

**ANNUAL REPORT**

679

OF THE

**DIRECTOR OF THE CENSUS**

TO THE

**SECRETARY OF COMMERCE**

FOR THE

**FISCAL YEAR ENDED JUNE 30, 1917**



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1917

1917  
CONTENTS.

	Page.
Organization and scope of work.....	5
Duties of divisions.....	5
Diagram—Organization, Bureau of the Census.....	6
Outline of work done during a decade.....	7
The decennial census.....	7
Other decennial inquiries.....	8
Quinquennial inquiries.....	8
Biennial preparation of Official Register of the United States.....	8
Annual inquiries.....	8
Quarterly tobacco statistics.....	8
Quarterly, monthly, and semimonthly cotton and cottonseed statistics.....	8
Special and miscellaneous inquiries.....	9
Office force.....	9
Statutory force, by salary classes, fiscal years 1912-13 to 1917-18.....	9
Office and field employees September 30, 1917.....	9
Losses due to low salary scale.....	10
Need of larger force.....	12
Present classification and classification as outlined in estimates for fiscal year 1918-19.....	13
Promotion of messenger boys.....	14
Superannuation.....	14
Work done during fiscal year and since its close.....	15
Current and completed work on statutory inquiries.....	16
Census of manufactures.....	16
Transportation by water: 1916.....	17
Census of shipbuilding: 1916.....	19
Electrical industries: 1917.....	19
Vital statistics.....	20
Financial statistics of cities: 1916.....	20
General statistics of cities: 1916.....	22
Financial statistics of States: 1916.....	22
Cotton and tobacco statistics.....	23
Cotton and cotton seed.....	23
Stocks of leaf tobacco held by manufacturers and dealers.....	23
Reports relating to special classes of the population.....	24
The blind.....	24
Deaf-mutes.....	24
Negroes.....	24
Prisoners and juvenile delinquents.....	24
Religious bodies.....	24
Official Register.....	25
Special and miscellaneous lines of work.....	25
Marriage and divorce.....	25
Monograph on cancer.....	25
Supplementary occupation statistics.....	26
Census of city distribution.....	26
Fisheries of New York City.....	27
Edible vegetable oils.....	27
Special census of population.....	27
Bulletin on executive civil service.....	28
Life tables.....	28
Statistical directory of State institutions.....	28
History and growth of the United States census.....	28
Searching of census records to determine ages.....	29
The Census exhibit.....	29

	Page.
Special and miscellaneous lines of work—Continued.	
Assistance rendered other departments.....	29
Estimates of population for use of War Department.....	29
Allocating enlistments and other work for the office of the Provost Marshal General of the War Department.....	30
Liberty Loan work.....	30
List of shipbuilding establishments.....	30
Total amount of war work done.....	30
Assistance to Federal Trade Commission in compilation of coal data..	31
Ages of pensioners.....	31
Work in mechanical laboratory.....	31
Integrating counter.....	32
Publications issued.....	32
July 1, 1916, to June 30, 1917.....	32
July 1 to September 30, 1917.....	33
Plans for future work.....	34
Preparations for Fourteenth Census.....	34
Vital statistics.....	36
Weekly mortality reports.....	36
Mortality from tuberculosis.....	36
Color and race in relation to births and mortality.....	36
Legislation needed.....	37
Fourteenth Census legislation.....	37
Registration of births and deaths.....	37
Employment of temporary clerks, stenographers, and machine operators..	38
Financial statistics of States.....	38
Tobacco statistics.....	38
Official Register.....	39
Forest products.....	40
Express business.....	40
Weight of Census mail matter.....	40
Special statistical compilations.....	41
Office room and storage space.....	41
Appropriations and expenditures.....	42
Financial statement, fiscal year 1917.....	42
Appropriations, fiscal year 1918.....	43

1917

683

REPORT  
OF THE  
DIRECTOR OF THE CENSUS.

---

DEPARTMENT OF COMMERCE,  
BUREAU OF THE CENSUS,  
Washington, October 1, 1917.

SIR: There is submitted herewith the following report upon the organization of the Bureau of the Census, its operations during the fiscal year ended June 30, 1917, and the work now in progress:

ORGANIZATION AND SCOPE OF WORK.

Since my last report the organization of the Census Bureau has been changed by the creation of a new division, the division of cotton and tobacco statistics (provided for by the act of May 10, 1916); by the reestablishment of the division of agriculture, which went temporarily out of existence at the close of the Thirteenth Census period; and by the appointment of an additional chief statistician (authorized by the legislative, executive, and judicial appropriation act approved March 3, 1917) to have general authority and supervision over the work of these two divisions.

DUTIES OF DIVISIONS.

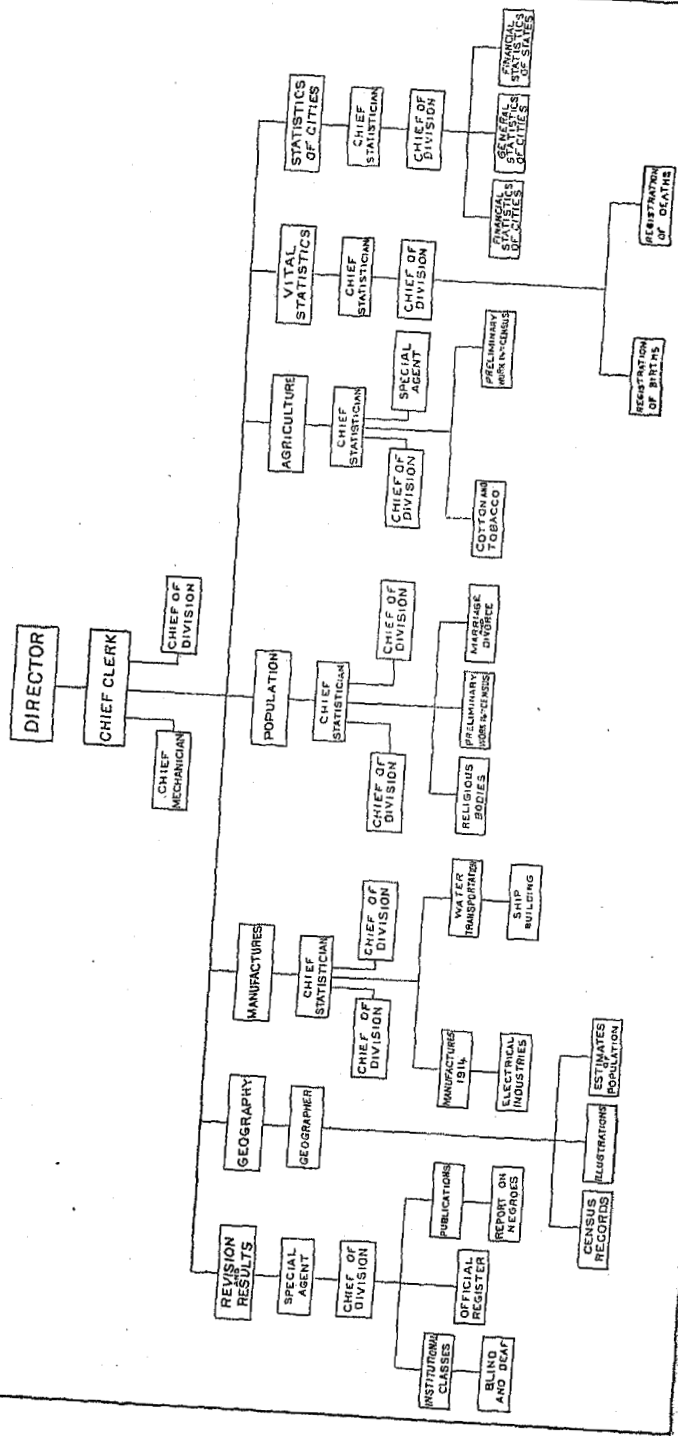
The diagram on page 6 shows graphically the present organization of the Bureau. The work of the several divisions may be briefly stated as follows:

*Administrative division.*—General supervision of personnel, including appointments, promotions, transfers, etc.; handling of general correspondence; distribution of publications; preparation of press summaries; other work not belonging especially to any other single division.

*Population division.*—Collection, compilation, and preparation for publication of decennial statistics relating to population (including occupations) and religious bodies and of special statistics pertaining to marriage and divorce.

*Division of manufactures.*—Collection, compilation, and preparation for publication of quinquennial statistics pertaining to manufactures and to electrical industries (electric light and power plants, street and electric railways, telegraphs and telephones, and electric fire-alarm and police-patrol signaling systems); and of decennial statistics of mines, quarries, and oil and gas wells, of water transportation, and of fisheries (in cooperation with the Bureau of Fisheries).

# ORGANIZATION BUREAU OF THE CENSUS



*Division of vital statistics.*—Collection, compilation, and preparation for publication of annual statistics of births and deaths in States and cities having adequate registration systems, and preparation of special reports presenting particular phases of vital statistics, such as "Life Tables" and "Mortality from Cancer."

*Division of statistics of cities.*—Collection, compilation, and preparation for publication of annual financial and general statistics of cities having more than 30,000 inhabitants; of annual financial statistics of States; and of decennial statistics of wealth, public indebtedness, and taxation.

*Division of agriculture.*—Collection, compilation, and preparation for publication of decennial statistics relating to agriculture.

*Division of cotton and tobacco statistics.*—Collection, compilation, and preparation for publication of statistics relating to cotton ginned to specified dates; monthly statistics of cotton consumed, imported, exported, and on hand, and of active cotton spindles; monthly statistics pertaining to cotton seed and its products; quarterly statistics relating to cotton fiber consumed in the manufacture of explosives; quarterly statistics of raw cotton consumed in the manufacture of absorbent and medicated cotton; annual statistics of cotton production and distribution; quarterly statistics of leaf tobacco held by manufacturers and dealers; and preparation of an annual bulletin giving statistics of leaf tobacco held at the beginning of each quarter, together with statistics as to acreage, production, imports, exports, consumption, etc.

*Division of revision and results.*—Compilation and preparation for publication of the following: Statistics of special classes—such as Negroes, deaf and dumb, blind, paupers, inmates of benevolent institutions, insane and idiotic, and prisoners and juvenile delinquents—from data gathered at decennial censuses; Official Register of the United States (issued biennially); and statistics relating to Federal employees; and performance of miscellaneous work in connection with the printing of all census publications.

*Geographer's division.*—Maintenance of records as to boundaries of supervisors' and enumerators' districts and creation of new districts where needed; maintenance of records as to changes in boundaries of counties, precincts, and municipalities; decennial preparation of Statistical Atlas of the United States; preparation of maps, charts, and diagrams illustrating statistics in census publications; searching of old census records for information in regard to ages and other data concerning individuals; and preparation of population estimates between census years.

#### OUTLINE OF WORK DONE DURING A DECADE.

The work of the Census Bureau is laid out in 10-year cycles and comprises inquiries made at intervals varying in length from 2 weeks to 10 years. The following is an outline of the various lines of work carried on during a decade:

*The decennial census.*—The taking of the decennial census, which covers the subjects of population, agriculture, manufactures, and mines and quarries (including oil and gas wells), is the chief function of the Bureau. The reports relating to these subjects present the statistics in great detail and are issued not only in the form of large

bound volumes but also as numerous paper-bound bulletins, each of which relates to a particular State of the Union or to a particular phase of an inquiry, such, for example, as some one manufacturing industry. During the taking of a decennial census the Bureau's field force comprises from 70,000 to 80,000 supervisors, enumerators, and special agents; and during the compilation of the data obtained its office force numbers, at times, from 3,500 to 4,000.

*Other decennial inquiries.*—Under authority contained in the act of Congress establishing the permanent Census Bureau (approved March 6, 1902), and in various acts amendatory thereof or supplementary thereto, the Census Bureau makes decennial investigations in regard to dependent, defective, and delinquent classes; wealth, public indebtedness, and taxation; religious bodies; transportation by water; and fisheries (in cooperation with the Bureau of Fisheries).

The decennial investigations relating to dependent, defective, and delinquent classes—inmates of benevolent institutions, the blind, the deaf, insane and feeble-minded in institutions, paupers in almshouses, and prisoners and juvenile delinquents—are made for the years in which the decennial censuses of population, agriculture, etc., are taken, and a part of the data are collected by the census enumerators, the remainder being obtained by correspondence. The reports, however, are not included in those of the decennial census but are issued after the close of the census period, which terminates on June 30 of the second year following that in which the census is taken. The last census of wealth, public indebtedness, and taxation related to the years 1912 and 1913; the current inquiries in regard to religious bodies and transportation by water relate to the year 1916; and the last census of fisheries covered the year 1908.

