

ANNUAL REPORT

OF THE

723

DIRECTOR OF THE CENSUS

TO THE

SECRETARY OF COMMERCE

FOR THE

FISCAL YEAR ENDED JUNE 30, 1918



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1918

REPORT

OF THE

DIRECTOR OF THE CENSUS.

DEPARTMENT OF COMMERCE,
BUREAU OF THE CENSUS,
Washington, September 16, 1918.

SIR: There is submitted herewith the following report upon the operations of the Bureau of the Census during the fiscal year ended June 30, 1918, and the work now in progress:

INTRODUCTION.

During the fiscal year the Bureau of the Census completed the compilation and preparation for publication of the final detailed reports of the last quinquennial census of manufactures; carried on its decennial canvasses of water transportation and shipbuilding and of religious bodies, its quinquennial canvass of electrical industries, and its special canvass of marriage and divorce; prepared and published the Official Register of the United States; conducted its regular annual inquiries relating to births, deaths, States, and municipalities; collected and published quarterly statistics of stocks of leaf tobacco; made semimonthly and monthly collections and publications of statistics on cotton, cotton seed, and cottonseed products; completed the preparation of reports on Negroes, deaf-mutes, and prisoners and juvenile delinquents, and of a statistical directory of State institutions for the dependent, defective, and delinquent classes; took a special census of the Virgin Islands; gathered data as to receipts of fresh fish in New York City; inaugurated the publication of weekly mortality reports for certain large cities; performed a considerable amount of war work for other Government establishments; carried on its preparations for the Fourteenth Decennial Census; and complied with numerous requests for information contained in its records.

The work done during the fiscal year and since its close along the various lines above specified is described in the sections headed "Current and completed work on statutory inquiries," "War work," and "Special and miscellaneous lines of work," which follow.

CURRENT AND COMPLETED WORK ON STATUTORY INQUIRIES.

CENSUS OF MANUFACTURES.

The compilation and preparation for publication of the reports of the last quinquennial census of manufactures, taken as of December 31, 1914, were, in the main, completed early in the fiscal year, al-

though considerable detail work in connection with the checking and verifying of proof remained to be done later in the year.

In the case of many of the bulletins which present the final reports of the census of manufactures, copy was sent to the printer at relatively earlier dates than those at which copy for the corresponding bulletins was sent to the printer at the preceding census.

CENSUS OF TRANSPORTATION BY WATER.

Under the act creating the permanent Census Bureau a census of water transportation is taken at decennial intervals. The last inquiry of this character was made as of December 31, 1916. The field work was begun in March, 1917, and was completed in October of the same year. Through cooperation with the Bureau of Foreign and Domestic Commerce, the Customs Service, the Post Office Department, and the American Steamship Association, it was possible to facilitate greatly the work on this inquiry and to keep down its expense. The effort to collect a large proportion of the data by mail, and in some cases by telegraph, was successful, and about 50 per cent of the owners or operators of craft covered by the census were canvassed in this manner before the field force left the office. Although this method necessitated a great amount of correspondence, it materially reduced the expense of the field work and shortened the time required for taking the census.

This census covered also the operations of fishing vessels, which were not canvassed at the last preceding similar inquiry.

During the progress of the field work and after its completion the compilation of the data gathered was carried on as rapidly as possible, and a preliminary statement comprising two tables with descriptive text was prepared in the latter part of January, 1918, and released for the use of afternoon papers on February 6.

The tables and text for the final report have been completed and will be sent to the printer at an early date. This report will cover the operations of 37,894 vessels, classed as steam, sail, and unrigged craft, and will give detailed statistics as to tonnage, value, ownership, employees, wages, amount of business done, etc., for the various classes of craft.

CENSUS OF SHIPBUILDING.

This census, which was taken in conjunction with the water-transportation inquiry and related to the same date—namely, December 31, 1916—covered the operations of 1,377 shipbuilding establishments during the calendar year. It was possible to obtain a large proportion of the reports by correspondence, and the cost of the canvass was thus reduced to a minimum. Statistics for the shipbuilding industry for the year 1914, which were secured at the last census of manufactures, were also included in the report.

For military reasons this report has not been published, but the statistics compiled have enabled the Census Bureau to furnish valuable information of a confidential nature to various war boards.

CENSUS OF ELECTRICAL INDUSTRIES.

This census, which, under the act creating the permanent Census Bureau, has been taken quinquennially since 1902, covers central

electric light and power stations, street and electric railways, telephones and telegraphs, and municipal electric fire-alarm and police-patrol signaling systems. The current inquiry is being made as of December 31, 1917.

By reference to the various records available, supplemented by correspondence with some 14,000 postmasters throughout the country, with State telephone associations, and with public-service commissions, a card index of establishments engaged in electrical industries was prepared. In formulating the schedules used, criticisms and suggestions were requested and obtained from the Interstate Commerce Commission, the American Telephone & Telegraph Co., the independent telephone companies, the American Electric Railway Association, the American Railway Accountants' Association, and the National Electric Light Association, and a number of conferences were held with representatives of these organizations. All the organizations named have given their hearty cooperation and have rendered valuable assistance to the Bureau in the revision of the schedules and the preparation of the reports.

In accordance with the general practice of the Bureau, the data have been collected so far as possible through correspondence. The field canvass, which is being made by employees detailed from the office, was begun on April 9 in Omaha, Nebr., and will be practically completed some time during October.

The necessary detail work of checking the schedules received with the card index, examination, criticism, returning for correction when necessary, editing, and preparation for tabulation has been carried on as rapidly as possible, and the compilation of the reports is now under way. These reports will present information as to number of establishments, character of ownership, traffic, equipment, expenses, employees, salaries and wages, finances, etc.

RELIGIOUS BODIES.

Under the law establishing the permanent Census Bureau the census of religious bodies is taken at decennial intervals. The collection of the data at the last inquiry, which was made as of date December 31, 1916, was substantially completed in March, 1918, except for certain special statistics in regard to ministers, the collection of which was not finished until July, 1918. The work was done almost entirely through correspondence, which method made possible a great saving in expense, but necessarily resulted in somewhat greater delay in obtaining the desired data from certain churches and ministers who did not respond readily or promptly to the Bureau's requests for information.

The tabulation of the data has been in progress for some time. A preliminary report in the form of a press announcement was issued on May 2, 1918, which showed, by principal denominations, the numbers of church organizations, members, ministers, Sunday schools, Sunday-school officers and teachers, and Sunday-school scholars. The final report will present, for each religious denomination, detailed statistics in regard to the subjects dealt with in the press announcement, and in addition will show the value of church property, salaries of ministers, and various other items of information.

The work on this inquiry has been delayed somewhat by the pressure of war work, and in particular by the employment of a considerable force upon the classification of occupations of registrants for the Provost Marshal General.

VITAL STATISTICS.

Death statistics.—Since its organization on a permanent basis in 1902 the Bureau of the Census has been compiling annual reports on mortality, based on data collected from States and cities having adequate death-registration systems. The "registration area" comprising these States and cities, which in 1900 contained only 40.5 per cent of the population of the country, has grown from year to year until at present it embraces 28 States, the Territory of Hawaii, the District of Columbia, and 42 cities in nonregistration States, and contains approximately 73 per cent of the population. The States now included are the six New England States and New York, New Jersey, Pennsylvania, Maryland, Virginia, North Carolina, South Carolina, Ohio, Michigan, Indiana, Kentucky, Tennessee, Wisconsin, Minnesota, Missouri, Kansas, Montana, Colorado, Utah, Washington, Oregon, and California. The most recent additions were the State of Tennessee and the Territory of Hawaii, admitted for 1917, and the State of Oregon, admitted for 1918. The inclusion of Hawaii extended for the first time beyond the limits of continental United States the area for which the Bureau annually collects and publishes mortality statistics. The admission of a State, Territory, or city is made only after a test, the results of which indicate that the deaths occurring are recorded properly under State law or municipal ordinance, and that the registration is at least 90 per cent complete.

A test of the completeness of the death registration in Illinois (outside certain cities whose registration is already accepted by the Census Bureau) was begun in the latter part of August, and if the result is satisfactory, as is expected, the registration area will be further extended and will contain about 76 per cent of the total population of the United States.

