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BUREAU OF THE CENSUS
REPORT OF THE DIRECTOR
TO THE SECRETARY OF
COMMERCE AND LABOR



Concerning the Operations of
the Bureau for the Year 1908-9

WASHINGTON : 1910

1909

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REPORT
OF THE
DIRECTOR OF THE CENSUS.



DECEMBER 1, 1909.

SIR: I have the honor to submit the following report upon the operations of the Bureau of the Census during the fiscal year ending June 30, 1909, and upon the work now in progress, with special reference to the preparations for the taking of the Thirteenth Decennial Census of the United States. As I did not take the oath of office until June 16, 1909, the work of this Bureau during the greater part of the fiscal year 1908-9 was under the charge of my predecessor in office, Director S. N. D. North.

CURRENT WORK OF THE YEAR.

Up to the end of the fiscal year 1909 the work of the Bureau of the Census was conducted under the permanent census act of March 6, 1902. The act remains in force at the present time, but the functions of the Census Bureau are expanded for the purpose of taking the Thirteenth Census, by virtue of the terms of the act of July 2, 1909.

The permanent Census Bureau has since its creation been organized into five principal divisions, namely, Population, Manufactures, Agriculture, Vital Statistics, and Revision and Results. These divisions are established primarily to correspond to the several principal branches of inquiries of the decennial census, but during the period between the decennial censuses each division has been engaged upon special investigations, most of which by their nature appropriately fell under one division or another, but some of which were assigned to a given division more or less arbitrarily, this policy being deemed more advantageous than to create new divisions to take up such special and temporary inquiries. During the fiscal year 1909, in addition to performing work upon these special investigations, the divisions of Population, Manufactures, Agriculture, and Revision and Results have been engaged largely on preparatory work for the Thirteenth Census. Auxiliary to these five principal divisions is the Geographer's Division, headed by the Geographer, and the Division of Publications, until the

end of the fiscal year under the charge of the Chief Clerk, but now under that of an expert chief of division.

During the year ended June 30, 1909, the Bureau of the Census issued 26 publications, of which 10 fall within the class of important reports and the remaining 16 in the class of bulletins and pamphlets. Together they represent a total of 3,970 printed pages. In addition to this the Bureau has performed a large amount of work on the preparation for publication of other reports, some of which have appeared since the close of the year and others are now nearing completion.

DIVISION OF POPULATION.

The Division of Population has been chiefly engaged upon the tabulation of the Cuban census and the completion of the reports on Marriage and Divorce and Religious Bodies. Active work on the Cuban census returns was begun in May, 1908, and was completed by the end of September of the same year—about five months being thus required for this work. The tabulating of the returns was performed by a temporary force paid by the Cuban Government, at a total cost of \$42,655.

The report on Marriage and Divorce, which was made in conformity with a joint resolution of Congress approved February 9, 1905, presents statistics for the years from 1887 to 1906, inclusive, thus extending for twenty years the record of marriage and divorce which was compiled for the years 1867 to 1886 by the Commissioner of Labor. Exceptionally complete information is thus available on this important subject for a consecutive period of forty years. The report has been published in two volumes. The volume which contains the general tables, presenting the statistics in full detail, was issued in October, 1908, and was followed by a bulletin briefly discussing and summarizing the results. The other volume, containing a more extended analytical text, a digest of the laws governing marriage and divorce in the United States, and also a presentation of the laws and statistics relative to this subject in twenty foreign countries, is now completed and has just been published.

The census of religious bodies relates to the close of the year 1906 and compiles data regarding the number of religious organizations, church memberships, seating capacity of church edifices, value of church property, etc. These data were collected by means of correspondence, which is necessarily a slow process. The work of collection was completed prior to the close of the fiscal year 1908, but in order to forward the work on the report on Marriage and Divorce the tabulation of the returns was not begun until the following Octo-

ber. The results were summarized in a bulletin and the final report is now in type.

In addition to the foregoing work upon reports, the Division of Population has been engaged upon the indexing and listing of the occupations returned upon the schedules at the Twelfth Census. The result will be a complete classified list of occupations followed in the United States, so far as returned by the enumerators at that census. A full index of these occupations is being prepared on cards, and this will be of great assistance in organizing and carrying through the tabulation of the returns relative to occupations in the Thirteenth Census. The work of transcription to the cards has been finished and the entire work will be completed in season for the Thirteenth Census work.

DIVISION OF MANUFACTURES.

The Division of Manufactures has had charge during the year of the preparation of a considerable number of reports relative to different subjects. It has completed and sent to the printer reports on Express Business, Electrical Industries in Porto Rico, Telegraph Systems, and Forest Products, all relating to the year 1907; and Cotton Production, Pulp-wood Consumption, Cross-ties Purchased, and Supply and Distribution of Cotton, relating to the year 1908. It has also completed and sent to the printer the manuscript of a Special Report on Industrial Districts.

Cooperative arrangements were made with the Bureau of Fisheries for taking the census of fisheries. Lists of the commercial fisheries, vessels, etc., were prepared from the records of the Bureau of Fisheries. The entire country was laid out in districts and the regular force of the office was assigned to the field work. The canvass was completed and the tabulation well advanced before the close of the fiscal year. Since June 30 preliminary reports have been published for all of the states and for the United States.

Preliminary or summary reports were likewise issued in the form of bulletins or pamphlets on the following subjects: Central Electric Light and Power Stations, Street and Electric Railways, and Telephones, 1907; and Production of Slack Cooperage, Consumption of Tan Bark and Tanning Extracts, Wood Consumed in Veneer Stock, Production of Tight Cooperage Stock, Wood Distillation, Poles Purchased, and Production of Lumber, Lath, and Shingles, 1908. The bulletins relative to Telegraphs, Telephones, Street and Electric Railways, and Central Electric Light and Power Stations constitute parts of the general report on Electric Industries which is made every five years. The first report of this character related to the year 1902.