*Quinquennial inquiries.*—These comprise the censuses of manufactures and electrical industries. The manufactures inquiry forms a part of each decennial census, and in addition a similar inquiry is made in the fifth year following that in which the decennial census is taken. The current investigation relating to electrical industries covers the calendar year 1917.

*Biennial preparation of Official Register of the United States.*—Once in two years the Census Bureau compiles the Official Register of the United States. The edition for July 1, 1917, is now in course of preparation.

*Annual inquiries.*—The annual inquiries conducted by the Bureau of the Census cover births, deaths, finances of cities having over 30,000 inhabitants, "general" statistics of such cities, and finances of States.

*Quarterly tobacco statistics.*—At quarterly intervals (Jan. 1, Apr. 1, July 1, and Oct. 1) the Census Bureau issues, in post-card form, statistics as to stocks of leaf tobacco in the hands of manufacturers and dealers.

*Quarterly, monthly, and semimonthly cotton and cottonseed statistics.*—At quarterly intervals the Census Bureau issues, in the form of multi-graphed or mimeographed sheets, two series of reports, one relating to the consumption of cotton fiber in the manufacture of explosives and the other to the manufacture of absorbent and medicated cotton. At monthly intervals are published two series of post-card reports, one relating to cotton consumption, stocks, and spindles, and the other to cotton seed and its products. At slightly irregular intervals,

averaging about two weeks in length, are issued post-card reports showing the amounts of cotton ginned to specified dates, a total of 10 such reports being published during each ginning season. In addition, an annual bulletin on cotton production and distribution is published.

*Special and miscellaneous inquiries.*—Besides making the various inquiries specifically authorized by law, as enumerated above, the Bureau of the Census makes such special and miscellaneous inquiries as may be ordered by Congress, the President, or the Secretary of Commerce. In this category are included an investigation relating to marriage and divorce, made in 1907 and covering the 20-year period 1887–1906; a similar investigation, covering the calendar year 1916, now being made; and a special inquiry relating to the cost of city cartage.

**OFFICE FORCE.**

The following table shows the total statutory force of the Census Bureau and the number of clerical positions in each salary class, by fiscal years, beginning with the close of the last decennial census period:

Fiscal year.	Total force. <sup>a</sup>	Clerks, \$1,800.	Clerks, \$1,600.	Clerks, \$1,400.	Clerks, \$1,200.	Clerks, \$1,000.	Clerks \$900.
1912-13.....	610	11	20	32	300	83	87
1913-14.....	621	11	20	39	305	83	86
1914-15.....	589	11	20	38	303	83	85
1915-16.....	569	11	20	37	300	83	82
1916-17.....	562	15	25	40	283	83	81
1917-18.....	563	15	25	40	283	83	81

<sup>a</sup> Includes official and subclerical positions.

The increase of one for the present fiscal year as compared with the preceding one is accounted for by the creation of a new position of chief statistician.

The following statement shows the office and field employees on September 30, 1917:

**OFFICIALS.**

Director.....	SAM. L. ROGERS.
Chief clerk.....	THOMAS J. FITZGERALD.
Chief statisticians:	
Population.....	WILLIAM C. HUNT.
Statistics of cities.....	STARKE M. GROGAN.
Manufactures.....	EUGENE F. HARTLEY.
Vital statistics.....	WILLIAM H. DAVIS.
Agriculture, cotton and tobacco.....	WILLIAM L. AUSTIN.
Expert special agent in charge of revision and results.....	JOSEPH A. HILL.
Geographer.....	CHARLES S. SLOANE.
Expert chiefs of divisions:	
Administrative.....	TIMOTHY F. MURPHY.
Population.....	WILLIAM H. JARVIS.
Statistics of cities.....	EDWARD W. KOCH.
Manufactures.....	LEMUEL A. CARRUTHERS.
Vital statistics.....	FRANK L. SANFORD.
Cotton and tobacco.....	JOHN F. DALY.
Revision and results.....	RICHARD C. LAPPIN.
Chief, mechanical laboratory.....	HARVEY J. ZIMMERMAN.
	HARRY H. PIERCE.
	E. M. LABOITEAUX.



## CLERICAL FORCE.

Stenographer, \$1,500.....	1	Clerks—Continued.	
Clerks:		\$1,000.....	83
Class 4.....	15	\$900.....	81
Class 3.....	25	Total.....	523
Class 2.....	40		
Class 1.....	283		

## SUBCLERICAL FORCE.

Skilled laborers:		Assistant messengers, \$720.....	5
\$900.....	2	Messenger boys, \$480.....	8
\$720.....	1	Total.....	13
Unskilled laborers, \$720.....	4		
Messengers, \$840.....	3		

## MECHANICAL LABORATORY FORCE.

Expert, \$2,000.....	1	Toolmaker, \$1,400.....	1
Expert, \$1,800.....	1	Tabulating mechanicians, \$1,200.....	4
Expert, \$1,800 (electrical).....	1	Pressman and machinist, \$1,200.....	1
Expert, \$1,600 (mechanical).....	1	General mechanic, \$1,000.....	1
Mechanician, \$1,000.....	1	Apprentice, \$600 (temporary).....	1
Mechanician, \$1,400.....	1	Total.....	15
Electrician, \$1,400.....	1		

## SPECIAL AGENT FORCE.

Expert special agents for general field work, etc.....	21
--------------------------------------------------------	----

## SUMMARY.

Officials.....	19	Mechanical-laboratory force.....	15
Clerical force.....	528	Special agents.....	21
Subclerical force.....	18	Total.....	601

In addition, there are employed throughout the cotton belt 767 local special agents to collect statistics of cotton. These agents perform their work only at intervals and are paid on a piece-price basis.

## LOSSES DUE TO LOW SALARY SCALE.

As explained in my last report, the Census Bureau labors under a great handicap by reason of its low average salary scale, which is causing many members of its force, including some of the most capable ones, to leave for more lucrative employment elsewhere, both in and outside the Government service. The extent of this handicap will be more readily understood and its seriousness will be more thoroughly appreciated when it is stated that out of the 563 official, clerical, and subclerical positions on the statutory roll of the Bureau only 98, or 17.4 per cent, pay salaries in excess of \$1,200 per annum, whereas in the other bureaus of the Department, considered as a whole, 39.9 per cent of the positions pay salaries higher than that figure. Furthermore, in 1912 (the latest year for which data are available) 36.1 per cent of the positions in all the executive departments combined, exclusive of those in the Bureau of the Census, carried rates of compensation greater than \$1,200 per annum. That is to say, the proportion of the Census force which receives more than \$1,200 per annum is less than half as great as the corresponding proportion for the remainder of the Department of Commerce and is also less than half as great as was the corresponding proportion in the remaining bureaus of all the departments combined five years ago.

The natural and inevitable result of this state of affairs appears in the fact that during the period from July 1, 1916, to September 30, 1917, the Census Bureau lost no fewer than 89 officials and employees, or nearly 16 per cent of its entire statutory force, including some of the most highly trained and valuable officers of the Bureau, whose services could ill be spared. The following cases are cited to illustrate the difference between the salaries received from the Census Bureau by some of the members of its force who have left since July 1, 1916, and the salaries they are now receiving:

In Bureau of Census.		Salary in present position.	In Bureau of Census.		Salary in present position.
Position.	Salary.		Position.	Salary.	
1 chief statistician.....	\$3,000	\$4,500	2 clerks.....	\$1,000	\$1,200
1 chief of division.....	2,000	4,000	6 clerks.....	900	{ 1,600 (1)
1 clerk.....	1,800	3,000	1 skilled laborer.....	900	{ 1,200 (5)
2 clerks.....	1,400	1,600			1,800
4 clerks.....	1,200	{ 2,000 (1)			
		{ 1,600 (1)			
		{ 1,400 (2)			

It will be noted that one of the officials who left the Bureau is now drawing double the salary paid him here, and that the other official and a number of the clerks who left are receiving greatly increased compensation.

In its estimates of appropriations for the fiscal year 1915 the Census Bureau asked for a reclassification of its force, but no action was taken upon its request.

For the fiscal year 1917 Congress, at the request of the Bureau, provided for 13 new positions above \$1,200 and made a corresponding reduction in the number at that salary. This change, however, gave the Bureau only slight relief, since the number of \$1,200 positions on its roll still remained inordinately large and the number of places above \$1,200 inordinately small in proportion to the total.

The estimates for the current year called for an increase of 33 in the number of places with salaries above \$1,200, with a corresponding reduction in the number at that salary, the total number of positions being left the same. This would have necessitated an increase of only \$9,600, or less than 1½ per cent, in the total appropriation for salaries, but would have made possible a considerable number of well-deserved promotions and would thus have brought about a marked improvement in the morale of the Census Bureau's force. This increase, however, was not granted, and as a result the Bureau lost during the year a large number of its well-trained employees.

It is my duty to the Census Bureau and to the public to point out, in the most emphatic manner possible, that unless an immediate and pronounced improvement is effected the Census Bureau will be unable to maintain the standard of excellence which it has set for its publications; it will be unable to issue them as promptly as it is now doing; and, most important of all, it will be extremely difficult for it to make proper preparations for the Fourteenth Census.

## NEED OF LARGER FORCE.

Not only is the Bureau thus handicapped by its exceedingly low salary scale, but it suffers by reason of the inadequate size of its statutory force, which now numbers 563, whereas 10 years ago it was 636, or 73 more than the present number. A portion of this reduction (39 employees) was due to the removal of the Census Bureau to the Commerce Building and the resultant consolidation of a part of its force with that of the Department; but, making allowance for this consolidation, the Bureau is now operating with 34 fewer employees than it had 10 years ago. Its work, however, is materially greater at present than it was at that time, to some extent by reason of the addition, in 1912, of the semiannual (now quarterly) tobacco inquiry to the investigations regularly carried on by the Bureau, but more especially because of the general increase in the work along all lines, due in part to the growth of the country during the past decade and in part to the amplification and extension of certain inquiries, such as those relating to births, to mortality, to cotton and cotton seed, and to cities and States.

The increase in the vital-statistics work is worthy of particular mention. This work is rapidly becoming greater from year to year, not merely by reason of the increase in the population of the country but also because of the extension of the "registration areas" for births and deaths. The collection of birth statistics by the Census Bureau was begun only a few years ago, but already the birth-registration area comprises 13 States and the District of Columbia and contains considerably more than a third of the total population of the country. The death statistics, which 10 years ago related to less than one-half of the population of the United States, now pertain to approximately 70 per cent. As a result of the growth of this branch of the work, it has become necessary during a portion of each year to employ a number of temporary machine operators in the division of vital statistics. Some of these operators have been former employees of the Census Bureau, and the remainder have been obtained, so far as possible, from the registers of the Civil Service Commission.

A further need for the enlargement of the Bureau's force is found in the fact that during the coming fiscal year—whose termination marks the beginning of the Fourteenth Census period (July 1, 1919)—it will be absolutely necessary, if that census is to be taken properly, to do a great deal of preparatory work for it.

As pointed out at the beginning of this report, under the head "Organization and scope of work," the division of agriculture, which went temporarily out of existence at the close of the Thirteenth Census period, has recently been reestablished. The force of this division, however, at present comprises only one official and six employees. A great deal of work must be done in preparation for the Fourteenth Census, and all comparative tables (that is, tables presenting Fourteenth Census statistics side by side with corresponding figures for preceding censuses) to be printed in the reports should be prepared, so far as figures for the Thirteenth and preceding censuses are concerned, before the beginning of the Fourteenth Census period, or at least before the enumeration is made. This can not

be done, however, unless a very much larger force is provided for the division.

The work of preparing for the decennial census of mines, quarries, and oil and gas wells will also be considerable and should be commenced at the beginning of the next fiscal year.

The geographer's division, the duties of which will include the establishment of several hundred supervisors' districts and approximately 75,000 enumerators' districts, in preparation for the Fourteenth Census, must begin this work early in the coming fiscal year and will, therefore, need an increase in its force.

The divisions of population and manufactures will also need more clerks for preliminary Fourteenth Census work, although, by reason of the fact that these divisions have been in continuous existence since the Thirteenth Census, their needs in this respect will not be so great as those of the division of agriculture.