The annual mortality report for the calendar year 1916 was completed and the revised proof was returned to the printer during the fiscal year 1918. This report shows, for the registration area as a whole, for States, and for cities of 10,000 or over, the number of deaths, exclusive of stillbirths, by month of occurrence, age, sex, color, nativity and parent nativity, and cause. Death rates per 1,000 population from all causes combined and per 100,000 population from individual causes are also given.

In order that the more important of the mortality statistics for 1917 may be placed in the hands of the public at the earliest possible date, a bulletin presenting certain of the basic tables which will later be included, with very little text discussion, in the final report will be prepared and sent to the printer by the close of the calendar year 1918.

Birth statistics.—Beginning with 1915, the Census Bureau has been collecting annually birth statistics from a registration area composed of those States (and the District of Columbia) having adequate birth-registration systems. This area, which in 1915 comprised only

the six New England States and New York, Pennsylvania, Michigan, Minnesota, and the District of Columbia, with a total population estimated at about 31 per cent of the aggregate for the United States, has grown very rapidly, until at present it embraces the States just named, together with Maryland, Virginia, North Carolina, Ohio, Kentucky, Indiana, Wisconsin, Kansas, Utah, and Washington, making 20 States in all, in addition to the District of Columbia, with a total population representing about 53 per cent of the aggregate for the United States. The completeness of the birth registration in Illinois is now being tested, and if that State measures up to the standard, the total population of the area will be increased to about 59 per cent of the aggregate for the country.

The birth reports show, for the registration area and its subdivisions, the number of births, by sex, month of occurrence, color, and parent nativity of white children; the numbers of births and deaths, with excess of births over deaths and number of births per 100 deaths; the number of births of white children, by country of birth of father and mother; and the number of deaths (exclusive of stillbirths) in the birth-registration area, from important causes, for 12 subdivisions of the first year of life.

The birth-statistics report for 1916 was completed and copy sent to the printer during the fiscal year 1918, and the report for 1917 will be ready for the printer by the close of the calendar year 1918.

International list of causes of death.—During the fiscal year a reprint was made of the Manual of the International List of Causes of Death. The Physicians' Pocket Reference to the International List of Causes of Death was also reprinted, and as soon as the American Medical Directory for 1918 is published a copy of the booklet will be sent to every physician in the United States.

Weekly health index.—On October 6, 1917, the Bureau of the Census inaugurated the publication of a "Weekly Health Index," which gives mortality reports from about 50 of the largest cities in the United States. For each city are given the total number of deaths reported for the week (stillbirths excluded), the death rate, the number of deaths under 1 year of age, and the proportion which infant deaths represent of total deaths. Each Weekly Health Index is issued within 72 hours after the close of the week to which it relates.

FINANCIAL STATISTICS OF CITIES.

Reports on municipal finance have been published annually by the Bureau of the Census since its organization on a permanent basis in 1902. The compilation of the report presenting financial statistics of cities having more than 30,000 inhabitants, for the fiscal year 1917, was completed and copy was sent to the printer in January, 1918, or within less than seven months from the close of the fiscal period covered. The report, which is printed in the form of a 373-page quarto volume, presents statistics in regard to the following subjects, the figures for each city relating to its latest fiscal year ended prior to July 1, 1917: (1) Total and per capita receipts from the various sources of revenue; (2) total and per capita payments for expenses, interest, and outlays, the payments for expenses and outlays being given in detail; (3) total value of city properties; (4) total and per

capita indebtedness; and (5) estimated true value and assessed valuation of property, tax levies, rates, and methods of assessment. In the introduction to the volume are given definitions of terms employed in municipal accounting.

In addition to the classes of statistics just specified, the report gives the numbers, terms of office, method of election, and annual salaries of certain city officials; form of government (mayor and council or commission); if under commission form, date when commission plan became operative, and departments over which each commissioner presides; and a historical sketch of the modern movement toward the commission form of government in American cities.

The field work on the inquiry now in progress, which covers the fiscal year 1918, will be finished by December of this year, and copy for the report will be in the hands of the printer early in 1919.

The statistics on municipal finance are especially useful at the present time, when, because of war conditions and the resultant necessity for retrenchment wherever possible, American cities are obliged to economize to the greatest practicable extent in the conduct of their governmental activities. Any municipal official, member of a civic body, or other citizen desiring to ascertain whether the financial affairs of his city are being conducted efficiently and economically can obtain much useful information by comparing his city with others in regard to such matters as its various classes of revenues and expenditures; its property valuation, tax rates and levies, and method of assessment; and its indebtedness and value of public properties.

GENERAL STATISTICS OF CITIES.

Since the creation of the permanent Census Bureau, in 1902, reports on various phases of municipal governmental activities, other than financial, have been published by the Bureau, at first biennially and later annually. The reports on this group of subjects for the fiscal year 1917 are two in number, namely, "Specified sources of municipal revenue" and "Statistics of fire departments."

The first-named report—copy for which was sent to the printer in December, 1917—presents, for the 219 cities estimated to have more than 30,000 inhabitants, data in regard to certain methods of raising revenues, namely, deriving them from business taxes collected without the issue of licenses, as on gross earnings of insurance companies; from business taxes, other than on the liquor traffic, collected through the issue of licenses; from other license taxes; from special assessments for public improvements, as street paving, sidewalks, and sewer construction; and from assessments for other purposes, as for street cleaning and sprinkling.

The information contained in this report is made available at a most opportune time, when the cities are readjusting their revenue systems so as to distribute the burden of taxation more equitably in regard to both their own needs and the unusual requirements of the National Government because of the state of war now existing. The report is also of special interest to cities which have recently outlawed the liquor traffic or are about to do so, and which, therefore, will be obliged to take under consideration other available methods of raising revenue.

The report giving statistics of fire departments of cities estimated to have more than 30,000 inhabitants in the fiscal year 1917 was sent to the printer in January, 1918. This report presents, in detail, data pertaining to organization, equipment, grades and salaries, special training of firemen, appointments, promotions, pension systems, and other statistics considered to be of interest and value by authorities on this subject.

A report on municipal markets, covering the fiscal year 1918, is now in process of preparation. This report will show the extent of municipal activity in providing market facilities and the use made of these facilities by the citizens. A report of this character should be particularly helpful at this time, when saving in food cost is a necessity for most people and food conservation is a patriotic duty for all. The field work on this inquiry will be completed during the coming December, and copy for the report will go to the printer early in 1919.

FINANCIAL STATISTICS OF STATES.

The report presenting financial statistics for the 48 States of the Union, covering in each case the latest fiscal year terminating prior to July 1, 1917, was completed in April, 1918, and sent to the printer shortly thereafter. This report, which is the third of the series of which it forms a part, is similar in scope to the municipal-finance reports, the general classifications being the same, and the only changes being those made for the purpose of showing data in regard to functions exercised by State governments that are not generally exercised by municipal governments. As pointed out in my former annual report, these reports have proven useful to State officials, and the annual visits of the Bureau's agents to collect the statistics will be influential in bringing about the installation of proper accounting systems, as was the case with the cities of over 30,000.

The report for 1918 will be completed early in 1919.

COTTON AND COTTON SEED.

During the fiscal year ended June 30, 1918, the Bureau of the Census conducted its regular inquiries in regard to cotton and cotton seed. The reports issued comprised 10 relating to cotton ginned to specified dates during the ginning season; 12, published monthly during the year, relating to cotton consumed, imported, exported, and on hand and to active consuming cotton spindles; 12, published monthly during the year, relating to cotton seed received, crushed, and on hand and to cottonseed products manufactured, shipped out, and on hand; an annual bulletin on cotton production and distribution for the season of 1916-17; and a pamphlet giving complete statistics of cotton ginned from the crop of 1917. This pamphlet was distributed in time to be of use in making comparisons between the crop of 1918 and those of previous years.

