

TOPICS OF THE WEEK.

THE UNITED STATES CENSUS IN ITS RELATIONS TO SANITARIANS.

From a paper presented by DR. JOHN S. BILLINGS at the annual meeting of the American Public Health Association held in Brooklyn October 25, we make the following extract:

Theoretically we all agree that vital statistics are the foundation of public medicine; but practically, the majority of sanitarians and physicians think that they are not essential to the work of a health officer or Board of Health, although they may be desirable. That the main objects in sanitary work are to see that the water supply is pure, that garbage and excreta are promptly removed or destroyed, that no filth is allowed to accumulate in the vicinity of habitations, that contagious diseases be controlled by isolation and disinfection, and that plenty of fresh air be provided in schools, churches, etc., and that all this can and should be done whether death-rates are known or not. Occasionally it is possible to get up a cholera, or yellow fever, or small-pox or typhoid fever scare, and to thus get a little money for sewerage or for street and alley cleaning; but these spasmodic reforms do not last long, and in most cases do not amount to much. You have got to produce constant, undeniable evidence that the work is needed and is useful; evidence that will convince the press and the majority of the community, and this evidence must be mainly death-rates, to which should be added all the sick-rates that can be obtained.

To give these death-rates you must have a complete registration of deaths and a corresponding enumeration of the population, and you ought to have a complete registration of births.

Before this Association meets again the eleventh United States census will be taken, and its methods, its completeness, and the mode in which its results will be tabulated and published, are of great interest and importance to all who are interested in sanitary science or in public health work in this country.

One of the most important questions, then, to be settled before the census is taken, is: What shall be the boundaries of the special districts of the city for which a separate statement of the population is desired?

For about a dozen of our large cities it is proposed to make a systematic division of the area into sanitary districts having special relations to altitude, character of habitation or of population, etc., and to have special death-rates calculated for each of these districts. This is being done in conference with the health authorities of these cities, and it is hoped that in this way some very interesting data will be obtained which will serve as a foundation for sanitary work in the future. Such districting has been arranged for Boston, New York, Brooklyn, Washington, New Orleans and Louisville, and the work is in progress for other cities. In investigating the details of the records of deaths kept in different cities I have noted deficiencies in a few of them to which I wish to call the attention of all who have to do with the regis-

tration of vital statistics. First, all deaths occurring in hospitals should be charged to the ward or district of the city from which the patient was taken to hospital, where this can be ascertained. Otherwise the death-rate in the ward in which the hospital is located will be too high, and in the other districts it will be too low.

Second, the birthplace of the parents of the decedent should be reported. We want to know the race of the decedent—whether he was German, Italian, Irish or American, and to give merely his own birthplace is not sufficient.

Third. It is very desirable that in all cases of deaths of colored persons it should be stated whether the decedent was black or of mixed blood, such as mulatto or quadroon.

One of the most important questions in the vital and social statistics of this country relates to the fertility, longevity and liability to certain diseases of those partly of negro and partly of white blood, and the only way to obtain data on this subject is through the registration of vital statistics.

Under the provisions of the law providing for the census, the living colored population is to be enumerated with distinction as to whether such person is black, mulatto, quadroon or octoroon, and we need the same distinctions for all persons dying during the census year, to enable us to calculate comparative death-rates. Wherever there is a fairly accurate registration of deaths, which now exists in several States, and in over 100 cities, the next census will afford the means of calculating the death-rates, with distinctions of color, sex and age which will furnish important indications for sanitary work.

I have no authority to make specific promises, but I believe that the reports of the next census, in which the members of this Association are specially interested, will be published as soon as it is possible to compile them, and will be distributed to those sanitarians and physicians who need them in their work and who make timely request for them; and thus believing, I do not hesitate to ask the cordial coöperation of all members of this Association to make the data upon which these reports are founded as full and accurate as possible.

CHANGES IN THE GANGLION CELLS AFTER STIMULATION.

The theory has for a long time been held that the change in activity in the central nervous system, that is, the performance of its function by any nerve centre composed of ganglion cells, was accompanied by some physical or chemical change in the cells. This theory has at last received demonstrative evidence in its favor from certain recent investigations. Korybutt-Daszkievicz¹ has attempted to solve the question whether the activity of the central nervous system is accompanied by changes recognizable with the microscope. His experiments were conducted on two frogs of the same weight and sex. One was kept as a control, in the other the eighth nerve was stimulated by induction shocks for an hour. The cords of both were hardened and stained by Gaule's method with hæmatoxylin, nigrosin, eosin, and safranin.

¹ Archiv. f. mik. Anat., 1889, p. 51.