In making its estimates of appropriations for the coming fiscal year, therefore, the Census Bureau will ask for an increase of 79 in its statutory force; and in order to make its salary scale more nearly comparable with the salary scales prevailing elsewhere in the Government service, the majority of the increases requested are in the classes above \$1,200.

The present and proposed classifications are shown below.

Grade.	Office force, 1918.			Estimates, 1919.		
	Num-ber.	Salary.	Amount.	Num-ber.	Salary.	Amount.
Director.....	1	\$6,000	\$6,000	1	\$6,000	\$6,000
Chief statisticians.....	5	3,000	15,000	5	3,000	15,000
Statistical and technical expert.....	1	3,000	3,000	1	3,000	3,000
Chief clerk.....	1	2,500	2,500	1	2,500	2,500
Geographer.....	1	2,000	2,000	1	2,000	2,000
Stenographer.....	1	1,500	1,500	1	1,500	1,500
Expert chiefs of division.....	9	2,000	18,000	9	2,000	18,000
Clerks:						
Class 4.....	15	1,800	27,000	23	1,800	41,400
Class 3.....	25	1,600	40,000	35	1,600	56,000
Class 2.....	40	1,400	56,000	110	1,400	154,000
Class 1.....	283	1,200	339,600	250	1,200	300,000
\$1,000.....	83	1,000	83,000	93	1,000	93,000
\$900.....	81	900	72,900	91	900	81,900
Skilled laborers:						
\$900.....	2	900	1,800	3	900	2,700
\$720.....	1	720	720	1	720	720
Messengers.....	3	840	2,520	3	840	2,520
Assistant messengers.....	5	720	3,600	5	720	3,600
Unskilled laborers.....	4	720	2,880	5	720	3,600
Messenger boys.....	3	480	1,440	4	480	1,920
Total.....	563		676,400	642		789,360

Under the proposed classification, as set forth in the above table, 29.1 per cent of the Census Bureau's force will be paid salaries higher than \$1,200 per annum. Even this percentage, although considerably greater than the corresponding one for the present year (17.4), is still materially below that for the other branches of the departmental service, taken as a whole. (See subsection headed "Losses due to low salary scale.")

The increase requested is needed in part to provide for the growth in the Bureau's current work and in part to provide for the preliminary Fourteenth Census work. Even the entire amount of the

increase—\$112,900, as compared with the current appropriation for salaries—is very small, indeed, in comparison with the cost of taking a decennial census, and the authorization of its expenditure will make possible the saving of a much greater amount in the cost of the Fourteenth Census work and will result in expediting the publication of the Fourteenth Census reports.

The importance of making suitable provision for beginning preparatory work in time and for carrying it on with proper thoroughness and speed can not be too strongly emphasized. This matter is further discussed in the section entitled "Plans for future work."

#### PROMOTION OF MESSENGER BOYS.

The statutory roll of the Census Bureau for a number of years has provided three messenger-boy positions. Since December 1, 1915, five messenger boys have left to obtain elsewhere the increased pay which the Bureau was prevented from giving them by section 6 of civil-service Rule XI. This provision of the civil-service rules is as follows:

Messenger boys appointed without regard to the apportionment shall not be promoted or transferred to apportioned positions whether they are residents of States or Territories which are entitled to appointments to apportioned positions or not.

Of these five employees, three had served between three and four years; one, a little over one year; and one, about nine months. Some were boys of unusual intelligence and capability whose merits the Bureau would have been glad to reward if it had been possible to do so; but vacancies occurring in the grade of assistant messenger and messenger, unless filled by transfer, must, under the civil-service rules, be filled, through certification from the registers of the Civil Service Commission, by appointment of men who, as a rule, are not as efficient as the messenger boys whose promotions are precluded.

Under existing conditions, therefore, it is necessary for the Census Bureau to take boys from 16 to 18 years of age, to pay them \$480 per annum, to give them a certain training in its work, and then after a few years to lose them. In any business office an intelligent and industrious boy has an opportunity to advance, but, to a considerable extent, such opportunity is denied him in the Government service by the provision of the civil-service rules above quoted. This is unfair both to the boys themselves and to the offices in which they are employed.

#### SUPERANNUATION.

On July 19, 1917, I was asked to appear before the Senate Committee on Civil Service and Retrenchment, but as the House Committee on Appropriations requested my presence at the same time I was unable to do so. However, the chief clerk of the Bureau, whom I designated to represent me before the former committee, appeared and urged the enactment of an equitable system of retirement legislation, in which both male and female employees would participate on the same basis. He submitted the following table, relating to July 1, 1917, in which are shown the officials and employees of the Bureau, by age groups, for the information of the committee:

Grade.	Under 35.		35 to 50.		50 to 60.		60 to 65.		65 to 70.		70 and over.		Total.		Grand total.
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	
Officials.....			7		5		3				1		16		16
Clerks, \$900-\$1,800, inclusive.....	84	24	95	144	53	70	15	6	10	2	11		268	246	514
Subclerical.....	7		5		2						2		16		16
Machine shop.....	3		10								1		14		14
Total.....	94	24	117	144	60	70	18	6	10	2	15		314	246	a 560

SUMMARY.

Age.	Number.	Per cent of total force.	Age.	Number.	Per cent of total force.
Under 35.....	118	21	65-70.....	12	2
35-50.....	261	47	70 and over.....	15	3
50-60.....	130	23			
60-65.....	24	4	Total.....	a 560	100

a On July 1, 1917, there were three vacancies in the statutory force of the Bureau.

There is no serious loss of efficiency in the Bureau at this time due to superannuation, since at present only 27 employees, or 5 per cent of the force, are over 65 years of age. This is because of the fact that when the Bureau was organized on a permanent basis in 1902 an age limit of 45 years was fixed for appointment, except in the cases of Civil War and Spanish War veterans. The situation has also been improved somewhat during the past two years by confining permanent appointments to persons not over 35 years of age.

It will be noted from the foregoing table, however, that 181 employees, or 32 per cent of the force, are over 50 years of age, so that continued failure to enact retirement legislation will result in the Census Bureau having within the next 10 or 15 years a large number of employees whose efficiency will be impaired because of advanced age. It is hoped that Congress will provide a retirement system before the Bureau's force reaches this condition.

WORK DONE DURING FISCAL YEAR AND SINCE ITS CLOSE.

During the fiscal year the Bureau of the Census completed the compilation and publication of the primary or fundamental statistics derived from its latest canvass of manufacturing industries, carried on the compilation of more detailed statistics for later publication, and issued the Abstract of the Census of Manufactures and numerous final reports, in bulletin form, for separate States and for separate industries; conducted its regular annual inquiries relating to births, deaths, States, and municipalities; published a report on the blind and brought well toward completion the preparation of reports on the deaf, on Negroes, and on prisoners and juvenile delinquents; published special reports on mortality from cancer and on the cost of city cartage; made quarterly collections and publications of statistics relating to stocks of leaf tobacco; made monthly and semimonthly collections and publications of statistics relating to cotton and to cotton seed and its products;

performed considerable work for the Treasury and War Departments and the United States Shipping Board in connection with the preparations for war; complied with many requests for information contained in its records; and began work on its decennial canvasses of religious bodies and water transportation, its quinquennial canvass of electrical industries, and its special canvass of marriages and divorces.

Since the close of the fiscal year the Bureau has issued a considerable number of State and industry reports of the last census of manufactures, in bulletin form, and has carried on the compilation of others; and has been engaged in the compilation of the 1917 edition of the Official Register of the United States, in the conduct of the usual annual, quarterly, and monthly inquiries, and in preparatory work for the forthcoming census of electrical industries.

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

#### CURRENT AND COMPLETED WORK ON STATUTORY INQUIRIES.

##### CENSUS OF MANUFACTURES.

The last quinquennial census of manufactures, which covered the calendar year 1914, was taken during the following year. In order to facilitate the work and permit the publication of the statistics at the earliest possible date, many changes and improvements were made in the methods employed, with the result that not only was the canvass brought to completion more expeditiously than at preceding censuses, but the primary or fundamental figures derived therefrom were made public, in the form of press summaries, more promptly than heretofore. The work of compiling and publishing these press summaries, or preliminary statements, began in June, 1915, and was completed in August, 1916. The summaries gave, for States and for cities having 10,000 or more inhabitants, statistics as to number of establishments; proprietors, officials, and employees; horsepower; capital; salaries and wages; cost of materials; value of products; and other items. They also gave similar statistics for 37 industries and special statistics as to materials and products for 63 industries. In all, 852 of these press summaries were issued for the 1914 census of manufactures. The summary giving the statistics relating to all manufacturing industries combined, for the entire United States, was sent to the printer on July 24, 1916—an earlier date, relatively to the period covered by the inquiry, than that on which the comparable figures for any preceding similar census had gone to press.

Tables were prepared and published in pamphlet form covering four census years and giving comparative statistics of manufactures for the United States by geographic divisions, States, and industries. There was so great a demand for these figures that statements for some of the principal industries were issued in multigraphed form in advance of the publication of the pamphlet.

The preliminary figures having thus been published, the clerical force of the Bureau was concentrated, so far as possible, upon the

preparation of the analytical tables and text for the final reports. These are being published first in bulletin form, a separate quarto bulletin being issued for each State and the District of Columbia and for 41 selected industries. These bulletins will later be bound together in three large quarto volumes. Of the 49 bulletins for the States and the District of Columbia, 33 have been published and the remaining 16 are in the hands of the printer; and of the 41 industry bulletins, 13 have been published, 24 are in proof, and copy for 3 more is now in the hands of the printer. In the case of the remaining industry, shipbuilding, the 1914 statistics will not be published separately but will be issued together with those for 1916, which are now being compiled in connection with the census of transportation by water. (See subsection headed "Census of shipbuilding.") The work of preparing the State bulletins for publication in the form of two bound volumes is now in progress, and analytical tables are being compiled for the report on industries, to be published in a similar volume.

The Abstract of the Census of Manufactures was completed and published during the fiscal year. This is an octavo volume of 722 pages presenting in condensed and convenient form the more important statistics derived from the census of 1914. It contains 223 tables with descriptive text giving brief comments on the statistics. This abstract is, in some respects, a new departure in census work and has proved to be a popular publication. It differs from the abstracts of the decennial censuses of 1890 and 1900 in that it contains analytical tables, comparative figures for earlier years, and text discussions; it differs from the abstract of the decennial census of 1910 in that it presents the statistics in considerably greater detail, and at the same time is of octavo instead of quarto size and, therefore, more convenient for handling; and it differs from all former abstracts in that it contains statistics of manufactures only. Since the abstract will supply the needs of a great majority of those using the statistics of manufactures, it was the first volume of the final reports to be issued. There has already been a great demand from manufacturers and others for this publication. It is not for free distribution, but may be purchased from the Superintendent of Documents, Government Printing Office, at 65 cents a copy.

#### TRANSPORTATION BY WATER: 1916.

The act creating the permanent Census Bureau authorized the Director of the Census to make an inquiry relating to water transportation at decennial intervals. The first inquiry conducted under this authority was made for 1906, and the current one relates to the calendar year 1916. The report will give detailed statistics as to number, tonnage, value, ownership, employees, wages, amount of business done, etc., for the various classes of craft.

At the request of the Secretary, all collectors of customs furnished the Bureau of the Census with lists of undocumented craft. Arrangements were made with the Postmaster General whereby postmasters in cities and towns situated on the coast and inland waters were permitted to assist the Bureau by the preparation of similar lists. A circular from the Postmaster General was prepared and



sent to approximately 7,000 postmasters, and reports were received from practically all of them. The Director of the Census and the chief statistician for manufactures attended a meeting of the American Steamship Association on July 18, 1916, and were successful in securing the cooperation of the association in taking this census. Arrangements were made with the Bureau of Foreign and Domestic Commerce under which the Bureau of the Census was permitted to compile, from the records of the former bureau, statistics in regard to shipments of freight from and to the principal ports on the Great Lakes. This made it unnecessary to call on shippers for census reports of the quantities of freight carried on the Great Lakes, which in a measure would have duplicated the manifests they were required to make to the Bureau of Foreign and Domestic Commerce.

By cooperation in these various ways it has been possible to facilitate greatly the work on this inquiry and to keep down its expense.