The report relative to Cotton Production, is an annual publication based on returns from cotton ginneries, the first report of this character being for the year 1900. The above-mentioned pamphlets relative to Cross-ties, Wood Distillation, and other forest products, constitute parts of the report on Forest Products which is made annually by the Bureau in cooperation with the Forest Service of the Department of Agriculture. The first annual report of this character was made for the year 1906. The Forest Service had collected and published a similar report for the year 1905. The system by which this information is now gathered and presented by the Bureau of the Census, in cooperation with the Forest Service of the Department of Agriculture, results in economy and avoids duplication of the work that would otherwise result.

In compliance with an executive order, the Division of Manufactures compiled statistics in regard to the developed water powers of the United States, for the use of the National Conservation Commission. These statistics relate to the year 1908 and show the number of water wheels and their total horsepower used in manufacturing, mining, and all other industries, including the generation of electricity.

At the request of the Select Committee on Pulp and Paper Investigation of the House of Representatives the Division of Manufactures collected and compiled statistics relative to the production of paper and wood pulp, the price paid by publishers for print paper, and various other items in relation to this industry, which were transmitted to the committee and are included in its report.

At the request of the Committee on Ways and Means of the House of Representatives the Division of Manufactures compiled statistics of manufactures, taken in 1905, arranged in conformity with the paragraphs of the tariff act and compared with the amount of imports and exports. This compilation was published by the committee as a pamphlet and was used extensively in connection with the discussion of the tariff law recently enacted.

At the request of the National Monetary Commission a tabulation was made by the division of the financial statistics of banks throughout the entire country.

The division, finally, has devoted considerable time to preliminary work for the Thirteenth Census. This consisted largely in securing as complete a list as possible of the names and addresses of manufacturers, to be used in connection with the canvass of manufactures.

DIVISION OF AGRICULTURE.

This division has been chiefly concerned with the collection and preparation for publication of the official statistics of cities containing over 30,000 inhabitants. This is an annual publication, the first of

which related to the year 1905. This series is, in effect, a continuation of the data contained in Bulletins 20 and 50, which give statistics of cities having a population of over 25,000 inhabitants for the years 1902 and 1903 combined, and for the year 1904, respectively. During the fiscal year the report for the calendar year 1906 was completed and printed, and since the close of the year the data for 1907 have been published in abstract form. This work was intrusted to the Division of Agriculture because that division has little work relative to agriculture to be performed during the years intervening between the regular decennial censuses and is, therefore, in a better position to handle this work than the other divisions. The data are collected by special agents who visit the cities to be canvassed. Their work calls for a high degree of ability and technical knowledge of municipal bookkeeping. Every effort is therefore made to train a special force of employees for this work. As the presentation of the complete results now requires a volume of considerable bulk, it has been deemed desirable that the more general and important results of the investigation should be presented in a brief bulletin that may be given a wider circulation than the detailed report.

DIVISION OF VITAL STATISTICS.

This division has been engaged upon its regular work of compiling the vital statistics for what are known as "registration areas"—that is, states and cities which maintain a registration system upon a sufficiently broad and accurate basis to furnish reliable statistics of this class. It is a matter for congratulation to note that these registration areas are being constantly added to, in no small measure as the result of the activity of the Census Bureau in urging the necessary legislation and in raising the standard of work of state and local registration offices. Thus, the states of Washington, Wisconsin, and Ohio have organized registration systems, based upon recently enacted laws which conform to the model bills approved by the Bureau of the Census and by state registration and sanitary officials. As a result, the first two states named were added to the registration area for 1908 and Ohio has been included for 1909. At the present time the registration areas embrace 55.2 per cent of the total population of continental United States. During 1909 registration laws drafted by the Census Bureau were passed in Delaware, Missouri, and North Carolina, and it is hoped that returns from these states may soon be included in the census reports.

The fiscal year 1909 is notable from the fact that for the first time the effort was made to transcribe and present statistics of births as well as statistics of deaths. The annual presentation of statistics of

births in registration areas and the analysis of the operation of the laws under which they are collected should lead to a marked extension and improvement of the registration of births in this country. In this connection it is suggested that it may be well for Congress to authorize the collection of annual statistics of marriages and divorces, instead of having statistics of this character obtained as the result of special investigations made from time to time and covering a series of years. If this is done, the annual reports of the Bureau of the Census will cover the whole field of vital statistics.

Up to the present time the reports of the Bureau relative to vital statistics have been issued annually, the first relating to the year 1900. With the establishment of a system of securing monthly reports from all registration areas, it may be possible to begin a monthly bulletin of mortality by which prompt information will be given to the public relative to statistics of death according to more important causes. Preparations for inaugurating this system are now under way.

The practice of securing monthly returns of deaths from state and city offices enables much more accurate returns to be obtained and makes it possible to insure exact correspondence between the annual compilations of the cities and states and those of the Bureau of the Census. The early receipt of the data has also permitted the annual compilation to be closed at an earlier date than heretofore, and advantage was taken of this fact to prepare an advance summary, known as "Census Bulletin 104, Mortality Statistics, 1908," which contains the general death rates and summarizes data relative to causes of death and occupational mortality.

This bulletin also contains the report of the Census Commission upon the Second Decennial Revision of the International Classification of Causes of Death, held at Paris, July 1 to 3, 1909. The participation of the Bureau of the Census in this revision was in accordance with Public Act 1 of the Sixty-first Congress. The representatives appointed were: Dr. Frank P. Foster, chairman of the committee on nomenclature of the American Medical Association; Dr. Wilmer R. Batt, state registrar of Pennsylvania and chairman of the committee on causes of death of the section on vital statistics of the American Public Health Association; and Dr. Cressy L. Wilbur, chief statistician for vital statistics of the Bureau of the Census. The result has been to make the classification of causes of death, which will be adopted by the Bureau of the Census and by the registration states and cities for the decade beginning January 1, 1910, of much greater service to the people of the United States. It also signalizes the fact that the United States has established a national system of vital statis-

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tics and is participating in the International Commission charged with the consideration of important details relating to such work.

