combination of local superstitions concerning the ill-luck to all of large families.

There are certain economic roots to the general spread of nervous ailments. In Tarn and Garonne country land values have steadily gone down, till to-day the farms are worth not half their price in 1881. The growing of flax, hemp and other items have been successively given

up and the cultivation is less successful than formerly. "Thus," writes Dr. Belbeze, "the Garonne farmer loses not only in taste and comfort, but is wounded in his pride." And nothing is done for the defence! Education in the schools, and still more that at home, softens the character instead of strengthening. The farmers see in their children deplorable weakness, but do not know how to combat it. A little fellow, invited to the cafe by his father, must needs procure a box of rice powder, kid gloves, and aray himself in grand toilette, while in other families a lad is the leader of them all by his caprices. "Neurastheniculture," is the word Dr. Belbeze has coined for the occasion.

Over-hours of labor in the fields and insufficient nourishment are causes of the trouble, with increases among the poorly fed. The people in which the figures have been obtained live almost exclusively on vegetables and sweets. Meat is seldom on the table, and the fruits are treated with disdain. Besides economy is an insistent master. Thus it is that a people, already enfeebled by centuries of isloation, and subject to defective ailmentation, is losing the nervous force that alone can be its main help in regaining its proper place.

While Garonne is said to be the district in which the conditions are the most alarming, it is not the only one in which the stagnation of population is sensible, and the peasants are showing symptoms of nervous fatigue. The situation is not, however, hopeless. "In time the State authority may be awakened, but yet troubles itself but little with the public health, and it has not yet even ordered an inquiry as to the real causes of the depopulation of France." The Garonne peasants are the premonitory symptom. Nothing can be more easy than to infuse new blood into their district, by favoring, for example, the colonization by Spaniards who have already begun to settle in Gers; and immigration agencies, after the pattern of those of Canada or Argentine, will help fill the empty voids. It is certain, however, that the troubles have some cause, and it is Dr. Belbeze who calls upon his nation to seek for this and for the credit of France reestablish its country people and furnish to them the means of combating the ill that hangs over them.

CURRENT PERIODICAL COMMENT AND WORKING NOTES.

In addition to Contributions and Editorials, noteworthy from a public health standpoint, in periodicals quoted below for this month: *The Journal of the Royal Army Medical Corps,* (Volume XVII., No. 3, received) contains a special contribution by Captain W. R. O'Farrell, R.A.M.C., and Andrew Balfour, M.D.; "Granule Shedding in Treponema-Pallidum, and Associated Spirochætæ"; (Volume XVII., No. 4, received) "Incineration in Cantonments in India," by Captain P. S. Lelean, R.A.M.C. *Physiologic Therapeutics* (September-October, 1911, received) "The Effects of Occupation on Health," by C. A. Lauffer, M.D. *North-Western Medical Journal* (Volume 3, No. 9, received) "Health Inspection as Applied to the Individual," by E. V. Silver, M.D. *Journal of A.P.H.A.*, (New Series, Volume 1, No. 9, received); "How to Get and Keep Competent Health Officers," by Geo. W. Goler, M.D., Health Officer of Rochester, N.Y. *Journal of the Outdoor Life"* (Vol. viii., No. 10, received) "The Dynamic Principle of Nutrition," by John R. Murlin, Ph.D. *Public Health Reports* (Volume xxvi., No. 41, "Observations on the Viability of the Eggs of Hookworms and of Eelworms in Feces Allowed to Decompose in Water," by C. Wardell Stiles, Professor of Zoology, and H. McC. Miller, B.S., Assistant Hygienic Laboratory, U.S.A. Public Health and Marine Service; (Volume xxvi., No. 42) "Obligatory Notification of Poliomyelites," by Arnold Netter, translated by W. C. Rucker, Passed Assistant Surgeon, U.S.A. Pubdic Health Marine Hospital Service *Le Journal de Medicine et de Chirugie* (VIe Année, No. 11) "La Tuberculose—Prencipales Indications dans le Traitement du Lupus Tuberculeux," par le Dr. Gustave Archambault, Assistant Dematologiste à l'Hopital Notre-Dame, Dematologiste de l'Institut Bruchési, Montreal.

Successful Medicine.

That bright little bi-monthly from Chicago, *Successful Medicine,* has the business side of a professional career as its keynote. Here are a number of pretty good reasons, contributed by Dr. J. E. Klotz, of Lanark, Ontario, to the current issue, why doctors are poorly remunerated:

1. Lack of good bookkeeping methods.
2. Lack of co-operation among one another.
3. Failure to impress the public of their obligations toward physicians.
4. Bills or accounts not sent out regularly.
5. Contra-accounts not promptly settled because the doctor fails to demand such statement.
6. Dead beats going from doctor to doctor and paying nobody; a fact which makes a black-list almost imperative and indispensable.
7. The importance of obtaining the full name, street address and occupation of their client before discussing his condition of disease.
8. Frequent failure to make early and close inquiries into financial standing of patients.
9. Laxity in making arrangements with patients regarding remuneration for medical or surgical professional services.

The Physician and Social Service.

There is no question, says *Dr. William A. Evans, editorially, in The Tribune,* but that physicians are giving less medicine than they formerly did. They stand ready to give even less when the patients are ready to take less medicine and keep their faith in what is being done for them. Every physician finds times when he would like to give his patient advice, direction, and counsel, and prescribe no medicine, but he weighs the situation carefully and concludes that the patient would be the loser by it. There is no question but that faith, crystallizing around a concrete act such as the taking of a dose of medicine, is more potent than faith more abstract. On the other hand, there is no question as to the power of medicines to accomplish results when the need is present. The wave of therapeutic nihilism which swept over the profession was directed not against medicine, but against the over-use, the non-discriminating use of medicine. There are those who have imagined that there was to be an end of all doctors as well as of all drugs. There is a field for faith in the treatment of disease, in the maintenance of wholesomeness of mind, in the prevention of discomfort, in the gaining of full efficiency. This field for faith exists alike among those who practice medicine and those who hold themselves out as healing by other means. But any man who relies alone upon faith is headed for trouble. The medical tree is like the railroad tree — it needs the lopping off of a limb here and there, but the trunk must stand or things will "go to pot."

In this iconoclastic age many medical traditions are going into the scrap heap. But the nation-wide demand for greater security against disease and greater physical efficiency is going to mean more work for the properly trained healers and preventers than there has ever been. The dominating public sentiment is behind the essentials of orthodoxy in religion, medicine, and business. The best judgment of the best trained men in each of these professions has always been, is now, and always will be accepted as the general rule of guidance by the dominating mass of the people. There is no more mysticism by which the speculation of untrained minds become safe guides in medicine than there is in banking.

But the public has a right to demand that physicians keep abreast of the growth in understanding of the social side of disease. Physicians must meet that demand.

They have the right to demand that physicians keep abreast of the discoveries in biology, bacteriology, and organic chemistry in their relations to medicine.

Physicians must meet that demand.

Effective Garbage Disposal.

Until lately practice on this continent in the matter of garbage disposal has not been a matter for pride. Two methods have been common; unsightly, malodorous piles of decomposing refuse have been — in some places still are! — allowed to accumulate in the vicinity of dwellings, or cheap, ineffectual "disposal plants" installed and operated by greedy or dishonest private contractors have been run for a few years and then allowed to lapse into well-earned oblivion. Neither procedure is creditable to a civilized state. There is really no need for a continuance of the

offensive and wasteful methods that have been commonly employed in this country, says *The Journal of the American Medical Association.*

At least two methods of garbage disposal have proved effective in cities: incineration and reduction. In the incinerating type all kinds of refuse, ashes, paper, rags, scraps of food, kitchen waste, etc., are fed together into crematories and burned. In European works of this type the heat generated by the combustion with a forced draft is a source of considerable revenue. One of the best examples of an incinerator plant on this side of the Atlantic is the Milwaukee incinerator, which has been in full operation since May, 1910. At the old Milwaukee plant the cost of disposal reached as high as $1.37 per ton of garbage, while the cost at the new plant is less than 60 cents per ton. If the excess supply of steam generated at the plant is economically utilized the actual cost will be further greatly reduced.

In garbage reduction works the sorted garbage is passed through various digestors, tanks and roller presses with a view to extracting the valuable portions, especially the fats and the nitrogenous matters. The Columbus, Ohio, plant, put in operation in July, 1910, is the first reduction plant in this country designed and constructed by a municipality. Successful financial operation of this plant appears in the fact that it netted $2,000 a month for the first six months.

The reasonable and business-like way of approaching the garbage disposal question is the employment of a reputable and competent engineer to examine local conditions and report on such topics as the most economical routes for collection and transportation, the establishment and location of one or more centres for disposal and the final method of treatment — incineration or reduction — best suited to the amount and nature of the refuse gathered. Small towns should beware of the man with patented machinery. In all cases the expert adviser is better than the quack.

Obligations of the Medical Profession.

