

ANNUAL REPORT

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OF THE

DIRECTOR OF THE CENSUS

TO THE

SECRETARY OF COMMERCE

FOR THE

FISCAL YEAR ENDED JUNE 30, 1919



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REPORT
OF THE
DIRECTOR OF THE CENSUS.

DEPARTMENT OF COMMERCE,
BUREAU OF THE CENSUS,
Washington, September 15, 1919.

SIR: There is submitted herewith the following report upon the operations of the Bureau of the Census during the fiscal year ended June 30, 1919, and the work now in progress:

INTRODUCTION.

The end of the fiscal year 1919 marked the close of the seven-year intercensal period during which the Bureau of the Census carried on numerous lines of statistical work at decennial, quinquennial, biennial, annual, quarterly, monthly, and semimonthly intervals, as prescribed by law; and on July 1, 1919, began the three-year decennial census period, within which time censuses of the population, agriculture, manufactures, mines and quarries, oil and gas wells, and forestry and forest products of the United States must be taken, compiled, and published.

One of the prime considerations which Congress had in mind in establishing the permanent Bureau in 1902 was the retention of a nucleus of trained officials and employees who could make their preparations for each decennial census in the light of the experience gained at preceding ones and whose familiarity with the work would be of incalculable value in supervising the collection and compilation of the census data. During the intercensal periods, however, the manifold duties of the Bureau fully justify its existence as a permanent organization.

During the fiscal year 1919 the Bureau of the Census carried on the compilation of the results of its quinquennial census of electrical industries; completed the work on its decennial inquiries relating to transportation by water and shipbuilding; brought well toward completion the preparation of its decennial report on religious bodies; completed and published its special report on marriage and divorce; conducted its annual inquiries relating to births, deaths, states, and municipalities; published quarterly statistics of stocks of leaf tobacco; made monthly and semimonthly collections and publications of statistics on cotton, cotton seed, and cottonseed products; made special enumerations of population in four counties; carried on the publication of weekly mortality reports for certain large

cities; compiled statistics relating to the mortality from the influenza epidemic; performed a large amount of war work for other governmental establishments; complied with numerous requests for information; and made detailed preparations for taking the Fourteenth (1920) Decennial Census.

The work done along the above lines during the fiscal year and since its close is described below.

CURRENT AND COMPLETED WORK ON STATUTORY INQUIRIES.

ELECTRICAL INDUSTRIES.

Under the authority of the act creating the permanent Census Bureau, this inquiry has been made at five-year intervals since 1902. It embraces central electric light and power stations, electric railways, telephones and telegraphs, and municipal electric fire-alarm and police-patrol signaling systems.

The inquiry was made, in accordance with the usual practice of the Bureau, through correspondence so far as it was practicable to secure the data in this manner. It was necessary, however, to send a number of men into the field to obtain information which could not be secured satisfactorily by mail. The field canvass, which was made by the Bureau's permanent employees, was begun in April, 1918, and was completed in the following December, except in one State, in which two agents were employed during January, 1919, in securing reports from delinquent establishments.

A preliminary report on ocean cable systems was prepared and released for use by morning papers on November 18, 1918. Early in January, 1919, the Bureau began to issue press summaries, each giving, for a particular State or group of States, preliminary statistics for central electric light and power stations; and on April 7, 1919, this series of State summaries was completed and a summary covering the entire United States was issued. Similarly, State summaries in regard to electric railways were issued, beginning in February, 1919; and in the following April this series was completed and a summary for the entire United States was published. A supplemental statement giving figures in regard to capitalization and traffic of electric railways was given to the press under date of July 1, 1919. A preliminary report on telephones was issued in March, 1919.

Meanwhile the work on the final reports was under way. The tables and descriptive text for the light and power station report are now in process of preparation. The general tables for the electric railway report have been completed and the preparation of the text and text tables is well advanced. Tables and text for the final report on telephone lines will be sent to the printer on September 22. Copy for the final report on telegraphs, including statistics for railway telegraph and telephone lines, was sent to the printer on March 4, 1919. The preparation of the report on electric fire-alarm and police-patrol signaling systems was completed in January, 1919. This report and that on telegraphs were issued as one bulletin on July 19, 1919. A press summary of this bulletin was sent out for release on July 17, 1919.

During the canvass 71,891 schedules or reports were received. Of this number, 19,220 were secured by the field force and 52,671 (including 22,752 received through the American Telephone & Telegraph Co.) by mail.

The several electrical industries reports present information as to number of establishments, character of ownership, equipment, income, expenses, employees, salaries and wages, finances, etc.

A few of the facts brought out by the summaries already published are:

The 6,542 electric light and power stations in the United States during the year 1917 generated more than 25,000,000,000 kilowatt hours of electric energy, producing an income of over half a billion dollars and giving employment to more than 100,000 persons, whose salaries and wages aggregated nearly \$100,000,000.

The 943 operating electric railways of the United States during the year 1917 transported over 11,000,000,000 fare-paying passengers, representing an average of 109 trips for each man, woman, and child in the United States; operated 102,603 cars on 32,548 miles of lines; and employed 294,826 persons, to whom were paid salaries and wages aggregating \$267,240,362.

The number of telephones in use in the United States at the close of 1917 was 11,716,520—one to every 9 persons or every 2 families. Of these telephones, 7,326,858 were operated by the 145 Bell-controlled systems and the remaining 4,389,662 belonged to the 53,089 independent systems. The number of calls made during the year was estimated at 21,846,000,000—an average of more than 200 per capita.

The 21 commercial land telegraph systems in the United States in 1917 operated 241,012 miles of pole line, comprising 1,888,793 miles of wire, sent 151,725,228 messages, and employed 47,227 persons, to whom were paid salaries and wages amounting to \$36,392,140.

The six ocean-cable systems of the United States operated 46,950 nautical miles of cable and transmitted 2,913,250 messages in 1917.

TRANSPORTATION BY WATER.

The census of transportation by water is, under the law, a decennial inquiry. The work on the last such census, which covered the calendar year ended December 31, 1916, was described in my report for the fiscal year 1918. In order to avoid the disclosure of information of value to the enemy, the Secretary of Commerce had directed that the water-transportation report be not made public during the war; and for this reason, and in order to permit the employment of the census force on more pressing work, especially war work, its compilation was suspended for several months. After the signing of the armistice the report was completed and sent to the printer, and it will be ready for distribution in the near future.

This report, which will be published in a quarto volume of approximately 300 pages, will contain statistics regarding American documented and undocumented vessels or craft of 5 tons register or over, classified by geographic divisions, namely, the Atlantic coast and Gulf of Mexico, the Pacific coast, including Alaska, the Great Lakes and St. Lawrence River, the Mississippi River and its tributaries, and canals and other inland waters.

SHIPBUILDING.

Statistics for this industry were collected in connection with the quinquennial census of manufactures covering the calendar year 1914, and a further canvass was made in conjunction with the census of transportation by water taken as of December 31, 1916. Although the results of these two investigations were compiled and the preparation of the combined report completed prior to the beginning of the fiscal year 1919, the Secretary of Commerce directed that they be withheld from publication at the time because of the inadvisability of giving out the information during the period of the war. The figures, however, were placed immediately at the disposal of the Shipping Board and other war agencies of the Government. In January, 1919, the restriction upon their publication having been removed, the manuscript was sent to the printer and the report was issued, in bulletin form, on May 16, 1919.

The statistics cover establishments engaged in the construction and repair of vessels, ships, and boats of all classes. Data for shipyards operated by the Federal Government are shown separately.

RELIGIOUS BODIES.

The last decennial census of religious bodies covered the calendar year 1916. The collection of the data for 97 per cent of the churches was made during 1917, and for the remaining 3 per cent was completed in March, 1918. The work was done almost entirely through correspondence.

On May 2, 1918, the Bureau issued a press announcement giving preliminary figures, subject to correction, showing, by principal denominations, the numbers of church organizations, members, ministers, Sunday schools, and Sunday-school officers, teachers, and scholars; and on January 17, 1919, a second press announcement was published which embodied a revision of the first, and in addition presented statistics as to the number of church edifices, value of church property, and expenditures by religious bodies.

The report on religious bodies covers 202 denominations and will be published in 2 parts, with a total of 1,321 pages. Part I, of 594 pages, contains 14 general tables, of which 10 present statistics, by denominations, for the United States, States, counties, and cities, and 4 give statistics for those denominations composed wholly or in part of Negro organizations. In addition, this volume includes a textual discussion of the various items of inquiry, such as church organizations, church members, value of property, etc., by denominations; statistics of ministers in their relation to church work and their compensation; data as to languages used in church services; a summary of the work or general missionary, educational, and philanthropic activities of the denominations; summarized statistics of all denominations for States, counties, and cities; and a summary of the statistics for Negro organizations. Part I is now in the hands of the printer and will probably be issued in November, 1919.

Part II, of 727 pages, consists of 202 sections, each presenting a statement of the history, doctrine, polity, and work of a particular denomination, together with a brief summary and review of the principal statistics by States, and by ecclesiastical divisions where

such divisions exist. Part II is in press and will be issued in November, 1919.

The preparation of the religious bodies report was frequently interrupted by war work, and the printing has also been delayed by conditions arising as a result of the war.

This report shows a total of 227,487 church organizations in 1916, with an aggregate membership of 41,926,854. Of this aggregate, the Roman Catholic church reported 15,721,815 members, or 37.5 per cent. The number of Sunday schools was 194,759, with 1,952,631 officers and teachers and 19,935,890 scholars. The increase in church membership during the 10-year period 1906-1916 was 19.6 per cent, a rate slightly below that for the increase in the population of the United States between 1900 and 1910 (21 per cent).

VITAL STATISTICS.

Birth statistics.—Beginning with 1915, the Census Bureau has made annual collections of birth statistics from a registration area made up of the District of Columbia and of those States having adequate birth-registration systems. This area has grown rapidly. It comprised, in 1915, only the six New England States, New York, Pennsylvania, Michigan, Minnesota, and the District of Columbia, with a total population amounting to about 31 per cent of the aggregate for the country, but embraced in 1917, in addition to the States and District just named, the States of Indiana, Kansas, Kentucky, Maryland, North Carolina, Ohio, Utah, Virginia, Washington, and Wisconsin, with a total population estimated at 53 per cent of the aggregate for the United States. No changes have been made since 1917. During the fiscal year 1919, however, tests were made in Illinois and Mississippi, but the birth registration in both States failed to measure up to the Bureau's standard of 90 per cent of completeness.

The birth statistics show, for the registration area and its subdivisions, number of births, by sex, color, and month of occurrence; births of white children, by country of birth of father and mother; total deaths (exclusive of stillbirths); births per 100 deaths; birth rates and infant mortality; deaths (exclusive of stillbirths) from important causes for 12 subdivisions of first year of life; legitimacy; plural births; ages of father and mother; and total number of children born to each mother who gave birth to a child during year covered by report, and number of surviving children.

A press summary of the birth-statistics report for 1917 was issued in June, 1919. This summary showed a total of 1,353,792 living births in the birth-registration area, representing a rate of 24.6 per 1,000 of population. The total number of deaths in the same area was 776,222, or 14.1 per 1,000. The births thus exceeded the deaths by 74.4 per cent, this excess being equal to about 1 per cent of the total population of the area. The mortality rate for infants under 1 year of age averaged 93.8 per 1,000 living births.

The report itself was completed and copy sent to the printer in July, 1919, and work is progressing satisfactorily on the report for 1918.

