

sewage, but it was possible to use the waste within the plant in such a way that the load was reduced from the equivalent of 380,000 to 10,000 people. This was done with profit to the company. To-day practically all corn products factories in the country are "bottled up."

Cities located on sea-coasts might dispose of sewage by dilution in the ocean without injury to drinking water supplies. Where the outlets are near seaside resorts, the wastes pollute the beaches, and these cities are being compelled to treat their sewage. At present New York City is constructing an immense sewage disposal plant to prevent the pollution of the Hudson River and the water of the beaches of the Long Island and New Jersey coasts. Lake cities have the same serious problem, but augmented by the fact that often it is necessary to obtain water supplies from the lakes into which sewage must be dumped. As a result, disposal is further advanced in the lake states than in the coastal states.

Cities on large streams like the Ohio, Missouri and Mississippi Rivers have so much dilution that the oxygen dissolved in the water serves to destroy the organic matter and bacteria of the sewage, and there is less need for treatment. Minneapolis and St. Paul have a Sanitary District to treat the sewage which will have its organic matter so reduced that the upper Mississippi will be able to oxidize it and eliminate any nuisance to the cities down stream.

CONCLUSION

We have told of what has been done in past years. What of the future? About 25 years ago, I heard

the statement that a certain organization 25 years before had done all that need be done, and it was only necessary to adopt their findings. Even to-day, I am not willing to say that any branch of water, sewage and sanitation is perfect. We know what a pure drinking water is and we know how to procure it. The water chemist in the future will develop still better methods, better control and a more economical procedure. We may find new coagulants or new and better sterilizing media. For example, if ozone can be made more cheaply and if a metal or other conductor can be found that will withstand corrosion, ozone might well replace chlorine, which is so universally used to-day. Ultra-violet light and the catodyn (silver) process are on trial.

Better methods of treatment of water for industry will be found. We have seen the Clark process, lime, widely used. The base exchange process is practical for use in industry, though it is not used in many municipal plants. The electro-osmose is being more used, and I am told that the new process being developed at Teddington, England, may be placed on a practical basis and that we may have a development in water treatment that will be comparable to the previous advance made by the base exchange.

I think great progress will be made in the disposal of sewage and trade wastes, resulting in the better protection of our streams. A way will be found to conserve the values that are now being wasted. Trade wastes are of special interest. The nitrogenous and other wastes of the organic chemical industries may furnish compounds which some day may be of future value.

SCIENTIFIC EVENTS

MEDICAL FELLOWSHIPS IN ENGLAND

THE London *Times* states that the Medical Research Council has decided to institute a series of studentships and fellowships to encourage young British medical graduates of special ability and original mind towards becoming investigators in those branches of medical science which are concerned directly with disease as it occurs in human beings. This field of research includes investigations into disease or manifestations of disease in patients, together with experimental work of an immediately relevant kind.

Six post-graduate studentships are therefore offered for medical graduates who have already held house appointments and are strongly inclined to a career in clinical science or experimental pathology. Each selected student will receive an inclusive grant at the rate of £200 a year, during a period not exceeding twelve months, for personal maintenance while under-

taking approved courses of study in England such as may be regarded as best calculated to advance the student's training in methods of research. This study may include modern languages and such advanced physiological, pathological and special clinical work under recognized teachers as may be regarded as forming a suitable preliminary to serious research work to be undertaken later; but the approved course may not include studies of which the purpose is to enable the student to pass further examinations.

The council also offers four research fellowships for candidates of similar qualifications who have already had some experience in the use of research methods. Each fellowship will be tenable for one year at the value of £250 a year, and will be renewable in approved instances at the rate of £300 a year for a second year. These fellowships are intended as probationary appointments for research in clinical science

or experimental pathology under suitable direction in England. Research expenses will be provided in addition to stipend.