Discussing the obligations of the medical profession, the *British Medical Journal* points out that "a very serious question to be considered in relation to the proposed medical service under the National Insurance Scheme, must be the definition of the conditions under which the medical men who agree to attend the insured persons will be called upon for their services. Unless some limitation is placed upon the power of the patient to requisition the attendance of the doctor when and where he pleases, the lot of the doctor will be intolerable, and the situation will prove to be a constant source of complaint and trouble." It does not appear to be generally known that medical practitioners in England admit no obligation to visit a sick person in response to a call, other than that imposed by ordinary considerations of human feeling; that is to say, the doctor is not legally bound to accept a call for his services should he desire to refuse them.

Smallpox and Vaccination.

As a result of twenty years' experience and investigation, Lieutenant-Colonel C. E. Woodruff, Medical Corps, U.S.A., has formed the following conclusions, as given in *The Military Surgeon*:

"(1) One good vaccination in infancy in three places on each arm as done in Europe, generally, but not always, causes a lifelong immunity in both vaccinia and smallpox.

"(2) In cases which can be re-vaccinated, or which take smallpox after one vaccination, the original operation as shown by the scars was not thorough as a rule.

"(3) There are no cases of smallpox on record after two undoubted vaccination successes, one in infancy and one in adult life, or even two in adult life at wide intervals. Many have been reported, but careful investigations failed to show scars of two different periods or showed poor ones. Even in those very few recorded cases where the physician himself has been convinced that the scars showed more than one perfect vaccination, we are now justified in doubting the accuracy of the observation or of the patient's previous history, as the cases are so few compared to the billions who have retained immunity. They are explainable as instances of

a long interval since one success. Until there are more accurate records of this interval we must accept the generalization that two successes protect for life. At least they do in the Army so far as twenty years of observation go. An exceedingly common mistake is to consider a vaccination successful when, in fact, it was a mere inflammation due to pus organisms always on or in the skin, and sometimes in the lymph. Another error is to consider "spurious" or "aborted" cases successful, where the vaccine organisms begin to grow but are too feeble to continue or, if potent, are killed by the immunity of a prior vaccination. All such cases must be called failures. They are much to blame for the false idea that vaccination does not protect. I can find no evidence that immunity wears out faster in the tropics than at home; the cases of smallpox here merely mean that we encounter infection more frequently, though, of course, a man otherwise wholly immune may be "run down" and more liable to any infection which he would resist if vigorous.

"(4) There are no persons immune to primary vaccination, and failure means dead lymph, improper application or removal of the live virus.

"(5) If an adult has two or more good normal scars from infancy, and a proper vaccination fails, he should be considered an immune, but in view of the few whose vaccinations were not thorough and whose immunity wears out, it is wise to repeat it until a second does succeed, but not oftener than every three years.

"(6) If an adult has good scars showing two successful vaccinations, one in infancy and one in adult life, or both in adult life, he should be considered an immune for life, and excused from further operation."

The Future of the Doctors.

In an article in the *Illinois Medical Journal*, Dr. Charles J. Whalen, formerly Health Commissioner of Chicago, calls upon physicians to unite in a campaign against the factors that threaten the doom of the medical profession. The average annual income of the doctor, he points out, is only about $700. Excessive competition, he says, has much to do with this state of things. The growth of "quackery" is another cause, and what he terms "abuse of medical charity" is another. Among the signs of the times noted by the Illinois doctor, however, perhaps the most boldly written is the tremendous advance in sanitation and hygiene. "The work of the physician," he declares, "will finally be eliminated by being absorbed as a function of the state." There might be a difference of opinion as to the advisability of obstructing the approach of that time when prophylaxis shall be perfect. Because his calling is one of the highest and noblest, because the lofty ethical standards to which he subscribes involve considerable self-sacrafice, it is hardly conceivable that the medical practitioner would thus bar the way to scientific progress, even though the very existence of the profession were menaced. In all times he has been a teacher as well as a healer, the learned man of every period. The Latin word, *docere*, from which our language gets the word doctor, means to teach. More and more it is becoming the doctor's privilege to teach prevention of disease. Shall he, in time, thus frustrate himself? Perhaps. We may doubt, however, whether that day is near at hand. The doctor by his growing skill is continually encroaching upon the grisly province of death. The feeble now live, though once they died, but they need the care of the physician throughout their lives. And, too, the conquering of infection ought to afford the medical profession opportunity to attack the hitherto unsolved puzzles such as cancer, and to afford them opportunity, not merely to keep people alive, but to eliminate the defects in general physical well-being. There will be, beyond a doubt, plenty to do, for generations of doctors yet unborn. If, in the cause of human advancement, it becomes the province of the state to keep everybody well and to punish the infraction of the law which results in bodily illness, perhaps the doctor will be an employe of the state. Either policemen will be doctors or doctors policemen. It matters little which. In the meantime the successful doctor is becoming every day more of a sanitarian and medical missionary and less of a peddler of drugs. He is entitled to increased respect as his per-

sonal usefulness grows and his income diminishes.

Next Step Forward in Public Health.

What the duty of the workers in public health is to-day has recently been concisely expressed by Dr. Hibbert W. Hill in a paper in the *Minnesota Alumni Weekly*, in words that are worthy the widest circulation as an educational force. "We as a people," he writes, "have reached what we have reached handicapped by an enormous continuous expenditure of men, women and children and money, of diverted energies and wasted vitality, all on account of disease and the sequelæ of disease. What may we not achieve with this enormous deficit removed! The most conservative estimates place the actual money loss through infectious diseases alone (not counting the social diseases, summer diarrhœa and pneumonia) at eight billions per generation of Americans." Dr. Hill strongly urges the economy of the policy of large sums spent for prevention, towards which object many of the public statements of his last few years have been devoted. He shows how the task of the public hygienist is not how to learn to subdue infectious diseases, for that is pretty well determined now. It is no longer necessary to persuade the public that it would be a good thing to do, it is well aware of this already. What is necessary and important and the next step forward in public health education is to show the people that it can actually be done. "The only reason that public health has not more men and more money," he continues, "is that the people hardly believe us yet. They think disease is more or less inevitable. They still muddle medicine and mystery, drugs and the dispensations of Providence. They have yet to be shown. Once shown, the results will be accomplished and so easily as to make us stand aghast." Dr. Hill was the first graduate of medicine from the University of Toronto to receive its D. P. H. degree.

Infantile Paralysis Contagious.

The terror of infantile paralysis, which has swept through so many communities during the past two or three years, has been increased because we knew so little about the disease to guide us either in its prevention or treatment.

There has been a general belief that the disease was contagious as well as infectious, and precautions have been taken in many ravaged communities along that line. Dr. Flexner, of the Rockefeller Institute, established its infectious character, and now two doctors of the Cornell Medical School have established its contagious character, have appeared to prove that it is propagated by dust from the room of a patient, and that the virus enters the system with this dust through the nose. Like other physicians, they suspected this from the course of the disease among children, but now they have approached the cause by injecting into monkeys a solution from sweepings taken from the rooms of sick children.

The experiments have lasted some two years, and the account of them is given to the profession through the *New York Medical Journal*. They establish prophylactic measures in the care of children stricken with the malady, and hold out some hope of a reduction in its sweep when such precautions become general.

The Content of the Breath.

Whether the human breath is really poisonous is a question often discussed, and it has been reconsidered recently in a paper by Dr. Milton J. Rosenau in the *Journal of Medical Research*. Dr. Rosenau finds that the outbreathings of individuals do contain organic matter, and this question of organic matter is one that needs to be investigated in its relations to the health of other men who have occasion to or are obliged to rebreathe the air. Dr. Rosenau's collaborator in the work, which was undertaken at the Harvard Medical School, is Dr. Harold L. Amoss. The ground is one which has been traversed many times as some new method permitted of more delicate measurements, and till the recent experiments the balance of evidence was against there being any organic matter in the breath. Dr. Rosenau has been able to turn to account a more delicate means of determination, in the form of anaphylaxis. This interesting physiological effect has been discussed many times, and here it will be necessary only to say, that man or other animals when treated with certain substances become after a while abnormally sensitive to that kind of

treatment, and a second use of the treatment will produce symptoms in the animals or man that may be detected by the specialist. Anaphylactic reactions in the experiments of Rosenau and Amoss demonstrate the presence of this organic matter, which has hitherto eluded the most delicate chemical tests.

Claude Bernard, in 1857, supposed animals to be affected by carbonic acid which deprived them of oxygen, and for a time there were many supporting authorieies. In 1860-61, Richardson noted the effect of temperature on the health of creatures confined in unmoving air, and Pettenkoffer in 1863 believed that the symptoms observed in crowded and unventilated places were not due to excess of carbonic acid nor decrease in oxygen. This observer did not acknowledge that the impure air of dwellings was directly capable of originating infectious diseases, or that it was really a poison in the usual sense of the word, but that it reduced the resistance of those continually breathing the impure air.