The periodical reports on cotton ginned, the monthly reports on cotton consumed, etc., and the monthly reports on cotton seed and cottonseed products are issued in the form of post cards, which are mailed to a large number of growers, ginners, manufacturers, dealers, and others interested in the cotton and cottonseed industries. The

annual bulletin presents in detailed form the statistical material contained in the post-card reports for the year preceding, together with data relative to cotton production and consumption in foreign countries and other information concerning the cotton and cottonseed products industries.

STOCKS OF LEAF TOBACCO.

During the fiscal year there were published four reports on leaf tobacco held by certain classes of manufacturers and dealers coming within the scope of the act of Congress approved April 30, 1912. These reports presented data as to leaf tobacco held on July 1 and October 1, 1917, and January 1 and April 1, 1918.

Bulletin 136, entitled "Statistics of Leaf Tobacco," which was prepared and distributed during the fiscal year, presents in comparable form the data collected at the several tobacco inquiries which have been made since the inauguration of the work in October, 1912. In addition to the statistics of leaf tobacco held, the bulletin contains data regarding the production, consumption, imports, and exports of tobacco; the prices obtained for the staple by the growers; the quantities of the several classes of products manufactured therefrom; and the revenue from tobacco collected by the Government of the United States. Statistics are also shown for the world's production of tobacco and the international trade in unmanufactured tobacco. This bulletin, the first of its kind ever issued by the Government, was designed for the purpose of assembling the statistics for the various phases of the tobacco industry published by the several Government bureaus and presenting them in convenient form for ready reference.

WORK PERTAINING TO SPECIAL CLASSES OF THE POPULATION.

The work on the reports specified below has been hampered greatly because of the necessity of employing the Census Bureau's force—which has not been large enough to meet all the demands made upon it—on other work believed to be of more immediate importance. The salient statistical facts derived from the inquiries, however, were first published in the form of bulletins; and the complete reports, which present these facts in greater detail, with text discussions and analyses, have been recently issued.

Deaf-mutes.—The report on deaf-mutes was completed during the fiscal year, and has since been published. This report was submitted in proof to various specialists and others interested in the subject and received high commendation from them.

Negroes.—The preparation of the report on Negroes was completed during the fiscal year, and it will be published in the near future. This report is a compilation in one volume of all the census statistics pertaining to the Negro race which have been collected during the entire period from 1790 to the present time. It includes, in addition to data from the decennial reports, annual mortality statistics relating to Negroes for the years 1900 to 1915. This special report is of unusual statistical value in itself, and in addition contains a great deal of matter which will be useful for comparative purposes in compiling the reports of the next decennial census.

Prisoners and juvenile delinquents.—The final work on this report was done before the close of the fiscal year, and it will soon be published. As in the case of the other reports dealing with special classes, it presents, in addition to the main statistical tables, numerous minor tables bearing on particular phases of the subject, together with detailed text discussion and analysis.

OFFICIAL REGISTER.

Under the present law the Census Bureau compiles biennially the Official Register of the United States, which consists mainly of a directory of Federal employees, showing name, designation, compensation, branch of service in which employed, etc. The issue for July 1, 1917, was prepared during the first half of the fiscal year.

I renew the recommendations for changes in the scope of the Official Register which appear on page 39 of my annual report for the fiscal year 1917 and which were also contained in the reports for the four preceding years. The Official Register in its present form, even under normal conditions, is of relatively slight value; and at a time like the present, when the energies of every member of the Census force are needed on important work—including war work along various lines, and including also the great task of making proper preparations for the Fourteenth Census—it is especially unfortunate that the Bureau should be under the necessity of employing a portion of its force in the compilation of a publication of so little and ephemeral value as the Official Register.

I therefore urge the enactment into law of the bill (H. R. 2354) now pending in the House of Representatives, which embodies the desired changes in the scope of the Official Register. If the enactment of this legislation is not considered advisable, I strongly urge that legislation be enacted directing the suspension of the Register until the conclusion of the war, or until further authorized by Congress.

WAR WORK.

WORK DONE BY THE BUREAU FOR OTHER GOVERNMENT ESTABLISHMENTS.

During the fiscal year the Bureau of the Census performed numerous pieces of work pertaining to the war, some of which required the services of a considerable number of employees, for the War Department and for other Federal departments and establishments. The more important of these pieces of work are set forth below.

Census of materials and commodities for use of war agencies.—In February, 1918, the Secretary of Commerce, at the suggestion of the Director of the Census, offered to utilize, in the performance of the statistical work of the various war agencies, the services of as many as 100 Census employees for 6 months. This offer was accepted by a number of the war agencies—the War Trade Board, the War Industries Board, the Shipping Board, the Food Administration, the Council of National Defense, and the Commercial Economy Board—and on April 8 the work was given specific authorization by the President, who, in addition, wrote the Secretary of Commerce expressing his thorough approval of the project.

The war agencies were particularly desirous to have statistics compiled showing the consumption and stocks on hand of certain raw materials used in war industries, and also the production and stocks on hand of certain of the commodities made therefrom. The materials and products for which the need of information was most urgent were the following:

Iron and steel.
 Wool machinery and woolen manufactures.
 Kapok fiber, jute, and silk.
 Leather stocks, boots, shoes, and manufactured leather goods.
 Antimony.
 Graphite crucibles.

Questionnaires or schedules covering these commodities were prepared, and at the close of business on August 31, 119,831 had been mailed. Preliminary reports on wool machinery and production therefrom, kapok fiber, jute, leather stocks, and graphite crucibles, have already been compiled and transmitted to the war agencies.

The compilation of data on the other commodities listed above is progressing as rapidly as the returns are received, and considerable work has been done in the study of still others for which statistics are desired.

In connection with the preparations for this inquiry, a survey of the existing sources of statistics of supply, production, and consumption of materials and commodities was made for the purpose of ascertaining what data were being collected by other bureaus or Government agencies, the purpose being to prevent or eliminate any duplication of statistical work. As was anticipated, more or less such duplication was discovered and eliminated. This survey will be continued with a somewhat broader scope during the period of the war by the statistical clearing house organized in connection with the War Industries Board.

I take this occasion to express my opinion that the usefulness of the Bureau of the Census would be materially enhanced if the scope of its work were extended by law so as to make the Bureau a permanent clearing house for all the statistical information issued by the executive branch of the Federal Government. This could be done by having all the executive departments and independent Government establishments submit reports, monthly or quarterly, to the Bureau of the Census describing all statistical data compiled or published during such period. This would enable the Bureau to detect any duplication or overlapping existing in the statistical work of the Government and recommend its elimination. It would also make Federal statistics more easily available to the public and to persons engaged in research work, and would result in bringing about a material saving in expense.

Census of commercial greenhouses.—For the use of the Priorities Division of the War Industries Board, the Bureau gathered data pertaining to commercial greenhouses covering, for the year ended June 30, 1918, area; value of products; fuel, fertilizers, insecticides, and fungicides used; and number of males 18 years of age and over continuously employed.

Censuses of nitric acid and of acids and materials used in the manufacture of explosives.—In September, 1917, in accordance with the

request of the Committee on Chemicals of the Council of National Defense, the Acting Secretary of Commerce authorized the Director of the Census to take a census of the production and capacity of plants engaged in the manufacture of nitric acid; also a census of the production and capacity of establishments manufacturing sulphuric acid and materials used in making acids and explosives, and the distribution of these commodities, which include cannon powder, mobile artillery powder, small-arms powder, trinitrotoluol, picric acid, ammonium nitrate, and military guncotton. The necessary blanks, together with the lists of manufacturers to whom they were to be sent, were prepared in collaboration with the Committee on Chemicals. The blanks were addressed and mailed and the reports received, checked, and acknowledged by the Bureau of the Census, which then transmitted them to the Committee on Chemicals for tabulation. The portion of the work assigned to the Bureau of the Census was completed in November, 1917.

Production of dental gold.—At the request of the Federal Reserve Board, in connection with its war activities, the Secretary of Commerce authorized the Bureau of the Census to make a canvass of the production of dental gold. Accordingly a questionnaire calling for the desired information covering the calendar year 1917 was prepared and mailed to manufacturers of dental goods. Returns were received from and tabulated for 64 establishments, and statements were prepared for the Federal Reserve Board showing the production of dental gold by States, and the amounts and values representing the gross domestic consumption and exportation of this commodity.