Mortality statistics.—The Census Bureau's series of mortality reports began with the year 1900. These reports have been based on

data collected from States and cities in which the registration of deaths was accepted by the Census Bureau, after suitable tests, as covering at least 90 per cent of the total mortality. The death-registration area has greatly increased in size since 1900, when it contained only 40.5 per cent of the population of the country. It now comprises 31 States—the six New England States, New York, Pennsylvania, New Jersey, Maryland, Virginia, North Carolina, South Carolina, Louisiana, Mississippi, Tennessee, Kentucky, Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Missouri, Kansas, Colorado, Utah, Montana, Washington, Oregon, and California—the Territory of Hawaii, the District of Columbia, and 23 cities in non-registration States, and contains approximately four-fifths of the population of the country. The most recent additions are Illinois, Louisiana, and Oregon, admitted for the year 1918, and Mississippi, admitted for 1919.

The annual mortality report for the calendar year 1917 was completed and copy sent to the printer before the close of the fiscal year, and will be issued in November, 1919. This report shows, for the entire registration area, for the individual States, and for cities and counties, the number of deaths (exclusive of stillbirths), and it shows for States and cities the number of deaths by month of occurrence, age, sex, color, nativity and parent nativity for whites, and cause. Death rates from all causes combined and from individual causes are also given.

A press summary giving data in regard to deaths during the calendar year 1917 from all causes combined and from the principal causes separately, for the registration area as a whole, was issued June 25, 1919. The total number of deaths reported (exclusive of Hawaii) was 1,068,932, representing a rate of 14.2 per 1,000 of population. Of these deaths, nearly one-third were due to three causes—heart diseases, pneumonia, and tuberculosis—and nearly another third resulted from the following nine causes: Bright's disease and nephritis, apoplexy, cancer, diarrhea and enteritis, arterial diseases, influenza, diabetes, diphtheria, and bronchitis. Tuberculosis in its various forms, which a few years ago was responsible for more deaths than any other single cause, occupied third place in this respect in 1917, having fallen behind heart diseases and pneumonia.

Weekly Health Index.—The publication of the "Weekly Health Index," which was inaugurated in October, 1917, and which gives mortality reports from 46 of the largest cities of the country, has been continued. The total number of deaths reported for the week (stillbirths excluded), the death rate, the number of deaths of infants under 1 year of age, and the proportion which such deaths represent of the total are shown. During the epidemic of influenza and pneumonia additional sheets were included which gave the number of deaths resulting from those causes. Beginning with the issue for June 17, 1919, there have also been shown for each week statistics, obtained from the leading industrial insurance companies, as to number of policies in force, total number of death claims, and number of claims per 1,000 policies in force.

Distribution of Physicians' Pocket Reference to the International List of Causes of Death.—During the fiscal year 148,000 copies of this publication were distributed by mail to physicians, in an endeavor to reach every physician in the United States.

Need of Federal legislation providing for registration of births and deaths.—In the matter of birth and death registration the United States has not kept pace with many of the more enlightened countries of the world. This condition is due to the fact that registration has been left to the control of the individual State governments, many of which have failed to establish and maintain adequate systems of recording births and deaths. The practice of the Census Bureau is to admit to the "birth-registration area" those States, and to the "death-registration area" those States and those cities in non-registration States, in which the Bureau's tests indicate the registration to represent at least 90 per cent of all births or of all deaths, as the case may be, and in which the registration systems are such as to justify the expectation of a still more nearly complete registration in the future. The present birth-registration area comprises 20 States and the District of Columbia and is estimated to contain 53 per cent of the country's population; and the present death-registration area is made up of 31 States, 23 cities in other States, the District of Columbia, and the Territory of Hawaii, with a combined population estimated at 80 per cent of the total for the country.

Thus far the only legislative action taken by the Federal Government toward the improvement of our vital statistics is found in a joint resolution of Congress approved February 11, 1903, requesting the State authorities to cooperate with the Census Bureau in securing a uniform system of birth and death registration. The Bureau itself has achieved some success in arousing the interest of the States in the matter. Under present conditions, however, it is likely to be many years before the last one of the 48 States enacts and properly administers adequate registration laws. It will thus be necessary, if the birth and mortality records of every municipality and county are to be made reliable, permanent, and readily available for reference at any time in the near future, to provide for a comprehensive system of Federal control and supervision. I recommend, therefore, that this be done.

FINANCIAL STATISTICS OF CITIES.

The report presenting financial statistics of cities having more than 30,000 inhabitants for the fiscal year 1918 was completed and copy sent to the printer on March 17, 1919, and will be issued in October, 1919. This report is one of an annual series which was inaugurated when the Bureau of the Census became a permanent organization in 1902. It is a 357-page quarto volume giving statistics in regard to (1) total and per capita receipts from the various sources of revenue; (2) total and per capita payments for expenses, interest, and outlays; (3) total value of city properties; (4) total and per capita indebtedness, purpose of issue, and rate of interest; and (5) assessed valuation of property, basis of assessment, tax levies, rates, and methods of assessment. The figures for each city relate to its latest fiscal year ended prior to July 1, 1918. In addition to the financial statistics just specified, the report presents various other items of information of interest to municipal officials, members of civic bodies, etc.

A press summary of the report for the fiscal year 1918 will be issued in October, 1919. Among the more important of the facts that

will be set forth in this summary are the following: In 147 of the 227 cities of more than 30,000 population, the excess of expenditures for governmental costs, including interest and outlays for permanent improvements, over revenues during the fiscal year amounted to \$70,923,990, or \$3.48 per capita. In the remaining 80 cities the excess of revenues over expenditures was \$22,323,060, or \$1.60 per capita. Taking the entire 227 cities as a group, the excess of expenditures over revenues amounted to \$48,600,930, or \$1.42 per capita.

The field and office work on the 1919 inquiry is now in progress, and copy for the report will probably be sent to the printer early in the spring of 1920.

GENERAL STATISTICS OF CITIES.

It has been the practice of the Census Bureau, since its establishment on a permanent basis in 1902, to issue reports on various phases of municipal governmental activities, in addition to the financial reports, under the title "General Statistics of Cities." At first these general statistics were issued biennially, but for the fiscal years 1915 to 1918, inclusive, they have been published annually. For 1918 the subject covered under this head was municipal markets in cities of over 30,000 population. Copy for the report was transmitted to the printer January 31, 1919; on May 12 a press summary was issued; and on July 23 the complete report was published in the form of a 56-page bulletin. This report showed a total of 237 municipal markets maintained by 128 of the 227 cities having more than 30,000 inhabitants. (Many of the smaller cities also maintain markets, but since the Bureau is authorized by law to collect statistics only from those having more than 30,000 inhabitants, it was impossible to extend the inquiry so as to cover the entire field.)

Although the municipal market is by no means a new institution, it has received a great impetus in recent years. In fact, no fewer than 107 of the 237 markets covered by the report have been established since the beginning of the present century, and 67 have commenced operations since January 1, 1914. The subject is a timely one in view of the abnormally high prices now charged for most foodstuffs, and the information presented in the report will be of value to cities that have not yet established municipal markets but are contemplating doing so.

Early in the fiscal year two reports—"Specified Sources of Municipal Revenue: 1917," and "Statistics of Fire Departments: 1917"—which had been prepared during the preceding fiscal year were published.

Because of the necessity for curtailing its current inquiries in order that the Bureau may have available for the Fourteenth Census work a sufficient number of trained employees, no report giving general statistics of cities will be compiled for the fiscal year 1919.

FINANCIAL STATISTICS OF STATES.

The report presenting financial statistics of States for the latest fiscal year was completed and copy was sent to the printer on April 19, 1919, and was issued in September, 1919. The report on this

subject is the fourth of the annual series of which it forms a part. It follows closely the lines of the reports giving financial statistics of cities, showing in detail State revenues, expenditures, properties, indebtedness, assessments, tax rates, etc. In fact, the only changes made in the municipal classifications in adapting them to the State reports consist in the addition of items showing certain functions exercised by State governments that do not generally pertain to municipal governments.

A press summary of the report for the fiscal year 1918 was issued under date of August 4, 1919. Among the more important of the facts set forth in this summary are the following: In 30 of the 48 States the revenues exceeded the expenditures for governmental costs, including interest and outlays for permanent improvements, by \$37,417,163, or 55.5 cents per capita; but in the remaining 18 States the revenues fell below the expenditures by \$14,597,449, or 40.5 cents per capita. Taking the entire 48 States as a whole, the excess of revenues over expenditures was \$22,819,714, or 22.1 cents per capita.

Work on the inquiry for the fiscal year 1919 is now in progress, and the copy for the report will probably be sent to the printer early in the spring of 1920.

The State finance reports, which present the only statistics that permit comparison of the revenues, expenditures, and other financial transactions of State governments, have been well received by the State officials, and as a result of the inauguration of this inquiry proper accounting systems have already been adopted in certain States which had not formerly maintained them.

COTTON AND COTTON SEED.

During the fiscal year the Census Bureau carried on its regular inquiries relating to cotton and to cotton seed. In addition to an annual bulletin on cotton production and distribution for the season of 1917-18 and a pamphlet giving complete statistics of cotton ginned from the crop of 1918, there were issued 10 reports relating to cotton ginned to specified dates during the ginning season; 12 reports, at monthly intervals, on cotton consumed, imported, exported, and on hand, and active consuming cotton spindles; and another monthly series relating to cotton seed received, crushed, and on hand, and cottonseed products manufactured, shipped out, and on hand.

The annual bulletin presents the statistics published in the periodical reports for the preceding year, with additions and amplifications, together with data relative to cotton production and consumption in foreign countries and other information in regard to the cotton and cottonseed-products industries. The pamphlet presenting the final figures on cotton ginned from the crop of 1918 (together with data for earlier years) was distributed in time to be of use in making comparisons between the ginnings from the crop of 1919 and those for corresponding periods in preceding years. The periodical and monthly reports on cotton ginned, cotton consumed, cotton seed and its products, etc., are issued in the form of post cards, which are mailed to large numbers of growers, ginners, manufacturers, dealers, and others interested in the cotton and cottonseed industries.

The extension of cotton growing southward into Florida has necessitated the establishment of new ginneries. The Bureau has accordingly sent circular letters to some 300 postmasters in that section in order to obtain the names of all ginneries established, so that complete information as to cotton ginning in Florida may be collected.

The pamphlet giving statistics in regard to the 1918 cotton crop showed a production of 12,040,532 equivalent 500-pound bales, gross weight. This crop was greater than the crops of the preceding 3 years, but was somewhat below the averages for the last 5 years and the last 10 years—12,423,917 bales and 12,728,576 bales, respectively. The production in all the cotton States except Texas, Louisiana, Oklahoma, and Florida showed an increase as compared with 1917.

STOCKS OF LEAF TOBACCO.

During the fiscal year the Bureau issued four reports on stocks of 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 related to the dates July 1 and October 1, 1918, and January 1 and April 1, 1919.

In addition, Bulletin 139, entitled "Stocks of Leaf Tobacco: 1918," was prepared within the fiscal year. It presents the data contained in the quarterly reports just mentioned, together with comparative figures for earlier years and various statistical information in regard to production, consumption, imports, and exports; prices paid growers; kinds and quantities of products; Federal revenue derived from tobacco, etc. Data relative to the world's production of tobacco and the international trade in unmanufactured tobacco are also shown. This bulletin is the second of an annual series designed for the purpose of bringing together in convenient form for ready reference the statistics of the various phases of the tobacco industry published by the several Federal bureaus which compile such statistics.

OFFICIAL REGISTER.

One of the duties imposed by law upon the Census Bureau is the compilation of the Official Register of the United States. This is a biennial publication which gives the name, position, salary, etc., of every official and employee in the legislative and judicial branches of the Federal Government; of every official and employee in the civil service of the executive branch, exclusive of the postal service; and of every commissioned officer of the Army, Navy, and Marine Corps. The forthcoming issue will relate to July 1, 1919. Preparations for the compilation of this issue were made during the latter part of the fiscal year 1919, and the work is now well under way. The last edition, that for July 1, 1917, contained about 166,000 names, but the number in the edition for the present year will be very much greater.