The organized registration officials of the United States, cooperating with the Bureau of the Census, have wisely adopted certain rules whose general use will do much to bring about harmony in the vital-statistics reports of the country. These rules are published in the annual report on mortality statistics each year. Among them will be found the very important action taken at the recent meeting held at Richmond, Va., October 19 to 22, 1909, relative to the adoption of the revised United States standard certificate of death. The original standard certificate of death has been used by the Census from 1902 to the present time and the new form will go into effect January 1, 1910. It has already been adopted by the leading registration states, and it provides for more specific statement of age, occupation, and cause of death, so that the mortality statistics beginning with the census year will be of enhanced value.

Another cooperative arrangement which will probably result in great benefit is that recently instituted between the Actuarial Society of America and the Bureau of the Census. A member of the Actuarial Society, Mr. Miles M. Dawson, of New York, has been appointed special agent of the Census, and the society has appointed a special committee to consult with the Bureau of the Census in the preparation of life tables. This committee consists of Mr. Emory McClintock, ex-president of the Actuarial Society and vice-president of the Mutual Life Insurance Company; Mr. Henry Moir, vice-president of the Actuarial Society and associate actuary of the Home Life Insurance Company; Mr. Arthur Hunter, secretary of the Actuarial Society and actuary of the New York Life Insurance Company; Mr. Hiram J. Messenger, actuary of the Travelers Insurance Company; and Mr. John K. Gore, president of the Actuarial Society and actuary of the Prudential Insurance Company, the latter being chairman of the committee. The population data for 1910, in connection with those of the preceding census and the annual reports of mortality now received from a large portion of the United States, will afford the material for the preparation of life tables, which are universally considered the only reliable guide to knowledge of the present mortality and future expectation of life.

Notwithstanding the great advance that has been made by the United States in recent years in respect to the organization, by states and cities, of systems for the registration of births and deaths, an advance to which the Bureau of the Census has contributed not a little, the United States is far behind other countries in respect to this matter.

It is believed that no effort should be spared to advance this work, and the Bureau of the Census is doing its utmost to accomplish this end. This means a large amount of work of an educational character and unremitting effort to keep in close touch with state and city officials, the medical profession, and all persons interested in this class of statistics. In this way only can the fundamental basis for accurate vital statistics—that of standardized sources—be laid, and it is a matter for congratulation that marked progress is being made.

DIVISION OF REVISION AND RESULTS.

This division has had as its chief work the critical examination of all reports prepared for publication. During the year it has also assisted in the preparation of the report on Marriage and Divorce, besides doing all the work upon the bulletin by which the more important results of this investigation were given to the public. To this division has been assigned also the collection of statistics relating to the defective, dependent, and delinquent classes in institutions; and it is now engaged in making preliminary arrangements for this work for the census of 1910.

DIVISION OF GEOGRAPHER.

The Geographer's Division during the year has been employed in computing estimates of population of cities and states; preparing illustrations for the special reports and bulletins; and copying and indexing names of heads of families returned at the Census of 1790 for the pamphlets containing these names; the division also prepared the charts and installed the exhibit of the Census Bureau at the Tuberculosis Congress. The most important work of the division during the year was in preparation for the Thirteenth Census; securing maps and detailed information showing the changes that have occurred in the minor civil divisions since the census of 1900; dividing the country into supervisors' districts and enumeration districts; and compiling data upon which to base the rates of compensation of enumerators at the Thirteenth Census.

DIVISION OF PUBLICATION.

The work of the Division of Publication during the past year may be described under two heads: (1) Publication work proper, comprising preparation of copy for the printer, proof reading, job work, indexing, and the keeping of printing records and accounts; (2) productive work not directly related to the regular work of the division, involving the making of tables and other work of a miscellaneous clerical

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nature. Examples of this second class of work are the preparation of tables and statistical work for the report "A Century of Population Growth, 1790-1900," and the compilation of the Official Register, 1909.

The following is a list of publications of the Bureau of the Census issued since the last annual report of the Director:

<i>Reports.</i>		Pages.
Marriage and Divorce, Part I.....		550
Express Business.....		28
Mortality Statistics, 1907.....		538
A Century of Population Growth, 1790-1900.....		312
<i>Special.</i>		
Official Register, 1909, Vol. I.....		822
Official Register, 1909, Vol. II.....		746
<i>Bulletins.</i>		
No. 96. Marriage and Divorce, 1887-1906.....		72
97. Supply and Distribution of Cotton, August 31, 1908.....		40
98. Supervisors' Districts, Thirteenth Census.....		20
99. Electrical Industries of Porto Rico.....		30
100. Cotton Production, 1908.....		52
101. Industrial Districts, 1905.....		82
102. Telegraph Systems, 1907.....		48
103. Religious Bodies.....		92
104. Mortality Statistics, 1908.....		134
<i>Pamphlets.</i>		
Report on Cotton Ginning.....		16
Tuberculosis in the United States.....		68
List of Publications, No. 6, to March 1, 1909.....		14
The Census and Coordination of Statistics—Reply of the Director of the Census to the Inquiries of the Interdepartmental Statistical Committee.....		44
Forest Products, 1907:		
No. 3. Production of Slack Cooperage Stock.....		12
4. Consumption of Tan Bark and Tanning Extracts.....		10
5. Veneer Stock.....		10
6. Production of Tight Cooperage Stock.....		12
7. Wood Distillation.....		8
8. Cross-ties Purchased.....		6
9. Poles Purchased.....		8
10. Forest Products of the United States.....		122
Forest Products, 1908:		
No. 1. Pulp-wood Consumption.....		12
2. Lumber, Lath, and Shingles.....		58
3. Slack Cooperage Stock.....		12
4. Tan Bark and Tanning Extract.....		10
6. Tight Cooperage Stock.....		12
7. Wood Distillation.....		10
8. Cross-ties Purchased.....		8
9. Poles Purchased.....		8

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Four hundred and twenty requisitions for printing and binding were made on the Public Printer.