Estimates of registrants for Provost Marshal General.—In May, 1917, immediately following the passage of the selective-service law, the Bureau of the Census published an estimate of 10,077,700 as the total number of men 21 to 30 years of age, both inclusive, in the United States. The actual registration on June 5, 1917, was 9,691,344; but if to this number were added approximately 400,000, representing men within the specified ages who were already in the military and naval services and therefore not required to register, the total would be brought very close, indeed, to the estimate.

On June 12, 1918, the Bureau, at the request of the Provost Marshal General, made an estimate of the number of men who had become 21 years of age during the year ended June 5, 1918. This estimate showed a total of 1,011,589 for the entire country. The actual number of registrants on June 5, 1918, plus the number of enlistments of men aged 21, amounted to 953,453; but the greater part of the difference of 58,136 between this number and the estimate is accounted for by a decrease of 45,098 in the number of aliens subject to registration.

On July 30, 1918, at the request of the Provost Marshal General, the Bureau estimated the number of men aged 18 to 20 years, inclusive, and 32 to 45 years, inclusive, in the United States on July 1, 1918. The total given by this estimate was 13,194,408. The registration on September 12 was 12,870,000, to which number should be added approximately 400,000, representing men within the ages specified who were already in the service. The total thus obtained, 13,270,000, differed from the estimate by only a little more than one-half of 1 per cent, thus again confirming the substantial accuracy of the Bureau's figures.

Allocating enlistments for the Office of the Provost Marshal General.—The 117,974 men who enlisted in the Regular Army from April 2 to June 30, 1917, inclusive, represented a portion of the credits to be applied to the gross quotas of the States, the counties, and the cities of 30,000 population and over in the apportionment of the first draft. At the request of the Provost Marshal General these enlistments were allocated by the Bureau of the Census. In addition, the enlistments in the Navy, the Naval Reserve, the National Naval Volunteers, and the Marine Corps from April 2, 1917, to June 30, 1918, which numbered 293,788, were similarly allocated in anticipation of the credit of these volunteer enlistments to the quotas of the various States, as proposed in the bill providing for the second draft, as it passed the House. This provision, however, was rejected by the Senate and was stricken out in conference.

Classification of occupations of registrants for Provost Marshal General's Office.—This work was undertaken at the request of the Provost Marshal General, dated December 21, 1917, that a detachment of skilled workers from the Census Bureau be sent to the War Department to train the clerks who were to be assigned to the preparation of an industrial index of the registrants under the selective-service act. The preparation of this index consisted in the classification, according to occupational skill or experience shown, of cards prepared by the local registration boards from questionnaires filled by registrants. The Census scheme of classification of occupations was used.

Preparatory work was done during the latter part of December and in January, but it was not until the middle of February that the number of cards received at the War Department became sufficiently large to make it feasible to begin the actual work of classification. From that time until July 1, 1918, a period of four and one-half months, a force of experienced Census employees, numbering about 30 during the greater part of the period, was employed, under the direction of the chief statistician for population, in supervising and guiding the work of about 250 clerks employed by the War Department.

The total number of cards received to the end of June, 1918, and classified under the direction of the expert Census force was 8,147,034. In the classification and verification of these cards it was necessary to handle most of them two or three times, so that the total number of handlings of cards, for all purposes, amounted to 23,707,872.

This work in some respects was most complex and could not have been successfully handled by inexperienced employees. The skill and energy displayed by the Census force were greatly appreciated by the Provost Marshal General, who, in a letter dated June 26, 1918, to the Director of the Census, paid a high tribute to the value of the service rendered in the prosecution of this important piece of war work.

Determination of ages of registrants.—Much work was done during the fiscal year in connection with the furnishing of transcripts of ages of persons who failed to register under the selective-service law but were believed to be within the specified age limits. These transcripts were supplied to the Department of Justice, to local registration boards, and to the individuals concerned. Because of the fact that in many instances the men in question had been arrested and

were in jail awaiting the settlement of their cases, it was highly important that this work be done with the utmost promptness. The Bureau has been advised by county officials that as soon as it became generally known that they had access to Census information in regard to ages many men came in voluntarily and registered. The recent extension of the draft ages will cause a great increase in this class of the work.

Liberty Loan work.—In connection with the Liberty Loans made during the fiscal year the Census Bureau rendered aid to the Treasury Department by sending out Liberty Loan literature to various mailing lists.

Work for the United States Fuel Administration.—For the Fuel Administration the Bureau compiled information, based on the data obtained at the last census of manufactures, showing the kinds and quantities of coal consumed by establishments using 100 tons or more per annum, and whether such establishments generated electricity for power. It also supplied the Fuel Administration with a list of cotton ginneries in the State of Georgia, and prepared index cards for use in the compilation of a list of names and addresses of establishments engaged in the manufacture of brick and tile, cement, glass, pottery, lime, and sand-lime brick.

Work for Railroad Wage Commission.—During the months of February and March, 1918, the Census Bureau prepared a large number of tables for the use of the Railroad Wage Commission in connection with the adjustment of the wages of railroad employees by the Federal Railroad Administration.

Miscellaneous war work.—In addition to that above specified, the Census Bureau has performed war work for the American National Red Cross, the Department of Justice, the Council of National Defense, the Housing Committee, the United States Shipping Board, the Emergency Fleet Corporation, the Medical Corps of the War Department, the Federal Trade Commission, the Federal Reserve Board, the United States Geological Survey, the Joint Information Board on Minerals and Derivatives, the Tanners' Council of the United States of America, the National Committee on Prisons and Prison Labor (through the Bureau of Foreign and Domestic Commerce), the Bureau of Education, the War Industries Board, the United States Food Administration, the New York Harbor Wage Adjustment Board of Arbitration, and the Port Facilities Commission.

The total amount of war work done during the fiscal year (exclusive of overtime) was equivalent to the services of 528 employees for one month, or 44 for one year. The total number of members of the Census force engaged on such work on July 1, 1918, was 92, and the number thus engaged on September 1, 1918, was 231.

ENLISTMENTS, CONTRIBUTIONS, RED CROSS WORK, ETC.

Members of Bureau's force enlisted and drafted into military and naval services.—During the fiscal year 47 members of the Census force entered the military and naval services. The total number who have entered those services from the outbreak of the war to September 15, 1918, is 64. Although the Bureau could ill spare the services of some of these men, no request was made to obtain deferred classification because of their Census employment.

Subscriptions for war purposes.—At the beginning of the First Liberty Loan campaign there was organized in the Bureau a "Liberty Loan Bond Club," which receives the semimonthly and monthly payments on bonds taken by the Bureau's employees on the installment plan and turns them over to the banks through which the bonds were purchased. The Bureau's subscriptions to the two loans made during the fiscal year 1918 (the second and third) totaled \$106,750, and the aggregate subscriptions to the first three loans amounted to \$164,800. The proportions of the force which subscribed for the bonds were 77.4 per cent at the first loan, 75.6 per cent at the second, and 89 per cent at the third. Since a large proportion of the Census employees were underpaid as compared with those in other Federal offices, and since at the time subscriptions were made for the third loan those who had bought their second loan bonds had not yet finished paying for them, the percentage of subscriptions to the third loan denotes a most commendable degree of self-sacrifice and a high spirit of patriotism on the part of the Census employees.

The total sales of War Savings Stamps and Thrift Stamps during the fiscal year to members of the Bureau's force amounted to \$8,506. Subscriptions to the Red Cross War Fund during the fiscal year by members of the Bureau's force aggregated \$2,773.

Red Cross Auxiliary.—Of the 11 companies composing the Red Cross Auxiliary organized in the Department of Commerce on June 13, 1918, 8 are made up of Census employees. In all, 275 employees of the Bureau, including contributing members, are represented in the Auxiliary.

SPECIAL AND MISCELLANEOUS LINES OF WORK.

MARRIAGE AND DIVORCE.

Marriage and divorce statistics for the calendar year 1916 have been collected and are now being compiled.

Statistics as to marriage and divorce covering the 40-year period from 1867 to 1906, inclusive, were collected and published, and the Census Bureau had had under contemplation the collection of similar statistics for the 10-year period 1907-1916. The amount of war work which the Bureau has been called upon to do, however, has been so great that it was decided to limit this inquiry to the single year 1916 instead of having it cover the entire decennium 1907-1916.

