better. In one of the circulars on the table here today I saw that it was necessary not to overwork, also to keep clean. It costs money to keep clean; some people don't think that. I believe in a fair day's work for a fair day's pay, but I don't believe in that kind of a day's work from which a man goes home to his family and says, "Never mind, I don't care about any supper. I am tired; I guess I'll go to bed." I don't care about that kind of a day's work; a man exhausts too much physical energy.

Our physicians have said a great deal, and they are entitled to a great deal of credit for what the medical fraternity is doing to prevent disease. It is a question in my mind if they have got right down to the cause of the disease. They understand the effect all right, and I believe that a great many of them know the cause, but somehow or other, nobody says anything about it. You wouldn't expect a man, a married man having three children, a family of 5, who was getting \$1.75 or \$2 a day to live under the very best conditions. It is all very well for a number of social workers, perhaps, or a number of philanthropists to tell that man, "You ought to be clean; you ought to do this, and you ought to do that," but if you want to do away with tuberculosis, in my humble opinion, one of the ways, and one of the best ways, is to raise the standard of living. It is all very well to say, "Eat good food and plenty of it," but the man has got to get a living wage. (I learned that in Filene's.) In order to get good food, and plenty of it, he has got to have a living wage. There is no question about that. You can tell a man that he ought to dress warmly, and all that sort of thing, but he has got to have money to do it.

You tell a man his children ought to be well clad. So they ought. You can tell a man that everything about his home ought to be in a sanitary condition. That's true. There isn't any question about it; but he has got to have the wages, for the money he gets Saturday night determines where and how he shall live. Don't forget that part of it. That is why I am a trade unionist. I believe that I can help to prevent tuberculosis by seeing that a man is better housed. That's the question that should interest the community. The worker should be well housed; sanitary conditions should be as good at home as they are in the factory or in the shop. Conditions in the factory today are a great deal better than when I was a boy. I don't want to describe the conditions that existed in the various industries when I was a boy, a good many years ago, but they are better today.

Let me say, perhaps a great deal of what has been said here today ought to be taught in the schools. Perhaps, as has been suggested by one of the speakers, it would be a good idea for the doctors to visit the labor unions once again. Sometimes you forget that we are over 80% of the population. You don't seem to remember that, and you don't seem to remember that our

doors are always open. We are not a secret organization, but are always willing to hear of something that will do something more for the community. We are always willing to work with you. Let me assure the medical fraternity of Massachusetts, the medical association, if they will do what they did once before, send a number of doctors around to visit the various labor organizations, we will guarantee them a hearing and we will do what we can to help them.

EDWARD O. OTIS, M.D. I would say, in summing up what we have heard from others, that the main emphasis in the discussion seems to be upon the education of the public in general hygiene and cleanliness, dwelt upon by Dr. McLaughlin and Dr. Linenthal and others. Dr. Linenthal also suggests that a committee might be appointed to draw up a set of regulations for places where food is prepared and handled; those regulations should be followed by those who employ cooks, handlers and servers of food. These seem to be the main points that were emphasized, education of the people in proper hygiene, and cleanliness, and in the examination of those who handle food, cook food, serve food, or assist in cooking food.

This conference, of course, did not intend to draw up any definite rules to present, but simply, and its object I think has been accomplished, to consider the whole subject of the matter of preparing food, having it cleanly, and having it prepared by those who are not infected with various diseases. It seems to be self-evident that so long as both acute and chronic diseases are so prevalent, particularly tuberculosis, typhoid fever, and so on, that those who are serving food to the general public should in some way be examined and certified, that they are not suffering from either acute or chronic diseases, so that those partaking of food in restaurants and hotels shall be safeguarded. If this conference has simply set us to thinking about this matter it has accomplished its purpose.

In behalf of the conference I wish to thank those who have been kind enough to give us their attention.

(The meeting was then adjourned.)

NOTE ON RECENT EXTENSION OF OUT-PATIENT WORK IN MASSACHUSETTS HOSPITALS FOR THE INSANE.*

BY A. WARREN STEARNS, M.D., BOSTON.