Brown-Sequard believed in poisonous matters in the breath while other authorities, Billings, Mitchell and others, denied their presence, repeating with negative results the former's experiments. The effects of breathing air contaminated with the expired breath have recently been generally assumed to be due to the effect of increased temperature and moisture rather than to the poisons of the breath. Such an opinion was strengthened by the experiments of Benedict, who in his tests has kept persons in his calorimeter for twenty-four hours, breathing and rebreathing the same air, with a carbon dioxide content as high as two per cent. The only precaution was to keep the temperature down and remove the moisture, and no discomfort was felt. Dr. Rosenau puts his finger on what seems to be the neglect of a very important factor in the calorimeter experiments, when he says: "It is to be noted that in these experiments some of the air was passed over lime and sulphuric acid every two hours, and the greater part of the moisture was removed by cendensation, which may also remove other substances than the carbonic acid and moisture."

Dr. Rosenau sets forth also the position of bacteriology in the matter of the breath. One of the notable achievements of the science was to show that the outbreathed air is sterile, the mucous membranes acting as a trap for the organisms. This fact has been urged to its full limit and instead of the belief in the dangers of communicable disease through the breath, "it was entirely acquitted and given a free bill of health in the minds of many sanitarians." Here there has been a reaction, and droplet infection, through Flugge's experiments, partly restored the breath to a position of danger. This position has again been asailed by Winslow, whose experiments show a limited time of danger from droplets and only in the immediate neighborhood of the invalid. Winslow's position, the latest that has been taken in this work, is that the droplets quickly settle to the ground and the person coming into the room half an hour after a sick person has left it runs practically no risk of infection. This view is quite in contrast with the older one, of air-borne infection, based on the assumption that the air is filled with dangerous bacteria.

Air-borne disease — save for two or three highly infectious diseases — is not now the belief of most of the authorities in medicine and heretofore no harmful substances of a chemical nature being demonstrated, the agency of the air has been recently considered as negligible. Some sanitarians have gone so far as to state that if the temperature and moisture can be kept down and the air stirred continuously, as it would be by an electric fan, it may be rebreathed. This claim, could it be substantiated, would have enormous influence in factory and workshop ventilation, for all the legislation is based on a continuous supply of fresh air to the rooms. If the supply could be dispensed with, commercial interests would soon demand a narrowinig of the quarters in which the work is done. Dr. Rosenau is not willing to go these lengths, "for," he writes, "we have always felt that a vitiated air must contain substances which are harmful, even though not demonstrable to science."

The greater portion of the paper is devoted to the technicalities, methods of condensing the breath and the details of the reactions. A protein substance was demonstrated, which for the present the investigators assume to come from the blood. The logical conclusion is that protein substances under certain circumstances must

be volatile, not in the sense that they can pass out into the air in gaseous form, but rather in some of the curious forms of colloidal suspension.

The fact that organic matter is present in the expired breath does not carry with it the right to state that they are poisonous; that must be the subject of other investigations. "It is evident," according to the statement, "that the air does contain many substances which we cannot at present discern, some of which may have an important bearing on health." It is well known that the deaths following an injection of diphtheria antitoxin, which are rare, occur in adults. How they have become sensitized has always been a mystery. It is possible that sensitive persons may absorb through the lungs enough horse protein to prevent anaphylactic reactions on inoculation. This opens up a new field for investigation, which may throw light on other important infections of the day, as to the content of the expired breath of horses and other domestic animals.

Slaves of Machines.

Sophronisba P. Breckinridge and Edith Abbott, of the Chicago School of Civics and Philanthropy, made an exhaustive examination of housing conditions in a district in the 8th ward of that city, and their report is published in the *American Journal of Sociology*, issued by the University of Chicago Press. It was prepared as the result of a house to house canvass made by a dozen research students of the Russell Sage Foundation:

"One cannot walk these streets without a weird impression of the fulfilment of an old prophecy that here men are slaves of machines, and that machinery has ceased to be the servont of its makers," say the writers. "The stranger within the gates of South Chicago is overwhelmed with the fact that the world is made for industry, not for men and women and little children; that with magnificent enterprise on the one hand there is a hideous waste of human life on the other. The men who feed the furnaces and send the product of their toilsome labor to a world market, sleep in these miserably overcrowded houses; they have no decent places for recreation and frequent the low saloons and dives along the strand; there are no decent lodging houses for the unmarried men or the newly arrived immigrants who have come out alone, hoping to earn the passage money for their wives and children when they have found a job.

"No work is too hard for them, no conditions of living are too sordid if they spell the promised reward. With no lodging houses provided they crowd into the small homes of their fellow countrymen and innocently become a demoralizing influence in the family life."

The authors declare the community is not doing its part to improve conditions, because the housing code is inadequate and because it has failed to provide the department of health with a staff of inspectors sufficient for the enforcement of present legislation. They say:

"It is important to call attention to the fact that neither in the stock yards district nor in South Chicago can the housing problem be solved until those responsible for the great industries upon which the men depend for employment and which, in turn, depend on the men for existence, realize the necessity for so altering industrial conditions that decent standards of family life may be maintained. It is fair neither to the workers nor to the community that a great and powerful industry should be allowed to blight the neighborhood at its gates."

The investigators canvassed a district of six blocks known as "the Bush," with a total population of 3,094. The nationalities represented in the population are German, Hungarian, Irish, Magyar, Polish Slavic and Swedish. The laws governing the size of sleeping apartments were found to be frequently violated. Overcrowding was found to be worse than in any other district in Chicago. Many of the laborers slept in the same rooms with the owner of the house and his wife. Often the rooms were used both night and day. The investigators found much filth where animals were kept, these pets being lodged in the most inconceivable places. Ducks, chickens and pigs were discovered in basements. One family kept four geese in a bedroom, and another seven goats in the basement. Attics also were found to shelter all sorts of feathered animals.

The Almanac Idea for Boards of Health.

"October for scarlet fever," is the striking caption in the *Health Almanac*, of the

Virginia State Board which in this interesting publication is circulating reliable facts with reference to the prevailing ailments, each in the season in which it rages. The relating of health to the almanac is no new idea, for those who were not brought up on the Old Farmer's had some substitute in the house usually issued in the interests of a patent remedy, but the presentation of plain facts at the time when they are likely to be of service is new when put in such attractive guise as in this Virginia almanac. It follows out the old ideas in having a calendar indicating the day of the month, the moon's phases, the times of rising and setting of sun and moon, and in the column where one usually finds the hieroglyphics and the legends, "About this time take Faker's Family Freshener," there are the settings forth of important events in the medical world, the birthday of Virchow, the opening of an important hospital with an international record, or the issuing of some world-reversing doctrine, as when on October 1, 1859, Darwin finished his proof of the origin of species. Health facts in such attractive guise as the Virginia Health Almanac ought to continue for years to be a factor in public health education.

Instruction in Sex Responsibility.

In his usual fearless manner, Dr. Neff, Director of the Philadelphia Department of Public Health and Charities, has come out squarely in favor of having parents instruct their children in the responsibilities of life as regards the matter of sex. In the *Bulletin of the Philadelphia Department of Public Health* recently issued he directs attention to a course of training which would begin with natural history, botany and, as the child grows older, include elementary zoology. By the aid of these, parents could undoubtedly unfold gradually and naturally to the child's mind the things which it seems essential it should know, but which it is extremely difficult to impart without their help. It is a fact, as the Director states, that too often parents hold to the old custom that such teaching is improper until it is too late. Withholding it is often the cause of "sorrow, disease and disaster."

Insufficiency of the Health Appropriations.

The *Bulletin of the Health Department of the City of Chicago* presents always on its last page some item, pictorial or statistical, that touches a vital spot. Sometimes it is the milkpail in the dirty farm barn, and at another it may be the baby's milk in the conventional baby's bottle. A current issue touches upon a matter to which too little of the public attention and the public consideration are given, the appropriations of the municipality for the public health department. The figures are presented in the Bulletin for the health, police and fire departments of Chicago for four years. For the health department in the four years, 1907-10, the appropriations were, respectively, $850,000, $800,000, $600,000, and $545,000. In the same years the appropriations for police were $5,600,000, $6,630,000, $5,840,000, and $5,900,000, while for fire they were $3,200,000, $3,200,000, $2,900,000, and $3,000,000. Health receives in Chicago only one-tenth as much public financial support as the police, and one-sixth as much as fire.

Such figures as this show how little people value the measures that are protective of health in comparison with those relating to property, for the police functions must in the finality range themselves quite largely under the protection of property. There is need in this country of a standardization, which can be done properly only at considerable cost, of the expenditures for health work in the municipalities. The problem approaches in complexity the ratings of the efficiency of colleges that the Carnegie investigators have taken up so actively and persistently. Here is a crying need for some good institution, wishing to confer lasting benefit on the country's most important asset, to lay a foundation for rational improvement in health administration by establishing proper standards.

Diagnosis and the Public.