The canvass has been conducted entirely by correspondence, except that in 11 of the Southern States and in Missouri 142 of the Bureau's local cotton agents were employed in securing divorce reports for counties where the information could not be obtained directly from county officials. Complete statistics as to divorce were secured at the capitals of three States—Nebraska, New Jersey, and Wisconsin—and for the remaining States and the District of Columbia the information was obtained through the offices of the county and court clerks. In the case of the marriage statistics the information for 27 States was obtained from the State capitals or from printed reports, and for the remaining States the data were obtained through the county or court clerks or officials having custody of the marriage records. This method of conducting the canvass made possible a

considerable saving in expense, although naturally somewhat greater delay resulted in the cases of certain counties than would have occurred if agents had been sent into the field to collect the statistics. Substantially all the returns had been received by the close of the fiscal year 1918.

The preparation of the report had been in progress for some time prior to the termination of the canvass and is now near completion. The report will show, among other things, by counties, the number of marriages performed and the number of divorces granted during 1916, with detailed statistics for divorce, covering such matters as cause of divorce, party to whom granted, whether contested, place of marriage, whether alimony was asked and whether granted, and the extent to which children were affected by the decree.

CENSUS OF THE VIRGIN ISLANDS.

At the request of the Secretary of the Navy, the Director of the Census was instructed by the Secretary of Commerce, on October 1, 1917, to take a census of the Virgin Islands. This census, which was taken as of date November 1, 1917, covered population, agriculture, manufactures, fisheries, and wages and hours of labor. The work was done under the supervision of the chief statistician for manufactures, assisted by six other employees of the Department of Commerce, but the actual enumeration was made mainly by local employees.

Because of difficulty in securing transportation facilities, the representatives of the Bureau of the Census who were to supervise the work did not arrive at their destination until December 17. A conference was held with representatives of the naval government of the islands, at which the general plan and organization of the census were discussed. It was decided to utilize school-teachers in canvassing the towns, while local officials and owners of estates were relied upon to do the work in rural districts. The actual work of enumeration began on December 24 and was completed on January 12, and the census commission returned to the United States on the steamer leaving St. Thomas January 14.

The various sections of the report, with introduction and comprehensive appendixes, were prepared; the final proof was returned to the Government Printing Office, approved for printing, on July 9, 1918; and printed copies were received from the Printing Office on August 27.

UNITED STATES LIFE TABLES.

As shown in previous reports, the Bureau of the Census compiled a series of "life tables" based on the population in 1910 and the mortality in the three years 1909, 1910, and 1911 for the six New England States and New York, New Jersey, Indiana, Michigan, and the District of Columbia. These tables, which were published in June, 1916, are similar to those prepared by life insurance companies, but differ from the latter in that they relate to the entire population of the area covered instead of being limited to risks selected through medical examination or otherwise. The preparation of a similar series of tables exhibiting mortality conditions in 1890 and 1901

and during the decennium 1901 to 1910, inclusive, has been nearly completed, and the copy will be sent to the printer before the close of the present calendar year. The report presenting these tables will contain the original data on which they were based, together with an explanation of the methods employed in computing them; and in connection with certain tables there will be given commutation columns and data as to annuities and single and annual premiums at various rates of interest.

The preparation of these tables has been made subsidiary to the regular work of the Census Bureau, for which reason it has not been possible to complete and publish them sooner. Their value, however, is permanent, not ephemeral, and therefore will not be impaired in any material degree by the delay in their publication.

STATISTICAL DIRECTORY OF STATE INSTITUTIONS.

During the fiscal year the Bureau completed the compilation of the statistical directory of State institutions for the dependent, defective, and delinquent classes, of which mention was made in my former report, and copy for which has been sent to the Printing Office since the close of the year. This publication will show for each institution the number of inmates; cost of maintenance; value of plant; acreage of grounds or land; numbers of officials, assistants, and employees; and other data. The classes of institutions covered include State prisons and penitentiaries and State institutions for the insane, feeble-minded, epileptic, tuberculous, blind, deaf, and dependent. In addition to the data for the individual institutions the report presents general statistics for the States and summaries, with maps showing the location of the institutions, etc.

SEARCHING OF CENSUS RECORDS TO DETERMINE AGES.

During the fiscal year 5,043 searches were made of Census records to determine ages of pensioners. In addition, a great amount of work was done in searching the records to establish the ages of men who failed to register for military service.

FISHERIES OF NEW YORK CITY.

On August 23, 1917, the Director of the Census was authorized by the Secretary of Commerce to make a tentative collection of fisheries statistics for New York City covering the period from September 1 to December 31, 1917, the purpose being to determine the feasibility of making the inquiry a permanent one. The details of the method to be employed in doing the work were arranged by the Bureau of the Census and the Bureau of Fisheries. It was agreed that the reports should be collected by an agent of the Bureau of the Census and mailed directly to the Bureau of Fisheries for tabulation. An employee of the Census Bureau was therefore delegated to do the field work, and he proceeded to New York City and entered on duty September 1, 1917.

The data collected comprised (1) landings of fresh fish by American fishing vessels and boats, and (2) receipts of fresh fish by rail and steamer.

At the request of the Bureau of Fisheries the detail of the Census employee performing this work was extended until January 31, 1918, when it was decided to discontinue the undertaking.

TABULATION OF DATA FOR DISPUTED AREAS OF EUROPE AND AFRICA.

In the latter part of the fiscal year the Bureau, upon authorization of the Secretary of Commerce, began the tabulation of data taken from foreign censuses 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 data are obtained from foreign census reports, statistical yearbooks, official trade reports, and such other sources as are available.

PREPARATIONS FOR THE FOURTEENTH CENSUS.

In my last report I set forth the urgent need of making adequate preparations for the Fourteenth Census in order that the undertaking might be carried through without the delay and waste which would inevitably result from an eleventh-hour rush to make a start in the actual work under the handicap of a somewhat indefinite plan of campaign. I also outlined briefly the preparatory work which had already been done. The first task to which the Bureau set itself in this connection was a careful and detailed study of the act providing for the Thirteenth and subsequent decennial censuses, with a view to determining what amendments or changes were needed to meet the conditions under which the Fourteenth Census will be taken. After thorough consideration it was decided to recommend to Congress the enactment of an entirely new law, differing from the Thirteenth Census act in many details, but containing no radical changes. Such a bill was drafted and submitted to the House Committee on the Census, which held a series of hearings upon it during the period from February 20 to April 10, 1918. After the Director and other Census officials had been heard, the Secretary of Commerce, the Secretary of Agriculture, and representatives of the Bureau of Mines, the Geological Survey, and the Food Administration were called upon to express their views. On July 2, 1918, the House passed the bill with a few amendments of a minor character, and it is now pending in the Senate.

I can not too strongly emphasize the importance of promptly enacting this bill into law. If further action upon it should be deferred until the next session of Congress, which will be a short one, there is a considerable probability that it will not be passed at all by the present Congress, in which event there would be grave danger that the Census Bureau would find itself at the beginning of the Fourteenth Census period (July 1, 1919) without the full and definite knowledge which it should have as to the legal authority and requirements under which it must perform the great task of inventorying the population and industries of the United States. In certain respects the Bureau can not plan efficiently and intelligently for the coming census until it knows exactly what these legal requirements are to be.

The division of agriculture, which had gone out of existence at the close of the Thirteenth Census period, was reorganized and placed

under the charge of a chief statistician. During the fiscal year the major part of the work performed by this division consisted in preparations for the Fourteenth Census. During the week of August 20, 1917, a conference of the leading authorities on agriculture was held at the Bureau for the purpose of preparing a tentative schedule for the next census of agriculture. The schedule agreed upon was completed and printed during the month of December, and approximately 35,000 copies were mailed to county agents and township correspondents of the Department of Agriculture for distribution to farmers. More than 18,000 of these preliminary schedules, representing farms located in every county of the United States, had been returned to the Census Bureau up to September 1. Nearly all the schedules returned contained valuable information, and they were sorted, classified, and tabulated. The results obtained have been placed at the disposal of the Bureau of Crop Estimates of the Department of Agriculture, and will also be of service to the Office of Farm Management, the Bureau of Animal Industry, the Bureau of Markets, and the Bureau of Plant Industry.