The nuclei of the ganglion cells were the point of chief interest. These stain red and blue, but he finds that 3.31 to 3.66 times more nuclei stain red in the stimulated frog than in the unstimulated frog. Hodge, who has investigated the same subject, questions the accuracy of this method, thinking that the red nuclei are more superficial than the blue, and that the thinner the section the greater the number of red nuclei. Hodge's method was to stimulate one or more nerves on one side of the body, and then remove the corresponding spinal ganglia on both sides, keeping them together all the time in the hardening and staining fluids, and making simultaneous sections. The treatment is thus absolutely identical, the only difference being that one ganglion has had its nerve stimulated while the other has not. He finds that the stimulated ganglion shows distinct differences; the nuclei in its cells are smaller, the outlines are jagged and irregular instead of round, and there is a loss of open reticular appearance with darker stain. The cell protoplasm shows a slight shrinkage in size, it has a lessened power to stain or to reduce osmic acid, and it becomes finally granular and reticulated. The cell capsule also shows a decrease in the size of its nuclei. These investigations are practically the first undertaken upon this subject, and their importance as confirming the theory of nerve action is great. They indicate, moreover, the importance of applying similar methods in the investigation of so called functional diseases of the nervous system, for they seem likely to render the old distinction between functional and organic disease of no value.—Philip Cooms Knapp, in *Boston Medical and Surgical Journal*.

STEAMSHIP SANITATION.

Among the subjects to be discussed at the meeting of the American Public Health Association at Brooklyn this month (October) is "Steamship Sanitation." The matter is one of considerable importance to the Eastern States, and through them to the whole Union. Owing to the supineness of the Board of Trade and the short-sighted selfishness of the steamship owners, there is a continual danger that whole shipfuls of passengers may be landed at New York, Boston, or any other Eastern port, bearing with them the germs of infection contracted during the Atlantic voyage. The inspection of emigrants at British ports, though carried out, we believe, as a rule, by the medical officers with the most conscientious care which the circumstances permit, is little better than a farce. The emigrants are gathered upon the wharf and at a signal admitted on to a narrow gangway, along which they struggle with their bedding and all the small impedimenta for the voyage. As they issue from the gangway they are hastily inspected, and any case presenting obvious or suspicious symptoms is made to stand aside for more careful examination. Even this rough inspection is better than nothing, and a practised eye will no doubt weed out most of the dangerous cases. If the surgeon of the ship could always ensure the isolation of the suspected cases, a very great step would be taken towards the attainment of the desired end. Unfortunately this is by no means always the case; if the

ship is full, the space set apart for the hospital is very apt to be used by the agents for berthing ordinary passengers. If the surgeon protests, he is snubbed, and if he records the fact in his report, which ought, according to regulations, to be forwarded to the Board of Trade when the vessel returns, he is very likely to have the document returned to him by the agents with the intimation that the matter is one which does not come within his province. It is within the powers of the Board of Trade to compel the steamship companies to obey the law as to the reservation of the ships' hospitals for the use of the sick alone; and it is not easy to understand why frequent and repeated breaches of the law are winked at by the officials.—*The British Medical Journal*.

THE ESSENTIALS OF SUCCESS.

SIR ANDREW CLARK, who has achieved a professional reputation which is world-wide, had occasion, in a recent address, to give his views of what is required to make a man a successful physician. In that address he uses the following language:

Firstly, I believe that every man's success is within himself, and must come out of himself. No true, abiding and just success can come to any man in any other way. Secondly, a man must be seriously in earnest. He must act with singleness of heart and purpose; he must do with all his might and with all his concentration of thought the one thing at the one time which he is called upon to do. And if some of my young friends should say here, "I cannot do that—I cannot love work," then I answer that there is a certain remedy, and it is work. Work in spite of yourself, and make the habit of work, and when the habit of work is formed it will be transfigured into the love of work; and at last you will not only abhor idleness, but you will have no happiness out of the work which then you are constrained from love to do. Thirdly, the man must be charitable, not censorious—self-effacing, not self-seeking; and he must try at once to think and to do the best for his rivals and antagonists that can be done. Fourthly, the man must believe that labor is life, that successful labor is life and gladness, and that successful labor, with high aims and just objects, will bring to him the fullest, truest and happiest life that can be lived upon the earth.

THE LATE DR. JOULE.

DR. JAMES PRESCOTT JOULE, who died at Sale on October 9th, in the 71st year of his age, was one of the most distinguished men of science which this country has ever produced, and is entitled to be reckoned one of the greatest of original workers in pure science. His great achievement was his determination of the mechanical equivalent of heat. The consequences flowing from the working out of this problem, which was achieved by Dr. Joule with the most consummate skill and admirable completeness, are to be noted in almost every department of science; upon his demonstrations the whole theory of the correlation of forces is mainly based. The most important practical applications have been in the mechanical arts, but even physiology is his debtor.