Index cards containing names and addresses of all vessels to be covered by the water-transportation census were prepared, and the schedules to be used were drafted and printed. Since at the census of 1906 it was found very difficult to obtain reports on the detailed schedule for some of the small craft, especially canal boats and other unrigged craft, and since it was the intention to collect reports by correspondence so far as possible, a card schedule was formulated for use in securing returns for the craft for which no book accounts were kept. In taking this census, therefore, four schedules have been used, as follows: For steam and other machinery-propelled vessels; for sail vessels; for unrigged craft; and the card schedule, used interchangeably for any class of craft. In the case of each owner or operator who reported at the census of 1906 a copy of his report for that year was made on the proper schedule and mailed to him with the request that he supply a similar report for the census of 1916.

The effort to collect a large proportion of the data by mail, and in some cases by telegraph, was successful, and over 70 per cent of the index cards were thus disposed of before the field force left the office. Although this method necessitated the preparation of a large number of blanks, including schedules, form letters, and post cards, and involved a great amount of correspondence, it materially reduced the expense of the field work and facilitated the completion of the census.

The field force was organized, and the entire country laid out in eight districts, as follows: Atlantic coast; Gulf of Mexico; Pacific coast; Mississippi River and its tributaries; Great Lakes; canals; inland waters other than canals; and Alaska, Porto Rico, and Hawaii. The field work, which was begun in March, is now practically completed.

The examination and editing of the schedules is progressing in a satisfactory manner, the tabulation has been begun, and it is hoped to make public the report at a relatively earlier date than that at which the report of the census of 1906 was published.

Statistics relating to the operations of fishing vessels, which were not covered by the inquiry of 1906, have been obtained at this census.

## CENSUS OF SHIPBUILDING: 1916.

A census of shipbuilding has also been taken in conjunction with the 1916 census of transportation by water. Form letters were prepared for use (a) in sending to each owner and operator a copy of the report made by him at the 1914 shipbuilding inquiry (taken as a part of the manufactures census of that year), with the request that he make a similar report for 1916, and (b) in collecting returns for shipyards that were not in existence in 1914; and letters were written to the governors of Hawaii, Porto Rico, and Alaska, asking for lists of shipyards in their respective Territories. This plan made it possible to obtain a large proportion of the reports by correspondence. Nearly all the establishments covered by the shipbuilding inquiry have already been accounted for, and the schedules received are now being edited, tabulated, and summarized.

A preliminary statement has been prepared giving, by coast districts and inland waters, separate statistics for steel and wooden vessels launched during the years 1916 and 1914, classified according to gross and net tonnage and character of power used; and a bulletin similar in form to those issued for the various industries covered by the last manufactures census is in process of preparation.

## ELECTRICAL INDUSTRIES: 1917.

The census of electrical industries covers central electric light and power stations, street and electric railways, telephones, telegraphs, and municipal electric fire-alarm and police-patrol signaling systems. This inquiry has been made at quinquennial intervals, beginning with that for the year 1902, under the authority of the act establishing the permanent Census Bureau, and the current one, therefore, relates to the calendar year 1917. The preparation of index cards containing names and locations of establishments is now in progress.

In revising the schedule for electric railways, various inquiries under "Financial statistics" have been changed or regrouped in order to conform to the latest system of accounting adopted by the Interstate Commerce Commission.

A representative of the American Telephone & Telegraph Co. visited the Bureau in August and took part in a conference held for the purpose of establishing the form of the telephone schedule. Through the cooperation of the Post Office Department, a circular letter will be addressed to approximately 25,000 postmasters throughout the United States, requesting the names and locations of farmer or rural telephone lines or systems. The information supplied by the postmasters will supplement that obtained from the schedules used at the 1912 inquiry.

It is the intention to collect the reports for the census of electrical industries, so far as possible, by correspondence. A copy of the returns made for the census of 1912 will be sent to each establishment covered by that inquiry, together with a blank schedule for 1917, with the request that a similar report be furnished for this census.

## VITAL STATISTICS.

The regular annual reports presenting statistics on mortality for the calendar years 1914 and 1915 were completed and published during the fiscal year 1917. The report giving birth statistics for the calendar year 1915 was issued early in August, 1917.

Reports giving mortality statistics and birth statistics for 1916 will be ready for the printer about December 1, 1917.

As set forth in my last report, a birth-registration area comprising the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, Michigan, and Minnesota and the District of Columbia was established toward the close of the calendar year 1915. This area, although it represented barely 10 per cent of the territorial extent of continental United States, had an estimated population of about 32,000,000, or more than 31 per cent of the total for the country. Maryland, Kentucky, and Virginia have since been added. Tests of the completeness of birth registration are now in progress in New Jersey and Indiana, and on their completion other tests will be begun in North Carolina, Ohio, Utah, and Wisconsin. The results obtained so far indicate that the registration area for births will be materially increased during the present year. The statistics gathered thus relate to an area having a population of such size and heterogeneity as to render them of great value and significance.

The reports show, for the registration area and its subdivisions, number of births, by sex and month; number of births, by sex, color, and parent nativity of white children; number of births and deaths, with excess of births over deaths and number of births per 100 deaths; and number of births of white children, by country of birth of father and of mother. Birth and infant-mortality rates in foreign countries are also shown.

The registration of deaths—which, like birth registration, is necessarily, under the Constitution of the United States, a function of the State and municipal authorities—is constantly becoming more nearly complete, the registration area having been extended until it now comprises 26 States, 46 cities in other States, and the District of Columbia, and contains over 70 per cent of the total population of the country.

A reprint was made of the Physicians' Pocket Reference to the International List of Causes of Death during the fiscal year, and a copy was sent to every physician in the United States whose name appeared in the American Medical Directory for 1916.

Transcripts of birth and death statistics for 1917 are being received and edited.

The census reports presenting vital statistics maintain a high standard of usefulness, which will be raised still further by the extension of the scope of certain branches of the work as explained in the subsection relating to vital statistics in the section headed "Plans for future work."

## FINANCIAL STATISTICS OF CITIES: 1916.

The annual report presenting comparative financial statistics of cities having 30,000 inhabitants or more, relating, in the case of each

city, to its latest fiscal year terminating prior to July 1, 1916, was completed and sent to the printer in December, 1916, or within less than six months from the close of the fiscal period covered. This report covers (1) total and per capita receipts from the various sources of revenues; (2) total and per capita payments for expenses, interest, and outlays, the payments for expenses and outlays being given in detail; (3) total value of city properties; (4) total and per capita indebtedness; and (5) estimated true value and assessed valuation of taxable property, tax levies, rates, and methods of assessment. In addition, data on governmental organization were collected which show number, terms of office, methods of election or appointment, and annual salaries of specified city officials; form of government under which the city operates; if under commission form, departments over which each commissioner presides, and date when commission plan became operative; and a condensed history of the modern movement toward alteration of governmental organizations. Definitions of the terms employed in municipal accounting and a discussion of the difficulties encountered and methods employed in securing comparable data are given in the introduction.

All the field work on the current inquiry will be finished by the close of October, 1917, and copy for the report will be in the hands of the printer by the end of December.

The purpose of the reports on municipal finance, which have been published annually by the Bureau of the Census since 1902, is to present comparable statistics of cities for the information of city officials, civic bodies, students of economics interested in city management, and citizens who take an interest in questions relating to city betterment. To secure statistics that are comparable, the Bureau sends its agents to the various cities to translate into a standard classification the data contained in their accounts and reports, thus securing a uniformity of presentation that could not otherwise be obtained. The wide-awake citizen interested in the physical and financial welfare of his city desires to ascertain the weak points in its governmental methods by comparing its operations with those of other cities of similar size and situation. To provide the data to make this comparison possible is the purpose of the inquiry conducted by the Bureau of the Census. In so far as this purpose is accomplished, the city is assisted in securing better management and more economical administration of its public funds. Better management results in improved health conditions, greater recreational opportunities, and wider scope for educational activities; and more economical administration, whether securing better service for moneys expended or retaining in the city treasury for future use moneys formerly wasted, results in benefit to every taxpayer.

The classification of receipts and payments presented in the schedules of the Bureau of the Census has been indorsed by many of the leading civic organizations and has been adopted by a large number of cities and several States.

It is worthy of mention that the chief statistician in charge of the division of statistics of cities and 11 employees of that division have taken a special course in accounting which requires from 10 to 15 hours a week and about 51 weeks of actual study to complete.

## GENERAL STATISTICS OF CITIES: 1916.

The report on this inquiry, which also refers in the case of each municipality having 30,000 or more inhabitants to its latest fiscal period terminating prior to July 1, 1916, was completed in December, 1916, and relates to the general subject of recreation. The principal features of this report, which is much in demand, are statistics of parks, playgrounds, museums and art galleries, zoological collections, music and entertainment, swimming pools and bathing beaches, and other special facilities for recreation.

The report presenting general statistics of cities for 1917, now in process of compilation, will give detailed data on fire departments in all cities having estimated populations of 30,000 and over, covering organization, equipment, grades and salaries, special training of firemen, appointments, promotions, pension systems, and other items considered of interest and value by authorities on this subject, who were consulted before the schedule was drafted.

Another subject to be included in the general-statistics report for 1917 is that of specified sources of city revenues. Under this head will be included data in regard to certain methods of providing revenues, such as deriving them from business taxes collected without the issue of licenses—for example, on gross earnings of insurance companies; from special assessments for public improvements, as for street paving, sidewalks, and sewer construction, with the percentage of cost paid by the benefited property owners; and from other methods of assessments, as for street cleaning and sprinkling. There will also be shown the kinds of other business licenses, the amounts derived from them, the rates of license fees, and the periods for which the licenses are granted. This information has been requested by city officials for a number of years. The annual financial-statistics reports show the amounts collected from such sources, but not the methods of levying and collecting.

The field work on the current general-statistics inquiry will be finished by October 15, 1917, and the copy for the report will be in the hands of the printer by the end of December.

## FINANCIAL STATISTICS OF STATES: 1916.

The report giving comparative financial statistics for the 48 States and relating in each case to the latest fiscal year terminating prior to July 1, 1916, was completed in March, 1917, and sent to the printer shortly thereafter. The annual reports on this subject, of which the one referred to is the second, are similar in scope to those presenting financial statistics of cities. The general classifications are the same, changes having been made only when necessary in order to show data for the functions exercised by State governments that are not generally exercised by city governments. These statistics are in high favor with the State officials, and the annual visits of the agents of the Bureau to the several States for the purpose of collecting them will have great influence in bringing about the installation of proper accounting systems, as in the case of the cities having populations in excess of 30,000, for which similar statistics are published.

All the field work on the current State-finance investigation will be finished by the close of October, 1917, and copy for the report will probably be sent to the printer some time in February, 1918.

#### COTTON AND TOBACCO STATISTICS.

*Cotton and cotton seed.*—During the fiscal year the Census Bureau conducted its regular inquiries in regard to cotton and cotton seed. The reports issued comprised 10 relating to cotton ginned to specified dates during the ginning season; 12, published monthly during the year, relating to cotton consumed, imported, exported, and on hand, and to active consuming cotton spindles; 9, published at monthly intervals, relating to cotton seed received, crushed, and on hand, and to cottonseed products manufactured, shipped out, and on hand; 4, published quarterly, pertaining to bleached cotton fiber consumed in the manufacture of explosives; 2, published quarterly, relating to unbleached cotton fiber consumed in the manufacture of absorbent and medicated cotton; an annual bulletin on cotton production and distribution for the season of 1915-1916; and an annual pamphlet giving statistics on cotton production from the crop of 1916.

The periodical reports on cotton ginned, the monthly reports relating to cotton consumed, etc., and the monthly reports pertaining to cotton seed and cottonseed products are issued in the form of postal cards, which are mailed to a large number of growers, ginners, manufacturers, dealers, and others interested in the cotton and cottonseed industries. The annual bulletin presents, in amplified form, with text discussion, the statistical material contained in the postal-card reports for the year, together with other information not given in those reports.

The monthly reports on cotton seed and its products and the quarterly reports on cotton fiber consumed in the manufacture of explosives and of absorbent and medicated cotton mark the beginning of three new series of reports pertaining to the cotton and cottonseed industries, authorized by the act of August 7, 1916. Statistics relating to cottonseed products and linters obtained were published quarterly prior to the passage of this act under the general authority contained in the legislation authorizing the collection and publication of cotton statistics; but those now being issued at monthly intervals under authority of the act of August 7, 1916, cover the subject in much greater detail.