Beginning on December 19, 1917, a conference was held at the Bureau of the Census for the purpose of discussing the irrigation inquiry which it is proposed to include in the Fourteenth Decennial Census, and preparing a schedule for use at that inquiry. This conference was attended by official representatives of the Departments of Agriculture and of the Interior and by representatives of several State universities. Photostat copies of the form of schedule adopted at this conference were sent to the irrigation economist for the Office of Public Roads and Rural Engineering of the Department of Agriculture for the purpose of making a test in several of the Western States. After the schedules have been filled by owners or operators of irrigation enterprises they will be forwarded to the Census Bureau for examination, criticism, and tabulation.

Beginning February 19, 1918, a conference was held at the Bureau, at which was discussed the drainage inquiry that it is planned to incorporate in the Fourteenth Census. This conference was attended by official representatives of the Departments of Agriculture and of War, representatives from several State universities, and a small number of leading engineers of the United States. The tentative schedule agreed upon has been prepared, but has not yet been printed.

There remains to be done much more preliminary Fourteenth Census work on agriculture, including studies concerning farm tenure, mortgage indebtedness, live stock, irrigation, drainage, special crops, and certain other special subjects; and in addition there is a vast amount of detail work in connection with the preparation and printing of schedules, tabulation sheets, etc.

It is the Census Bureau's plan, so far as the size of its force will permit, to have everything completed that can be completed before the beginning of the actual enumeration. However, the large amount of war work which the Bureau is being called upon to perform is necessarily interfering to some extent with these preparations.

REPORT OF THE DIRECTOR OF THE CENSUS. 640 21

PUBLICATIONS ISSUED.

Following is a list of the publications issued during the fiscal year and since its close. In addition, the Bureau has published a number of press summaries.

Class and title.	Date issued.	Pages.	Edition.
JULY 1, 1917, TO JUNE 30, 1918.			
Reports (cloth bound and of quarto size except as otherwise indicated):			
Birth statistics for the registration area of the United States: 1915 (paper).....	Aug. 7, 1917	78	5,000
General statistics of cities: 1916.....	Aug. 18, 1917	88	6,000
Financial statistics of cities: 1916.....	Sept. 22, 1917	375	6,500
Financial statistics of States: 1916.....	Sept. 4, 1917	127	3,500
Total.....		668	21,000
Bulletins (quarto):			
No. 135—Cotton production and distribution, season of 1916-17.....	Feb. 27, 1918	141	45,000
Census of manufactures, taken as of Dec. 31, 1914—			
States—			
Alabama.....	Sept. 22, 1917	29	1,300
Arizona.....	Oct. 27, 1917	15	700
California.....	July 25, 1917	83	2,600
Colorado.....	Oct. 12, 1917	29	1,400
Connecticut.....	Aug. 23, 1917	45	1,700
Delaware.....	Sept. 11, 1917	19	700
District of Columbia.....	Aug. 16, 1917	13	600
Florida.....	July 23, 1917	21	1,000
Illinois.....	Oct. 30, 1917	65	4,800
Iowa.....	Oct. 8, 1917	33	2,000
Kansas.....	Oct. 15, 1917	29	1,800
Kentucky.....	Aug. 26, 1917	27	1,200
Maine.....	Aug. 20, 1917	29	1,300
Maryland.....	Nov. 15, 1917	37	1,500
Massachusetts.....	Nov. 20, 1917	79	3,700
Michigan.....	Feb. 21, 1918	53	2,900
Minnesota.....	July 25, 1917	41	2,200
Missouri.....	Aug. 22, 1917	43	2,400
Montana.....	July 23, 1917	17	1,000
Nebraska.....	do.....	23	1,500
New Hampshire.....	Aug. 23, 1917	27	1,000
New Jersey.....	May 11, 1918	50	2,000
New Mexico.....	July 23, 1917	11	800
New York.....	May 10, 1918	147	6,500
North Dakota.....	Aug. 28, 1917	15	1,000
Ohio.....	Dec. 14, 1917	81	4,500
Oklahoma.....	Oct. 6, 1917	23	1,400
Pennsylvania.....	Dec. 14, 1917	97	6,500
South Carolina.....	July 23, 1917	21	1,100
Tennessee.....	do.....	31	1,500
Texas.....	Sept. 25, 1917	35	2,500
Virginia.....	Aug. 22, 1917	33	1,600
Washington.....	July 11, 1917	33	1,600
Wisconsin.....	Sept. 5, 1917	30	2,000
Total.....		1,362	71,000
Industries—			
Agricultural implements.....	Oct. 11, 1917	12	1,700
Automobiles, including bodies and parts.....	Oct. 15, 1917	19	2,500
Brass, bronze, and copper products.....	Nov. 26, 1917	11	2,200
Butter, cheese, and condensed milk.....	Aug. 31, 1917	23	5,250
Buttons, manufacture of.....	Nov. 15, 1917	9	1,700
Canning and preserving.....	Nov. 14, 1917	31	2,800
Carriages and wagons.....	Feb. 28, 1918	17	2,200
Cast-iron pipe.....	Dec. 8, 1917	7	1,300
Chemicals.....	Apr. 23, 1918	85	3,300
.....do.....		22	8,500
Clothing, manufacture of.....	Feb. 12, 1918	33	3,000
Cotton manufactures.....	Oct. 6, 1917	18	2,700
Electrical machinery, apparatus, and supplies.....	Oct. 19, 1917	8	2,000
Engines and machinery.....	Oct. 9, 1917	25	2,400
Gas, manufacture of.....	Aug. 20, 1917	9	1,300
Glucose and starch industry.....	Feb. 12, 1918	20	2,500
Hosiery and knit goods.....	Dec. 10, 1917	63	2,200
Iron and steel.....	Apr. 23, 1918	33	3,200
Leather industry.....	Oct. 11, 1917	8	1,200
Motorcycles, bicycles, and parts.....	Feb. 28, 1918	21	2,000
Musical instruments.....	Oct. 1, 1917	8	1,100
Needles and pins and hooks and eyes.....			

Class and title.	Date issued.	Pages.	Edition.
JULY 1, 1917, TO JUNE 30, 1918—continued.			
Bulletins (quarto)—Continued.			
Census of manufactures taken as of Dec. 31, 1914—Continued.			
Industries—Continued.			
Oil-toth and linoleum.....	Aug. 20, 1917	8	1,000
Patent and proprietary medicines and compounds, and druggists' preparations.....	May 1, 1918	18	1,700
Petroleum, refining.....	Feb. 15, 1918	13	1,600
Printing and publishing.....	Mar. 4, 1918	49	7,200
Rubber industry.....	Feb. 12, 1918	15	1,700
Silk industry.....	Nov. 14, 1917	24	2,200
Slaughtering and meat packing.....	Jan. 23, 1918	25	3,750
Soap industry.....	July 11, 1917	11	1,600
Steam and electric cars and railroad repair shops.....	Feb. 21, 1918	23	2,500
Sugar industry.....	July 2, 1917	13	1,300
Textiles, including cordage and twine; jute goods and linen goods; flax and hemp, dressed; fur-felt hats; dyeing and finishing textiles; halcloth; mats and matting.....	Nov. 27, 1917	27	1,800
Turpentine and rosin.....	July 11, 1917	10	1,300
Wool manufactures.....	Apr. 23, 1918	48	2,200
Total.....		810	84,600
Miscellaneous publications:			
Legislation relating to Bureau of the Census.....	Aug. 20, 1917	71	100
Annual report of the Director of the Census to the Secretary of Commerce, fiscal year 1917 (octavo).....	Nov. 9, 1917	44	2,500
Physicians' pocket reference to the International list of causes of death (fourth edition) (2½ by 6 inches).....	June 4, 1918 [July 14, 1917]	28	200,000
Thirty-two reports, in card form, relating to cotton and cotton seed.....	to June 19, 1918 July 30, 1917 to Apr. 29, 1918	32	1,280,000
Four reports, in card form, relating to stocks of leaf tobacco.....	to Apr. 29, 1918	4	70,000
Total.....		178	1,558,600
Grand total, July 1, 1917, to June 30, 1918.....		3,168	1,780,500
JULY 1 TO AUGUST 31, 1918.			
Reports (cloth bound and quarto size except as otherwise indicated):			
Statistics of fire departments of cities having a population of over 30,000 (paper).....	Aug. 13, 1918	105	6,000
Census of the Virgin Islands of the United States: November 1, 1917 (cloth and paper).....	Aug. 27, 1918	147	4,000
Deaf-mutes in the United States: 1910.....	July 5, 1918	221	2,000
Total.....		473	12,000
Bulletin No. 136—Stocks of leaf tobacco.....	July 17, 1918	44	20,000
Miscellaneous publications:			
Manual of the International list of causes of death (third reprint, revised) (octavo).....	July 13, 1918	399	500
Advance tables of cotton production in the United States—crop of 1917 (quarto).....	July 27, 1918	40	42,000
Total.....		349	42,500
Grand total, July 1 to Aug. 31, 1918.....		896	74,500