SPECIAL AND MISCELLANEOUS LINES OF WORK.

MARRIAGE AND DIVORCE.

Marriage and divorce statistics for the calendar year 1916 were collected in 1917. At the close of the fiscal year 1917-18 the work on the report had been substantially finished with the exception of

the text and text tables, which were completed in August, 1918. A press summary was issued March 20, and the report itself was published April 7, 1919. The work of compilation and preparation for printing was delayed somewhat by the necessity of employing clerks on the various war inquiries that were carried on by the Bureau, and the printing was also delayed by the rush of war work at the Government Printing Office.

The report on marriage and divorce shows, among other things, by counties, the number of marriages performed and the number of divorces granted during 1916, with detailed statistics for divorces, covering such matters as cause, party to whom granted, whether contested, place of marriage, whether alimony was asked and whether granted, and the extent to which children were affected.

SPECIAL CENSUSES OF POPULATION.

Special censuses of the population of Okmulgee, Ottawa, and Tulsa Counties, Okla., were ordered by the Secretary of Commerce at local request and expense. The census of Okmulgee County was taken as of August 15, 1918, and the report published in January, 1919; the census of Ottawa County was taken as of December 16, 1918, and the report published February 27, 1919; and the enumeration of Tulsa County was made as of January 15, 1919, and the report issued April 25, 1919.

A special census of Charles County, Md., was ordered by the Secretary of Commerce in March 1919, at the request of the Secretary of the Treasury, in order to determine its population and the effect of the recent influenza epidemic thereon. The schedules and instructions for this special census were prepared in conjunction with Dr. Frost, of the Public Health Service. The enumeration was made as of March 12, under the supervision of experienced census employees, but the tabulation of the returns was made by the Public Health Service.

STATISTICS OF FATS AND OILS.

Early in the calendar year 1919 the collection, at monthly intervals, of data in regard to the production, consumption, and stocks of fats and oils was discontinued by the Food Administration, its last compilation of such data being that for December, 1918. In view of the need for reliable information concerning these commodities during the reconstruction period, the Secretary of Commerce authorized the Bureau of the Census to collect and publish, at quarterly intervals during the calendar year 1919, statistics similar to those which had been gathered and compiled by the Food Administration. The required forms were printed and sent out, and the compilation of the statistics is now under way.

UNITED STATES LIFE TABLES.

As stated in my 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 life tables, which were published

in June, 1916, are similar to those prepared by most civilized countries, but differ from those used by life insurance companies in that they relate to the entire population of the area covered instead of being confined to selected risks. In order to provide a basis for the study of changes in mortality conditions, life tables were computed for these same areas for the three-year period 1900-1902, and in addition certain tables for the ten-year period 1901-1910, and two for the census year 1890 for Massachusetts, the only State for which data for that year were available. These supplementary tables, with their accompanying text, will be sent to the printer in November, and will be included in a new edition of the original life tables, thus materially enhancing the value of the latter. In connection with certain of the original tables there will be given in this new edition commutation columns, annuities, and premiums at various rates of interest; and there will be shown also the data on which the various tables were based, together with the derivation of the theory and an explanation of the methods of computing them. The preparation of these tables could not be brought to completion sooner without interfering with the current work of the bureau; but their character is such that their value is not impaired in any material degree by the delay in publication.

SPECIAL INVESTIGATION OF INFLUENZA EPIDEMIC.

The sudden outbreak of influenza and pneumonia in the United States early in the fall of 1918 took so great a toll of life that it was felt by eminent medical men and vital statisticians throughout the country, including officials of the United States Public Health Service, that such data in regard to the mortality resulting from these causes as were obtained by the Bureau of the Census from the death-registration area would be of great value in studying the epidemic if compiled in special tables. The Director of the Census therefore authorized the immediate compilation of these data. Special tables and diagrams showing the deaths from influenza and pneumonia in Indiana, Kansas, and the city of Philadelphia, from September 1 to December 31, 1918, are now ready for publication in the form of a special bulletin.

Thanks are due to the United States Public Health Service for its generous financial assistance in this work.

STANDARD NOMENCLATURE OF DISEASES, PATHOLOGICAL CONDITIONS, AND INJURIES.

The preparation of a standard nomenclature of diseases, pathological conditions, and injuries for the United States was begun by the Council of National Defense during the war, but it became necessary to lay it aside because of the pressure of other important work. The council thereupon turned it over to the Bureau of the Census, with the approval of the Surgeon Generals of the Army, Navy, and Public Health Service, and the Bureau completed the work and sent the copy to the printer before the close of the fiscal year.

INTERNATIONAL STATISTICAL YEARBOOK.

Within the past fiscal year the Bureau was requested by the Secretary of the International Statistical Institute at The Hague to supply data relating to the United States for the International Statistical Yearbook (*Annuaire Internationale de Statistique*), published by the Institute. Compliance with this request involved considerable work, as figures were called for in detail not only for the United States as a whole but for each State as well; but, since the yearbook will be a standard publication presenting statistics for all the countries of the world, and will be very widely used, it seemed desirable and important that the figures for the United States should be as nearly complete as it was possible to make them. The work was begun in February, 1919, and was completed in June, 1919.

STATISTICAL DIRECTORY OF STATE INSTITUTIONS.

During the fiscal year 1918 the Bureau brought to substantial completion the compilation of a statistical directory of State institutions for the dependent, defective, and delinquent classes, of which mention has been made in my preceding reports. Because of the great amount of war work and other current work to be done both by the Printing Office and by the Bureau, the publication of this directory has been considerably delayed, but it is expected that it will be ready for distribution before the close of the present calendar year.

SEARCHING OF CENSUS RECORDS TO DETERMINE AGES.

During the fiscal year 2,315 searches of census records were made for the Pension Bureau in order to determine the ages of applicants for pensions and increases of pensions. Many other searches were made for genealogical purposes and for the purpose of supplying statements as to the ages of children whose births had not been recorded and who wished to obtain certificates showing that they were of suitable ages to permit their employment without violation of the child-labor laws. In addition, as set forth in the section entitled "War Work," much work was done in searching the records to establish the ages of men who had not registered for military service but were believed to be within the prescribed ages.

DISTRIBUTION OF OLD CENSUS SCHEDULES TO STATE LIBRARIES.

The Census Bureau had on hand 1,349 bound volumes of old schedules returned by the enumerators at the censuses of 1850 to 1880, containing data relating to births and deaths, agriculture, manufactures, and "social statistics of cities." As these volumes were of little value to the Bureau for genealogical or other purposes and were rarely used or referred to, and as the storage space in the fireproof vault at the Commerce Building was needed for other material, it was decided to dispose of them. Accordingly they were distributed during the year to State libraries and historical societies, and in cases where the State officials declined to receive them, to the library of the Daughters of the American Revolution, at Washington.

MISCELLANEOUS INFORMATION SUPPLIED OTHER GOVERNMENTAL AGENCIES
AND OUTSIDE ORGANIZATIONS.

Numerous compilations of statistical information from the Bureau's records were made in compliance with requests received from other Federal bureaus and offices and from private concerns. The more important of these compilations are set forth below.

Chamber of Commerce of the United States.—List of cities of 10,000 to 15,000 population which reported municipal lighting systems at the last census of electrical industries.

United States Tariff Commission.—Table showing, by States, quantities and values of certain classes of woven goods reported as manufactured in 1914; list of establishments engaged in production of bone, carbon, and lampblack.

War Department, Office of Surgeon General.—Table giving statistics for inland waterways, showing principal ports and numbers, sizes, and ownership of, and quantities of freight handled by, the various classes of vessels on canals and inland waters.

General Electric Co.—Statistics showing growth of central electric light and power station industry since 1912.

"Power Plant Engineering" (periodical).—Data showing, by States, horsepower reported by central electric light and power stations and electric railways for 1917 and by manufacturing establishments for 1914.

Sinclair Refining Co., Chicago.—Statistics showing, by States, power-plant equipment of central electric light and power stations and electric railways; and, for the United States as a whole, distribution of power between light and power stations and electric railways.

Southwestern Electrical and Gas Association, Dallas, Tex.—Statistics relating to the States of Louisiana and Texas, and the United States as a whole, as to capital, income, employees, customers served or passengers carried, and output of stations, as reported by electric light and power companies and electric railways for 1917 and by gas companies, so far as such statistics were available, for 1914.

National Association of Cotton Manufacturers.—Statements showing stocks of cotton lining and of cloth and fabric for uppers held by boot and shoe and leather manufacturers at close of each month from May 31 to December 31, 1918, and on March 31, 1919.

WAR WORK.

WORK DONE BY THE BUREAU OF THE CENSUS FOR OTHER GOVERNMENTAL
ESTABLISHMENTS.

During the fiscal year the Bureau of the Census carried on various lines of war work, most of which were begun during the preceding year, for the War Department and for other Federal establishments. The more important of these activities are briefly described below.

Census of materials and commodities for use of war agencies.—This work, which was authorized on April 8, 1918, is referred to on pages 11 and 12 of my report for the fiscal year 1918. It was undertaken for the purpose of securing statistical information needed by a number of 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—

in regard to the production and stocks on hand of the following-named classes of commodities, which are listed in the order in which the work upon them was taken up:

Kapok fiber.
Jute.
Leather stocks.
Boots, shoes, and manufactured leather goods.
Silk.
Antimony.
Graphite crucibles.
Wool manufactures—machinery and production.
Iron and steel products.

For stocks of kapok fiber, one report, relating to the date May 1, 1918, was compiled from the returns of 313 establishments. This report was prepared and given to the war boards prior to the beginning of the fiscal year 1919, but considerable work was afterward done in revising the statistics for final presentation.

For stocks of jute, one report, referring to June 1, 1918, was compiled from the returns received from 3,473 establishments. This was completed and given to the war boards on October 2, 1918.

For leather stocks, monthly reports relating to the last day of each month, May to December, 1918, and quarterly reports relating to March 31 and June 30, 1919, have been compiled. The first of these reports, which was given to the war boards on August 28, 1918, was based on the returns from 3,266 establishments for May 31, and was followed in rapid succession by reports for the following months. The Bureau also issued press summaries giving statistics for leather stocks in the United States, together with figures for the quantities and values of imports and exports of leather, as compiled by the Bureau of Foreign and Domestic Commerce, for the periods intervening between the dates to which the reports related.

For stocks of boots, shoes, and manufactured leather goods, reports similar in form to those compiled for leather stocks were prepared and given to the war boards and other agencies, and summaries were given to the press. These reports related to the last day of each month, June to December, 1918, and to March 31 and June 30, 1919. The report of stocks on hand and in transit for June 30, 1918, was based on returns received from 3,541 establishments and was given to the war boards on October 18, 1918.

Although the collection of statistics for leather stocks and stocks of boots, shoes, and manufactured leather goods ceased to be a war necessity after the signing of the armistice, it was of great importance as a conservation measure. The collection of these statistics, at quarterly intervals, was therefore continued until the end of the fiscal year 1919, at the request of the War Industries Board and upon the recommendation of the War Service Committee representing the shoe and leather industries of the United States Chamber of Commerce. It was decided that a simplified form of schedule should be used for the quarterly statistics, which would answer all requirements and at the same time lessen the work of the Bureau as well as that of the persons supplying the data; and accordingly the form in use was revised and a new schedule printed.

The silk report, which related to June 1, 1918, and covered returns for 1,588 establishments, was given to the war boards on October 7, 1918.

The antimony report related to June 30, 1918, and was based upon the returns from 751 establishments. This report was completed and given to the war boards on October 8, 1918.