The sale of the pamphlets "Heads of Families of the First Census" was conducted in this division, and the amount received during the fiscal year ended June 30, 1909, was \$16,935.71.

Indexes were prepared for the following reports: Manufactures, 1905, Part IV; Statistics of Cities, 1906; Marriage and Divorce, Part I; A Century of Population Growth, 1790-1900; and Mortality Statistics, 1907.

The following statement shows the expenditures from the allotment of appropriation for printing and binding to the credit of the Bureau of the Census with the Public Printer for the fiscal year ended June 30, 1909:

Amount of allotment	\$125,000.00
Expenditures for publications.....	\$79,144.21
Expenditures for blank books, blanks, forms, and miscellaneous printing.....	13,276.10
Total expended	92,420.31
Unexpended balance	32,579.69

PRESERVATION OF CENSUS REPORTS.

In addition to the larger editions of census publications printed on ordinary paper, I have directed that there be printed and bound of every future report and bulletin issued by the Bureau of the Census 35 copies on best quality all white new rag paper, to be deposited in the leading libraries of the large cities, so far as the edition permits; and 15 copies on Japan vellum paper, 5 of which are to be retained for the use of the Bureau of the Census and the Department of Commerce and Labor, 2 copies to be deposited in the Congressional Library, and the remainder to be kept to supply further demands, such as exchanges with foreign countries. The volumes so printed on special paper are to have a distinctive and lasting binding in order to distinguish them from the regular edition, thus preventing their loss.

By so printing and binding these special copies a permanence will be secured far greater than that attained even by the earlier publications of the Census, and the actual expenditure will not be large. More recent publications have been printed on "contract" wood-pulp paper, which is far less durable than the crude rag papers used in the earlier publications. It is cheaper than any rag paper, and is used as a matter of economy. The expense of printing the entire edition of census reports and bulletins on paper which would last without deterioration for at

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least one hundred years would be too great, but by printing and binding a few copies of each report and bulletin upon the most durable paper that can be obtained the main object of permanent preservation will be secured.

OFFICIAL REGISTER.

The Official Register of the United States for 1909, the second issue produced by the Census Bureau, was compiled in the Division of Publication and issued for the first time within the period fixed by law. The same general form was used as in the 1907 edition, the publication being in two volumes—the first containing the legislative, executive, and judicial employees, and the second containing the employees of the postal service. There is an increase of 62 pages over the edition of two years ago. The 1909 publication contains 64,000 more names than did the preceding edition. The aggregate number of names contained in the two volumes for 1909 is 370,065.

SPECIAL REPORT ON POPULATION GROWTH.

During the year to which this report relates the Bureau issued a report entitled "A Century of Population Growth from the First Census of the United States to the Twelfth, 1790-1900." It constitutes one of the most interesting special publications that have appeared since the organization of the permanent Bureau. It was prepared under the immediate direction of Mr. W. S. Rossiter, late chief clerk of the Census Bureau. The volume contains a comparison and analysis of the population statistics of over a century. In particular, it renders available for the first time interesting information relative to the First Census. The results of the First Census were originally published in summarized form in a small volume, and no attempt had ever been made to present the returns of that census in full detail nor had the Census Office ever previously attempted to analyze the returns or compare them with corresponding figures of later censuses.

PREPARATION FOR THE THIRTEENTH CENSUS.

THE THIRTEENTH CENSUS ACT.

"An act to provide for the Thirteenth and subsequent decennial censuses" (Pub. No. 2) was passed by Congress and approved by the President on July 2, 1909. The bill had been under consideration for nearly two years, and its final passage was much nearer to the date of the actual enumeration than has been the case in most of the preceding census acts. The existence of the permanent Census Bureau, with

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the skeleton organization ready to expand for the work of the decennial census, has, however, largely obviated any difficulties which might have arisen by reason of the late passage of the census act. The new act follows in its general outlines the provisions under which the Twelfth Census was taken, but there have been a number of modifications of considerable importance. The principal changes are as follows:

SCOPE OF THE CENSUS.

The present act provides for taking a census covering four distinct fields of inquiry: Population, agriculture, manufactures, and mines and quarries. The census of 1900 did not cover mines and quarries, but the statistics of these industries were taken for the year 1902 by virtue of a provision in the permanent census act of March 6, 1902. There is an obvious advantage in having the census of mines and quarries cover the same period of time as the census of manufactures and agriculture.

On the other hand, the Thirteenth Census act differs from that for the Twelfth Census by making no provision for the special collection of statistics of births and deaths. At the Twelfth and certain preceding censuses each family was asked to report deaths which had occurred during the year. It was found impossible to obtain anything like complete statistics by this method, and the reports as to causes of death and the occupations of those who had died were particularly inaccurate. Under the permanent census act, as already stated, the Census Bureau now assembles each year the statistics of deaths collected by those states and cities which have an efficient system of registration of mortality. During the present year, moreover, the Census Bureau has begun to publish statistics similarly collected regarding births. Although the vital statistics thus published do not cover the entire country—in fact only about one-half of it—they are so much more accurate than those which could be obtained by the enumeration method that they furnish far more valuable information.

DATE OF THE CENSUS.

Under the Thirteenth Census act the enumeration of population is to be taken as of April 15 instead of June 1, as formerly. This change was made largely for the reason that fewer people are absent from their homes in April than in June. Moreover, under the new act the census of manufactures and of mines and quarries is to cover the calendar year 1909. By the Twelfth Census act the inquiry covered the fiscal year of each concern ended next preceding June 1, 1900. Practically, in most cases, the returns covered the calendar year 1899, but the change now made, which was originally suggested at the time of

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the publication of the results of the census of 1900, has the advantage of making it possible to begin the collection of manufacturing and mining statistics as early as January, 1910, whereas in 1900 no beginning could be made before June 1. This change will not only facilitate the completion of the report on manufactures within the time fixed by law, but will also tend to greater accuracy, since the returns will be called for at a time when the information is fresh in the minds of the manufacturers and the operators of mines and quarries.