Commenting on the difficulty which even the experienced doctor may have in settling the nature of an illness, the *London Lancet* makes the following striking statement: "The public fail to recognize that in many cases the making of a diagnosis is extremely difficult, and not rarely quite impossible; and they are ready to look upon any refusal to name the disease present as an acknowledgement of ignorance, while it may well be that the refusal is due to the wide knowledge of the observer."

Open Mail

To the Editor, The Public Health Journal, State Medicine and Sanitary Review:

The Woman Health Inspector.

Sir:—The woman health inspector ought to be, and probably soon will be, a permanent institution in every city. She has been tried and proved in New York. Wonderful have been the improvements since she began to delve with her practised hand into the conditions that make for the spreading of disease in the poorer sections of a city.

In order to write intelligently about the work that these Health Board women are doing, the writer recently obtained permission from the New York City Department of Health to accompany one of them on her rounds. If an aspirant for a position on the health squad is curious to know the requirements, I would say: Tact in dealing with women of the slum world; nerves, olfactory and every other kind, of the insensible variety; an athletic physique and an absolute craze for prying into corners and investigating quarters that harbor human beings who regard filth and foul air as necessary evils. It will be readily seen how essential all the requirements referred to are when the story of one day with the health officer is told.

"First of all," said the brisk little woman of the Health Department, as we stopped before a huge, overgrown tenement house, "first of all, the fire escape. Most of the people of the tenement house type regard a fire escape as a kindly provision by a not over-generous landlord for enabling the occupant of scant quarters to find storage room for anything that can be dispensed with for the time being in the room itself. The fire escape is used as a clothesline, as a bedding receptacle, as a pantry, a sleeping-place in warm weather and a lounging-place in the day time. Now, I want to get out on this fire escape, in order to reach the roof, but on the way I shall have to have a heart-to-heart talk with the woman of the rooms, who, you can see from the street, has made it quite impossible for anyone to reach safety in the event of fire, by piling the escape with all sorts of domestic flotsam."

The question of tact became prominent as soon as the rooms of the tenant referred to were reached. She proved a tartar. Nothing but the threat of a policeman would bring her to reason. Once her tirade of abuse was stilled, however, the day was ours. It was found that most of the windows of the place were hermetically sealed, apparently because some previous tenant had left them that way and the present occupant had been content to leave things as she found them. A simple lecture on the benefit of airing a room did less good than the action of the woman health officer in mounting a chair and unsealing the windows, while the tenant looked on stoically, neither indorsing nor objecting to the admission of fresh air into the fetid room. At the end of the session, however, the tenant had been reduced to that state of submissiveness popularly referred to as "eating out of your hand." We had no trouble when it came to clearing the cluttered fire escape and making our way to higher regions.

"Besides seeing that the fire escapes are kept clear and free from the refuse that these people pile on them," said the Health Board inspector, "it is my duty to observe the condition of the escape itself. Grasping landlords will try to evade the law by putting up a fire escape that is smaller than the legal requirements. I carry a foot rule, and measure them as I go up. It would be a calamity, wouldn't it, if, when a fire occurred, one of these many stout women became wedged in a narrow fire escape, cutting off the pathway to the street for the other tenants? Not only must the fire escapes be kept clear, but they must be of the right size. We have to report any that are in wrong shape.

"Now we get to the roof. You see, it would not do for a delicate person to tackle a job like this. Any woman ought to be able to climb a fire escape, however, with a little practice. Up to the roof we

big tank provides water for all the young army of tenants in this rookery. How often do you think it would be cleaned out if the health officer did not come along and insist upon it? I must climb that ladder and get my inquisitive optics focussed on the interior of the tank."

"Horrors!" ejaculates the health board expert. "I never saw a tank in a worse condition. I don't believe it has been cleaned since it was put up, and dear knows how long ago that was. It takes a woman to find out such things as these. The wonder is that every one in the tenement has not been added to the typhoid death list long ago. You may rest assured that the owner of this building will get a prodding that he won't forget in a long while.

"Well, now that we are on the roof, we may as well climb to the roof of the adjoining building and make our way to the street down that fire escape."

Another water tank was scrutinized by the keen eyed Health Board woman, and a note made to give another landlord a dressing down for not providing a clean receptacle for the tenants' supply of water.

On the way down three sets of rooms were visited and a tactful talk handed to the occupants on the need of studying simple hygiene. It became more and more apparent, as the day wore on, that a woman alone could be intrusted with work of this kind. A man would not only have been out of place — he would have been quite unable to accomplish what the woman did. She was in her proper sphere, the home. Nothing could be more eminently proper than the selection of a woman for such work.

"We're now going down to the quarter that gives us more trouble than any other part of the town, the streets where rags and bones are sorted."

The health officer led the way to a littered street, where every evil smell seemed to have been caught and kept ready to attack the visitor. Rags and scraps of every kind provided an unwholesome carpet for the untidy street. Disease lurked in every hole and corner.

"We do the best we can," said the health officer, a little wearily, "but it is impossible to teach these people to be tidy. We make them clean up every time we come around, but if we didn't come we know well they would lapse into the old condition of dirt and litter. Here you," this to a slatternly looking woman who was sorting rags, "get busy and rake that rubbish into a heap. Don't let it get spread all over the street in that fashion again or I will put the policeman — the cop— on to you. Where's the man who runs this place? Get that rubbish out of here before something gets you."

So the day wore on. The health officer's heart was clearly in her work. And she was doing a great work, conscientiously and consistently cleaning up and trying to keep clean a part of the town that fairly revelled in filth. To the writer the only weak feature of the plan was the lack of women to carry it out. Instead of a few women health inspectors there should be hundreds. And they should be part of the municipal machinery of every city.

C. B.

Meetings and Reports

Material for this department to appear in any month should be transmitted before the 25th of the preceding month.—Ed.

DOMESTIC

ADVANCE NOTICES.

Canadian Public Health Association Congress, under the patronage of Field Marshall, His Royal Highness, the Governor-General, December 13th, 14th, and 15th, 1911, Royal Victoria College, Montreal. F. C. Douglas, M.D., Secretary of Committee for Local Arrangements, 51 Park Avenue.

The Eleventh Annual Report of the Canadian Association for the Prevention of Tuberculosis.

From every point of view the Eleventh Annual Report of the Canadian Association for the Prevention of Tuberculosis is the best which this Association has yet issued. Both the President, Professor J. George Adami, and the Secretary, Dr. Geo. D. Porter, are to be congratulated on its amplitude and excellence.

The essence of the Report is that the work which the Association is organized to do is being aggressively and successfully done. During the year much highly useful educative and organization work has been accomplished — the fruits of which will show in the records of the future. The task of arousing national interest and action in the subject of the prevention of tuberculosis is a very great one, and the wonder is that so much has been already accomplished.

The report shows in detail just what work is being undertaken in every province, and contains a number of papers on a wide variety of subjects connected with the anti-tuberculosis movement by those well competent to deal with these subjects. Among these papers are the following:

Dr. Adami's Presidential Address at the Convention held in London in May; "Sanitorium Treatment," by Dr. C. D. Parfitt; "Prevention and Treatment of Tuberculosis in Rural Municipalities," Dr. Wm. C. White; "The Present Outlook in the Campaign Against Tuberculosis," Dr. Livingston Farrand; "Woman's Work Against Tuberculosis," Mrs. P. D. Crerar; "Tuberculosis in Children," Dr. J. H. Holbrook; "The Clinic for Pulmonary Tuberculosis," Dr. Harold Parsons; "Municipal Sanitoria," Dr. J. W. S. McCullough; and "The Relation of Bovine Tuberculosis to Public Health," by Dr. Shraeder.

The incorporation of illustrations in this report adds much to its interest and value.

From the foregoing it will be seen that the Eleventh Annual Report is not only comprehensive; but is made a valuable addition to the literature on the subject with which it is concerned.

The Medical Side of Dalhousie University.

The educationalists who brought about the combination of the Halifax Medical College and Dalhousie University, following suggestions of the Carnegie Commission, are to be congratulated, tending, as this union does, towards the requisite financial strength and concentration of educational efficiency necessary to and more in harmony with that high standard of citizenship always identified with maritime provinces of eastern Canada. Dalhousie University reports that in accordance with an agreement between the Governors of the University and the Corporation of the Halifax Medical College, the work of the latter institution has been discontinued and instruction in all subjects of the medical curriculum will henceforth be given at the University.

Toronto Professional Harmony and Hospital Requirements.

In Dr. N. A. Powell's recent presidential address before the Toronto Academy

of Medicine, it was pointed out that the evolution of the Academy from four societies, by the union of which it came into existence, was in line with medical progress the world over. "In all great centres of civilized population," said Dr. Powell, "the day of the small medical society, of the proprietary medical school, and of the ill-equipped hospital is passing or has already passed.

"Modern life, with its complexity of needs, has made it imperative that bigger and better organizations should replace those which formerly sufficed. Yet to be bigger is not of necessity to be better; and while in the changes that are taking place much has been gained, some things of value have possibly been lost.