ONCE more Massachusetts has taken the lead in forwarding the scientific and human care of the

* Being State Board of Insanity Contributions, No. 40 (1915.9). (*Bibliographical Note.*—The previous State Board of Insanity Contribution (1915.8) was by E. E. Southard, entitled "On the Direction of Research as to the Analysis of Cortical Stigmata and Focal Lesions in Certain Psychoses," published in the *Transactions of the Association of American Physicians for the Year 1914*).

mentally ill. That the care of such patients is part of the duty of the state has been recognized for more than eighty years, and eleven years ago Massachusetts took upon herself the work of maintaining and treating all dependent insane. The Massachusetts School for the Feeble-Minded has conducted a clinic once a week for more than twenty-five years, but till recently, this has been the only activity of any hospital staff outside the walls of its own buildings. Since 1885 the Massachusetts Board of Insanity has maintained a family-care service, during which time 1242 patients have been boarded out in homes. Still more recently several hospitals have taken up this work, and some have done a considerable amount of after-care and social service work. On Jan. 1, 1913, the Psychopathic Hospital in Boston opened the first full-fledged out-patient department to be conducted by any hospital for the insane in this state. Success was immediate, over 1000 new patients visiting the clinic during the first year, and active social service and after-care was begun.¹ In August, 1914, the Board of Insanity determined to make this work state wide, and each hospital was asked to arrange for an out-patient department as such. The work of these departments was divided, roughly, into four parts, namely, the clinic, after-care, family care, and mental hygiene. Most important, perhaps, are the clinics.² Because of varying conditions, each hospital was left to its own resources in formulating a plan for this work. All that was desired was that a clinic should be convenient for each large city. Where a hospital is in a large city, the clinics are held at the hospital itself, others are held at general hospitals or public buildings in neighboring cities. These clinics are conducted

by members of the staff of the nearest hospital. Some hospitals conduct but one clinic, while one conducts as many as six. They vary in frequency, from one which is daily (Psychopathic Hospital) to several which are monthly. Doctors in the community are notified of the dates of such clinics and are invited to send patients for consultation or treatment. Also, advice and treatment is given without charge to all cases of nervous or mental disease that apply, especial attention being given to former hospital patients. After-care and social service in the state hospitals are nearly synonymous, and more than ten institutions are doing this work to a greater or less extent. The clinics are of especial value in after-care, as patients find it more easy to report when near. As rapidly as possible the state family-care patients are being turned over to the hospital nearest their boarding place and the hospitals themselves are placing patients out rapidly. There is no doubt that all of this out-patient activity is the most practical sort of mental hygiene, but an additional effort is being made to interest the medical profession in the work of the hospitals, and many of the speakers for the Massachusetts Society for Mental Hygiene are in the state service. This vast movement is a two-edged sword, for important as it is to patients and community, it is of equal value in the socialization of the hospitals.

The accompanying map illustrates the work in a concise manner. The Roman numerals show approximate hospital locations and the plain numerals indicate clinics, the lines connecting each hospital with the clinics which it is conducting in whole or in part.

HOSPITALS.

- I. Northampton State Hospital. Clinics at Pittsfield (1), Greenfield (2), and Springfield (3).
- II. Monson State Hospital. Clinics at 1, 2, and 3, with Northampton.
- III. Gardner Colony. Clinics at Fitchburg (8).
- IV. Worcester State Hospital. Clinics at Spencer (4), and Worcester (5).
- V. Worcester State Asylum. Clinics at Worcester (6).
- VI. Westboro State Hospital. Clinics at Westboro (7), and Boston (13).
- VII. Medfield State Hospital. No clinic.
- VIII. Wrentham School. No clinic.
- IX. Taunton State Hospital. Clinics at Taunton (9), Fall River (10), and New Bedford (11).
- X. Bridgewater State Hospital. Clinic at Brockton (12).
- XI. Boston State Hospital. Clinic at Boston (Psychopathic Hospital) (14).
- XII. Psychopathic Hospital. Clinic at Boston (14). Dept. Boston State Hospital.
- XIII. Massachusetts School for the Feeble-Minded. Clinic at Waverley and also joint clinic at 3, 5, and 9 with Northampton, Worcester and Taunton resp.
- XIV. State Infirmary at Tewksbury. No clinic. It is hoped that one will be located at Lowell later.
- XV. Danvers State Hospital. Clinics at Lynn (15), Salem (16), Gloucester (17), Newburyport (18), Haverhill (19), and Lawrence (20).
- XVI. Foxboro State Hospital. No clinic.