For graphite crucibles reports were prepared relating to the dates June 30 and September 30, 1918. The first canvass covered 938 establishments, and the preliminary and final reports were given to the war boards on September 5 and September 30, 1918, respectively. The report for September 30, covering 828 establishments, was completed and given to the war boards on January 25, 1919.

The canvass for woolen manufactures and wool machinery related to July 1, 1918. A preliminary report, based upon the returns from 900 establishments, was given to the War Industries Board on August 7, 1918; and the revised report, covering 1,074 establishments, was completed and given to the war boards and other governmental agencies on September 6, 1918. A condensed table summarizing the results of this inquiry was also prepared, and mimeographed copies were sent on November 21 to the National Association of Wool Manufacturers for distribution among its members.

The canvass for iron and steel products referred to September 1, 1918. A preliminary tabulation, covering 7,129 establishments, was made and submitted to the war boards under date of October 30, 1918; and returns received later, up to and including November 23, were tabulated and the results included in a revision of this advance report, which was given to the statistical branch, General Staff, War Department, on November 29, 1918. The final report, covering 10,494 establishments, was completed and supplied to the war boards on December 23, 1918.

Statistics for all the war commodities covered by the several inquiries have been revised and rearranged for printing in a somewhat condensed form more convenient for reference. This is designed to be the final presentation of these statistics, which will constitute a permanent record of the census of war commodities.

The bulk of the work on these war-commodities inquiries was done during the period from May 1 to November 30, 1918; and the total number of questionnaires handled in connection with the compilation of the statistics was 204,596.

Census of commercial greenhouses.—This inquiry, which was made at the request of the priorities division of the War Industries Board, in order to obtain information for use in connection with fuel restrictions, was authorized by the Secretary of Commerce on July 13, 1918. The work performed consisted in gathering, by means of questionnaires, data pertaining to commercial greenhouses, covering, for the year ended June 30, 1918, area; value of products; fuel, fertilizers, insecticides, and fungicides used; and the number of men 18 years of age and over continuously employed. The work was done during the period from July 24 to November 30, 1918, and the total number of schedules handled was 29,192.

Work done for Provost Marshal General.—As stated in my former report, the Bureau, at the request of the Provost Marshal General, allocated the enlistments in the Navy, the Naval Reserve, the National Naval Volunteers, and the Marine Corps from April 2, 1917, to June 30, 1918. These enlistments, which numbered 293,788, were allocated in anticipation of their being credited to the quotas of the various States, in accordance with the terms of the bill providing

for the second draft, as passed by the House of Representatives. This provision, however, was rejected by the Senate and was stricken out in conference.

Estimates were prepared in July, 1918, for the Provost Marshal General, as to the number of British subjects in the United States who might be subject to draft under the terms of the conventions concluded between this country and Great Britain, and also as to the number of men in the United States from 18 to 20 and from 21 to 45 years of age, inclusive.

Determination of ages of registrants.—District attorneys and other officials of the Department of Justice were, at their request, supplied with age certificates for men who, although of military age, had not registered for the selective draft. Such certificates have been furnished from month to month during the entire fiscal year and since its close, and some of the cases are still pending.

Men who were in doubt as to whether they were within the military age limits were supplied with statements as to their ages.

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

Compilation of statistics relative to foreign countries for peace conference.—This compilation comprised statistics of the movement of cereals, salt, oil, coal, and wood on the railways and waterways of Russia in 1908, 1909, and 1910, the latest years for which figures were available; a tabulation showing the distribution of manufacturing establishments and wage earners in Austria by industries and factory inspection districts; and statistics in regard to the exports and imports of countries and colonial possessions in Africa.

Information for United States Shipping Board.—At the request of the United States Shipping Board, detailed tables were prepared showing the population and value of agricultural products within a radius of 100 miles of each of 28 cities, located on the Atlantic, Pacific, and Gulf coasts.

Miscellaneous war work.—In addition to the specific lines of work just described, the Census Bureau performed numerous small amounts of war work for various departments and establishments of the Government, including the Post Office Department, the Navy Department, the Department of Labor, the Bureau of Foreign and Domestic Commerce, the Fuel Administration, the Federal Trade Commission, the Telephone and Telegraph Administration, the Office of the Chief of Engineers, the General Engineer Depot, the Office of the Director of Military Aeronautics, the Emergency Fleet Corporation, the Railroad Administration, the War Industries Board, the War Trade Board, the Capital Issues Committee, the Central Statistical Clearing House, the Employment Service, the Reconstruction Survey, the War Service Committee of the Rubber Industry of the United States, and the American Electric Railway Association War Board.

The total amount of war work done during the fiscal year (exclusive of overtime) was equivalent to the services of 1,719 employees for one month, or 143 for one year. Most of this service, of course, was performed prior to January 1, 1919.

ENLISTMENTS, CONTRIBUTIONS, ETC.

Members of Bureau's force enlisted and drafted into military and naval services.—During the fiscal year 25 office and field employees of the Census Bureau entered the military and naval services (not including those who joined as Army field clerks). The total number who entered those services from the outbreak of the war to the signing of the armistice was 79. The loss of so many employees, some of whom had had years of experience in census work, caused considerable inconvenience, but no effort was made to obtain deferred classification for any of these men because of their employment in the Bureau. Up to August 31, 1919, only 20 of the 79 men who left had returned to the Bureau.

Subscriptions for war purposes.—Subscriptions made by the Census officials and employees to the Fourth Liberty Loan and the Victory Loan—the two loans made during the fiscal year—totaled \$190,800 (not including subscriptions of local cotton agents), and the aggregate subscriptions to the five war loans amounted to \$355,600. The proportions which the numbers of subscribers represented of the total force of the Bureau were 77.4 per cent at the first loan, 75.6 per cent at the second, 89 per cent at the third, 96.2 per cent at the fourth, and 98.4 per cent at the Victory Loan. The total sales of War Savings Stamps and Thrift Stamps in the Bureau, to August 31, 1919, aggregated \$23,620. In addition, the members of the Census force subscribed \$4,551 to the Red Cross; \$1,648 to the United War Work Campaign, etc.; and \$3,000 for the support of French war orphans.

During the entire period of the war the Bureau's personnel manifested a high spirit of patriotism and a most commendable degree of self-sacrifice.

PREPARATIONS FOR THE FOURTEENTH CENSUS.

THE FOURTEENTH CENSUS LAW.

As set forth in my report for the fiscal year 1918, a bill to provide for the fourteenth and subsequent decennial censuses was drafted by the Census Bureau and submitted to the House Committee on the Census. The bill was passed by the House of Representatives July 2, 1918, and by the Senate, with amendments, January 14, 1919; the conference report was adopted by the Senate February 28, 1919, and by the House March 3, 1919; and the bill was approved by the President March 3, 1919. The act as enacted did not differ greatly from the bill prepared by the Census Bureau, although a number of minor changes were made. In many respects it follows the lines of the Thirteenth Census legislation, but there are departures in regard to a few important features and numerous unimportant ones. The most significant points of difference are as follows:

Section 1.—Provision for census of forestry and forest products.

Section 6.—Reclassification of clerical salaries, increase in compensation of clerical and subclerical employees, and increase in number of higher-salaried clerks in Census Bureau; and provision for preference to honorably discharged soldiers, sailors, and marines.

and widows of such, in making appointments to clerical and other positions in all executive departments and independent governmental establishments. The reclassification of clerical salaries provides a much larger number of classes, differing from each other by only \$60 per annum between \$900 and \$1,440, and by \$120 per annum between \$1,440 and \$1,800. The provision for preference to honorably discharged soldiers, etc., was later amended by section 1 of the third deficiency appropriation act, approved July 11, 1919, to make it apply to all positions in the executive branch of the Government in the District of Columbia and elsewhere, and to include the wives of injured soldiers, sailors, and marines who themselves are not qualified, but whose wives are qualified, to hold the positions to which appointments are contemplated.

Section 7.—Provision requiring Civil Service Commission to examine applicants who are temporarily absent from the places of their legal residence without requiring them to return for the purpose of taking the examination, and provision authorizing selection of temporary census employees from reemployment registers established by Executive order of November 29, 1918. The first-mentioned provision is general legislation relating to the entire Government service. The reemployment registers established by Executive order of November 29, 1918, are made up of the names of persons eligible for permanent employment in apportioned positions in the competitive classified service who have been separated from competitive classified positions after less than three years' service, by reason of reductions of force, and who have been recommended for further employment by the Government because of efficient service.

Section 8.—Omission of provisions for securing information in regard to unemployment on census date and during preceding calendar year and in regard to survivors of Union or Confederate Army or Navy. The information obtained through these inquiries at the Thirteenth Census was incomplete and unsatisfactory, for which reason it was decided to drop them.

Insertion of provision for obtaining information as to encumbrances on homes and farms.

Omission of provision for enumeration of inmates of institutions for dependent, defective, and delinquent classes. The inquiry relating to these classes will be made after the close of the Fourteenth Census period.

Inclusion of inquiry as to sex of farm operators.

Amplification of irrigation inquiry and addition of drainage inquiry.

Section 9.—Provision for appointment of supervisors by Secretary of Commerce, upon recommendation of Director of the Census, instead of by President, by and with advice and consent of Senate.

Section 20.—Change of census date from April 15 to January 1; reduction of minimum-size limit for cities in which enumeration must be completed within two weeks from 5,000 to 2,500 (as ascertained at last preceding census).

Sections 21-24.—These, the so-called "penalty sections," have been so drawn as to make them more effective and more readily enforceable than the corresponding sections of the Thirteenth Census

act. In section 23 there has been inserted a provision penalizing the offering of any suggestion, advice, or assistance by any individual, committee, or other organization, with the intent or purpose of causing an incorrect enumeration to be made.

Section 31.—Provision for mid-decennial census of agriculture to be taken in 1925 and at ten-year intervals thereafter. (A similar provision was included in the Thirteenth Census act, but was later repealed.)

Section 32.—Provision for biennial census of products of manufacturing industries, beginning in 1921.

These provisions for more frequent canvasses to ascertain the character and extent of our agricultural and manufacturing resources represent a most important extension of the Bureau's work and one which, I am confident, will achieve results of real benefit to the country. Hitherto these inquiries have been made at intervals of such length—ten years for agriculture and five years for manufactures—that they have not at all times provided the data needed by agricultural and industrial interests, by legislators, and by the public generally. For example, the present campaign to reduce the cost of living could be carried on more efficiently, and those in charge of it could proceed with a greater degree of certainty, if we had up-to-date figures as to agricultural and manufactured products. And, apart from the abnormal conditions now existing, the complexity of the present-day industrial fabric is such as to require more frequent statistical illumination if it is to be maintained in a condition of strength and soundness.

JOINT ADVISORY COMMITTEE OF AMERICAN STATISTICAL AND ECONOMIC ASSOCIATIONS.

Upon the invitation of the Secretary of Commerce, under date of November 18, 1918, the presidents of the American Statistical and American Economic Associations appointed a joint committee to be advisory to the Director of the Census and the Department of Commerce in connection with the work of the Fourteenth Census. This committee is composed of six members, namely:

Representing American Statistical Association—

W. S. Rossiter, chairman, formerly chief clerk, Bureau of the Census;
now president, Rumford Press, Concord, N. H.
Prof. Carroll W. Doten, Massachusetts Institute of Technology.
Dean Edwin F. Gay, Harvard University.

Representing American Economic Association—

Prof. Wesley C. Mitchell, Columbia University.
Prof. E. R. A. Seligman, Columbia University.
Prof. Walter F. Willcox, Cornell University.