"A few years ago the four medical societies referred to were doing excellent work in Toronto and making the name of the city and country widely known. They voluntarily gave up their autonomy in order that by uniting forces, one strong and progressive society should come into existence. Medical men have thus been brought into closer relationship, one with another, and warm friendships are replacing jealousies and suspicions which formerly were too much in evidence."

Referring to hospitals, and later to student requirements, Dr. Powell said that in the year 1898 it fell to his lot to suggest a way in which a certain ample fortune could be used for the permanent benefit of the people. What was decided upon involved substantial gifts in aid of the care of sick children, of the treatment of pulmonary tuberculosis, of missionary efforts, and of various other great charities, but reserved for a single purpose the bulk of what was to be devised. This purpose was to build, equip and maintain in perpetuity an emergency or casualty hospital, which should afford prompt and skilled relief to those injured or taken suddenly ill.

That a need exists for such assistance in all large cities admitted of no question. When supplied by the regular service of a general hospital it was apt to be attended by delays, and to disarrange the work of the staff. The Relief Station at Haymarket Square, connected with the Boston City Hospital, and the Hudson Street Hospital, which is the Casualty Department of the New York Hospital, were the best institutions of the kind to which he can refer. Each has a staff of its own and the patients admitted are soon transferred to the parent hospital. In Scotland a similar plan is found to be most satisfactory. In every great modern hospital a department like this must be given a place. On this continent, he wished it remembered, there is no great modern hospital complete in every detail. Years must elapse before anything approaching the Rudolph Virchow Hospital or two or three others in Europe could become available.

If the dreams of the architects are realized, however, Blackwell's Island will have one and Cincinnati another.

If asked to name one particular in which the men who are graduated in medicine with us most seriously fall short, he would answer at once: "In the practical aspects of their surgical training."

He was glad, therefore, to tell the members of the Academy that, after consultation, those in authority had thought it best to approve of a large clinic room in the aforesaid Emergency Hospital being set apart for surgical demonstrations and fitted up with a lantern and whatever else may be found of advantage to surgical instruction.

Union of Canadian Municipalities and the Twentieth Century City.

The Hon. Henry B. F. Macfarland, former president of Commissioners of the District of Columbia, U. S. A., before the recent 11th annual convention of the Union of Canadian Municipalities at Quebec, spoke on the Twentieth Century City in substance as follows:

The true twentieth century city is one which is conscious of its duties and opportunities as the present heir of all the ages and is striving to meet them fully.

A city, like a man, is body, mind and spirit. It is more than the individual citizens, for it lives on and is not only a legal, but an actual entity, separate from them. Even up to the nineteenth century, there was little community consciousness, and generally the citizens thought of their city simply as a place in which to make money and spend it. City patriotism was almost unknown; hence in the United States the general failure of municipal government; hence the terrible indictment of one of the greatest of our cities as "corrupt and contented." On both sides of

that invisible line between the Dominion and the Republic, we were too busy in that period of construction to think fully of what we were doing, to see far ahead or to look much below the surface. But late in the last century, noble men and women appeared in different cities who began to see what their particular city ought to be, and then to try to make other people see the vision too.

Naturally when we were first wakened up by our more progressive citizens, we first thought of the body of the city. The "city beautiful" became the natural object of those who suddenly opened their eyes to see that they lived in smoke, amid ugly and incongruous buildings with unattractive highways, often poor and almost always inadequate, and without suitable parks, park space, trees and other aesthetic essentials.

But as no thinking being can be contented simply with physical development, our cities have now also a noble discontent with the improvement of their mind. The educational system, including public schools of all kinds up to, and including city colleges, the public libraries and museums, and public play grounds, all the forms of public education, show the evidence of this new feeling. Public play grounds, indeed, have been practically created in the past decade. They have not entirely passed the stage of ridicule by the ignorant, including persons of general intelligence and education, of whom many oppose every step forward. The need for them had to be shown first by public spirited citizens who provided them until the municipality took them up officially, as was the case with the kindergarten and other modern improvements in public education. But now they are on municipal programs and budgets, and millions have been spent upon them already, often by vote of enormous majorities of the taxpayers, which show their popularity. Public schools and public libraries which we admired for their buildings, equipment and training in the nineteenth century, would not content us in the twentieth century. Changes in the curriculum of our schools have been rapid and radical and the end is not yet even.

As in the man, so in the city, the spirit is the most important. As a city thinketh in its heart so is it. Its spirit determines its life.

This is the warrant for the new optimism or meliorism of cities. We are sure of making everything better; so that the new word is "the city better" rather than the "city beautiful," unless we comprehend all under "the beauty of holiness" that is of wholeness, of health, of perfection in all things.

This means that all the city's work shall be done by citizens and officials not only without graft, but with efficiency under a comprehensive plan of harmonious development through a long period, a wider city planning. This requires better fiscal provisions, more equitable and rational tax laws, more clear and comprehensive budgets, uniform municipal accounting according to cost keeping and other modern methods, and expenditures according to true economy, not parsimony and not extravagance. It requires also proper management of public utilities and proper regu lation of public service corporations.

The ideal twentieth century city with a pure water supply, pure milk supply, pure food supply; without slums or dangerous congestion; without insanitary or inflammable buildings; with general knowledge and general practice of health rules; with righteous and enforced laws as to labor, especially that of women and children; above all with the social justice of true democracy, will have smaller and smaller delinquent, defective and dependent classes and a higher order of citizenship.

As practical men, we know even though the "stay-on-the-farm" and "back-to-the-farm" movements are having encouraging success, thanks to improved means of communication and as well to scientific training and better facilities for farming, that the entirely modern growth of the city in unparalleled proportions must continue under the operation of economic laws which cannot be repealed by the legislature. More and more people will live in cities where the majority now live. We must accept the conditions and make the best of them. This can only be done through the spirit of the city. Its intelligence must be developed and educated, its conscience must be quickened, its will power must be strengthened by exercise. Experience has already shown that there is nothing impracticable in such a vision.

For the Health of Vancouver.

A special report was submitted to the Vancouver, B.C., health committee recently by Medical Health Officer Underhill. The clauses adopted provide: assistant, at a salary of $3,000 per year, to take entire charge of the department of infectious diseases; that a joint meeting be held between the city engineer, the chief of police, and the medical health officer, to discuss the overlapping that now occurs in portions of their respective duties, and that the joint committee report to the city council as to how this overlapping can best be obviated; that an additional rooming house and lodging houses inspector be appointed, whose duties, in addition to assisting in inspection, would be to find rooming and lodging houses which have not yet applied for a license. The recommendation says: "It is possible that this work could be carried on by the police, and this is one of the reasons why I suggest a joint meeting of the chief of police, the city engineer and myself."

Several of Dr. Underhill's recommendations were laid over, however, for future consideration. Among them were: that an assistant be appointed, to have complete charge, under the supervision of the medical health officer, of all sanitary matters; that consideration be given to the advisability of placing the health department in the hands of an elective commission, composed, for example, of three laymen and one or two medical men (*a la* San Fransisco.)

Dr. Underhill finished his report with an emphatic statement that if his department is to carry out its work in an efficient and consistent manner, it is necessary that adequate accommodation be provided.

He called attention to the complexity of the by-laws, which acts as a great handicap, and instanced the example of a manure box in an alley. One by-law declared it a nuisance under the control of the health department; another that it was a lane obstruction, which should be removed by the board of works; while under another by-law it was placed under the supervision of the scavenging department, which is part of the city engineer's department. The result is that the department receiving the complaint will usually refer it to the police department, which, in turn, will send it back to some other department. Dr. Underhill complaied that the health department is responsible for all such nuisances, but has no power to take action.

Vancouver has decided, however, to erect an Isolation Hospital to cost $50,000, and is now asking for tenders.

Montreal Architectural Lectures.

The following is the list of lectures arranged by the Province of Quebec Association of Architects to be given at 5 Beaver Hall Square, Montreal, during the winter season: Tuesday, November 21, "Modern Methods in Foundation Work," by Mr. Alexander Allaire, M.E.; December 19th, "Ventilation of Public Buildings," Dr. T. A. Starkey, Professor of Hygiene, McGill University, and President, 1910-1911, Canadian Public Health Association; January 16, 1912, "Improvements to Traffic Routes in Montreal," Mr. F. G. Todd; February 20, "Mouldings," Prof. P. E. Nobbs, A.R.I.B.A.; March 19, "French Apartment Houses," Prof. Jules Poivert, of the Polytechnic School; April 16, "Colonial Architecture, Prof. T. W. Ludlow, of McGill University.

London (Ontario) and the Public Towel.

Dr. T. V. Hutchinson, will oncorporate in his forthcoming report a recommendation that the London Board of Health request the council to take steps against the public roller towel.

Factories, offices and even schools harbor the roller towel, and it is likely that London will follow in the footsteps of Chicago in prohibition measures.