*Stocks of leaf tobacco held by manufacturers and dealers.*—During the fiscal year the Bureau issued, in the form of post cards, three quarterly reports relating to stocks of leaf tobacco, classified according to principal types, held by manufacturers and dealers. Under authority contained in the act of April 30, 1912, the Bureau had issued reports on this subject at semiannual intervals; but in compliance with the terms of the act of May 10, 1916, these reports have been published quarterly, beginning with that for October 1, 1916. At the close of each calendar year there will be issued a bulletin presenting the statistics contained in the several quarterly reports for the same year, together with data as to acreage, production, imports, exports, consumption, etc.

## REPORTS RELATING TO SPECIAL CLASSES OF THE POPULATION.

The work on these reports has been considerably delayed because of the inadequate size of the Census Bureau's force and the necessity for employing it on other work considered to be of more pressing importance. The fundamental or basic statistics, which are of most interest to the general public, have, however, been issued some time since in bulletin form. The final and detailed reports have been prepared with a great deal of care in the belief that their permanent value was so great as to justify the delay due to the taking of sufficient time to make a thorough and exhaustive analysis of the figures, especially in view of the fact that the primary or fundamental figures had already been published in bulletin form.

*The blind.*—The report on the blind, which was completed and published during the fiscal year, is probably the most comprehensive and thorough statistical treatment of the subject ever published in English. It has been very favorably received and highly commended by specialists and by persons engaged in philanthropic work on behalf of the blind. The letters acknowledging its receipt and the press notices indicate that the interest attaching to a report of this character is very considerably enhanced if in addition to elaborate statistical tables it comprises a careful study and interpretation of the data.

*Deaf-mutes.*—The preparation of the report on deaf-mutes was completed shortly after the close of the fiscal year, and it is now in the hands of the printer. This report also has been very favorably received and commended by specialists and others interested in the subject, to whom it was submitted in proof.

*Negroes.*—The report on Negroes, which is now in type and will soon be published, is a compilation of statistics covering the entire period from 1790 down to the present time, including data from the annual mortality reports from 1900 to 1915, as well as from reports of the decennial censuses. The report thus presents, so far as data are available, a complete statistical account of the Negro race in the United States. Not only is this special report of permanent statistical value in itself, but it contains a vast amount of material which will be useful and easily available for incorporation in the Fourteenth Census reports. To some extent, therefore, the work done in compiling this report is preparatory work for the Fourteenth Census.

*Prisoners and juvenile delinquents.*—This report also is now in type and will be issued in the near future. As in the cases of the other reports relating to special classes, it will present a thorough and exhaustive analysis of the statistics which it contains.

## RELIGIOUS BODIES.

The census of religious bodies is, under the law, taken at decennial intervals. The current inquiry relates to the calendar year 1916. The report, which will be published before the close of the present fiscal year, will present, for each religious denomination, detailed statistics in regard to church membership, church property, number and salaries of ministers, Sunday schools, etc.

Because of the pressure of other work, preparations for the 1916 census of religious bodies could not be begun until October of that year; and the progress of the work was interrupted somewhat during

the following May and June by reason of the necessity for employing considerable numbers of clerks on special work for the Treasury and War Departments.

Conferences were held with representatives of religious organizations, at which suggestions were made which have aided greatly in determining the extent and form of the inquiries to be made on the schedules. Notices regarding the census of religious bodies were sent during the year to the religious press generally. These notices were cordially received, and in several instances translations were made for insertion in papers other than English.

This census will cover about 204 denominations, comprising 240,000 churches. The statistics for 124 of these denominations are to be secured wholly by mail, for 9 denominations partly by mail and partly by contract, and for the remaining 71 denominations wholly by contract. The first church schedules were mailed on January 4, 1917. At the close of the fiscal year schedules had been sent to 213,379 churches, and the total number returned was 128,991, or about 60 per cent of the number sent; and to date (Sept. 30) a total of 232,288 schedules have been sent out, of which 167,186, or 72 per cent, have been returned.

OFFICIAL REGISTER.

The Official Register of the United States is now in course of preparation. This publication consists mainly of a directory of Federal employees, showing name, designation, compensation, branch of service in which employed, etc. (See reference to Official Register in section headed "Legislation needed.")

SPECIAL AND MISCELLANEOUS LINES OF WORK.

MARRIAGE AND DIVORCE.

Statistics of marriage and divorce covering the calendar year 1916 are now being collected. The canvass thus far has been conducted entirely by mail.

Statistics pertaining to the subject of marriage and divorce for the 40-year period 1867 to 1906, inclusive, have heretofore been collected and published, and it had been the intention to compile such statistics for the 10-year period 1907-1916; but because of the national crisis, as a result of which the Census Bureau has been called upon to do considerable emergency work for other departments whose activities are intimately connected with war preparations, it has been decided to make the current inquiry relating to marriage and divorce cover only the year 1916.

The report will show, among other things, by counties, the number of marriages performed and the number of divorces granted during the year 1916, with detailed statistics for divorces, covering such matters as duration of marriage; cause of divorce; party to which granted, and whether contested; number of children; and whether alimony was asked, and whether granted.

MONOGRAPH ON CANCER.

A monograph entitled "Mortality from Cancer and Other Malignant Tumors in the Registration Area of the United States, 1914," was completed and published during the past fiscal year. This mono-



graph presents, in much greater detail than that given in the annual reports issued by the Bureau, statistics relating to deaths from cancers and other malignant tumors throughout the registration area in 1914. The work was undertaken at the request of the American Society for the Control of Cancer. Both this society and the American Public Health Association are especially interested in the monograph and have been active in cooperating with the Census Bureau in its compilation.

#### SUPPLEMENTARY OCCUPATION STATISTICS.

At times when clerks could be spared from other and more pressing lines of work the tabulation of occupation statistics supplementary to those published as a part of the reports of the Thirteenth Census has been carried on. All information of this character has considerable permanent value in itself, but the main reason for compiling it is found in its great value as affording a proper measure of comparison with the occupational data to be secured in 1920. This is particularly important in view of the fact that the classification now employed was not in use prior to 1910.

A tabulation showing the marital condition of women gainfully occupied was prepared at the request of the American Labor Association for use in relation to the subject of health insurance, and particularly maternity insurance. The work was completed in March, 1917, and the results were transmitted to the secretary of the above-named association for its information and for use in States where legislative action in respect to health insurance had been taken or was then pending; and a press summary and mimeograph copies of tables were made available for the use of the press.

Other phases of the work on supplementary occupation statistics relate to occupations of the foreign born and of women and children.

#### CENSUS OF CITY DISTRIBUTION.

In view of the great importance of city cartage as an element in the total cost of goods to the consumer, the Bureau of the Census, in the latter part of the calendar year 1916, at the direction of the Secretary of Commerce, made a brief preliminary survey in the city of Washington covering four important classes of commodities—coal and wood, milk, ice, and department-store merchandise. The results of this survey, which were published in the form of a preliminary statement dated January 3, 1917, were considered by the Secretary to be sufficiently striking to justify him in directing the Census Bureau to make a further and more exhaustive inquiry. Unfortunately, the Bureau had not available either the force or the funds with which to extend the investigation to cities other than Washington; but an inquiry was made covering gross sales and delivery costs during the year 1916 in 120 carefully selected establishments in this city, representing 17 lines of retail business (some of which did a wholesale business also), together with 8 wholesalers of meat products, the report of which was published on April 21, 1917. On the basis of the results obtained from this canvass, the total transportation and cartage costs applying to commodities for public consumption in Washington were estimated, for the year 1916, at \$15,550,000 (of which amount slightly more than one-half represented cartage costs alone),

this being equivalent to approximately \$40 for each person, or \$190 for each family.

These figures emphasize the importance of the subject; and it is hoped that at some future time the Bureau will be in a position to make a more exhaustive canvass, covering a number of representative cities throughout the country.

#### FISHERIES OF NEW YORK CITY.

On August 23, 1917, the Secretary of Commerce authorized the Director of the Census to make a tentative collection of data pertaining to the fisheries of New York City during the period from September 1 to December 31, 1917, the details of the method to be employed in doing this work to be arranged by the Director of the Census and the Acting Commissioner of Fisheries. It is thought that by the close of the period specified it will be possible to determine the feasibility of making the inquiry a permanent one.

Since the conditions in New York City differ radically from those at other ports at which fishery agents are stationed, it will be necessary to develop a special scheme for collecting and reporting the data. The Director of the Census and the Acting Commissioner of Fisheries accordingly agreed that it would be advisable to have a field agent of the Bureau of Fisheries, who was acquainted with the New York fish trade, assist in the work for the first two or three weeks. An employee of the Census Bureau was designated to make the inquiry and entered on duty September 1, 1917.

The data to be collected comprise (1) landings of fresh fish by American fishing vessels and boats and (2) receipts of fresh fish by rail and steamer. The daily receipts will be published in monthly bulletins similar to those issued by the Bureau of Fisheries for the ports of Portland, Me.; Gloucester and Boston, Mass.; and Seattle, Wash.

#### EDIBLE VEGETABLE OILS.

The manufacture of edible oils from seeds other than cotton seed is of recent origin in the United States, only a few concerns engaged in the production of such oils having been reported at the manufactures census of 1914. Because of the rapidly increasing importance of this industry, the Bureau of Chemistry, of the Department of Agriculture, requested the Census Bureau to make a special canvass of it for the calendar year 1916. This was done, and the results were published in June, 1917, in the form of a press statement in which it was shown that 112 establishments produced during 1916 a total of 262,558,661 pounds of oils from peanuts, mustard seed, kapok seed, rape seed, sunflower seed, soy beans, walnuts, corn, copra, palm kernels, and olives. The movement to grow soy beans, peanuts, and other oil-bearing seeds and nuts for the production of oil has received a great impetus, and it is believed that several hundred establishments will be engaged in crushing the crops grown in 1917.

#### SPECIAL CENSUS OF POPULATION.

A special census of Shreveport, La., was taken as of February 15, 1917, at local request and expense.

## BULLETIN ON EXECUTIVE CIVIL SERVICE.

The Bureau is preparing a statistical report on the employees in the Federal executive civil service on July 1, 1916. Similar reports were published relating to the years 1903 and 1907. Individual cards to the number of about 250,000 have been filled out and returned by the different departments and offices of the Government and are now being edited preparatory to tabulation. This work is being carried on in cooperation with the Bureau of Efficiency, which is utilizing the data as a basis for computing the cost of civil-service pensions.

## LIFE TABLES.

As shown by my last report, the Census Bureau 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, New York, New Jersey, Indiana, Michigan, and the District of Columbia. These tables, which were published in June, 1916, are similar to those prepared by life insurance companies but differ from the latter in that they relate to the entire population of the area covered instead of being limited to risks selected through medical examination and otherwise. A similar set of tables exhibiting mortality conditions in 1890 and 1901 and during the decennium 1901 to 1910, inclusive, is now in course of preparation, and in the report presenting these tables will be given the original data on which they are based, together with an explanation of the methods employed in computing them.

A reprint of the tables already published was made from the original plates during the fiscal year 1917.

## STATISTICAL DIRECTORY OF STATE INSTITUTIONS.

As explained in my previous report, the Bureau has been compiling data for a statistical directory of State institutions for defective, dependent, and delinquent classes, which will show for each institution of that character the number of inmates; cost of maintenance; value of plant; acreage of grounds or land; numbers of officials, assistants, and employees; and other data. The returns are now nearly complete, only a few institutions remaining for which the schedules have not yet been received. The classes of institutions covered by this inquiry include State prisons and penitentiaries and State institutions for the insane, feeble-minded, epileptic, tuberculous, blind, deaf, and dependent. In addition to the data for the individual institutions the report will present general statistics for the States and summaries with maps indicating the location of the institutions, the density of population, etc.

## HISTORY AND GROWTH OF THE UNITED STATES CENSUS.

A volume having this title, published in 1900, gave a historical review of American census taking, showing the items of information called for by each of the schedules from census to census, publications, cost of censuses, summary of census legislation, etc. The material necessary for bringing up to date the information contained

in this volume is now being compiled, and there have been assembled nearly all the forms required to make a complete chronological presentation of the various census inquiries, showing the changes and developments which have taken place. This publication will be in the form of an additional volume compiled along the same lines as the original.

#### SEARCHING OF CENSUS RECORDS TO DETERMINE AGES.

The work of searching the census records to determine ages of individuals was considerably increased as a result of the registration, under the selective draft act, of men 21 to 30 years of age, inclusive. In order to establish the ages of men who failed to register, but were believed to be within the specified age limits, recourse to the enumerators' returns was necessary in many cases. The returns made at the census of 1900 were especially valuable for this purpose, since, in addition to the age at the last birthday, they also showed the month and year of birth.