The Joint Advisory Committee has thus far held six meetings, the first on February 10, 1919, and the sixth on June 27, 1919. It has given very careful consideration to all phases of the census work in connection with which plans have thus far been made, has given its approval to practically all these plans, and has made a number of helpful recommendations. I take this opportunity to express publicly my sincere thanks to the members of this committee for the assistance they have rendered to me and to the other officials of the Bureau in making our plans for the great task of taking the Fourteenth Census.

FIELD FORCE.

Continental United States (exclusive of Alaska) has been divided into 372 supervisors' districts. These districts, outside the large cities, are, as a rule, coextensive with the congressional districts; but each of the large cities has been placed under the charge of a single supervisor, with the exception of New York City, which has been divided into four districts. A bulletin describing the supervisors' districts and showing their outlines on a series of State maps has been prepared and printed; and tentative plans for the division of these districts into approximately 85,000 enumeration districts have been prepared for the use of the supervisors. In order to secure the data needed as a basis for this work, it was necessary to send letters to the 3,050 county clerks throughout the country requesting information as to changes in the boundaries of the counties and their subdivisions since 1910, and to obtain from the officials of the 779 cities which at the last census had populations of 8,000 or more, maps showing ward and precinct boundaries and statements of the registration at the latest elections.

As already pointed out, the Fourteenth Census act provides for the appointment of supervisors of census by the Secretary of Commerce, upon the recommendation of the Director of the Census. This is a departure from the method employed heretofore, namely, appointment by the President, by and with the advice and consent of the Senate, which naturally might occasion more or less delay in certain cases, especially because of the change in the census date. At the Thirteenth Census the enumeration was made as of April 15, and at earlier censuses as of June 1; but under the existing law the next and subsequent censuses will be taken as of January 1. This necessitates the appointment of the supervisors at an earlier date than heretofore, and with the least possible delay. Moreover, it is believed that the director will have more direct control over the supervisors and thus can obtain better results under the method of appointment provided for in the Fourteenth Census act.

Under date of March 17, 1919, the Bureau issued a press notice setting forth the date of the coming census, the approximate number of supervisors to be appointed, and the method of their appointment, and requesting applicants for supervisorships to address their applications to the Director of the Census. Approximately 5,500 persons were supplied, upon request, with application blanks for the position of supervisor, similar to the forms used by the Civil Service Commission for "nonassembled" examinations. About 2,200 of these applications were filled out and returned to the Bureau, duly sworn to. A suitable scheme of rating was devised, the papers were graded accordingly, selections were made, and a list of candidates recommended to the Secretary of Commerce for appointment; and during August practically all the appointments were made by the Secretary and announced through the public press.

Of the 372 supervisors appointed for continental United States, 65, or 17.5 per cent, were in the military or naval service during the recent war. Three women have been appointed, one each in New York, Texas, and Nevada. In the following statement the supervisors are grouped according to certain of the more important occupations represented:

| Occupation. | Number. | Per cent. |
|------------------------------|---------|-----------|
| Total..... | 372 | 100.0 |
| Lawyers..... | 110 | 29.6 |
| Physicians and dentists..... | 5 | 1.3 |
| Editors..... | 44 | 11.8 |
| Educators..... | 13 | 3.5 |
| Farmers..... | 23 | 6.2 |
| All other..... | 177 | 47.6 |

The following letter from the Secretary of Commerce addressed to me, under date of July 12, 1919, in regard to political activity on the part of supervisors and enumerators, has been embodied in the instructions to these classes of census employees:

The taking of the Fourteenth Census involves the appointment of some 400 supervisors, upon whom in turn will rest the serious duty of selecting and appointing many times that number of enumerators. The success of the census will depend upon the efficiency, impartiality, and the strict attention to duty of the supervisors and upon the intelligence of the enumerators and their faithful devotion to the important public business which is to be placed in their hands.

The vast country-wide system thus created can be perverted to political uses if both supervisors and enumerators are not forbidden to use it as an instrument for influencing either local or general elections, or primaries, in the interest of particular candidates or parties.

The work of the census itself is a sufficient task to tax the powers of those concerned in it, and it is a reasonable requirement that whoever accepts an appointment as supervisor or enumerator shall during the term of his employment as such strictly avoid any active part in politics.

Attention is therefore directed to the following order of the President of the United States, dated August 14, 1909:

"I therefore order that, in the preparation of regulations for the taking of the census, you and the Director of the Census embody therein a provision that any supervisor or enumerator who uses his influence with his subordinates or colleagues to assist any party or any candidate in a primary or general election, or who takes any part, other than merely casting his vote, in politics, national, State, or local, either by service upon a political committee, by public addresses, by the solicitation of votes, or otherwise, shall be at once dismissed from the service.

"I wish to make this regulation as broad as possible, and wish it enforced without exception. It is of the highest importance that the census should be taken by men having only the single purpose of reaching a just and right result, and that the large amount of money to be expended in the employment of so vast a machine as the census shall not be made to serve the political purposes of any one."

The above order, applicable to the census of 1910, is now confirmed and made applicable to the work of the census of 1920. It is an essential factor in the appointment of every supervisor and enumerator and is to be obeyed by those officers in letter and in spirit. Departure from it will be considered as warrant for dismissal from the service, as therein stated.

The Secretary of Commerce requested the Secretary of the Treasury (as had been done in preparation for the Thirteenth Census) to issue a circular letter to custodians of public buildings directing them, wherever practicable, to furnish suitable office accommodations to the census supervisors. The Secretary of the Treasury complied with this request, and it is expected that quarters in Federal buildings can be secured for a number of the supervisors.

The enumerators will be appointed by the supervisors, with the approval of the Director of the Census. Candidates will be required to fill out a sample census schedule from printed information pertaining to a number of hypothetical families stated in narrative form, and in the case of enumerators whose work will be in rural districts, to

fill out a sample schedule of agriculture, in order to demonstrate their fitness to perform the duties of an enumerator. No special educational qualifications will be necessary, but candidates for enumerators' positions should be active, energetic persons of good address and thorough trustworthiness and should be able to write legibly and with reasonable rapidity.

OFFICE FORCE.

Although there will be a considerable increase in the amount of office work to be done in connection with the Fourteenth Decennial Census as compared with the Thirteenth, due to the growth of the population and industries of the country, it is estimated that the total force of official, clerical, and subclerical employees will reach at its maximum only about 4,000, as against 3,738 at the last census. The reason for this relatively small increase in force is found in the expectation of the Bureau that certain changes in organization, improvements in methods, and developments in tabulating machinery will make possible the accomplishment of a given amount of work with a somewhat smaller number of employees, on the average, than was required at the census of 1910.

The Fourteenth Census act fixes no limit upon the number of appointments which may be made to clerical and subclerical positions nor upon the number in any salary class, but provides that the number of temporary positions at salaries from \$1,440 to \$1,800 per annum, inclusive, shall at no time exceed 150. It further provides that the classification of the statutory force as fixed by the appropriation act for the fiscal year 1919, which included 65 clerks at \$1,400, 30 at \$1,600, and 20 at \$1,800, shall be continued in effect during the decennial census period, thus making a maximum of 265 clerks, both permanent and temporary, who may be paid from \$1,400 to \$1,800 per annum, inclusive.

Appointments.—The minimum salary of \$900 per annum for clerks authorized by the Fourteenth Census act represents an increase of 50 per cent over the entrance salary of \$600 per annum paid the temporary clerks at the Thirteenth Census. Experience during that census clearly showed, however, that an entrance salary of only \$600 was entirely too low to induce a sufficient number of capable persons to accept clerical employment in the Bureau. It will be necessary, therefore, if the large number of qualified employees needed are to be obtained, to offer an entrance salary which will enable appointees to meet the present abnormally high cost of living.

It is estimated that between 3,000 and 3,500 temporary clerks will be needed for this census. These clerks will be appointed, in most cases, as the result of special examinations to be conducted by the Civil Service Commission in the fall of this year throughout the United States, and the appointments will be apportioned as nearly as practicable among the several States and Territories and the District of Columbia on the basis of population. In order to meet the pressing needs of the Bureau in the meantime, however, a small number of the temporary clerical and subclerical positions, as well as vacancies on the permanent roll, are being filled by the following methods:

1. By selection from the reemployment registers of the Civil Service Commission established under authority of the Executive Order of November 29, 1918, as amended April 30, 1919. On these registers

are listed the names of all persons who were eligible for permanent employment in apportioned positions in the competitive classified service, who have been separated from competitive classified positions after less than three years' service, by reason of reductions in force, and who have been recommended for further employment by the Government because of efficient service.

2. By selection from the registers maintained by the Commission for the departmental service generally.
3. By transfer, reinstatement, or other method provided by the civil-service rules.

Promotions.—Although, as stated above, there is no limit placed upon the number of temporary clerks who may be appointed nor upon the number in any particular salary class, the law fixes the salary scale as follows: \$900, \$960, \$1,000, \$1,020, \$1,080, \$1,140, \$1,200, \$1,260, \$1,320, \$1,380, \$1,400, \$1,440, \$1,560, \$1,600, \$1,680, and \$1,800 per annum. This salary scale will enable the Bureau to adopt regulations that will provide for promotions at reasonably frequent intervals, with small increments, and for readjusting the compensation of the employees from time to time to make it commensurate with their general increase in efficiency as a result of experience gained in census work. It is anticipated that these small but relatively numerous increases will have a more beneficial effect on the morale of the force than larger increases at less frequent intervals would have.

OFFICE AND FIELD EMPLOYEES AUGUST 31, 1919.

The following statement shows the nature and distribution of the office and field force on August 31, 1919:

OFFICIALS.

| | |
|--------------------------------------|-----------------------|
| Director..... | SAM. L. ROGERS. |
| Assistant director..... | WILLIAM M. STEUART. |
| Chief clerk..... | THOMAS J. FITZGERALD. |
| Chief statisticians: | |
| Population..... | WILLIAM C. HUNT. |
| Agriculture, cotton and tobacco..... | WILLIAM L. AUSTIN. |
| Manufactures..... | EUGENE P. HARTLEY. |
| Statistics of cities..... | STARKE M. GROGAN. |
| Vital statistics..... | WILLIAM H. DAVIS. |
| Revision and results..... | JOSEPH A. HILL. |
| Disbursing clerk..... | FRED A. GOSNELL. |
| Appointment clerk..... | WALTER S. GILCHRIST. |
| Geographer..... | CHARLES S. SLOANE. |
| Expert chiefs of divisions: | |
| Administrative..... | TIMOTHY F. MURPHY. |
| Appointment..... | EMILY I. FARNEM. |
| Cotton and tobacco..... | WESLEY E. CILLEY. |
| Manufactures..... | JOHN H. DALY. |
| Population..... | EDWARD B. WHITE. |
| Revision and results..... | EDWARD W. KOCH. |
| Statistics of cities..... | WILLIAM B. CRAGG. |
| Vital statistics..... | HARRY H. PIERCE. |
| Chief, mechanical laboratory..... | LEMUEL A. CARRUTHERS. |
| | JOHN B. MITCHELL. |
| | E. M. LABOTTEAUX. |

CLERICAL FORCE.

| | | | |
|-----------------------------------|----|-------------------|-----|
| Statistical experts, \$2,000..... | 5 | Clerks—Continued. | |
| Stenographers: | | \$1,320..... | 119 |
| \$1,800..... | 1 | \$1,260..... | 64 |
| \$1,500..... | 1 | \$1,200..... | 89 |
| Clerks: | | \$1,140..... | 30 |
| \$1,800..... | 24 | \$1,080..... | 49 |
| \$1,680..... | 10 | \$1,020..... | 27 |
| \$1,600..... | 15 | \$1,000..... | 57 |
| \$1,560..... | 42 | \$960..... | 10 |
| \$1,440..... | 17 | \$900..... | 80 |
| \$1,400..... | 58 | | |
| \$1,380..... | 10 | Total..... | 717 |