CIVIL-SERVICE EXAMINATION OF CLERICAL FORCE.

The census act provides for the appointment of the additional force necessary in the Washington office of the Census Bureau by means of an examination prescribed by the Director of the Census and conducted and rated by the Civil Service Commission, selections from the eligible register to be in the order of rating. The act also provides that the appointments as a result of this examination are to be apportioned among the several states in accordance with the law of apportionment provided for the classified service. It further provides that not only in the case of examinations for the Census Bureau, but in all other civil-service examinations, the applicant must have had his actual domicile for at least one year in the state where he is examined. Under the Twelfth Census act the clerical appointments were made subject to such examination as the Director of the Census should prescribe but the examination was not required to be competitive—and was not in fact competitive—and no apportionment of appointments was provided.

In order to prevent any delay in the necessarily rapid expansion of the clerical force, the Thirteenth Census act authorizes, in case of emergency, the appointment, for not to exceed sixty days, of any person who has passed the examination, regardless of apportionment or relative rating; and also the appointment, for not to exceed sixty days, without examination, of any person who has had previous experience, satisfactory to the Director of the Census, in the operation of mechanical appliances in census work.

COMPENSATION OF SUPERVISORS AND ENUMERATORS.

The Thirteenth Census act provides for somewhat more liberal compensation of supervisors than was provided by the act of 1900, and also permits the Director in his discretion to fix rates of compensation for the enumerators somewhat in excess of those permitted in 1900. The increase in the population of the various districts, as well as the increase in the cost of living, makes this advance in the compensation of supervisors appropriate, and has proved of material assistance in

securing competent men for these important positions. It is not the intention of the Director to fix rates of compensation for enumerators materially higher than those in the census of 1900 except in districts presenting peculiar difficulties.

PENALTIES FOR DISCLOSURE OF INFORMATION.

The Thirteenth Census act is more specific than that for the Twelfth Census with respect to penalties upon supervisors, enumerators, or other employees who disclose information which they secure, or who make false returns. While there is no evidence that employees of the Census Bureau in the past have been guilty of improper disclosure of information—except, possibly, in a very few cases—these more specific provisions for penalties are highly advantageous. Although the census law requires persons interrogated to furnish the information called for on the duly authorized schedules, reliance for prompt and accurate returns must rest largely upon the good will of those making the returns. Manufacturers, farmers, and others will not freely disclose the needed information unless they feel assured that it will be treated in strict confidence. The Census Bureau exists solely for the collection of general statistics, and is not, and should not be, an instrument for disclosing the affairs of individual persons, firms, or corporations. Returns made by the Census Bureau are, in no case, published in such a way as to identify the business operations of individual persons or concerns; nor are they disclosed to any person aside from employees of the Bureau itself—not even to other Departments of the Government or to other bureaus of the Department of Commerce and Labor.

APPROPRIATION FOR THE THIRTEENTH CENSUS.

On June 29, 1909, an appropriation of \$10,000,000 was made by Congress for the salaries and necessary expenses of the Thirteenth Census. This appropriation is not limited to the fiscal year 1910, but it is probable that the greater part of it will be required during that year, as the pay of supervisors and enumerators and of special agents for the collection of manufactures and mining statistics—in other words, the cost of the field collection of statistics for the census—will nearly all fall within the present fiscal year. Further appropriation will therefore be necessary to cover the cost of tabulation and publication to be incurred during the remainder of the census period.

As stated by my predecessor in his annual report for 1908, the Director of the Census then estimated the cost of taking the Thirteenth Census and at the same time continuing the regular annual work of the Census Bureau for the three-year census period ending June 30, 1912, at \$14,117,000. Of this amount, it was estimated that \$12,930,000

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would be the cost of the special decennial census work, the remainder representing the cost of carrying on the other functions of the permanent Census Bureau. It is still hoped that this estimate of the expenses of the census will not be exceeded, notwithstanding the fact that it is substantially the same amount that was spent upon the Twelfth Census, since which there has been an increase of approximately 20 per cent in the population to be enumerated, and a still greater increase in the volume of agricultural, manufacturing, and mining operations. There is no doubt that material economies can be effected in the cost of tabulation and publication which will largely if not wholly offset the necessary increase in the cost of the collection of the statistics in the field. It is not possible at the present time to give any more precise estimate of the cost of the Thirteenth Census than that made in the annual report for 1908.

QUARTERS FOR THE CENSUS FORCE.

In the annual report for 1908, and previously, the Director of the Census recommended to Congress an appropriation for the purchase of the building now occupied by the Census Bureau, the purchase of the adjoining building formerly occupied by the Business High School and more recently by the Southern Railway Company, and the purchase of the vacant ground also adjoining, and the erection thereon of a modern office building. A provision for this purpose was incorporated in a bill which called for an appropriation of \$680,000. This provision, however, failed to meet the approval of Congress, and no authority whatever was given for the purchase or construction of quarters for the Census Bureau.

Under these conditions, the Bureau has made arrangements to continue the lease of the building now occupied and to lease two additional buildings. This increase in quarters will be imperatively necessary to accommodate the great addition to the clerical force which will be needed during 1910. The permanent census force at Washington consists of less than 700 persons, whereas during the period of maximum activity in the census work upward of 3,500 will be employed. The present building of the Census Bureau will not accommodate more than half of this force. One of the additional buildings which has been leased is the old Business High School building, adjoining the Census building, to which reference has been made; this has been secured at an annual rental of \$6,000 from January 15, 1910. This building contains about 32,000 square feet of floor space. The other building is one originally constructed for an armory on L street NW., between Fourth and Fifth streets, and contains about 60,000 square feet. The rental of this building is \$13,000 per annum, beginning January 1, 1910. These two buildings together have about

the same floor space as the present Census building. Under this arrangement the greater part of the force will be practically in one place and all the remainder in one other building. While this separation will be somewhat less convenient than the plan of having the entire force assembled in three adjoining buildings, it will be much more convenient than the arrangement at the Twelfth Census, when several different buildings, scattered throughout Washington, had to be rented. The total annual rental of the three buildings to be used by the Bureau is \$40,000, and the expenditure for that purpose during the three-year period from July 1, 1909, to June 30, 1912, will be about \$112,000. A slight additional expenditure is also required for storage and other quarters pending the occupation of the two additional buildings above mentioned.