EXTENSION OF THE WORK OF THE U. S. WEATHER BUREAU

UNDER a special research grant provided from funds available under the Bankhead-Jones Act, an investigation of the structure of polar continental air and the development of cold waves in North America will be undertaken by the Weather Bureau. This will include twice-daily airplane observations at Fairbanks, Alaska, from September 15, 1936, to March 14, 1937. In addition, there will be made at Fairbanks, Alaska, and Fargo, N. Dak., detailed terrestrial radiation measurements. The Canadian Meteorological Service is endeavoring to establish an airplane observation station during the same period at Fort Smith, Northwest Territory, Canada, in the Mackenzie River Basin. The latter observations will considerably enhance the value of the project.

An increase in appropriations for the current fiscal year makes possible an extension of the fire-weather service of the Weather Bureau, mostly in western districts. It is contemplated that new fire-weather trucks will be purchased for mobile forecasting units similar to the one which has been used in California since 1929. The trucks are to be equipped with radio receivers and transmitters, meteorological instruments, charting facilities, camping equipment, etc. Two men, a forecaster and a radio operator, will travel with each truck to the site of large-going forest fires, where they will set up the equipment and prepare weather maps from signals and reports received by radio and over Forest Service telephone lines. Detailed forecasts and warnings are issued from this truck unit for the immediate use of forestry officials in charge of fire-fighting crews. The new truck units will be stationed, respectively, at Missoula, Mont., serving Idaho and Montana, and at Portland, Ore., serving Oregon, except the extreme southwest portion, and at Mount Shasta, Calif., serving northern California and a section of southwestern Oregon. First order stations of the Weather Bureau, for fire-weather purposes only, are being opened at Pasadena and Mount Shasta, Calif.

S. D. F.

THE ARMY MEDICAL LIBRARY

At the thirty-eighth annual meeting of the Medical Library Association the following resolutions were adopted recommending the appropriation of adequate funds for the maintenance and growth of the Army Medical Library's Book Collection and Index-catalogue.

The Medical Library Association, comprising two hundred of the medical libraries of the United States and Canada, assembled in its thirty-eighth annual session in St. Paul, June 22, 1936, notes with pleasure and pride the appearance of volume one of the fourth series of the "Index-catalogue" of the Library of the Surgeon-General's Office, United States Army (Army Medical Library). The association records with satisfaction the abbreviations and changes in composition in this new volume effecting a saving of twenty per cent. in space with accompanying reduction in cost.

After a delay of three years during which no volumes of this catalogue were printed, the appearance of this first volume of the fourth series gives renewed assurance of the continuation of this publication, which, together with the Army Medical Library, is considered the outstanding contribution which our country and its government have made to medical knowledge, and,

WHEREAS, The value and usefulness of the "Index-catalogue" is dependent upon the completeness of the files of medical publications contained in the Library of the Surgeon-General's Office—a public, national, medical library, the greatest in the world, serving in its present form of administration with satisfaction the medical profession and the medical libraries of our country, and,

WHEREAS, In recent years the annual appropriation of the Congress has been wholly inadequate to provide sufficient funds to acquire the current medical books and periodicals issued throughout the world, so that they might be available for use throughout the country and for inclusion in the "Index-catalogue;" therefore, be it

Resolved, That the Medical Library Association urges the Congress to appropriate annually to the Library of the Surgeon-General's Office an adequate sum for current medical books and periodicals and for the purchase of back publications lost during those recent years when the amount granted was grossly inadequate, thus depreciating the completeness and usefulness of the library's collection; and an additional sufficient sum annually, for as many years as may be required, in order to make for the greatest possible completeness of the collection and its catalogue; and, be it further

Resolved, That a sum be appropriated annually to defray the cost of printing regularly each year not less than one volume of the "Index-catalogue;" and, be it further

Resolved, That a copy of these resolutions be spread upon the minutes of the annual meeting of this association and sent to the President of the United States, the presiding officer of both houses of Congress, the Secretary of War, the Surgeon-General of the Army, and to the national, state and other medical periodicals with a request for publication, and to the members of this association, urging the organization of which they are a part and all other medical associations and institutions to adopt similar resolutions to be sent to their local members of Congress requesting their support of these measures.