#### THE CENSUS EXHIBIT.

The Census Bureau's exhibit at the Panama-Pacific International Exposition, which was awarded the grand prize and gold medal "For an exhibit of methods and machines employed in the collection and tabulation of statistics," was returned to the Bureau at the close of the exposition and has been made a permanent exhibit. It comprises an automatic tabulating machine, a sorting machine, a punching machine, and a large number of charts and maps, the latter showing graphically some of the results of the Thirteenth Census and of important inquiries that have been made since that census.

The establishment of this exhibit as a permanent one has been amply justified by the numerous requests for its display at expositions and by the interest in census work which it has aroused. It was shown at the meeting of the Western Pennsylvania Exhibition Society held at Pittsburgh during the month of September, 1916; at the Electrical Exposition and Motor Show in New York City from October 6 to 21, 1916; and at the Industrial Exposition and Export Conference held at Springfield, Mass., from June 23 to 30, 1917. A portion of the exhibit was also on display at the Annual Convention of the Chamber of Commerce of the United States held at the New Willard Hotel, Washington, D. C., January 31 to February 3, 1917. At each of these expositions publications of the Census Bureau were distributed by the persons in charge of the exhibit.

When not in use elsewhere this exhibit is installed in the Commerce Building and is always open to the public.

#### ASSISTANCE RENDERED OTHER DEPARTMENTS.

*Estimates of population for use of War Department.*—An important piece of work begun by the Census Bureau just before the close of the fiscal year and completed shortly afterward was the preparation of estimates of population for use in connection with the registration of men subject to military duty and with the apportionment of the draft. The first set of these estimates was prepared in May for use in appor-

tioning supplies of registration cards to the various counties and cities; and the second set, prepared late in June, was based on the registration and was intended solely for use in the apportionment of the draft among the States and their subdivisions. Both sets were prepared at the request of the Provost Marshal General of the War Department.

In making the latter estimates, the Census Bureau was confronted by the necessity of securing the greatest possible measure of justice to each community. The method adopted, therefore, was based on the assumption that the registrants in each community represented a fixed proportion of the population. This proportion for the United States as a whole was determined to be equal to 9.32 per cent; and the population estimates for the various States, cities, and counties were therefore computed by dividing the number of registrants by 0.0932. This method yielded the fairest possible basis for the apportionment of the draft, since the localities whose population was overestimated were those in which there was an excess of men 21 to 30 years of age, inclusive, while the localities whose populations were underestimated were those in which the proportions of men of these ages were smaller than the average.

Any other method which might have been employed would inevitably have resulted in overstating the population of some communities which had relatively small proportions of men 21 to 30 years of age; and the seriousness of the injustice that would thus have been brought about may be realized when the fact is taken into consideration that the proportion which men of these ages represent of the total population is fully three times as great in some localities as in others.

*Allocating enlistments and other work for the office of the Provost Marshal General of the War Department.*—Considerable work was done for the office of the Provost Marshal General of the War Department in connection with the allocation of enlistments in the Regular Army from April 2 to June 30, 1917, inclusive. The 117,974 men enlisting in the Regular Army during this period represented a portion of the credits to be applied to the gross quotas of the States and their 3,300 subdivisions in the apportionment under the selective draft act.

Other work done for the Provost Marshal General's Office included the addressing of franks and envelopes for use in the transmission of registration cards and instructions to governors, mayors, and sheriffs throughout the United States and the computation of the net quotas of the several States and Territories and the District of Columbia in the apportionment of the 687,000 men drafted on the first call.

*Liberty Loan work.*—A considerable number of clerks were employed for about a week in addressing envelopes and mailing copies of the Des Moines speech of the Secretary of the Treasury in regard to the Liberty Loan. This work was greatly appreciated by the Secretary of the Treasury.

*List of shipbuilding establishments.*—Special information was compiled from the 1916 shipbuilding inquiry for the use of the United States Shipping Board, and similar information, together with summaries of wage earners employed in shipbuilding establishments, has been furnished the Department of Labor.

*Total amount of war work done.*—The total time spent by the Census Bureau's force on war work, or work having some bearing on war

preparations—including, in addition to that already specified, work for the American National Red Cross, the Department of Justice, and the Council of National Defense and miscellaneous work for other governmental establishments or for individuals—to September 30, 1917, was equivalent to 4,550 days, or nearly 15 years, for one employee.

*Assistance to Federal Trade Commission in compilation of coal data.*—During the months of August and September, 1917, considerable assistance was rendered to the Federal Trade Commission in connection with the compilation of data relating to cost of production of coal at the mines and to prices at which coal has been sold at retail.

*Ages of pensioners.*—The value of the old decennial census records has been effectively demonstrated during recent years by the increasing number of requests from the Pension Bureau for data needed to establish the ages of pensioners, approximately 3,500 such requests having been received during the fiscal year 1917. Since, in order to obtain increases of pensions, soldiers and their widows are obliged to show evidence of their ages, and since throughout the greater part of the country no reliable birth records are in existence, or at least none have been maintained until recently, it has been necessary in many cases to obtain such evidence from Census records.

#### WORK IN MECHANICAL LABORATORY.

During the year the mechanical laboratory maintained the machines used in the Census Bureau and the Bureau of Immigration, made repairs to computing machines, rearranged the keyboards of 10 pantograph punches to conform to the requirements of the card used by the Eight-Hour Commission in tabulating its statistics, and made definite and satisfactory progress on the construction of the tabulating machines to be used in the Fourteenth Census. A new automatic tabulating machine was completed toward the close of the fiscal year, given a practical test in connection with the work of tabulating the mortality data of the division of vital statistics, and found to be entirely satisfactory and a great improvement over the machine used in the Thirteenth Census. This machine is to be used as a model in constructing 25 tabulating machines for the Fourteenth Census work. Many of the parts for these machines have already been manufactured in the mechanical laboratory or purchased in the open market upon specifications prepared by the Bureau's chief mechanic.

Considerable experimental work has been done on one of the sorting machines during the last six months with a view to bringing it to a higher state of perfection. One of the automatic punches used in the Thirteenth Census was rebuilt during the year and will be tested against an improved commercial key punch in order to determine which machine is better adapted to the punching work of the next decennial census.

If the Bureau obtains the necessary appropriations for the next fiscal year, it is planned to have the 25 tabulating machines, 5 extra tabulator bases, and 114 extra counting units of 10 counters each constructed and 19 card-sorting machines and 5 card-counting machines given a thorough overhauling, by July 1, 1919, the beginning of the Fourteenth Census period.

## INTEGRATING COUNTER.

For some years past the officials of the Census Bureau have had in mind the development of an "integrating counter"—that is, a counter which will not merely record and add units but will also record and add numbers, thus performing automatically the work done by the operator of an adding machine—for use in tabulating various classes of the data gathered by the Census Bureau, such as those pertaining to agriculture and manufactures. The need of an integrating tabulator for doing cost accounting and similar work in other governmental offices has also been recognized. In 1911 some sketches and drawings for a model integrator were made, but work along this line soon had to be discontinued in order that the entire energies of the mechanical-laboratory force might be directed toward the development of a sheet-printing device for use in connection with the automatic tabulator employed by the Bureau, and until very recently nothing further has been done in regard to the integrating counter.

Several types of integrating machines are now manufactured by private companies, but their use by the Bureau is undesirable not only by reason of their cost but also because the control of the tabulating devices used by the Government should not be in the hands of one company.

At the request of the Secretary of Commerce, Congress granted to the Census Bureau, in the legislative, executive, and judicial appropriation act for the fiscal year 1918, \$60,000 for expenditure in the development, improvement, and construction of tabulating machines, and \$30,000 of this amount has been allotted for use in the development and construction of an integrating counter. A force has been organized for the work, the patent situation has been carefully examined, machinery and supplies are being purchased, and other preliminary work has been begun.

## PUBLICATIONS ISSUED.

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

Class and title.	Date issued.	Pages.	Edition.
JULY 1, 1916, TO JUNE 30, 1917.			
Reports (cloth bound and of quarto size except as otherwise indicated):			
Mortality statistics: 1914.....	Sept. 25, 1916	714	6,000
Mortality statistics: 1915.....	Apr. 27, 1917	707	5,000
Mortality from cancer and other malignant tumors in the registration area of the United States: 1914.....	Jan. 23, 1917	212	2,000
The blind in the United States: 1910.....	Apr. 10, 1917	342	4,000
Financial statistics of cities: 1915.....	Aug. 7, 1916	338	7,500
Financial statistics of States: 1915.....	Sept. 5, 1916	125	5,000
Plantation farming in the United States (paper).....	Jan. 25, 1917	40	3,000
Abstract of the census of manufactures: 1914 (octavo).....	June 22, 1917	722	10,000
Total.....		3,200	42,500

Class and title.	Date issued.	Pages.	Edition.
<b>Bulletins (quarto):</b>			
No. 132—Abstract, financial statistics of cities: 1915.....	Sept. 22, 1916	117	3,000
No. 133—Estimates of population, 1910-1916, including results of State enumerations made in 1915.....	Dec. 20, 1916	46	7,000
No. 134—Cotton production and distribution, season of 1915-16.....	Dec. 23, 1916	99	45,000
Total.....		262	55,000
<b>Census of manufactures: 1914—</b>			
State bulletins—			
Arkansas.....	June 8, 1917	23	1,200
Georgia.....	May 7, 1917	27	1,800
Idaho.....	June 2, 1917	15	900
Indiana.....	June 8, 1917	47	2,600
Louisiana.....	June 22, 1917	27	1,300
Mississippi.....	May 24, 1917	19	1,200
Nevada.....	Apr. 21, 1917	13	900
North Carolina.....	Feb. 28, 1917	25	2,600
Oregon.....	May 8, 1917	25	1,200
Rhode Island.....	June 8, 1917	31	1,100
South Dakota.....	May 7, 1917	15	1,000
Utah.....	May 8, 1917	21	800
Vermont.....	June 26, 1917	25	1,600
West Virginia.....	Mar. 24, 1917	25	1,000
Wyoming.....	Apr. 24, 1917	13	600
Total.....		351	20,600
<b>Industry bulletins—</b>			
Flour-mill and gristmill products.....	June 26, 1917	20	6,400
Glass.....	June 4, 1917	13	1,500
Ice.....	Mar. 24, 1917	15	5,600
Paper and wood pulp.....	June 8, 1917	19	2,500
Power laundries.....	July 31, 1916	28	8,500
Rice cleaning and polishing.....	Sept. 23, 1916	9	8,000
Total.....		104	32,500
Report of special census (octavo): Population of Shreveport, La. (enumerated Feb. 15, 1917).....	Apr. 17, 1917	8	300
<b>Miscellaneous publications:</b>			
Census of manufactures: 1914—General totals for the United States, by geographic divisions, States, and Territories, 1914, 1909, 1904, and 1899 (octavo).....	Dec. 13, 1916	26	10,000
Circular No. 2—Circular of information concerning Census publications: 1700-1916 (octavo).....	Feb. 9, 1917	124	2,000
Circular No. 5—Tentative program of the Bureau of the Census: 1916-1919 (octavo).....	Aug. 14, 1916	14	5,000
Annual report of the Director of the Census to the Secretary of Commerce, fiscal year 1916 (octavo).....	Nov. 10, 1916	31	2,500
Study of cartage costs in the city of Washington (octavo).....	Apr. 28, 1917	14	2,000
Manual of the international list of causes of death (second reprint; revised) (octavo).....	July 25, 1916	307	500
The story of the Census: 1790-1916 (reprint; revised) (octavo).....	Dec. 7, 1916	38	5,000
Advance tables of cotton production in the United States—crop of 1916 (quarto).....	June 26, 1917	43	41,000
Physicians' pocket reference to the international list of causes of death (2½ by 6 inches).....	Sept. 19, 1916	28	200,000
32 reports, in card form, relating to cotton and cotton seed.....	July 14, 1916 June 22, 1917	32	1,280,000
3 reports, in card form, relating to stocks of leaf tobacco.....	Nov. 8, 1916 Jan. 31, 1917 May 2, 1917	3	61,000
Total.....		660	1,600,000
Grand total, July 1, 1916, to June 30, 1917.....		4,585	1,769,900
JULY 1 TO SEPTEMBER 30, 1917.			
<b>Reports (cloth bound and of quarto size except as otherwise indicated):</b>			
General statistics of cities: 1916.....	Aug. 18, 1917	88	4,500
Financial statistics of cities: 1916.....	Sept. 22, 1917	375	6,500
Financial statistics of States: 1916.....	Sept. 4, 1917	127	3,500
Birth statistics for the registration area of the United States: 1915 (paper).....	Aug. 7, 1917	78	5,000
Total.....		668	19,500