TABULATING MACHINES.

Under special authority and appropriation of Congress, the Census Bureau has continued during the fiscal year its experiments in designing tabulating machines. Designs for a punching machine and a tabulating machine, to be used in handling the population statistics of 1910, were perfected, and in August, 1909, contracts were let for the construction of 300 of the punching machines and 100 of the tabulating machines. The contract price of the punching machines is \$250 each and that of the tabulating machines \$478 each. The actual cost of the tabulating machines is, however, greater, as the Government furnishes to the contractors the material, much of which had been previously manufactured either in the machine shop of the Census Bureau or by outside concerns, and as the Bureau itself is manufacturing the counters which are to be used in connection with the tabulating machines. The total cost of each tabulating machine, with counters, may be estimated at approximately \$800, and the total cost of the machines for tabulating and those for punching will thus be approximately \$155,000.

Tabulating machinery is essential to the economical compilation of the statistics of population. A card is punched for each man, woman, and child in the country, showing by appropriate holes all the facts with regard to the individual which are disclosed by the schedules secured by the enumerators. There will thus be in the neighborhood of 90,000,000 of these population cards, and in addition nearly 20,000,000 cards will be required to present the facts with regard to families. The cards thus punched are run through the tabulating machines, which by means of electrical connections not merely count the population, but combine the facts with regard to color, sex, age, nativity, and the like.

The punching machine to be used at the present census differs materially from that used at the last census. The former punching machine had only one key, which had to be moved about and pushed through the proper holes. The new machine has more than 250 keys corresponding to the various possible facts and operated somewhat in the manner of a typewriter or an adding machine. All the necessary keys for punching a given card are set before any of the holes are actually punched. An error in setting a single key can thus be readily corrected, whereas formerly if an error was made the card had to be destroyed, although many holes might have been already punched in it. This change, together with the greater clearness of the designations of the various facts upon the keyboard, will, it is believed, materially increase the accuracy of the punching work and also increase the speed with which it is done.

The tabulating machines for which the contract has been let differ from those formerly employed chiefly in having a device for automatically printing the results of the count of the various facts for each division of the country, whereas formerly the results were recorded on dials from which they had to be transcribed in manuscript. This change, and others, will result in the saving of much time on the part of the operator, as well as in greater accuracy.

The Bureau is still experimenting with another form of tabulating machine which, if perfected, will be capable of much greater rapidity. In the machine described in the preceding paragraph, each card has to be fed in for tabulation by the hand of the operator. The machine under development has an automatic feeding device by which the cards are handled much more rapidly than can be done by hand.

In addition to the punching and tabulating machines, the handling of the population cards requires the use of sorting machines which separate them into certain groups. The Bureau is conducting experiments with respect to these machines, and expects to be able to secure machines of high efficiency.

At the Twelfth Census the statistics of agriculture, as well as those of population, were tabulated by means of punched cards and electrical tabulating machines. Because of the large number of items on the agricultural schedule an average of about 20 separate cards was required for each farm. The very marked economies which the card system brings about in handling population statistics can not therefore be secured in handling the agricultural statistics. For this reason the Census Bureau contemplates the abandonment of the card system in the agricultural census of 1910. Instead, the figures in the schedules will be taken off either by typewriter-adding machines or more likely, by ordinary adding machines provided with several col-

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umns. Either of these methods will have the advantage of presenting the figures for the various farms in plain numerals and in due order, so that they can be readily scrutinized. At the census of 1900 a very large expenditure was incurred in editing the individual schedules—correcting obvious errors and inserting omitted figures. It is believed that much of this editorial work did not add enough to the accuracy of the returns to justify its cost.

ORGANIZATION OF THE FIELD WORK OF THE THIRTEENTH CENSUS.

The work of taking the census naturally divides itself into two parts—the collection of the statistics in the field and their tabulation and publication.

The field work will be divided into two main parts. The first has to do with the collection of the statistics of population and agriculture, and the second with the collection of the statistics of manufactures and mines and quarries. For the most part these two branches will be committed to distinct groups of employees. The population and agricultural statistics will be collected by enumerators under the direction of the supervisors. In localities where there is very little manufacturing or mining, the statistics for these subjects will also be collected by the enumerators. For the most part, however, the statistics of manufactures and mines and quarries will be withdrawn from the supervisors and enumerators and intrusted to special agents, as authorized by law.

SUPERVISORS AND ENUMERATORS.

The census act provides for 330 supervisors of the census. All but one or two of these have been appointed by the President and have entered upon their duties. In most cases each supervisor has charge of a district corresponding to a congressional district. Each of the large cities of the country, however, is made a single supervisor's district, and the same is true of the states of Massachusetts, Connecticut, New Hampshire, Rhode Island, and Vermont, while in a few other cases the convenience of the work has necessitated a departure from the lines of the congressional districts.

Under the law each supervisor's district has to be divided into convenient enumeration districts, in each of which one or more enumerators are to be appointed. Except under unusual conditions, there will be only one enumerator to each district. The total number of enumerators required in order to finish the work within the time limited by law will be about 68,000. Under the law the enumeration is to begin on April 15, 1910, and be completed within thirty days in the

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country districts and within two weeks in cities and towns of more than 5,000 inhabitants according to the preceding census.

Examination of enumerators.—The census act provides that it is the duty of the supervisors to “designate to the Director suitable persons and, with his consent, to employ such persons as enumerators.” It is self-evident that, if the consent of the Director to these appointments is to have any significance whatever, there must be some form of examination or test by which the qualifications of the candidates designated by the supervisors may be judged. It would be quite impossible for the Director otherwise to obtain any information whatever as to the capacity of the great majority of the 68,000 enumerators.

