Census Bureau during 1918 directed a part of its energies to the compilation of war statistics. The increase in this class of work was so large that the number of employees engaged on it rose from 92 on July 1, 1918, to 231 on September 1.

The war work done by the bureau covers a wide range. Its more important phases include canvasses of manufacturers and dealers to ascertain the consumption and stocks on hand of certain raw materials used in war industries, and the production and stocks on hand of commodities made therefrom; the classification of occupations of military registrants, an undertaking that necessitated the handling and rehandling of more than 8,000,000 cards; estimates of population for use as a basis in the apportionment of the first draft; the allocation of enlistments; and the determination of registrants' ages from census records. In addition to carrying on these and other specific lines of work at the request of the war agencies of the government, the bureau has complied with many requests for information which had a bearing on the problems arising in connection with the war.

During the fiscal year the bureau carried on 13 regular and 7 special lines of work, in addition to the war work and the preparations for the Fourteenth Census. The regular inquiries included canvasses of water transportation and shipbuilding, of electrical industries, of religious bodies, of births and deaths, of state and municipal finance of cotton and cotton seed, and of stocks of leaf tobacco in the hands of manufacturers and dealers.

The work on birth and death statistics has been considerably expanded during recent years. These statistics are gathered only from those states and municipalities which maintain adequate registration systems.

The special work done by the bureau included a census of the Virgin Islands recently purchased from Denmark. These islands have a total area of 132 square miles, and the total population on November 1, 1917, was 20,051.

Another special line of work undertaken by the bureau was the tabulation of data covering the disputed areas of Europe and Africa—that is, those areas whose final disposition will be determined by the outcome of the war.

The force of the Census Bureau in Washington comprises 684 officials and employees, and in addition there are employed throughout the cotton belt approximately 700 local special agents who make periodical collections of cotton and cottonseed statistics.

In order to avoid waste and delay in the conduct of the next decennial inventory of the country's population, agriculture and industries, to be made in 1920, the bureau is carrying on such preparatory work as can be done prior to the enactment of the pending bill to provide for the Fourteenth Census. Under this bill, if it is enacted into law, all the clerical and subclerical force of the bureau will be appointed through open competitive examinations, held by the United States Civil Service Commission, as at the census of 1910.

The Fourteenth Census will cover the subjects of population; agriculture, including irrigation and drainage; manufactures; and mines, quarries and oil and gas wells. The undertaking will require the services of a field force of about 85,000 or 90,000, chiefly enumerators.

THE BUREAU OF STANDARDS

THE annual report for 1918 of Dr. Samuel W. Stratton, director of the Bureau of Standards, reports that the regular work of the bureau has yielded important results. Apart from new researches, a large volume of testing was completed, more than 300,000 separate tests being made. The construction of the new industrial laboratory, the completion of the metallurgical laboratory, and the building of a number of emergency war laboratories for airplane investigations were events of interest, and will be of great value in the development of the several branches of technology within the bureau's field.

When the United States entered the war, the bureau already possessed exceptional facilities, equipment, and personnel, chemistry and engi-

neering. This enabled it to take up promptly many important military researches. The laboratories, so useful during peace, proved of especial importance in war. The specialized equipment of instruments, materials and supplies were on hand which were then almost unobtainable elsewhere. The bureau promptly extended its service to all lines of scientific work which would assist in the war. Practically every section of its regular organization has had military problems of the most pressing nature submitted to it, and invaluable service has been rendered.

The recent expansion of the bureau has been on lines vital to the success of the war. It is interesting to note, however, that many of these lines are also of essential value to our industries in peace. The need for the national provision for master-gauge standardization was only realized by those in close touch with such work. The accurate dimensioning of the functioning parts of mechanisms will permit extending the American system of manufacturing interchangeable parts to its maximum usefulness. The importance of nation-wide standardization has long been known, but the practical working out of such standardization is best met by a national laboratory such as the Bureau of Standards. The same principle holds for all the technologies and special branches of physics.

The combination of pure science and technology has proved especially stimulating and effective. The close cooperation of physicists and engineers in practical as well as theoretical work has given an unusual breadth to such researches. In turn, the technologic facilities have proved of great value in the purely scientific work. Many cases might be cited where the elements of a research problem ramify into laboratories of practically every division of the bureau. The airplane is an example, and a problem apparently as simple as the spark plug has called for researches in many different technical sections of the bureau. The establishment of new industries in America, such as those of optical glass and chemical porcelain, and the scientific remodeling of older industries are fruits of the more intimate cooperation of science and industry which it is the function of the bureau to promote.

A fine laboratory for industrial research is nearly completed and will be ready for use in a few months. This laboratory, when completely equipped, will be one of the most effective of its kind in the world. In no national institution in the world is the union between pure science and practical technology so intimate as in the work of the Bureau of Standards.

Apart from confidential reports the bureau published during the year about 50 new publications, including scientific and technologic circulars and bulletins. Thirty-six confidential circulars were printed on the subject of aviation instruments alone. The establishment of the work on metals in a suitable laboratory building was followed by the establishment of experimental foundry and other research work on a practical basis. An interesting branch of the bureau's work is found in the field of public utilities, especially recent developments in regard to telephone service standards, and the standards of safety practise for power service, elevator service, crane construction, building construction, and the like.

SCIENTIFIC NOTES AND NEWS

Professor Edward M. East was elected president of the American Society of Naturalists at the recent Baltimore meeting.

Dr. C. M. Child, professor at the University of Chicago, has been elected president of the American Society of Zoologists.

Mr. Robert T. Jackson, of Peterborough, N. H., has been elected president of the Paleontological Society.

Dr. F. E. Wright, of the Geophysical Laboratory of the Carnegie Institution, has been elected president of the Optical Society of America.

The Society of American Foresters have elected the following officers for 1919: *President,* F. E. Olmsted; *Vice-president,* W. W.