REFERENCES.

¹ The After-Care Program and Results of the Psychopathic Hospital, Boston, 1913-1914, BOSTON MEDICAL AND SURGICAL JOURNAL, Vol. clxxi, No. 23, p. 850.

² For detail of organization see Massachusetts State Board of Insanity Bulletins, Nos. 1, 2, 3, 4 and 5.

Reports of Societies.

AMERICAN ASSOCIATION OF IMMUNOLOGISTS.

First Annual Meeting, held in Atlantic City, N. J., June 22, 1914.

The President, DR. GERALD B. WEBB, of Colorado Springs, Colorado, in the chair.

A Historical Sketch. DR. MARTIN J. SYNNOTT of Montclair, N. J., gave a brief account of the way in which the idea of this society had been conceived and of the manner in which its organization was effected. He stated that the idea had first occurred to him, in 1912, that a "Society of Vaccine Therapists" made up of men who had worked in the Prued Street Laboratories might prove mutually advantageous to the members. He had therefore written to the men in the United States and Canada who had taken the course in the Inoculation Department of St. Mary's, and later to those who had studied with Metchnikoff, Ehrlich, Wassermann, and in some of the other famous laboratories of Europe. Dr. Gerald B. Webb had suggested the more concise and inclusive title for the organization, "The American Association of Immunologists," thereby widening the scope of the society beyond the original conception of the speaker. A first attempt of organization was made in Washington in May, 1913, during the time of meeting of the Association

of American Physicians, but was not consummated until June 19, 1913, at Minneapolis, Minn., during the session of the American Association. They had now sixty charter members and eight applications for membership. The speaker predicted that they would in a few years be one of the most important medical organizations on this continent, and said he believed with Sir Almroth E. Wright that the physician of the future would be an immunologist.

The Production, through Immunization, of Specific Ferments against Bacteria; as Detected by the Abderhalden Test. MR. GEORGE H. SMITH of Glenolden, Pa., presented this paper, which was based on the fact first demonstrated by Abderhalden in his pregnancy reaction, that specific proteolytic ferments were elaborated by the body in response to the parenteral introduction of foreign protein. The writer stated that they had proposed to test the limits of this specificity of ferment production by employing bacterial proteins. Rabbits received immunizing courses with *Staphylococcus aureus*, *Staphylococcus albus*, *Streptococcus*, *Pneumococcus*, *B. influenzae*, *M. catarrhalis*, and with a mixture of all. The substrates were prepared from the organisms by washing and drying heavy suspensions. The technic of Abderhalden was employed, using one and one-half c.c. of serum and ten mgrs. of the substrate. The results demonstrated that each serum was able to effect a marked degradation of the homologous substrate, while with the other substrates reactions were negative. Several slight non-specific reactions were obtained with *Streptococcus* and *Staphylococcus albus* substrates. It had been demonstrated that these were due to accidental infection. Sera from rabbits immunized with the mixture degraded all the substrates. The results indicated a relatively high degree of specificity in ferment production.

Professor E. C. L. MILLER of Richmond, Va., said that Mr. Smith had given a very good demonstration of the problem he had attempted to solve. From the biological standpoint it fitted in with and corroborated what they had been thinking for some time. It was obvious that a unicellular organism must of necessity form a ferment if it was to live. If the protein food materials outside the organism were insoluble, as they often were, they must be made soluble by digestion that they might diffuse into the organism. To accomplish this the unicellular organism separated from itself something that they had designated an enzyme, and this power of enzyme formation was one of the striking and essential characteristics of unicellular organisms. It was becoming clearer and clearer that a human body was made up of a mass of cells that were in many respects still unicellular creatures; Nature in working up from the unicellular to the multicellular had not so much produced a new kind of creature as a colony or interdependent community of unicellular forms, each one of which to a large extent retained its primitive functions. The function of reproduction was well shown in the process of repair. The function of motion was uncertain in even the unicellular forms. The function of enzyme formation was probably involved in all cell nutrition and could now be demonstrated in the laboratory by means of the Abderhalden reaction. That each cell maintained to a large extent an independent existence capable of motion, nutrition, reproduction, and response to stimulation had lately been demonstrated by the actual cultivation of tissue cells without the