SUBCLERICAL FORCE.

| | | | |
|-----------------------------------|---|----------------------------------|----|
| Photostat operators, \$1,200----- | 2 | Unskilled laborers, \$720----- | 12 |
| Skilled laborers: | | Messengers, \$540----- | 5 |
| \$1,000----- | 2 | Assistant messengers, \$720----- | 5 |
| \$900----- | 3 | Messenger boys, \$480----- | 10 |
| \$840----- | 2 | | |
| \$720----- | 1 | Total----- | 39 |

MECHANICAL LABORATORY.

| | | | |
|--------------------------|---|--------------------------------------|----|
| Experts: | | Mechanical draftsman, \$1,600----- | 1 |
| \$2,200----- | 1 | Toolmakers: | |
| \$2,000----- | 2 | \$1,600----- | 1 |
| \$1,800----- | 1 | \$1,400----- | 1 |
| Mechanicians: | | Pressman and machinist, \$1,400----- | 1 |
| \$1,800----- | 1 | General mechanic, \$1,200----- | 1 |
| \$1,000----- | 1 | Machinist's helper, \$1,000----- | 1 |
| Tabulating mechanicians: | | Shop apprentices: | |
| \$1,600----- | 3 | \$840----- | 1 |
| \$1,400----- | 3 | \$720----- | 3 |
| \$1,200----- | 1 | \$600----- | 3 |
| Electricians: | | Total----- | 30 |
| \$1,600----- | 1 | | |
| \$1,400----- | 2 | | |
| \$1,200----- | 1 | | |

SPECIAL-AGENT FORCE.

| | |
|---|----|
| Special agents for general field work, etc----- | 42 |
|---|----|

SUMMARY.

| | | | |
|------------------------|-----|----------------------------------|-----|
| Officials----- | 23 | Mechanical laboratory force----- | 30 |
| Clerical force----- | 717 | Special agents----- | 42 |
| Subclerical force----- | 39 | Total----- | 351 |

In addition, there are employed throughout the cotton belt 694 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.

COOPERATION WITH OTHER FEDERAL SERVICES AND WITH OUTSIDE AGENCIES.

In making its plans for the present census the Bureau has aimed, as in the past, to eliminate duplication of work done by other Government services and to make its published statistics as valuable as possible to the various organizations and interests, both governmental and nongovernmental, which have use for them. To these ends it has sought, and has received in greater measure than ever before, the full and hearty cooperation of other Federal bureaus and offices and of outside agencies to whose activities the census statistics pertain.

In the course of the preparation of the agricultural schedules many conferences were held with officials representing the Bureau of Crop Estimates, the Bureau of Markets, the Office of Farm Management, the Office of Farm Horticultural Investigations, and the Division of Animal Husbandry in the Department of Agriculture. These conferences were characterized by a spirit of complete harmony, and all important decisions were reached by unanimous agreement. Subsequent conferences were attended not only by representatives of the Department of Agriculture but also by professors in agricultural colleges, editors of agricultural newspapers, and representatives of other agricultural interests.

In connection with the preparation of the irrigation schedule a conference was held with representatives of the Departments of Agriculture and of the Interior; and the Office of Public Roads and Rural Engineering in the Department of Agriculture, cooperated by making a test of the tentative schedule in several of the Western States.

The drainage schedule was drawn up after conference with representatives of the Departments of Agriculture and of War, representatives from several State universities, and a small number of the leading engineers of the United States.

In the formulation of many of the schedules to be used in the manufactures inquiry, consultations have been held with representatives of various Federal services, including the Bureau of Standards, Tariff Commission, Bureau of Chemistry, Bureau of Mines, Geological Survey, Bureau of Markets, and Bureau of Internal Revenue, and with representatives of the statistical organizations of the various States. The cooperation of chambers of commerce, leading manufacturers, and trade associations has also been sought. With the view of securing this cooperation and of enlisting the interest of the manufacturers and trade associations, the Director of the Census and the chief statistician for manufactures conferred with members of the National Industrial Conference Board, of Boston, and the National Association of Manufacturers, of New York, on June 9 and 12, respectively; and as a result of these conferences the general manager of the National Association of Manufacturers called a meeting of representatives of the various industrial organizations for the purpose of considering the tentative schedules of manufactures. By this means first-hand knowledge has been obtained as to the nature of the statistical information needed by the various industries. The responses of the industrial organizations have been gratifying as indicating their interest and desire to cooperate.

At a conference held in the office of the Director of the Census and attended by the Director of the United States Geological Survey, the Director of the Bureau of Mines, and other representatives of those services, it was agreed that the census of mines and quarries should be conducted in cooperation with the Geological Survey and the Bureau of Mines; and a committee composed of one representative each from the Bureau of the Census and the other offices named was appointed to consider all details as to the practical working out of the cooperative arrangement.

In preparation for the census of forestry and forest products, arrangements were made with the Forest Service of the Department of Agriculture whereby the lists of sawmills and other establishments consuming lumber and timber products, on file in that office, were placed at the service of the Census Bureau. A list of producers of naval stores was obtained from the Bureau of Chemistry, Department of Agriculture. Consultations were held with representatives of the Forest Service and correspondence was carried on with leading lumber manufacturers and associations in regard to the form of the schedule to be used in securing the data.

The census of Alaska is to be taken in cooperation with the Bureau of Education of the Department of the Interior. Mr.

William T. Lopp, in charge of the Alaskan division of the Bureau of Education, will supervise the work. (See subsection headed "Outlying possessions.")

The censuses of Guam, Samoa, and the Panama Canal Zone will be taken under plans agreed upon by representatives of the Bureau of the Census and of the War and Navy Departments. (See subsection headed "Outlying possessions.")

Arrangements have been made with the Treasury Department to provide offices in Federal buildings for supervisors of census wherever it is practicable to do so. (See subsection entitled "Field force.")

PREPARATION OF SCHEDULES, INSTRUCTIONS, LISTS, ETC.¹

A tentative general population schedule was prepared and printed in March, 1919. A few slight revisions were made, and a small number of copies were printed July 9, 1919, in final form. The full edition (2,500,000 copies) has been printed and is now being distributed to the supervisors and enumerators. This schedule is similar in general form to those used at the last two decennial censuses, the necessary changes in the inquiries being made to conform to the provisions of the Fourteenth Census act.

In connection with the preparation of the agricultural schedules, the officials of the division of agriculture held numerous conferences with persons designated to represent the various governmental departments which are interested in agricultural statistics, as well as with professors in agricultural colleges and representatives of agricultural periodicals and of farmers' associations. As a result of these conferences, a general farm schedule was formulated which has been very widely indorsed and has received the unqualified approval of the Joint Advisory Committee of the American Statistical and Economic Associations. This schedule, the schedule for live stock not on farms and ranges, the schedule for drainage, and the schedule for irrigation have all been printed.

Summaries of the reports of the census supervisors for 1910 as to the methods pursued in the conduct of the field work have been made as a guide to the work of the Fourteenth Census. These summaries cover the methods employed in the division of each district into enumeration districts; the selection and instruction of enumerators and the supervision of their work; the use of advance schedules for population and agriculture; rates of pay of enumerators; and methods employed by newspapers, private organizations, etc.

The general instructions to supervisors have been printed, and the instructions to enumerators, as well as other forms, are in process of preparation.

The compilation of the occupation index to be used at the Fourteenth Census has been nearly completed. More than 100,000 slips have been prepared covering occupational designations not contained in the index used at the Thirteenth Census, and these slips have been arranged according to occupation symbols and are being considered in reference to their numerical importance with the view of their use in the new index for the Fourteenth Census. This index,

¹ See also preceding subsection.

alphabetically arranged, to be used by the classifying clerks, will comprehend practically 20,000 occupational designations and will fill 400 printed pages.

A card index giving names, addresses, and character of products for establishments to be covered by the censuses of manufactures, mines and quarries, and forestry and forest products has been prepared from schedules of the 1914 census of manufactures, business trade directories, and lists on file in other bureaus and offices of the Government.

The preparation of a complete list of factories for which reports will be made from central offices is now in progress. This list will be perfected by correspondence with each company that made a report of this character at the last census, as well as with others that will be listed in the new card index as having come into existence at later dates.

The Bureau has prepared a list of the forms to be used in the enumeration, showing size of edition, dates when copy will be supplied, and when deliveries must be made.

ENCUMBRANCES ON HOMES.

Section 8 of the Fourteenth Census act contains a provision, inserted in the Senate, for ascertaining the amount of encumbrance on mortgaged homes. This refers only to mortgaged homes occupied by their owners, of which in 1920 there may be approximately 4,000,000. This number includes 1,500,000 mortgaged farm homes, for which provision for securing this information has been made on the regular farm schedule, and 2,500,000 mortgaged homes in city districts, for which the necessary information can not be secured on the general population schedule and for which, therefore, a special schedule will be required.

The number of owned encumbered homes will be determined through inquiries on the general population schedule by the enumerators in January, 1920, but the information as to the amount of encumbrance will be later secured from the owners of the encumbered homes by the use of a special schedule, this supplemental inquiry to be conducted partly by correspondence and partly by the use of special agents.

The Fourteenth Census act as originally drawn did not provide for an inquiry as to encumbrances on homes occupied by owners, for which reason the estimate of the total cost of the Fourteenth Census work did not cover the cost of this inquiry. In order, therefore, to comply properly with this special provision of the census act, an appropriation of at least \$1,000,000 will be required to cover the additional cost of collecting and compiling this information.

An investigation regarding the encumbrance on homes was first made at the census of 1890, for which an appropriation of \$1,000,000 was made in addition to the regular census appropriations.

OUTLYING POSSESSIONS.

The Fourteenth Census act provides for censuses of Alaska, Hawaii, and Porto Rico, to be taken by the Bureau of the Census, and also for censuses of Guam, Samoa, and the Panama Canal Zone, to be taken by the respective governors of those possessions in accordance with plans prescribed or approved by the Director of the Census.

Alaska.—In taking the census of Alaska the Bureau of the Census will cooperate with the Bureau of Education. The plan of cooperation, which received the approval of the Secretary of Commerce June 3, 1919, and of the Secretary of the Interior on June 14, 1919, provides for the employment (1) of Mr. William T. Lopp, in charge of the Alaskan Division of the Bureau of Education, with headquarters at Seattle, Wash., as chief special agent in charge of the Alaskan census; (2) of the six district superintendents of schools in Alaska as special agents in charge of the enumeration work in their respective school districts; (3) of local teachers as enumerators wherever practicable; and (4) of the Bureau of Education bookkeeper in Seattle as special disbursing agent for the census and of his clerk as special agent for clerical service in connection with the census. The schedules, blanks, and other supplies were shipped to Mr. Lopp at Seattle on July 17, ready for transportation to his census headquarters at Juneau.

Hawaii and Porto Rico.—Supervisors have been appointed for Hawaii and Porto Rico, and the schedules and blanks, which will be substantially the same as those used for continental United States, are being printed.

Other outlying possessions.—Plans for the censuses of Guam, Samoa, and the Panama Canal Zone have been perfected in conference with officials of the War and Navy Departments. The census in each instance will be taken under the immediate direction of the governor, who will be supplied with schedules and other blank forms from this Bureau. The schedules will be less elaborate than those used in Continental United States.

Arrangements have also been made, through the Chief of the Bureau of Insular Affairs, War Department, for securing the detailed results of the census of the Philippine Islands, taken by the Philippine Government as of December 31, 1918, as fast as they are available, for incorporation in the announcements and reports of the Fourteenth Census of the United States.

MILITARY AND NAVAL POPULATION.