MECHANICAL EQUIPMENT.

WORK IN MECHANICAL LABORATORY.

In addition to the maintenance of tabulating machinery for current use in the Census Bureau and the Bureau of Immigration, the Mechanical Laboratory was engaged during the fiscal year in the overhauling and new construction of machinery to be employed in the tabulation of the Fourteenth Census reports. This includes the construction of 25 new-model tabulating machines, complete, and of 5 extra bases, with full complement of counters; the rebuilding of 2

and the overhauling of 17 card-sorting machines; and the overhauling of 5 card-counting machines.

The new automatic tabulating machine, which was completed toward the close of the fiscal year 1917, was given a practical test in connection with the work of tabulating mortality data and was found to be entirely satisfactory in every respect and a great improvement over the machine used at the Thirteenth Census. This improved machine has been used as a model in the construction of the 25 tabulating machines mentioned above.

The present plans call for the completion of all parts entering into the construction of the equipment specified above before the expiration of the present fiscal year. In addition, it is planned, if the size of the force will permit, to expedite the assembling of these parts into complete machines.

The completion, on time, of the work to be done in the Mechanical Laboratory in preparation for the Fourteenth Census work will depend, in some degree, upon the acquisition and retention of skilled help. There appear to be no difficulties of a mechanical or technical character which can not be surmounted in time to make possible the complete equipment of the Bureau with the special and greatly improved machinery to be used in the tabulation of the Fourteenth Census statistics; but the difficulty in securing and retaining skilled help, owing to the increasing demand and higher rates of pay prevailing in manufacturing establishments outside, presents a serious problem.

INTEGRATING COUNTER.

In my former report I referred to the commencement of work on the development of an "integrating counter"—that is, a counter which will record and add numbers, instead of mere units, thus performing automatically the work done by the operator of an adding machine—for use in tabulating certain classes of the census data, such as those pertaining to agriculture and manufactures. This machine, like the unit-tabulating machine already in use, will work from punched cards which will be automatically fed into it. The numbers, indicated on the cards by the positions of the punched holes, will be automatically totalized precisely as a number is carried into the total by an adding machine when the proper lever or bar is depressed. Two or three sets of figures can be totalized at the same time.

Work was begun on the development of the integrating counter in the Census Bureau on July 6, 1917. In order not to interfere with the construction, overhauling, and rebuilding of the Bureau's regular tabulating equipment, it was necessary to organize a new force for work on the integrating counter and to purchase equipment for the building of the model. This has been done, and the work to date has shown good progress. The idea of the first model integrating counter has been developed and all drawings made; the patent situation has been carefully studied; and patterns, castings, and practically all parts have been made and are ready for assembling. The most difficult features of the work were undertaken first and have been completed, and the preliminary tests have shown satisfactory results.

OFFICE FORCE.

The appropriation act for the current fiscal year provided for 609 permanent officials and employees of the Census Bureau, representing an increase of 46 as compared with the preceding year. At the same time the numbers of positions in the various salary classes were readjusted so as to provide a somewhat better average salary scale than the Bureau has had heretofore. This readjustment will, it is hoped, diminish the tendency of the Census employees to seek more lucrative employment elsewhere, although the salary scale is still unduly low as compared with those existing in many other branches of the Federal Government. During the fiscal year 1918 there were 90 resignations from the Bureau's force, of which number only 20 were for the purpose of transfer to other positions in the classified civil service.

The greatest difficulty now experienced in connection with the personnel is in inducing eligibles on the civil-service registers to accept employment at the entrance salary of \$900. During the 14-month period from July 1, 1917, to August 31, 1918, inclusive, offers of appointment were tendered to 569 eligibles on the stenographer and typewriter, clerk, and other registers of the Civil Service Commission. Of these eligibles, 299 declined, 79 failed to reply, and 191—only one-third of the total number—accepted appointment.

The following statement shows the nature and distribution of the office and field forces on August 31, 1918:

OFFICIALS.

Director	SAM. L. ROGERS.
Chief clerk	THOMAS J. FITZGERALD.
Chief statisticians:	
Population	WILLIAM C. HUNT.
Statistics of cities	STARKE M. GREGAN.
Manufactures	EUGENE F. HARTLEY.
Vital statistics	WILLIAM H. DAVIS.
Agriculture, cotton and tobacco	WILLIAM L. AGSTIN.
Expert special agent in charge of revision and results	JOSEPH A. HILL.
Geographer	CHARLES S. SLOANE.
Expert chiefs of divisions:	
Administrative	TIMOTHY F. MURPHY.
Population	WILLIAM H. JARVIS.
Statistics of cities	EDWARD W. KOCH.
Manufactures	LEMOUEL A. CARRUTHERS.
Vital statistics	JOHN F. DALY.
Cotton and tobacco	EDWARD B. WHITE.
Revision and results	JOHN B. MITCHELL.
Chief, mechanical laboratory	WESLEY E. CILLEY.
	HARRY H. PIERCE.
	E. M. LABOITTEAUX.

CLERICAL FORCE.

Stenographer, \$1,500	1	Clerks—Continued.	
Clerks:		\$1,000	90
Class 4	20	\$900	81
Class 3	30		
Class 2	65	Total	572
Class 1	285		

SUBCLERICAL FORCE.

Skilled laborers:		Assistant messengers, \$720	5
\$900	3	Messenger boys, \$480	4
\$720	1		
Unskilled laborers, \$720	4	Total	20
Messengers, \$840	3		

MECHANICAL-LABORATORY FORCE.

Expert, \$2,200.....	1	Tabulating mechanics, \$1,400.....	2
Expert, \$2,000.....	1	Tabulating mechanic, \$1,200.....	1
Experts, \$1,800.....	2	Pressman and machinist, \$1,000.....	1
Mechanic, \$1,600.....	1	General mechanic, \$1,000.....	1
Mechanical draftsman, \$1,600.....	1	Apprentices, \$600 (temporary).....	4
Toolmaker, \$1,600.....	1		
Electrician, \$1,400.....	1	Total.....	17

SPECIAL AGENT FORCE.

Special agents for general field work, etc.....	56
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SUMMARY.

Officials.....	19	Mechanical-laboratory force.....	17
Clerical force.....	572	Special agents.....	56
Subclerical force.....	20	Total.....	684

In addition, there are employed throughout the cotton belt 701 local special agents to collect statistics of cotton and cotton seed. These agents perform their work only at intervals and are paid on a piece-price basis.

OFFICE ROOM AND STORAGE SPACE.

The beginning of the Fourteenth Census period (July 1, 1919) is now considerably less than a year distant, and the matter of providing adequate office accommodations for the Bureau during that period, as well as proper storage space for its permanent records, is one the importance and seriousness of which can not be overemphasized.

During the Thirteenth Census period (1909-1912) the Census Bureau's force was housed in no fewer than four buildings, one of which adjoined the main office, while the others were located at some little distance, one of them being nearly a mile away. The total floor space then occupied was approximately 200,000 square feet, for which an annual rental of \$40,000 was paid (no rental being charged for the 8,700 square feet occupied in the Maltby Building).