Night Refuges in Montreal.

The question of night refuges is at present occupying the attention of Montreal civic authorities, who are making a thorough inspection of the places run by individuals. Conditions in those run under the auspices of certain societies, as well as the one bonused by the city, are found favorable, but a number which cater to the foreign element reveal deplorable conditions, Without light, ventilation or sanitation, many of these places are a menace to the health of the city.

It is believed that it will eventually be necessary to establish municipal refuges

for Montreal's homeless, in order to weed out the undesirable places where unhygienic conditions prevail.

Manitoba Architects and the Health Act.

Several questions of interest and importance to architects and the public at large were discussed at a meeting of the Manitoba Association of Architects at last month's meeting.

One of the most important questions discussed was with reference to the new provisions of the Manitoba Health Act, passed at the last session of the Legislature. Some of the new provisions of the Act which affected the building by-laws of the city of Winnipeg were found to be impracticable, and a committee from the association was appointed to interview the Government. The committee reported that the Ministers had agreed that some amendments to the Act would be accepted, and the same committee was asked to prepare a synopsis of the suggested alterations to the Act which the Government will introduce at the next session. The committee will report back to the next meeting of the association.

Lectures on Town Planning at Toronto.

The University of Toronto is taking the lead in Canada by inaugurating a course of lectures on Civic Art and Town Planning, and has secured the services of Mr. Thomas H. Mawson, H.A.R.I.B.A., lecturer at the University of Liverpool. Mr. Mawson stands high in the new study of civic planning, having been appointed to design the grounds of the Peace Palace at Brussels, and is the author of important works on cities and gardens; and the University of Toronto has done wisely in securing so eminent an expert to lead in the study of this important subject. The course of lectures begins the first week of the present month.

Fort William's Health Officer on the Duty of the Housewife.

We are in receipt of a paper read by Dr. R. E. Wodehouse, before the Woman's Institute in Fort William recently, on "The Duty of the Housewife to the Cause of Public Health." The speaker, in introducing his subject, spoke of his work for the advancement of public health as extremely interesting, and having gratifying results, but also its drawbacks. Frequently these were in the form of obstacles interposed by the public, whose opinions are formed without knowledge of all the facts. Having this lack of knowledge of the facts in mind, he endeavored in his humble capacity to follow the maxim of the Earl of Derby: "Sanitary instruction is even more important than sanitary legislation;" and to impart to others at every opportunity the facts, as public health men know them to-day.

Continuing Dr. Wodehouse said: "What is the meaning of the words Public Health? Public Health is concerned in that portion of the unwell feeling in the individual, chargeable to some controllable cause. It is evident from this definition that the cause of public health is a wide subject as well as one whose component parts are open to question and which still lacks many parts which should be included under its guardianship. For the purpose of this address we shall arbitrarily limit our discussions to those diseases commonly known by the public to be under the ban of all health departments — namely, smallpox, chicken pox, measles, whooping cough, mumps, scarlet fever, diphtheria, tuberculosis, typhoid, plague, malaria, yellow fever, cerebro-spinal meningitis, and infantile paralysis.

"What is the nature of these diseases? They are all known to be communicable from one person to another, but frequently from the infected person to another by some intermediate hoste. This hoste may be clothing or personal belongings, earth, excreta, or a living person into whose system the disease does not gain an entrance, or a person into whose system the germs gain an entrance but are unable to produce typical symptoms, or so very mildly that they are mainly indiscernable. All these diseases are supposed to be communicable owing to a germ causation, but many of them have not had their individual germ isolated.

What has been the prevailing idea of their cause and spread? Fifty years ago infectious diseases were said to be found only where filth existed, either due to nature — as swamps, low lying, poorly drained tracts, or due to men — unsanitary habits. These ideas were formed from the histories of epidemics, malaria and yellow

fever being prevalent near swamps; typhoid, plague and other diseases occurring in unsanitary cities; diphtheria and tuberculosis in homes where stagnant sewer gas and other foul air existed.

What has been proven to be the nature of their cause and spread? Malaria and yellow fever have been found to be due to infection by germs, and these early forms of life exist in the mosquito and get into the blood stream of man through the bite of this insect. Plague is caused by a known germ which also infects rats and ground squirrels and multiplies in these animals and may thus travel from place to place, infecting man indirectly through food or otherwise.

Typhoid fever is caused by a germ which has no intermediate hoste in lower animals or insects as the above mentioned have, but is known to live for some time in water, ice, earth, milk and other foods, and may live for many months in people who have had typhoid and who have recovered from its symptoms, or in people who have had typhoid infection but in whom the symptoms did not develop or were so mild as to be unnoticed. These persons give off — not always continuously — germs by way of fæces and urine. Their hands and clothes are thus infected and the food of other persons in this way contaminated.

Tuberculosis in the human form has no intermediate hoste, but the tubercular germ infecting cows can and does live in man and cause tubercular disease. This disputable point has been settled once and for all time by the final report of the Royal Commission on tuberculosis.

Human sputum from tuberculous people is almost constantly infections, and these germs live on clothes, in dust and elsewhere for variabe periods.

Spinal meningitis and infantile paralysis have both been traced to a known and constant infecting bacillus, but its mode of propagation and dissemination has not been definitely determined.

The other diseases mentioned, are undoubtedly of germ origin, but the germs have not been finally decided upon, therefore our means of combat is simply isolation for defiuite periods.

How does this concern the housewife? In the first place, it is becoming the view of many public health men that most of the germs causing specific diseases do not live long outside the human body or the living intermediary hosts referred to. In fact, 97 to 99 per cent. of the germs this discussion is concerned about die within 24 hours to a week from the time they are discharged. Even typhoid epidemics from water infection are very sharp and usually short in their duration unless there is a constant pollution of the water by fresh fœcal contamination. Infected wells are slower to purify themselves than city supplies, but even these are non-injurious if their source of infection is cut off. It is almost a certainty that nearly all infection is spread by carriers of one form or another. Even the germs that live outside of the body of their host, practically do not multiply except in milk, and very slightly there if milk be kept under 50 degrees Fahr.

The principal carriers we know of are the mosquito, the rat and squirrel, and man. The method of combating the mosquito is drainage of all bogs and low lands, the spreading of oil over stagnant waters, and the complete screening of houses and places of habitation. Panama Canal zone is now an excellent example.

The rat and squirrel must be combatted by governments and municipalities.

The last named carrier, man, is largely entrusted to the careful housewife.

Carriers of smallpox, chicken pox, measles, whooping cough, mumps, scarlet fever and diphtheria are:

First, those who have not entirely become clean or recovered from illness before they are allowed to mix with other people of their own or other households.

Second, those who have in their system the germs causing the above mentioned diseases, but in whom no symptoms have been produced;

Third, those who have in their system the germs causing the above mentioned diseases, but in whom the symptoms have been so light as not to have been recognized, or if recognized, for various reasons have not been treated as infectious.

Under No. 1, the housewife should feel it her duty to the other members of the household and the outside general public to make sure the case is entirely better, and where possible insist upon a thorough personal examination by a physician to as-

certain that the body is no longer giving off infective matter.

Under No. 2, the housewife is handicapped, but, in case of typhoid, should insist upon three examinations of fæces and urine by the Board of Health laboratory on three different days. She should inquire into the history of maids, waiters, cooks and other help who handle foods, to see whether they have had typhoid, and, if so, insist upon a similar examination of excreta. This may seem rather far fetched, but it is preferable to an outbreak such as that which occurred at Hymers.

And No. 3 could be met by each housewife refusing to shield or conceal scarlatina, chicken pox or mild forms of any infectious disease.

See, therefore, that the health officer is notified of each possible case or suspect. If in doubt, throw the responsibility on him. By removing such mild case or suspect to the hospital at once, you prevent probably two other cases in the house which might be much more severe and perhaps fatal.

Every time you conceal a case of infectious disease, you do yourself a wilful wrong as well as your family and the general public. It is the unknown cases of infection which cause epidemics, not the severe cases which are reported and quarantined.

As to tuberculosis — knowledge of the infected sputum and longevity of its germs outside the living host suggest extreme care in destroying sputum at all times, as excreted from patients and absolute cleanliness in surroundings of patients. Knowledge of the facts, from the Royal Commission's report referred to, emphasize the importance of tuberculin testing of all milk cows, and the personal interest parents should show in choosing a supply of cow's milk for their artificially fed infants. Don't sit back and feel assured the Board of Health has protected your supply. If from a private source, inspect the animal and methods of caring for the milk yourself. The Board may not know such a cow exists. Ascertain if it has been tested for tuberculosis. If not, telephone the Health Department, and follow up your telephone message to see if your request has been carried out.

Dr. Douglas, of the Winnipeg Health Department, strikes the keynote when he says: "No sanitary improvement worth the name will be effective, whatever acts you pass or whatever powers you confer on public officers, unless you create an intelligent interest in the public mind.