Steps are being taken toward providing, through the War and Navy Departments, for the proper enumeration of all persons in the military and naval services, and of all civilians engaged in or identified with war work, who are likely to be absent from their usual places of residence at the time the census is taken in January, 1920.

MISCELLANEOUS PREPARATORY WORK.

An irrigation expert and a drainage expert have been appointed to take charge of the irrigation and drainage inquiries, under the direct supervision of the chief statistician for agriculture, and the necessary preparatory work for these inquiries is under way.

The Bureau is now in correspondence with chambers of commerce and other industrial organizations with the view of extending the territory to be comprised in the "metropolitan districts," or industrial zones, and increasing the number of such districts.

Consideration has been given to the requirements of the card-punching work, including the preparation of a punch card, and arrangements are being made with the Government Printing Office for securing an adequate supply of satisfactory paper for punch cards.

Certain experimental tabulations and studies have been made with the view of a better presentation of the statistics in reports and bulletins.

A brief report on the methods of taking censuses in foreign countries has been prepared.

MECHANICAL EQUIPMENT.

Work in mechanical laboratory.—The object of the mechanical laboratory, to have produced or to have on hand at the close of the fiscal year 1919 all parts entering into the construction of certain tabulating machinery for the work of the Fourteenth Census, comprising 40 automatic tabulator heads, 35 bases with full complements of counters, and 25 sorting machines, has been practically attained.

It was considered advisable to build larger numbers of machines and accessories than were called for in the original estimates. The numbers of the several machines and parts finally determined upon, the numbers originally estimated, and the percentages of increase are as follows:

| Item. | Number determined upon. | Number originally estimated. | Per cent of increase. |
|--------------------------------|-------------------------|------------------------------|-----------------------|
| Automatic tabulator heads..... | 40 | 25 | 60.0 |
| Automatic tabulator bases..... | 35 | 30 | 16.7 |
| Sorting machines..... | 25 | 19 | 31.6 |
| Counter units..... | 156 | 114 | 36.8 |

Each tabulating machine will be equipped with from one to six counter units, each of which will have sufficient capacity to record 10 numbers of four figures each.

More work of an assembling nature was carried on during the latter part of the fiscal year than was thought possible in the beginning. For the permanent use of the division of vital statistics 4 tabulators and 3 sorting machines have been completed and installed and 77 pantograph punching machines have been overhauled and equipped with composite key plates in conformity with the latest forms of the mortality and birth cards. In all, five tabulators have been completed and tested, of which the four just referred to are in

actual use. The remainder of the equipment of tabulating and sorting machines intended for population work will be completed on or before February 1, 1920, in ample time to have them in readiness for the Fourteenth Census work.

Of the total numbers of machines determined upon, there had been completed and tested up to September 15, 1919:

| | |
|--------------------------|---------------|
| Tabulating machines..... | 142 per cent. |
| Sorting machines..... | 120 per cent. |

The estimated percentages of work accomplished on the remaining machines to September 15, 1919, were:

| | |
|--------------------------------|--------------|
| Automatic tabulator heads..... | 95 per cent. |
| Automatic tabulator bases..... | 87 per cent. |
| Sorting machines..... | 82 per cent. |

The original estimates pertaining to the sorting machines took into consideration merely the work of overhauling. It was later found expedient to introduce some radical changes in design and method of operation, and the result has been the production of a practically new and much more efficient machine.

Supplies and maintenance, as needed, have been furnished the Bureau of Immigration for its tabulating machinery.

Integrating counter.—In my last two reports I have referred to the progress of 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 census data, such as those pertaining to agriculture and manufactures. The numbers will be indicated on cards by punch marks, the cards will be fed into the machine, and the numbers will be automatically totalized. Several sets of figures can be totalized at the same time. The principal advantage to be derived from the use of the integrating counter lies in the facility with which the data, as indicated on the cards by the punch marks, may be regrouped or rearranged so as to obtain totals for the various classifications desired.

Work on the integrating counter, which began on July 6, 1917, was continued during the fiscal years 1918 and 1919, and is still in progress. The first model has been completed as an experimental machine, and it has automatically added and recorded numbers as indicated on punched cards at the rate of 20,000 to 25,000 cards a day. The machine is small and compact and does not depend upon electricity for its operation, except that it is motor driven. It may be operated wherever a connection can be made to an electric-lamp socket or outlet carrying a 110-volt direct current. A complete set of drawings and all patterns necessary for manufacturing this type of machine have been made.

A tentative card system for tabulating part of the manufactures census has been developed and will be given a test.

OFFICE ROOM AND STORAGE SPACE.

The Bureau of the Census will employ during the Fourteenth Census period (July 1, 1919, to June 30, 1922), a greatly increased clerical force in Washington, numbering at its maximum about 4,000. Moreover, it will need floor space for the many machines that

will be used in tabulating the results of the census and storage space for the millions of schedules containing the data gathered by the field force and the 300,000,000 or more cards which will be used in tabulating the population and agricultural statistics. It thus became necessary to seek additional quarters. Accordingly, arrangements were made with the War Department and Public Buildings Commission for the use of Building D (one of the temporary buildings erected during the period of the war), at Four-and-a-half Street and Missouri Avenue NW., by the Census Bureau during the Fourteenth Census period. This is a three-story frame structure with eight wings and a head house on each floor, and, exclusive of corridors, aisles, toilets, etc., contains 237,000 square feet of floor space.

A number of alterations and repairs and some new construction are necessary in order to render this building suitable for the use of the Bureau. These changes consist mainly in shoring up the floors of four wings, the construction of bridges between certain wings, the installation of three freight elevators, and the construction of a fireproof vault in which to keep the population schedules of the Fourteenth Census. It had been the desire of the Bureau to begin this work early in the spring of 1919, and accordingly an item was incorporated in the third deficiency bill, reported in the House of Representatives on February 27, 1919, to make immediately available \$200,000 of the Fourteenth Census appropriation to cover the cost of the alterations, etc., in question; but the bill failed to pass, and as a result the Bureau was delayed in beginning the work. It is now under way, however, and will be pushed to completion as rapidly as possible.

On July 1 one-half of building D was made available for the use of the Census Bureau, the other half being retained by the Air Service; and on July 1 and 2 the divisions of population and agriculture, and on August 12 the geographer's division, were removed to that building. As the work of the division of manufactures, which is housed in the Commerce Building, expands, it will be necessary to transfer other divisions to Building D. This will require the use of the entire building, which is to be turned over to the Bureau by January 1, 1920.

This arrangement is the best that could be made under the existing circumstances, but I regard it as very unfortunate that the important records of a decennial census must be constantly exposed to destruction by fire in a temporary frame structure. I sincerely hope that by the time the next census is taken the Government will have adopted a building policy which will permit the housing of the census force in a modern, fireproof building. Furthermore, the separation of the force is not conducive to good administration. Although the main work of the decennial census is not yet under way, much inconvenience and lost motion have already resulted from the lack of direct contact with each unit of the organization.

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, 1918, TO JUNE 30, 1919. | | | |
| Reports (cloth bound and of quarto size, except as otherwise indicated): | | | |
| Birth statistics for the registration area of the United States: 1916. | Nov. 6, 1918 | 96 | 5,000 |
| Financial statistics of cities having a population of over 30,000: 1917. | Oct. 5, 1918 | 373 | 6,500 |
| Financial statistics of States: 1917 (cloth and paper). | Oct. 10, 1918 | 129 | 3,500 |
| Statistics of fire departments of cities having a population of over 30,000: 1917 (paper). | Aug. 13, 1918 | 105 | 6,000 |
| Specified sources of municipal revenues: 1917. | Aug. 28, 1918 | 140 | 6,000 |
| Deaf mutes in the United States: 1910. | July 5, 1918 | 221 | 2,000 |
| Census of manufactures, 1914—Vol. I, reports by States and principal cities ^a . | Feb. 26, 1919 | 1,677 | 1,500 |
| Mortality statistics: 1916. | Sept. 27, 1918 | 543 | 5,000 |
| Marriage and divorce: 1916 (paper). | Apr. 4, 1919 | 47 | 5,000 |
| Negro population in the United States: 1790-1915. | Oct. 28, 1918 | 844 | 5,000 |
| Prisoners and juvenile delinquents. | Oct. 28, 1918 | 535 | 4,000 |
| Census of the Virgin Islands of the United States: Nov. 1, 1917. | Aug. 27, 1918 | 147 | 4,000 |
| Total. | | 4,857 | 53,500 |
| Bulletins (quarto): | | | |
| No. 136—Stocks of leaf tobacco (octavo). | July 17, 1918 | 44 | 20,000 |
| No. 137—Cotton production and distribution, season of 1917-18. | Jan. 1, 1919 | 135 | 37,500 |
| No. 138—Estimates of population in the United States: 1910-17. | Jan. 21, 1919 | 57 | 3,000 |
| Textiles—census of manufactures: 1914. | Sept. 30, 1918 | 165 | 5,500 |
| Shipbuilding (including boat building): 1916 and 1914 ^b . | May 16, 1919 | 35 | 2,500 |
| Total. | | 436 | 63,500 |
| Miscellaneous publications: | | | |
| Annual report of the Director of the Census to the Secretary of Commerce, fiscal year 1918 (octavo). | Oct. 21, 1918 | 28 | 2,500 |
| Census publications available for distribution by the Bureau of the Census, Apr. 1, 1919 (octavo). | Apr. 26, 1919 | 16 | 500 |
| Manual of the international list of causes of death (third reprint revised) (octavo). | July 13, 1918 | 309 | 500 |
| Advance tables of cotton production in the United States—crop of 1917 (octavo). | July 27, 1918 | 40 | 42,000 |
| Advance tables of cotton production in the United States—crop of 1918 (octavo). | June 23, 1919 | 40 | 36,000 |
| Act providing for the Fourteenth Census, to be taken Jan. 1, 1920. | Apr. 17, 1919 | 23 | 1,000 |
| Supervisors' districts, 1920—Fourteenth Census. | May 3, 1919 | 75 | 1,500 |
| Thirty-four reports, in card form, relating to cotton and cotton seed. | June 14, 1918 to July 19, 1919 | 34 | 1,360,000 |
| Four reports, in card form, relating to stocks of leaf tobacco. | July 29, 1918 to Apr. 30, 1919 | 4 | 77,000 |
| Total. | | 569 | 1,521,000 |
| Special censuses (octavo): | | | |
| Population of Okmulgee County, Okla. (enumerated Aug. 15, 1918). | Jan. 6, 1919 | 16 | 500 |
| Population of Ottawa County, Okla. (enumerated Dec. 16, 1918). | Feb. 26, 1919 | 15 | 500 |
| Population of Tulsa County, Okla. (enumerated Jan. 15, 1919). | Apr. 24, 1919 | 19 | 800 |
| Total. | | 50 | 1,800 |
| Census of war commodities (quarto): | | | |
| Antimony, and graphite crucibles. | Apr. 4, 1919 | 10 | 500 |
| Iron and steel. | Jan. 31, 1919 | 16 | 1,500 |
| Statistics of leather. | Dec. 12, 1918 | 11 | 1,000 |
| Textile fibers—wool, silk, jute, and kapok. | Apr. 17, 1919 | 16 | 1,500 |
| Total. | | 53 | 4,500 |
| Grand total, July 1, 1918, to June 30, 1919. | | 5,965 | 1,644,300 |
| JULY 1 TO AUG. 31, 1919. | | | |
| Reports (cloth bound and of quarto size, except as otherwise indicated): | | | |
| Census of manufactures, 1914—Vol. II, reports for selected industries and detailed statistics for industries by states ^a . | July 2, 1919 | 1,047 | 1,500 |
| Telegraphs and municipal electric fire-alarm and police-patrol signaling systems: 1917 (paper). | July 19, 1919 | 61 | 3,000 |
| Municipal markets in cities of over 30,000: 1918 (paper). | July 23, 1919 | 19 | 1,500 |
| Total. | | 1,127 | 6,000 |
| Census of war commodities (quarto): Leather statistics—Boots, shoes, and manufactured leather. | Aug. 25, 1919 | 19 | 1,500 |
| Grand total, July 1 to Aug. 31, 1919. | | 1,146 | 7,500 |

^a The various reports bound together in these volumes had previously been published separately.
^b Withheld from earlier publication for military reasons.