Even had the growth in the country's population and industries since the last census been but a normal one, the coming census would necessarily be a somewhat greater undertaking than the preceding one; but the abnormal changes which have taken place as a result of the war, especially in our manufacturing industries, will still further increase the complexity of the task. Naturally, therefore, the Bureau will need a greater amount of floor space than it had at the Thirteenth Census. Moreover, the necessity for storage space for such of the Census records as have permanent value is increasing rapidly from year to year, and with the great increase in the amount of such records at the next decennial census the needs will become acute. The old population schedules contain information of great value to genealogists, applicants for pensions, litigants, and others, and at present the data they afford as to dates of births of registrants for military service are of incalculable value in many cases where no birth records are available. It is obvious, therefore, that the destruction or serious injury of these old schedules would cause irreparable loss. Notwithstanding this, they are stored under conditions which tend to bring about their rapid deterioration.

It is estimated that during the next decennial census period the Bureau (whose force will then be between six and seven times as large as at present) will need about 275,000 square feet of space, including storage. Since the total floor space occupied by it in the Commerce Building on June 30, 1918 (exclusive of halls, toilet rooms, etc.), amounted to only 78,386 square feet, of which about 8,000 square feet represented storage space, and since there is practically no more room in the Commerce Building available for the use of the Bureau, the absolute necessity of finding other quarters for the greatly increased Census force during the Fourteenth Census period is apparent. It is highly undesirable to have the force scattered as it was during the Thirteenth Census. It is to be hoped, of course, that the war will have come to an end before the beginning of the next census period, in which event it may be possible to accommodate the extra force in some of the temporary buildings erected for the use of the two military departments and for the various special war agencies which have been created, thus bringing about a material saving in cost as compared with the previous census period. However, it is by no means safe to count upon this contingency as a certainty, because it is not at all likely that these buildings will be vacated immediately after the close of the war. In order that preparations may be made for sending out the enormous quantities of schedules and other supplies to the supervisors in charge of the field work a reasonable length of time in advance of January 1, 1920, the proposed date as of which the enumeration will be made, it will be necessary for a part of the Census force to move into other quarters several months in advance of that time—perhaps in September or October, 1919.

It is believed, therefore, that prompt steps should be taken looking toward the provision of a suitable building for housing the temporary Fourteenth Census force.

APPROPRIATIONS AND EXPENDITURES.

FINANCIAL STATEMENT, FISCAL YEAR 1918.

The following financial statement covers the operations of the Bureau of the Census during the fiscal year ended June 30, 1918:

Administrative:		
Salaries—		
Administrative and general	\$20, 675. 18	
Accounts and time	5, 045. 27	
Appointments	8, 559. 87	
Correspondence and distribution	8, 676. 76	
Editorial	2, 726. 50	
Mall	1, 459. 12	
Photos at	1, 156. 86	
Labor force	2, 932. 88	
Contingent expenses ^a	16, 966. 28	\$68, 108. 22
Machine shop:		
Salaries	24, 685. 23	
Materials, supplies, etc.	13, 571. 34	38, 206. 57
Division of revision and results:		
Supervision	5, 856. 27	
Dependent, defective, and delinquent classes	8, 920. 81	
Publications	4, 162. 83	
Official Register of the United States	5, 012. 21	
Negroes in the United States	2, 801. 71	
Directory of institutions	3, 380. 36	
Executive civil service	4, 205. 18	
Preparations for Fourteenth Census	258. 56	
Miscellaneous	3, 254. 52	37, 837. 45

^a Paid from appropriation for Department of Commerce; no separate appropriation for Bureau of the Census.

REPORT OF THE DIRECTOR OF THE CENSUS.

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Division of population:		
Supervision	\$9,567.72	
Occupations	2,255.12	
Marriage and divorce	21,314.16	
Religious bodies	113,265.83	
Preparations for Fourteenth Census	5,324.32	
Miscellaneous	680.31	\$152,307.46
Division of manufactures:		
Supervision	11,048.90	
Census of manufactures for 1914	29,758.64	
Water transportation	86,039.39	
Electrical Industries	92,208.98	
Shipbuilding	2,533.66	
Fisheries of New York City	1,207.83	
Preparations for Fourteenth Census	13,755.57	230,712.97
Geographer's division:		
Supervision	\$3,084.32	
Drafting	3,608.03	
Ages of pensioners and others	18,005.50	
Miscellaneous	8,895.97	34,253.82
Division of vital statistics:		
Supervision	7,192.38	
Mortality	91,172.23	
Births	70,422.58	
Life tables	2,280.55	
Miscellaneous	265.06	171,283.70
Division of statistics of States and cities:		
Supervision	8,107.80	
Financial and general statistics	79,074.83	
State statistics	17,368.33	104,551.02
Division of agriculture:		
Supervision	4,040.36	
Preparations for Fourteenth Census	14,122.71	18,163.07
Division of cotton and tobacco statistics:		
Supervision	5,291.38	
Cotton	252,307.38	
Tobacco	12,132.31	
Edible oils	70.74	269,801.81
Preparations for Fourteenth Census, general		427.68
Special census of Virgin Islands		6,754.75
Salaries of employees detailed to Department of Commerce		1,226.66
Printing and binding ^a		96,487.31
War work:		
Registration	8,618.00	
Occupations of registrants	14,766.57	
Liberty Loans	6,601.53	
Housing Committee	1,171.08	
Railway wage scale	1,405.35	
War commodities and materials	11,434.20	
Manufacturing establishments using 100 tons or more of coal	3,033.86	
Miscellaneous war work	374.21	47,406.06
Grand total		1,283,618.55

Title of appropriation.	Appropriation.	Expenditures during fiscal year.
Salaries, Bureau of the Census, 1918	\$676,460.00	\$652,914.74
Collecting statistics, Bureau of the Census, 1918	647,000.00	643,101.41
Tabulating machines, Bureau of the Census, 1918	60,000.00	37,165.41
Increase of compensation, Department of Commerce, 1918	42,983.40	42,983.40
Contingent expenses, Department of Commerce, 1918 ^a	16,966.28	10,166.28
Printing and binding, 1918 ^a	96,487.31	96,487.31
Total	1,539,896.99	1,283,618.55

^a Paid from appropriation for Department of Commerce; no separate appropriation for the Bureau of the Census.

^b The expenditures during the fiscal year for "collecting statistics" amounted to about \$210,000 less than the appropriation for that purpose. This resulted in large measure from the fact that the estimate on which the appropriation for collecting statistics was based included items for both decennial and annual statistics of marriage and divorce, whereas only an annual inquiry was made. It was the original intention to have the decennial inquiry cover the entire 10-year period 1907-1916 and to make the annual inquiry for the calendar year 1917. Later, however, because of the large amount of war work which the Census Bureau has been called upon to do, it was decided to drop the decennial inquiry but to make an annual inquiry for 1916.

APPROPRIATIONS, FISCAL YEAR 1919.

The Census Bureau's appropriations for the fiscal year 1919 aggregated \$1,349,240, as against \$1,383,460 for the preceding year.

The amount appropriated for salaries was increased from \$676,460 to \$739,240 in order to provide for 46 new statutory positions and for the readjustment of the salary scale so as to bring it more nearly into conformity with those for other branches of the Federal service.

The appropriation for collecting statistics was reduced from \$647,000 to \$490,000. This reduction was the net result of a number of changes, the most important of which were (a) the omission from the 1919 appropriation of items corresponding to those contained in the 1918 appropriation for statistics of marriage and divorce, lumber and timber products, and water transportation, and (b) increases in the items for statistics of electrical industries and preliminary Fourteenth Census work.

The appropriation for constructing tabulating machinery and for experimental work in developing an integrating counter remained unchanged at \$60,000; but a new item of \$60,000 was included in the current appropriation for the construction, purchase, rental, or repair of card-punching machines for use in compiling the results of the Fourteenth Census.

Respectfully,

SAM. L. ROGERS,
Director of the Census.

To Hon. WILLIAM C. REDFIELD,
Secretary of Commerce.

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