Class and title.	Date issued.	Pages.	Edition.
Census of manufactures, 1914:			
State bulletins—			
Alabama.....	Sept. 22, 1917	29	1, 100
California.....	July 25, 1917	63	2, 600
Connecticut.....	Aug. 23, 1917	45	1, 700
Delaware.....	Sept. 11, 1917	19	700
District of Columbia.....	Aug. 16, 1917	13	600
Florida.....	July 23, 1917	21	1, 000
Kentucky.....	Aug. 29, 1917	27	1, 200
Maine.....	Aug. 20, 1917	29	1, 300
Minnesota.....	July 25, 1917	41	2, 300
Missouri.....	Aug. 22, 1917	43	2, 600
Montana.....	July 23, 1917	17	1, 000
Nebraska.....	July 23, 1917	23	1, 500
New Hampshire.....	Aug. 23, 1917	27	1, 000
New Mexico.....	July 23, 1917	11	800
North Dakota.....	Aug. 28, 1917	15	1, 000
South Carolina.....	July 23, 1917	21	1, 100
Tennessee.....	July 23, 1917	31	1, 500
Texas.....	Sept. 25, 1917	35	2, 500
Virginia.....	Aug. 22, 1917	33	1, 600
Washington.....	July 11, 1917	33	1, 600
Wisconsin.....	Sept. 5, 1917	39	2, 600
Total.....		615	31, 200
Industry bulletins—			
Automobiles.....	Aug. 15, 1917	19	2, 500
Butter, cheese, and condensed milk.....	Aug. 31, 1917	23	5, 250
Glucose and starch.....	Aug. 20, 1917	9	1, 300
Oilcloth and linoleum.....	Aug. 20, 1917	8	1, 000
Soap.....	July 11, 1917	11	1, 600
Sugar.....	July 2, 1917	13	1, 300
Turpentine and rosin.....	July 11, 1917	10	1, 300
Total.....		93	14, 250
Miscellaneous publication: Legislation relating to the Bureau of the Census.....	Aug. 20, 1917	71	100
Grand total, July 1 to September 30, 1917.....		1, 447	65, 050

### PLANS FOR FUTURE WORK.

#### PREPARATIONS FOR FOURTEENTH CENSUS.

Perhaps the most serious obstacle in the way of the prompt and efficient handling of decennial censuses heretofore has been the lack of time given to the preliminary work previous to the actual enumeration. The Bureau of the Census was made a permanent organization at the close of the Twelfth Census period (July 1, 1902), primarily for the purpose of facilitating the work of future decennial censuses. If the Bureau is to succeed in any reasonable measure in justifying its permanent establishment—at least so far as this primary purpose is concerned—it must have, some time prior to the beginning of each decennial census period, a well-organized administrative and clerical force to serve as a nucleus for the enormously expanded organization necessary for the conduct of the decennial census work.

Furthermore, in order that preparations for the decennial census may be made intelligently and without waste of effort, it is necessary for the Bureau to know long in advance of the actual enumeration the exact nature and extent of the information it is to be required to secure, compile, and publish. In this connection Director North, in his annual report to the Secretary of Commerce and Labor, under date of December 1, 1907, said concerning legislation for the Thirteenth Census:

The Director of the Census is entitled to at least two years in which to prepare for the greatest single piece of work which the Government undertakes, and in order to make this preparation intelligently and to the best possible advantage he should know for that length of time just what are the provisions in the law under which the work is to be undertaken.

The Fourteenth Census period will begin July 1, 1919, and will end on June 30, 1922. Realizing the importance of making proper preparations for the taking of the Fourteenth Census, the Director of the Census, on March 20, 1917, issued an order to the officials of the Bureau in which attention was called to this matter and it was directed that current inquiries of the Bureau should be finished, so far as possible, and all the preliminary work for the next decennial census practically completed by the beginning of the census period.

In compliance with this order preparations for the Fourteenth Census have already been begun. These preparations include a consideration of the act providing for the Thirteenth and subsequent decennial censuses, with a view to determining whether amendments are required to adapt it to the needs of the Fourteenth Census and, if so, the character of such amendments; revisions of the schedules to be used in the several field canvasses; and work in the mechanical laboratory.

At about the close of the fiscal year a committee composed of officers of the Bureau was organized to consider what changes, if any, were necessary in the existing legislation. This committee has since been holding weekly meetings and will continue to do so until it has given thorough consideration to every section of the act providing for the Thirteenth and subsequent decennial censuses, after which it will formulate its recommendations in time for presentation at the opening of the next session of Congress.

In making its plans for taking the Fourteenth Census the Bureau has invited and obtained the cooperation of outside statisticians and others interested in census work. During the week beginning August 20, 1917, a series of conferences were held between representatives of the Census Bureau and a committee of statisticians of the Department of Agriculture in regard to changes in the schedules used in collecting agricultural data. The representatives of the Census Bureau, eight in number, had been temporarily appointed as special agents for service in connection with the revision of the agricultural schedules. Of these eight special agents, four had been officials of the division of agriculture, three had been special agents employed for expert work in that division during the Thirteenth Decennial Census period, and one was the editor of an agricultural periodical in North Carolina. The committee of the Department of Agriculture comprised five officials representing the Bureau of Crop Estimates, the Office of Markets, the Office of Farm Management, the Office of Farm Horticultural Investigations, and the Division of Animal Husbandry.

At these conferences a most gratifying spirit of cooperation—much greater than had prevailed in connection with the preparations for preceding censuses—was manifest, and the various recommendations as to changes in the agricultural schedules were agreed upon by unanimous vote. Some of the changes contemplated will have to receive the approval of Congress before they can be embodied in the schedules to be used at the Fourteenth Census, and recommendations as to the desired legislative action will be included in the report of the com-

mittee already referred to which is considering proposed changes in legislation.

The Department of Agriculture is planning to assist the Census Bureau by making a test of the tentative general schedule agreed upon. Through its field employees, a canvass of representative farms throughout the country will be made, the results of which will be tabulated by the Bureau of the Census. In this way the practicability of each of the various items of information called for by the schedule can be determined, and changes can be made if necessary in order to adapt it properly to the requirements of the Fourteenth Census work.

In making its preparations for the Fourteenth Census inquiries in regard to population, manufactures, and mines and quarries, as well as agriculture, the Bureau, having in mind the increase in the complexity of the inquiries that has taken place from census to census, with the result that it has become impossible to complete the work within the three-year period beginning on July 1 of the year preceding that in which the enumeration is made, is fully alive to the necessity for simplifying them to the greatest practicable degree and for rearranging its work so as to make possible the completion of the tabulations and the publication of the main reports of the Fourteenth Census by June 30, 1922, as prescribed by law. But if the Bureau is to be successful in carrying out its intentions in this respect, it will be absolutely necessary that the needed legislation be enacted in the near future and that—as pointed out in the section entitled "Office force"—an adequate amount be appropriated for preliminary work.

#### VITAL STATISTICS.

*Weekly mortality reports.*—Plans are now being made to issue weekly reports of mortality, which will give within 72 hours after the close of each week the mortality rates for about 50 large cities in the United States. Such reports will quickly reveal any unusual health conditions in any of our large cities and will serve as an important health index.

*Mortality from tuberculosis.*—A monograph on mortality from tuberculosis in the registration area for the calendar year 1918 will be prepared and published. It was originally intended to issue this monograph for the year 1916, but the work was postponed in the hope of obtaining more definite statements regarding the occupations of decedents. In view of the great mortality resulting annually from tuberculosis—which until recently exacted a heavier toll than any other cause of death and still leads all others except diseases of the heart (including endocarditis)—a publication of this character, showing the relationship between certain occupations and the prevalence of tuberculosis, will be of unusual value and interest.

*Color and race in relation to births and mortality.*—A monograph on mortality by color and race, with especial reference to birth-places of mothers of white persons, will be prepared and published. This monograph will measure the influence of color and race upon mortality rates, as revealed by the population and mortality figures for the calendar years 1910 and 1920.

As the birth-registration area grows and the birth statistics published by the Census Bureau assume a greater national significance,

the annual birth-statistics reports will be enlarged and tables will be added to show the influence of race and color upon birth rates and upon rates of infant mortality.

#### LEGISLATION NEEDED.

##### FOURTEENTH CENSUS LEGISLATION.

As pointed out in the subsection headed "Preparations for Fourteenth Census," in the section entitled "Plans for future work," a committee appointed for the purpose is at present engaged in making a careful study of the act providing for the Thirteenth and subsequent decennial censuses, with a view to determining whether amendments are needed to adapt it to the requirements of the Fourteenth Census and, if so, the character of such amendments. Not all the committee's recommendations have yet been formulated, but they will be ready in ample time for submission to Congress in December.

##### REGISTRATION OF BIRTHS AND DEATHS.

In the matter of birth and death registration the United States has lagged far behind many other countries. This is because the registration of vital data has been left to the action of the individual States, 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 nonregistration States, in which, as the result of tests conducted by the Bureau, it appears that the registration is at least 90 per cent complete and in which the registration laws are such as to give promise of a still more nearly complete registration. In only 13 States and the District of Columbia does the registration of births comply with these requirements. In six more States tests are being made, or soon will be made, and the records of some of these States are likely also to be accepted in the near future. But throughout a large part of the country either there is practically no birth registration at all or the registration is far from complete.

The timeliness of this subject is obvious in view of the registration, on June 5, 1917, of all men between the ages of 21 and 30, inclusive, in compliance with the terms of the selective draft act. In many cases when it became necessary to establish the ages of men in order to determine their liability to draft no records except the census population schedules were available. The decennial population returns as to dates of births, however, by no means afford a satisfactory substitute for records made immediately or within a few days after the occurrence of the births; moreover, they do not cover the cases of children who have been born and have died during the interval elapsing between two successive censuses.

In death registration the United States has made greater progress than in birth registration. Nevertheless, only 26 States, 46 cities in other States, and the District of Columbia maintain mortality records of sufficient accuracy to justify the Census Bureau in accepting them as authoritative. These States and cities contain about 70 per cent of the total population of the country.

It is highly desirable that the birth and mortality records of every municipality or county should be made reliable, permanent, and readily available for reference; and the only way to insure the existence of this condition in all localities throughout the country is to place the matter under Federal control.

Thus far the only legislative action taken by the Federal Government toward the improvement of vital statistics is found in a joint resolution of Congress, approved February 11, 1903, requesting State authorities to cooperate with the Census Bureau in securing a uniform system of birth and death registration. The Census Bureau itself has conducted a propaganda in the interest of better birth and death registration by the States, and has achieved some success. In order, however, that the United States may have complete birth and death statistics, comparable with those of the more enlightened foreign countries, it will be necessary either to provide for comprehensive Federal control and supervision of birth and death registration or to wait until the last one of the 48 States shall enact and properly administer adequate laws for the registration of vital data.

After careful consideration of the subject, therefore, I have come to the conclusion, in which I have the support of all my subordinate officials, that by far the most satisfactory and effective means to hasten the day when the entire United States shall have adequate registration of births and deaths would be afforded by placing the matter entirely under Federal control and supervision.

#### EMPLOYMENT OF TEMPORARY CLERKS, STENOGRAPHERS, AND MACHINE OPERATORS.

In view of the facts that many of the Census Bureau's inquiries are made at decennial or quinquennial intervals and that the amount of work of certain kinds in connection with its annual inquiries varies greatly from month to month, it is highly important, in the interest of good administration, that legal provision be made for the needed elasticity in the clerical and machine-operating forces. A bill (H. R. 2359) authorizing the temporary employment of clerks, stenographers, and machine operators, to be selected from the registers of the Civil Service Commission, has been introduced in the House of Representatives, and its enactment into law is recommended.

#### FINANCIAL STATISTICS OF STATES.

Financial statistics of States are now being collected annually under authority of an order issued by the Secretary of Commerce. Legislative authority for making the inquiry a permanent one is desirable, however, and a bill to provide such authority (H. R. 2358) is now before the House of Representatives. Its enactment into law is recommended. The statistics in question are of great value to State officials and others, who are desirous that the investigation be made regularly hereafter.