APPROPRIATIONS AND EXPENDITURES.

FINANCIAL STATEMENT, FISCAL YEAR 1919.

| Division. | Salaries. | Subsistence and travel. | Other. | Total. |
|---|--------------|-------------------------|-------------------------|-------------------------|
| Administrative: | | | | |
| Salaries..... | \$64,351.57 | \$322.25 | \$2.45 | \$64,676.27 |
| Contingent expenses..... | | | ^a 23,261.14 | ^a 23,261.14 |
| Mechanical laboratory..... | 32,638.86 | | 10,629.59 | 43,268.45 |
| Revision and results..... | 23,451.30 | | | 23,451.30 |
| Population..... | 115,694.90 | 857.73 | 1,745.66 | 118,298.29 |
| Manufactures..... | 244,519.13 | 29,492.55 | 195.14 | 274,206.82 |
| Geographer's..... | 42,879.87 | | 6.58 | 42,886.45 |
| Vital statistics..... | 160,399.99 | 4,273.29 | 73,631.90 | 238,305.18 |
| Statistics of States and cities..... | 79,708.69 | 28,456.34 | 109.16 | 108,274.19 |
| Agriculture..... | 30,319.50 | 57.00 | 103.33 | 30,479.83 |
| Cotton and tobacco..... | 40,461.05 | 136.92 | 230,277.20 | 270,875.17 |
| Salaries of employees detailed to Department of Commerce..... | 998.98 | | | 998.98 |
| Printing and binding..... | | | ^a 113,971.18 | ^a 113,971.18 |
| War work: | | | | |
| Registration..... | 1,047.07 | | | 1,047.07 |
| Liberty loans..... | 2,775.86 | | | 2,775.86 |
| Census of jute..... | 1,632.92 | | | 1,632.92 |
| Census of antimony..... | 1,303.50 | | | 1,303.50 |
| Census of leather stocks..... | 35,858.72 | | | 35,858.72 |
| Census of silk..... | 987.14 | | | 987.14 |
| Census of boots, shoes, and leather goods..... | 52,454.77 | 120.61 | | 52,605.38 |
| Census of graphite crucibles..... | 1,679.28 | | | 1,679.28 |
| Census of woolen manufactures..... | 3,001.01 | | | 3,001.01 |
| Census of iron and steel..... | 11,526.01 | | | 11,526.01 |
| Data for foreign countries..... | 4,069.87 | | | 4,069.87 |
| Commercial greenhouses..... | 7,407.17 | 48.00 | 3.85 | 7,459.02 |
| Grain-trade investigation..... | 32,472.66 | | | 32,472.66 |
| Confidential work for Navy Department..... | 1,112.50 | | | 1,112.50 |
| Ages of registrants..... | 2,139.99 | | | 2,139.99 |
| Miscellaneous..... | 27,669.96 | 107.05 | 18,443.95 | 46,220.96 |
| Purchase and repair of punching machines..... | | | 35,000.00 | 35,000.00 |
| Total for Bureau..... | 1,022,592.27 | 63,871.74 | 507,381.13 | 1,593,845.14 |

| Title of appropriation. | Appropriation. | Expenditures during fiscal year. |
|---|----------------|----------------------------------|
| Salaries, Bureau of the Census, 1919..... | \$739,240.00 | \$652,161.95 |
| Collecting statistics, Bureau of the Census, 1919..... | 490,000.00 | 466,091.95 |
| Tabulating machines, Bureau of the Census, 1919..... | 60,000.00 | 40,933.44 |
| Punching machines, Bureau of the Census, 1919..... | 60,000.00 | 35,000.00 |
| National Security and Defense, Department of Commerce (special statistical work), 1919..... | 150,000.00 | 138,329.50 |
| National Security and Defense, Department of Commerce (uniform nomenclature), 1919..... | 10,000.00 | 9,895.56 |
| Contingent expenses, Department of Commerce, 1919 ^a | 23,261.14 | 23,261.14 |
| Printing and binding, 1919 ^a | 113,971.18 | 113,971.18 |
| Increase of compensation, Department of Commerce, 1919..... | 84,140.42 | 84,140.42 |
| | 1,730,612.74 | 1,593,845.14 |

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

APPROPRIATION, FISCAL YEAR 1920.

The Census Bureau's appropriation for the fiscal year 1920 was made in a single lump sum of \$15,000,000. The Bureau's estimate of the cost of taking the Fourteenth Decennial Census was \$18,129,000, and the cost of the annual and other nondecennial work to be done during the three-year census period (July 1, 1919, to June 30, 1922) was estimated at \$2,371,000, making a total of \$20,500,000. It was impossible to apportion, with any approach to accuracy, the cost of the work among the three fiscal years which will constitute the census period. Obviously, however, the greater part of the total expense of the census will fall within the first fiscal year, during which the bulk of the payments for field work will be made.

ESTIMATED EXPENDITURES DURING FOURTEENTH CENSUS PERIOD.

After the estimate was prepared, provision for an additional inquiry, relating to encumbrances on homes, was inserted in the census bill by the Senate. The inclusion of this inquiry in the Fourteenth Census work (as explained in the section entitled "Preparations for the Fourteenth Census") will add approximately \$1,000,000 to its cost. An additional estimate of \$50,000 has been made necessary on account of the construction of a fireproof vault, the installation of elevators, the strengthening of floors, etc., at Building D, one of the temporary war buildings, at Four-and-a-half Street and Missouri Avenue NW., which has been assigned to this Bureau for the use of the Fourteenth Census force. On the other hand, the original estimate of \$300,000 for rent of buildings in the District of Columbia has been eliminated, in view of the assignment of the temporary war building to this Bureau. An item of \$35,000 for fuel has also been eliminated, as the cost of heating Building D will be paid by the office of the Superintendent of the State, War, and Navy Building. These changes are equivalent to a net increase of \$715,000, making the revised estimate of the cost of the Fourteenth Decennial Census inquiries amount to \$18,844,000. This represents an increase of 29 per cent over the corresponding amount expended to cover the cost of the Thirteenth (1910) Census inquiries, which exceeded by 23 per cent the cost of the Twelfth (1900) Census work. It should be borne in mind, however, that neither the Thirteenth nor the Twelfth Census contained the inquiry on encumbrances on homes, for which an estimate of \$1,000,000 is made for the Fourteenth Census.

The estimate for the Fourteenth Census, which was a very conservative one, was made in the expectation that prices and wages would have made some progress toward a return to a normal level before it became necessary to purchase supplies and engage enumerators and other field employees, but thus far that expectation has not been realized. With the prevailing wage scales and the high prices of equipment, supplies, etc., it is possible that the Bureau's estimate may prove to be too low.

The following statement shows in detail the estimated expenditures during the Fourteenth Census period:

| DECENNIAL CENSUS INQUIRIES. | |
|---|------------|
| POPULATION: | |
| Field work (including outlying possessions)----- | \$750,000 |
| Supervisors (salaries, expenses, and assistance)----- | 3,600,000 |
| Enumerators----- | 50,000 |
| Interpreters----- | 100,000 |
| Miscellaneous (reenumerations, etc.)----- | 500,000 |
| Collecting data on unenumerated homes----- | 5,000,000 |
| Total, field work----- | 10,400,000 |
| Office work, total salaries----- | 2,900,000 |
| Mechanical laboratory (salaries, supplies, etc.)----- | 400,000 |
| Total, Population----- | 13,700,000 |
| AGRICULTURE: | |
| Field work (including outlying possessions)----- | 750,000 |
| Supervisors (salaries, expenses, and assistance)----- | 3,541,000 |
| Enumerators----- | 106,000 |
| Irrigation (compensation, subsistence, travel, etc.—field employees)----- | 170,000 |
| Drainage (compensation, subsistence, travel, etc.—field employees)----- | 42,000 |
| Special field work----- | 4,609,000 |
| Total, field work----- | 9,018,000 |
| Office work, total salaries----- | 1,440,000 |
| Total, Agriculture----- | 10,458,000 |

* Exclusive of work on integrating counter.

| | |
|--|-------------------|
| MANUFACTURES AND MINES AND QUARRIES: | |
| Field work, including outlying possessions (compensation, subsistence, travel, etc., of field employees)----- | \$1,056,000 |
| Office work, total salaries----- | 1,192,000 |
| Total, Manufactures and Mines and Quarries----- | <u>2,248,000</u> |
| FORESTRY AND FOREST PRODUCTS: | |
| Field work, including outlying possessions (compensation, subsistence, travel, etc., of field employees)----- | 4,000 |
| Office work, total salaries----- | 23,000 |
| Total, Forestry and Forest Products----- | <u>27,000</u> |
| ADMINISTRATIVE AND GENERAL: | |
| Salaries for Director's Office, Administrative Division, Appointment Division, Disbursing Office, Geographer's Division, Publication Division, and Editorial Division----- | 975,000 |
| Printing (including cards for tabulating machines and other job work)----- | 821,000 |
| Stationery, supplies, and equipment (other than for mechanical laboratory), office maintenance, etc.----- | 724,000 |
| Total, Administrative and General----- | <u>2,520,000</u> |
| Grand total, decennial census inquiries----- | <u>18,844,000</u> |
| Grand total decennial census inquiries, Thirteenth Census (1910), including work done after close of census period----- | \$14,570,946 |
| Grand total Twelfth Census (1900)----- | \$11,854,818 |
| Per cent of increase, 1910-1920----- | 26 |
| Per cent of increase, 1900-1910----- | 23 |

OTHER WORK DURING DECENNIAL CENSUS PERIOD.

| | |
|--|---------------------|
| OFFICIAL REGISTER FOR 1919 AND 1921: | |
| Office work, total salaries----- | \$12,000 |
| VITAL STATISTICS (annual): | |
| Field work (transcripts of records and subsistence and travel)----- | 340,000 |
| Office work, total salaries----- | 410,000 |
| Total, Vital Statistics----- | <u>750,000</u> |
| STATISTICS OF STATES AND CITIES (annual): | |
| Field work (compensation, travel, subsistence, etc., of field employees)--- | 210,000 |
| Office work, total salaries----- | 150,000 |
| Total, Statistics of States and Cities----- | <u>360,000</u> |
| COTTON AND COTTONSEED STATISTICS (monthly and semimonthly): | |
| Field work (pay of local agents on piece-price basis)----- | 825,000 |
| Office work, total salaries----- | 90,000 |
| Total, Cotton and Cottonseed Statistics----- | <u>915,000</u> |
| TOBACCO STATISTICS (quarterly): | |
| Field work (compensation, subsistence, travel, etc., of field employees)--- | 45,000 |
| Office work, total salaries----- | 30,000 |
| Total, Tobacco Statistics----- | <u>75,000</u> |
| GENERAL: | |
| Printing----- | 182,000 |
| Stationery, supplies, and equipment----- | 12,000 |
| Total, General----- | <u>194,000</u> |
| INTEGRATING COUNTER: | |
| Work of development, construction, and maintenance (salaries, supplies, etc.)----- | 65,000 |
| Grand total, other work during decennial census period----- | <u>\$2,371,000</u> |
| Aggregate, all work done during decennial census period----- | <u>\$21,215,000</u> |

Respectfully,

SAM. L. ROGERS,
Director of the Census.

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