We are very dependent upon the co-operation of the public for any success in health department undertakings. We must, therefore, inform you of the facts connected with our work and ask your co-operation."

Dental Inspector's Outline of Toronto School Work.

Some of the work to be undertaken this year in Toronto Public Schools by Dr. Doherty, Dental Inspector:

1. Continuance of mouth inspection. Notification of defects sent to parents.

2. Lectures to teachers, parents, etc., on mouth hygiene.

3. Talks to pupils on care of the teeth.

4. Preparation of an Oral Hygiene Exhibit, to be left a certain time in each school, with lecture to parents and pupils while there.

5. Pamphlets for distribution among parents.

6. Some bacteriological tests for unhealthy teeth and mouths, for pneumococci, streptococci, tubercle bacilli, Kloebs Loeffler bacilli (diphtheria).

7. Arranging to place a supply of the proper tooth brushes and dentifrice in each school, preferably under charge of the school nurse, to be sold at cost.

8. Endeavor to make some arrangement to have each new pupil, when admitted, required by principal to supply himself with tooth brush and dentifrice, and receive instructions from nurse. A pamphlet, at the same time, to be given or sent to the parent.

7. Supplying the city press with occasional short articles of an educative nature on the importance of mouth hygiene.

10. Tooth brush drill.

11. Using facts relating to Oral Hygiene, such as "Good Teeth — Good Health" when possible, as writing exercises, etc.

INTERNATIONAL

ADVANCE NOTICES.

American Public Health Association Convention, Havana, Cuba, Dec. 4-9, 1911. Dr. Wm. C. Woodward, General Secretary, Washington, D.C. *International Red Cross Conference,* Washington, D.C., May 7-15, 1912, Dr. C. R. Dixon, General Secretary, Canadian Red Cross Society, 192 Bloor Street West, Toronto Ontario; *International Eugenic Congress,* London, England, July 24-30, 1912. Address the Honorable Secretary, 6 York Buildings, Adelphi, London, England. *Seventeenth International Congress of Medicine,* London, England, summer of 1913. Further particulars of this Congress will be given later. Honorary General Secretary, Prof. H. Burger, Vondelstraat, Amsterdam.

International Red Cross Conference.

Empress Marie Feodorovna Prize Competition.

To be held in conjunction with the 9th International Red Cross Conference, Washington, D.C., May 7-17, 1912.

Programme.

1. A scheme for the removal of the wounded from the battlefield with the minimum number of stretcher bearers.
2. Portable wash-stands for use in the field.
3. The best way of carrying dressings for use in regimental aid posts and dressing stations.
4. Wheeled stretchers.
5. Transport of stretchers on mule back.
6. Easily folding portable stretcher.
7. Transport of the wounded between warships and hospital ships and the coast.
8. The best method of heating railway carriages by a system independent of steam from the engine.
9. The best model of portable Roentgen apparatus for the employment of X rays at the dressing stations and on the field of battle.

Prizes.

First prize of 6,000 roubles (approximately $3,000).

Two second prizes of 3,000 roubles (approximately $1,500) each.

Six third prizes of 1,000 roubles (approximately $500) each.

Inventions entered in this competition are to be displayed at an exhibition to be held on the occasion of conference.

Further information may be obtained from Dr. C. R. Dickson, General Secretary Canadian Red Cross Society, 192 Bloor Street West, Toronto.

The Thirteenth Annual Conference of the American Hospital Association.

The Thirteenth Annual Conference of the American Hospital Association, held in New York from September 19th to 22nd, under the presidency of Dr. W. L. Babcock, of Detroit, was highly successful. The audience was largely composed of women, mostly superintendents or matrons of hospitals, or nurses. They took their part in the papers and discussions with great ability. As speakers they compared favorably with the men. The programme was long, so it must suffice to refer to only some papers of outstanding public concern. Mr. George McAneny, president of the Borough of Manhattan, in welcoming the members to New York, took as his subject hospital reform. He sharply criticized New York's divided system of hospital supervision and advocated a centralization of the hospitals of the city. He deprecated the action of the city authorities in demanding the provision included in the new charter for centralizing the control of some of the city hospitals, asserting that it had put the situation back into its former position.

The first, and perhaps the most generally interesting, paper read was by Dr. J. N. E. Brown, of Toronto, until recently superintendent of the Toronto General Hospital. Dr. Brown had just returned from a tour of inspection of hospitals in Great Britain, Germany, France, Austria, and Holland. He referred to the various systems of hospital support, and considered that state or municipal support of such institutions, as in vogue on the Continent, was superior to the voluntary method of Great Britain, and the partially voluntary method of America. Dr. Brown also appeared to be favorably prepossessed with the European method of hospital administration, and stated that in his opinion "a medical man, *cæteris paribus,* makes the best sort of director of a large hospital, but when appointed to fill such a position he should be relieved of work which

belongs to the medical staff. The proper administration of a large hospital demands the sole attention of the head." He briefly described the organization of European hospitals, and expressed himself in favor of the European system generally. As to hospital construction, Dr. Brown thought that the architects of the best of these institutions in Europe had little to learn from their American and British *confrères*. He was especially impressed with the situation of many of the large Continental hospitals, placed in large and beautiful grounds, affording plenty of fresh air and secluded from noise. Another feature of some of the Dutch and German hospitals which greatly struck Dr. Brown was the ample provision of bath-houses and of disinfection-houses. Finally, the much vexed question of ventilation was dealt with, and many of the methods, elaborate and otherwise, for securing a constant supply of fresh air in the wards of hospitals were described at length.

Mr. Edward F. Stevens, A.A.I.A., of Boston, Mass., Dr. Brown's companion during his European pilgrimage, dealt at considerable length with the details and equipment of British and Continental hospitals, and compared these with the details and equipment of American hospitals. Mr. Stevens showed on a screen illustrations, exterior and interior, of numerous hospitals visited.

Another excellent paper was read by Mr. J. M. Cosgrave, manager of the Winnipeg General Hospital, on the "Development of Typhoid Fever Among Hospital Workers." It really was a vindication, if such were needed, of preventive anti-typhoid vaccination. Mr. Cosgrave said that until anti-typhoid vaccine came into use it had been almost impossible to prevent the spread of the disease among nurses and hospital employees; but since its use became general typhoid fever among hospital employees had almost ceased. Dr. H. W. Austin, of the United States Public Health and Marine Hospital Service, also eulogized the efficacy of the vaccine, and said it was being used more and more in the navy hospitals, and with success. Dr. Morrell, of Baltimore, told of the results of its use in the United States army camp at San Antonio during the manœuvres, and said that among 1,200 men who submitted to the treatment, only one contracted the disease, and that in a mild form. Dr. Willie G. Neally, assistant superintendent of the New York Hospital, emphasized the importance of properly administering anæsthetics, which was frequently as essential to operative success as the work of the surgeon.

Mr. Robert W. Hibberd, secretary of the State Board of Charities of New York, complained that the hospital facilities of New York City were woefully inadequate to the needs of the population. He further stated that the system of management was far too complicated, and he also was of opininon that centralization of the hospital organization was required. The plans of the State Board of Charities, the great hospital department of the city, which cares, probably, for three times more patients daily than the other hospital departments, he said, contemplate that Blackwell's Island shall eventually become a great hospital park for the care of the adult sick poor, that Randall's Island shall be made into a park for sick children, that the King's County Hospital property shall be dealt with in a similar manner, and that the relatively able-bodied poor, who are really the ones cared for by the department, shall be maintained at the Farm Colony on Staten Island, where they may be given plenty of work suited to their strength and capacity. Mr. Hibberd concluded that New York was a generation behind the age in its public hospital and ambulance facilities. To bring it up to date it urgently required an unified hospital and ambulance system.

Mr. Abraham Flexner, of the Carnegie Foundation, one of the authors of the report on the medical schools of America, read a paper on hospital organization and research, wherein he reiterated the charges made in his report against small and inefficient medical schools. Mr. Flexner pointed to the satisfactory fact that 20 medical schools of this class had gone out of existence during the past year, owing to the campaign among the hospitals which permitted them to flourish. Mr. Flexner concluded by naming several medical schools which, he said, ought to be closed. Mrs. Margaret Engelhart, president of the Association of the Frances Willard Hospital of Chicago, took exception to Mr. Flexner's strictures on certain of these medical schools, and stated from personal know-

ledge that at least one of them produced as fine a student body as could be desired, and that a graduate of that school would be welcome on the staff of the Frances Willard Hospietal. The Rev. A. S. Kavanagh, superintendent of the Methodist Episcopal Hospital, Brooklyn, read the report of the committee on hospital efficiency, hospital finance, and economics of administration, and incidentally paid a well-merited tribute to the work done by Dr. Doty as health officer of the port of New York. This expression of the gratitude of the citizens of New York to Dr. Doty was peculiarly fitting, in that recently Dr. Doty has been fiercely asailed with charges of neglect of duty by political opponents.

American Association of Railway Surgeons.