#### TOBACCO STATISTICS.

The law providing for the collection of quarterly statistics of stocks of leaf tobacco held by manufacturers and dealers requires that the blanks be mailed 10 days before the date to which the report relates

and gives the persons reporting 10 days after that date in which to prepare and forward their returns. The time elapsing between the date on which the blanks are received and that on which they are filled out and returned to the Census Bureau—almost three weeks in most cases—is thus so great that many of them are mislaid or lost, with the result that the receipt of the returns and consequently the publication of the reports are delayed.

The law requires an affidavit, which compels a needless expense in places where there is no deputy collector of internal revenue, who is required to administer the oath without charge. This at times occasions delay, since some wait for a visit from the deputy collector in order to save the expense of making the affidavit before a notary public or other official.

It is recommended that the law be amended (1) to provide for mailing the blanks 5 days, instead of 10, before the date to which the report relates, and to allow only 5 days, instead of 10, after that date in which to prepare and forward the returns; and (2) to empower and require the postmaster or assistant postmaster to administer the necessary oath without expense.

#### OFFICIAL REGISTER.

I desire to renew the recommendations for changes in the scope of the Official Register of the United States which have appeared in the annual reports of the Director of the Census for the fiscal years 1913 to 1916, inclusive, and to emphasize the necessity for them. These changes comprise:

1. The establishment of a card directory, prepared and maintained by the Civil Service Commission from information furnished by the executive departments and independent offices, showing the name and status of every person in the Government service except the officers and enlisted men of the Army, Navy, Marine Corps, and Coast Guard. (Lists of officers of the Army, Navy, and Marine Corps are already published annually in the Army Register and Navy Register, issued by the War and Navy Departments, respectively.)

2. The elimination from the Official Register of detailed lists of all employees, by name.

3. The publication annually by the Bureau of the Census of an Official Register containing—

- (a) A list of all employees of the Government (except officers and enlisted men in the Army, Navy, Marine Corps, and Coast Guard) whose duties are of an executive, supervisory, technical, or professional character and whose compensation is \$2,000 or more per annum.

- (b) Statistics relating to the Government service, to be prepared from the Civil Service Commission's card directory.

The Official Register is published biennially. The law directing its compilation provides that the information concerning each employee in the Government service shall be as of July 1. In order to make the register as useful as possible, this law, during the period in which the register has been compiled by the Bureau of the Census, has been disregarded to the extent that all important changes after that date to the time of going to press have been included, so far as practicable; but as the register can not be issued until more than five months after the date to which the information is supposed to refer, it is, in its present form, even under normal conditions, a very unsatisfactory and incomplete publication. The conditions of the past year have emphasized the necessity for making the recommended changes in the method of publishing the register. Important services of the Government have been organized since July 1, and although

they have been included there have been many changes in their personnel which it has been impossible to record, despite the fact that every effort has been made to do so.

If the material in the register were confined, as has been recommended, to a presentation of the organization of each of the bureaus and independent offices, with a full list of the administrative and supervisory officials, together with tables showing, so far as practicable, the numbers of employees in the various grades and classes, it would convey all the information concerning Government departments and personnel which should be of general interest. The adoption of the plan outlined above would also result in a very considerable reduction in the expense of preparing the Official Register and at the same time would provide for a complete and up-to-date record of the entire personnel of the Government in one central office (the Civil Service Commission), in such form that the Census Bureau would be able, by the aid of its tabulating machinery, quickly and accurately to compile statistics relating to Federal employees when called upon to do so by the President or by Congress.

A bill (H. R. 2354) embodying the desired changes in the scope of the Official Register is now before the House of Representatives, and its enactment into law is strongly urged.

#### FOREST PRODUCTS.

In my last two reports I recommended the enactment of legislation providing for the annual collection of statistics of forest products. A bill (H. R. 2357) containing a provision of this character is now before the House of Representatives. Statistics of forest products are of more than ordinary importance at this time and should be collected and published regularly.

#### EXPRESS BUSINESS.

I renew the recommendation contained in my last two annual reports for the repeal of the requirement of a decennial collection of statistics relating to the business of express companies, now contained in the act of June 7, 1906. It would be an unnecessary duplication of work for the Census Bureau to make decennial collections of these statistics, in view of the fact that annual statistics of the same character are collected and published by the Interstate Commerce Commission.

A bill (H. R. 2353) providing for the repeal of the requirement of law in question has been introduced in the House of Representatives.

#### WEIGHT OF CENSUS MAIL MATTER.

It is important that suitable provision be made for the transportation by mail, both to and from Washington, of the Bureau's supplies used in connection with census inquiries, regardless of the size and weight of the boxes in which they are packed. Although the Bureau's needs in this regard are very much greater during a decennial census than at other times, it is, nevertheless, important that it be authorized at all times to have its mail transported in boxes of suitable and convenient size. To this end, the enactment of H. R. 4449 is recommended.

## SPECIAL STATISTICAL COMPILATIONS.

I also renew the recommendation contained in my last two reports to the effect that express, rather than implied, authority be given the Director of the Census to prepare special statistical compilations, as well as to furnish transcripts of tables and other records, for State and local officials and for private concerns and individuals, and that the provision of law conferring this authority be so drawn as to make the amounts received for work of this character actually serviceable to the Bureau instead of only nominally so as at present. The authority under which the Bureau now performs this work is found in section 32 of the Thirteenth Census act. A bill (H. R. 2360) conferring upon the Director of the Census the desired authority has been introduced in the House of Representatives.

## OFFICE ROOM AND STORAGE SPACE.

Less than two years will now elapse before the beginning of the Fourteenth Census period (July 1, 1919), and it is imperative that early consideration be given to the matter of providing suitable office accommodations for the Bureau during that period, as well as adequate permanent storage space for its records.

During the Thirteenth Census period (1909-1912) the greater part of the Census Bureau's force occupied two adjoining buildings and the remainder was housed in two other buildings, one of which was nearly a mile from the main office. The total floor space occupied by the Bureau in these four buildings amounted to nearly 200,000 square feet, and the total annual rental was \$40,000 (no rental being charged for the 8,700 square feet of floor space occupied in the Maltby Building). The total floor space, exclusive of halls, toilet rooms, etc., occupied by the Census Bureau in the Commerce Building on June 30, 1917, was approximately 74,000 square feet, of which about 8,000 square feet represented storage space.

In view of the fact that the Bureau during the next decennial census will have a force about seven times as large as at present and will need about 275,000 square feet of space, including storage, the impossibility of accommodating it in the Commerce Building during that period is apparent. It would be unfortunate and expensive to have the force split up into four separate elements, as it was at the last census. It is recommended, therefore, that arrangements be made for the provision of a building suitable for the accommodation of the additional force of the Census Bureau during a decennial census period.

The urgency of this matter can not be too strongly emphasized.

In reference to storage space, the following excerpt from my last report applies with equal force to present conditions:

The matter of storage space for the Bureau's old records is steadily becoming more serious. These records consist in large part of population, agricultural, and manufactures schedules—that is, the returns made by the enumerators—of past censuses. The population schedules constitute substantially complete lists of the inhabitants of the United States at decennial intervals from 1790 to 1910. These schedules—which show not only names and addresses but various other items of information, such as sex, age, marital condition, etc.—are thus of great value to genealogists, applicants for pensions or increases of pensions, litigants in connection with the settlement of estates, and others; and their destruction would mean irreparable loss. At present these schedules are stored in four places—the eighth floor of the Commerce Building; the fireproof vault in the basement; a portion of the basement outside the vault; and the old Armory Building at the corner of Fifteenth and E Streets NW.



One end of the vault is next to the boiler room, and all the steam pipes for one side of the building pass through it. For this reason the temperature—although the windows are left open and the steam kept shut off from the radiators—can not be brought below 90° F. while the heating plant is in operation. It is, therefore, almost impossible for a clerk to work in the vault, and particularly in the end next to the boiler room, for more than a few minutes at a time; and the records are rapidly deteriorating because of the heat.

The old Armory Building is unlighted and is exceedingly damp and moldy. The roof and walls were formerly in a leaky condition, with the result that some of the records stored there were so badly injured by the rain that portions of them were obliterated.

It is highly important that prompt steps be taken to remedy the conditions above set forth.

### APPROPRIATIONS AND EXPENDITURES.

#### FINANCIAL STATEMENT, FISCAL YEAR 1917.

The following financial statement covers the operations of the Census Bureau during the fiscal year ended June 30, 1917:

Administrative:		
Salaries for administrative places.....	\$35,670.00	
Salaries for division of correspondence and mail.....	11,198.63	
Salaries for labor force.....	4,227.66	
Contingent expenses <sup>a</sup> .....	16,355.62	\$67,471.20
Machine shop:		
Salaries.....	17,496.67	
Materials, supplies, etc.....	7,402.77	24,899.44
Division of revision and results:		
Supervision.....	6,790.74	
Publications.....	3,789.65	
Dependent, defective, and delinquent classes.....	12,590.01	
Official Register of the United States.....	80.84	
Negroes in the United States.....	11,382.78	
Directory of institutions.....	729.08	
Executive civil service.....	7,181.27	
Editorial and result work.....	23.34	
Miscellaneous.....	4,728.34	47,297.20
Division of population:		
Supervision.....	8,922.15	
Occupations.....	30,068.41	
Marriage and divorce.....	1,034.25	
Religious bodies.....	56,808.44	
Preparation for Fourteenth Census.....	2,087.78	
Miscellaneous.....	588.42	99,500.45
Division of manufactures:		
Supervision.....	7,870.57	
Quinquennial census of manufactures.....	173,969.24	
Cotton statistics.....	259,036.36	
Tobacco statistics.....	11,393.23	
Transportation by water.....	97,502.66	
Electrical industries.....	237.68	
Shipbuilding.....	303.34	
Edible oils.....	100.79	550,512.87
Division of vital statistics:		
Supervision.....	7,169.75	
Mortality statistics.....	110,700.46	
Birth statistics.....	38,012.95	
Life tables.....	2,253.97	
Occupational mortality.....	705.01	158,842.14
Division of statistics of cities:		
Supervision.....	7,976.13	
Financial and general statistics.....	82,994.33	
State statistics.....	18,968.81	109,939.27
Geographer's division: Salaries.....		30,938.61
Special population census.....		860.81
Salaries of employees detailed to Department of Commerce.....		1,401.50
Printing and binding <sup>a</sup> .....		115,971.35
War Department work (registration).....		2,671.72
Liberty Loan work.....		2,720.87
Grand total.....		1,213,036.53

<sup>a</sup> Paid from appropriation for Department of Commerce; no separate appropriation for Bureau of the Census.

Title of appropriation.	Appropriation.	Expenditures during fiscal year.
Salaries, Bureau of the Census, 1917.....	\$673,460.00	\$658,243.94
Collecting statistics, Bureau of the Census, 1917.....	512,000.00	397,656.18
Tabulating machines, Bureau of the Census, 1917.....	25,000.00	24,889.44
Contingent expenses, Department of Commerce, 1917 <sup>a</sup> .....	10,365.62	16,365.62
Printing and binding <sup>a</sup> .....	115,971.35	115,971.35
Total.....	1,342,796.97	1,213,036.53

<sup>a</sup> Paid from appropriation for Department of Commerce; no separate appropriation for Bureau of the Census.

#### APPROPRIATIONS, FISCAL YEAR 1918.

The Census Bureau's appropriations for the fiscal year 1918 amounted to \$1,383,460. The amount appropriated for salaries was increased from \$673,460 to \$676,460, the change being due to the creation of a new position of chief statistician at \$3,000 per annum.

The appropriation for collecting statistics was increased from \$512,000 to \$647,000. This change is accounted for mainly by the inclusion in the current appropriation of an item for the electrical-industries inquiry, no similar item having been contained in the appropriation for the preceding year, and by increases in the items for the marriage and divorce inquiry and for collection of birth statistics.

The appropriation for experimental work in developing, improving, constructing, and repairing tabulating machines was increased from \$25,000 to \$60,000. Of this amount, \$30,000 will be used to provide for new construction, rebuilding, and overhauling of the types of tabulating machinery now in use by the Census Bureau, in preparation for the work of the Fourteenth Census; and the remaining \$30,000 has been set aside for use in the development of an integrating counter.

Respectfully,

SAM. L. ROGERS,  
*Director of the Census.*

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