At the last census, the provisions of law regarding the appointment of enumerators being precisely the same as under the Thirteenth Census act, the Director required each person designated as enumerator by the supervisors to submit to a test consisting of the preparation of a sample schedule of population from data regarding typical families, presented to the candidate in narrative form. The test itself was adequate, but the methods of conducting the examination were such as in no way to prevent the candidate from receiving assistance in the preparation of the schedule. The examination paper was sent to each candidate by mail, and, although he was required to certify that he had received no assistance, there is reason to believe that assistance was not infrequently secured, and in any case the people generally did not have full confidence in the effectiveness of the examination.

It is the intention of the Director at the present census to prescribe the same kind of test for enumerators as was required in 1900, but to have the examination conducted under due precautions. The difficulties to be overcome in properly conducting the examination are very considerable. Because of the short term of employment of the enumerators and the comparatively small amount of their compensation it would not be just or practicable to require the candidates to travel any material distance to the place of examination. The test must, therefore, be held at a very large number of places distributed through every part of the country, and a large number of persons must be secured to preside at the various examination places. It will probably prove necessary to make use of three different agencies for conducting the examination. The supervisors can preside in person at examinations in their home towns, 330 in all. In about 1,500 other places the Civil Service Commission has examining boards whose services the commission has agreed to place at the disposal of the supervisors. The greater number of candidates can be examined before one or the other of these two agencies. In other cases it

will be necessary to have postmasters conduct the examination, and the Postmaster-General has authorized them to do so.

Every applicant for the position of enumerator, unless disqualified under definite rules, will be permitted to take the test. The papers of all the candidates in each supervisor's district will then be forwarded to the supervisor, who will be instructed to examine them carefully, select one person for each enumeration district (or possibly two in certain districts where it is desirable to have two enumerators), at the same time forwarding the papers of all of the candidates to the Bureau of the Census. It will not be possible for the Bureau of the Census to examine all the papers without undue expense, as there may readily be two or three hundred thousand candidates. The papers of those recommended by the supervisor, however, will be examined, and in the event that such a candidate fails to pass the test successfully the papers of the other candidates for the same district, if any, will be graded, and the supervisor required to designate one of the successful candidates.

It would not be desirable, even if possible, to require the supervisor in every case to select the candidate who passes the best test, as determined by the examination of the papers. There are important qualifications for an enumerator which can not be determined by a written test. Supervisors will, however, be required to give due regard to the relative excellence of the test papers in making their selections, in order that they may conform to the requirement of law that the persons whom they designate shall be "suitable." It is believed that this method of examination will result in excluding those who are clearly incompetent and that the supervisors will take advantage of the information secured through the examination to select not only competent but the most competent available persons.

SPECIAL AGENTS FOR MANUFACTURES AND MINES AND QUARRIES.

The census act authorizes the appointment of special agents for the collection of statistics of manufactures and mines and quarries, and for other purposes. Their compensation is limited to \$6 per day. It will be the policy of the Bureau to appoint two classes of special agents, namely, chief special agents, each of whom will be put in charge of a district—such as a large city or a section of a state or an entire state—and sub-agents, who will in most cases work under the direction of these chief special agents. The chief special agents will be paid \$4.50 to \$6 per day, and the subagents from \$3 to \$4 per day. It is expected that from 1,600 to 1,800 special agents will be required for the field work on manufactures and mines and quarries, the great bulk of which should be completed during the first three or four months of 1910.

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For the purpose of facilitating the selection of competent special agents, the Director of the Census prescribed an open competitive examination, which was held on November 3, 1909, throughout the country. Through the courtesy of the Civil Service Commission, the various local examining boards of the commission presided at the holding of this examination, but the papers were graded in the Census Bureau. This examination was of a character designed to give a practical test of the fitness of the candidate for the actual work of collecting the required statistics. Each candidate was required to present an application stating in detail his education and previous experience, supported by proper evidence and nonpartisan recommendations. One-half of the rating of each candidate was based on education and experience as indicated by this application. The remainder of his rating was based on a test consisting of the filling out of a sample manufactures schedule from data regarding a hypothetical establishment. This test was of two grades corresponding to the two classes of special agents above mentioned. Persons who have had previous successful experience in collecting manufactures or mining statistics for the census, or who have passed civil-service examinations for the position of special agent in the Bureau of Labor or the Bureau of Corporations, were made eligible without further examination.

As the result of this examination, which was widely advertised and which was taken by over 2,500 people, the Bureau has secured an eligible list of persons who are believed to be exceptionally well fitted for the work of collecting manufactures and mining statistics. In making selections from this eligible list it will be necessary to take the residence of the candidates into consideration as well as their relative ratings, since the interests of economy make it essential that, so far as possible, special agents should be assigned to work in the localities where they reside.

It is the intention in the present census to adopt the policy of specialization in the work of the field agents on manufactures and mines and quarries, so far as it can be done without unduly increasing the expense. That is to say, certain special agents will be designated to canvass certain classes of establishments with which they are already familiar, or with which they will become familiar by such specialization. This arrangement can be carried out economically only in large industrial centers where there are numerous establishments of a given class. It would involve undue expense, through duplication of travel and of the time of agents, were it applied throughout the entire country.

ORGANIZATION OF THE OFFICE FORCE.

The existence of a permanent Census Bureau renders the task of organizing the office work in connection with the Thirteenth Census much more simple than was the case when an organization had to be created *de novo* for each census. In fact, comparatively few additions are required in the higher grades of service in the Bureau. Most of the chief statisticians and chiefs of division and the geographer were already provided for and actually in service on the permanent roll, so that for the most part all that is necessary is to multiply the force of clerks of lower grade to provide for the great increase in the amount of work to be done.