The enactment of uniform laws in the several states to govern sanitary conditions of railroads was discussed at a meeting of the American Association of Railway Surgeons, held in Chicago, October 18, 19 and 20.

At a meeting of the association a year ago attention was called to the difficulty, not to say impossibility, of strict compliance by railroads that are interstate carriers, with the widely varying sanitary laws quoted by the health boards of different states for the regulation of railroad companies. Surgeons representing nearly all the railroads in the country attended the Chicago meeting.

UNITED STATES

ADVANCE NOTICES.

American Association for Highway Improvement, Nov. 20-24, 1911, First Annual Convention, Richmond, Va., Logan Waller Page, President, United States Office of Public Roads, Washington, D.C. *Health and Sanitary Exposition*, week of November 16th, 1911, in the Coliseum, St. Louis, Mo.; F. W. Payne, manager.

New York Commission on Congestion of Population.

The commission on congestion of population appointed last year in New York, have made their recommendations, under 14 heads, as follows:

1. Restriction of the height or volume of buildings other than tenements.
2. Restrictions upon the lot occupancy of buildings other than tenements.
3. Restriction upon the height of tenements.
4. Methods of encouraging three family tenements.
5. Measures to prevent room and apartment overcrowding.
6. Measures to secure better conditions of labor.
7. Measures to secure a better distribution of factories.
8. Parks, playgrounds, schools and recreation centres.
9. Measures to keep land cheap and to provide good and cheap housing.
10. Measures to promote health and safety.
11. Distribution of population through municipal control over charities.
12. Immigration.
13. Delinquency.
14. Public squares and buildings.

Art in Medicine at Johns Hopkins.

An interesting development of medical work is represented by the appointment of a professor of "Art as applied to Medicine" at the *Johns Hopkins University*, Baltimore, Md. It appears that this new subject will chiefly deal with the training of artists for illustrative work in connection with medical and surgical publications, there being those who consider that such work can only be efficiently carried out by experts who have a personal knowledge of technical subjects. If this idea becomes popular it seems as if the future will see a special type of art-medical student at the hospitals.

Erie County "Fee Splitting."

Certain members of the *Erie County, New York, Medical Society* are accused of fee splitting, or dichotomy. This practice consists of division of the fee for a surgical operation between the surgeon who performs the operation and the medical attendant who sends the patient to that particular surgeon. It is customary for the medical attendant to accompany his patient to the surgeon, and patients are prone to consider such a trip as a friendly duty on the part of their adviser, and sel-

dom offer to defray even his travelling expenses. In its least objectionable form the fee splitting has been restricted to the surgeon's including the advising practitioner's expenses in his bill; but the practice has quickly outgrown this simple form, and certain medical men, it is alleged, have made a custom of sending their patients to the surgeon who was willing to pay the largest commissions. Reprehensible as this custom is, it is an inevitable outcome of the crowding of the profession by the small, proprietary medical schools, chartered, generally with great pride, by communities that have been newly furnished by the Federal Government with a State constitution. The various States are only now waking up to the evils which they, unthinkingly and with mistaken liberality, fostered years ago.

Mushroom Poisoning and the New England Federation of Natural History Societies.

At the recent meeting of the *New England Federation of Natural History Societies,* President Barlow, of the Lawrence Society, called attention to the excellent work that has been done by various local mycological societies towards the prevention of mushroom poisoning. This was the more to the point since he referred to the numerous recent cases of illness in New York City and its vicinity with more than twenty fatalities. Under the supervision of the person who knows the mushrooms there is no risk of poisoning, but a few simple rules must be observed. The collection should be made with some degree of care and the species kept apart. No injurious nor unknown mushroom should be allowed to come into contact with the good ones since their influence may contaminate the edible ones. For these reasons mushrooms gathered promiscuously should not be used for the table. To many persons all mushrooms look alike, and in this lies the danger, but with those having the proper knowledge the sorting of them is as easy as it would be to select the five-cent pieces from a mixture of dimes and pennies. It is in affording to the people generally an opportunity to gain this knowledge that the natural history societies are an aid to the public health authorities, and the frequent exhibitions in Boston and elsewhere are distinct means of disseminating useful knowledge.

THE EMPIRE AND THE WORLD ABROAD

ADVANCE NOTICES.

The Pure Food and Health Society Congress of Great Britain, London, England, March, 1912. Particulars later. *Congress of the Universities of the Empire,* London, England, July 2nd, 3rd, 4th and 5th, 1912. Fifty-one universities have arranged to send representatives; and among the questions proposed to be discussed by them are the following: University Organization; Universities in Their Relation to Teachers and Undergraduate Students; Universities in Their Relation to Post-graduate and Research Work; Universities in Their Relation to Schools and to Agencies for Higher Education. Other subjects for discussion will probably be: Whether any Common Understanding Will be Possible Among the Universities of the Empire as to the Extent to Which They Could Recognize Each Other's Entrance Examinations; The Desirability of Increased Facilities for Post-graduate Study; The Possibility of Some Plan of Interchange of Professors; What Could be Done by Universities in Regard to After Careers of Students, and the whole question of the Financial Support Given from Public Sources to Universities. Inquiries with regard to the Congress should be addressed to Dr. R. D. Roberts, at the Congress Office, University of London, South Kensington, London, England.

Papers for the Incorporated Association of British Medical Officers.

From a notice just received it appears that the members of the *Incorporated Association of British Medical Officers* have an interesting programme of debates for the session which opened on Oct. 20th. A number of highly important subjects, in connection with hospital work, are to be discussed at coming meetings, papers having been promised on "Medical Treatment of London County Council School Children," by Mr. H. C. Barker, B.A., LL.B., superintendent of the out-patient department at the London Hospital: "Hospital Appeals," by Mr. Godfrey Hamilton, secretary of the National Hospital for the Paralyzed and Epileptic; "Paying Hospitals of the Future," by Mr. L. H. Glenton-Kerr, secretary of the Great Northern Cen-

tral Hospital; and "The Samaritan Fund," by Mr. Sydney Phillips, B.A., steward of St. Thomas' Hospital.

A Treatment Scheme for School Children in Carnarvonshire.

The Carnarvonshire Education Committee have decided to establish a voluntary scheme, to be entitled the "Children's Medical Relief Fund," in order to secure advice and treatment for children found defective in the course of school medical inspections. All parents are to be asked to contribute, the idea being that the scheme will develop a desire among the children to help one another. The county treasurer is to be asked to control the fund, and an influential committee has been appointed. Other features of the scheme have been agreed upon as follows:

1. That the head teacher act as local secretary and treasurer for each school, and that the school managers be consulted.

2. That the school contribution be sent to the county treasurer before the second Saturday in every month.

3. That the amount of the contribution by each child be as follows: Where one child comes from the same house 1d. per month, where two children come from the same house 1½d. per month, where three or more children come from the same house 2d. per month.

4. That the benefits of the fund be limited to those subscribing, unless in exceptional cases.

5. That treatment for the following ailments be covered, viz., diseases of the eye or nose or throat, ringworm, teeth (if funds are available), and any other special cases sanctioned by the committee.

6. That cases requiring treatment be considered by the local managers at their regular meetings and a full report on each case be prepared for the information of the committee appointed to administer the fund.

7. That the collection of subscriptions be begun immediately.

The monthly contribution of each child will be made at school on a day to be appointed for that purpose, during the first week of every month. It is hoped to make arrangements to provide advice and treatment in all urgent cases coming under the fund without delay.

The Late Dr. Hughlings Jackson of England.

It is generally acknowledged that the late Dr. Hughlings Jackson, whose death occurred on the 10th of last month, was the man who laid the foundations of the science of neurology, and that his observations in connection with nervous diseases were those of a master-mind. Writing to the *British Medical Journal* in this connection, a well known physician attached to the London Hospital states that Dr. Hughlings Jackson will probably "be known in the future as the greatest genius in his speciality that the world has ever seen."

Danish Society for Aid of Pathologic Imbeciles.

In Denmark, where there has been attained a high degree of public social work, the Society for the Aid of Pathologic Imbeciles has just embarked on a new experiment. It has purchased the island of Livoe, situated in the fiord of Lim, that curious, straggling strait that cuts off the most northern department from the rest of the kingdom. In the central expansion of the fiord a lake perhaps 25 miles by 10 is formed, with sheltered water, in the middle of which Livoe is situated. Here there will be established an asylum for those weak-minded persons who have manias annoying to the public, more particularly tending toward vagabondage. Such individuals and others who are housed within stone walls for the public security may be benefitted by a measure of freedom. It is intended by means of the island to let them enjoy the freest kind of life and the most natural, and those given to vagabondage will have room to exercise it in the square mile of territory. They will be secure, for the expanse of surrounding water will be sufficient restraint. There will be furnished attendants and internes who will study the cases, and for the patients there will be provided light occupations and work on farm or forest or in tile potteries or charcoal mounds. The outcome of the experiment will be well worth watching.