During the Twelfth Census there existed five principal divisions in the Census Bureau, each headed by a chief statistician, namely, the divisions of Population, Manufactures, Agriculture, Vital Statistics, and Methods and Results. All of these divisions were continued as part of the permanent census organization after the completion of the Twelfth Census, the name of the last being changed to Revision and Results. Under the permanent census act, however, only four chief statisticians were provided for, and the fifth division, which had been under the charge of a chief statistician during the Twelfth Census, was consequently placed in charge of an expert chief of division. The Thirteenth Census act again provides for five chief statisticians, and the Division of Revision and Results has therefore been placed under the charge of a chief statistician. Four of the five chief statisticians at present employed were engaged in similar work during the Twelfth Census, and the chief statisticians of Agriculture and Population held the same positions during the Twelfth Census.

The addition of the subject of mines and quarries to the scope of the decennial census would seem logically to call for a chief statistician of Mines and Quarries. For the time being the subject has been added to the field of the chief statistician of manufactures. In order, however, to relieve him as much as possible of the burden of this additional work, a separate division of mines and quarries has been established under the general supervision of the chief statistician of manufactures. A chief of division has been assigned to this new division and also an expert special agent.

Under the Twelfth Census act there were five expert chiefs of division in addition to the chief statisticians. By the permanent census act the number of chiefs of division was reduced to four, but under appropriation acts from time to time others have been provided for, so that in the fiscal year 1909 eight were in service. The Thirteenth Census act provides for twelve of these chiefs of division, and the additional places have now all been filled. Most of these chiefs of

division act as assistants to the chief statisticians, having in charge subdivisions of the work of the five principal divisions.

The provisions of law authorizing the appointment of an Assistant Director, a fifth chief statistician, and an appointment clerk, all of which positions have been filled, have greatly facilitated both the administrative and the scientific work of the Bureau.

Under the provisions of the census act a special civil-service examination for the additional clerical force of the Thirteenth Census was held by the Civil Service Commission on October 23. About 5,700 candidates took the examination. It is anticipated that about 3,000 appointments will have to be made from the eligible register thus established and at the time this report is written it is not possible to say whether or not the eligible register will be adequate. The same examination was taken by all candidates, but an additional test in typewriting was provided with a view especially to the selection of clerks to operate the typewriter-adding machines or ordinary adding machines in the tabulation of agricultural statistics, already referred to.

MEANS OF SECURING ACCURACY AND COMPLETENESS IN THE CENSUS.

The expenditure of the many millions which each decennial census requires can be justified only if the data secured present a substantially correct picture of the population and industries of the country. The difficulties involved in securing complete and accurate statistics are not fully appreciated by the public. Even the enumeration of the population, with the essential details regarding age, conjugal condition, nativity, occupation, and literacy or illiteracy, involves many difficulties. For example, the greatest judgment is required on the part of the enumerator merely to determine what persons are properly to be enumerated in his district, since the law requires that everyone shall be enumerated at his "usual place of abode" rather than at the place where he happens to be at the time of the enumeration. Moreover, it is quite impossible for the enumerator, in the length of time and for the compensation which is allowed him, to interview personally every individual, and he sometimes has to secure the "personal description" from boarding-house keepers, hotel keepers, or neighbors instead of from the person himself, although such methods are permitted only when absolutely necessary. In the agricultural census difficulty is encountered from the fact that most farmers do not keep accounts, or even records of the quantities of their crops, so that their reports to the enumerator are subject to the defects of memory. The great complexity of modern business and the diverse ways in which business accounts are kept render it exceedingly difficult also to obtain strictly comparable returns from manufacturers and mine

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operators. Absolute accuracy in the census can not therefore be hoped for. The problem is to reduce the margin of error to a minimum, to eliminate estimates as far as possible, and to secure the greatest care in making such estimates as must be made.

THE SHARE OF THE PUBLIC IN CENSUS WORK.

The completeness and accuracy of the census depend in no small measure upon the interest and the intelligent cooperation of the people themselves. Comparatively little difficulty has been encountered in the past from unwillingness to make the census returns. The people very generally appreciate the great importance to their own interests of knowing accurately not only the number of the population, but its elements and characteristics, and of possessing accurate information regarding the resources and the products of the country and of its several states and divisions. Correct census statistics are essential to a proper understanding of the great economic and social problems of the day, to a proper conduct of business, and to proper legislation and administration of government. The provisions of law regarding the confidential treatment of the statistics, as well as the uniform policy of the Census authorities at all times in that respect, assure the citizen that no possible injury can come to him from making such returns.

The Census Bureau is taking active measures to increase the interest of the people in the census and to prepare them to make accurate returns by informing them in advance regarding the interrogatories which will be addressed to them. By means of the press, by means of agricultural colleges, farmers' institutes, and other farmers' organizations, by means of associations of manufacturers, and in other ways, information regarding the census is being widely disseminated. Much credit is due to these various agencies for the assistance which they are rendering.

RESPONSIBILITY OF ENUMERATORS AND SPECIAL AGENTS.

Next to a proper interest and cooperation on the part of the public, the most important means to secure accuracy and completeness in census returns is the employment of competent persons to collect the statistics. No degree of accuracy in the tabulation of the statistics in the Census Bureau can in any way give value to figures which have been erroneously collected by careless men in the field. The methods which have been adopted or which are proposed for securing competent enumerators and special agents have already been described. The Census Bureau must rely on every supervisor to cooperate loyally in the common purpose by exercising the greatest possible care

in the selection and the direction of the enumerators, and must rely on every enumerator and every special agent to strive earnestly for complete and accurate returns.

SIMPLIFICATION OF THE CENSUS SCHEDULES.

Another essential to securing accurate returns is to make the work of the census enumerator or special agent as simple and easy as possible. The amount of work required of the employees in the field should be reduced to the lowest limit consistent with securing the information called for by law. Consequently the Census Bureau has given much study to the schedules on which information is collected, seeking to lessen the number of inquiries as much as possible and to present them in the clearest manner.

The inquiries on the population schedule are practically all specifically prescribed by law, and the schedule for the present census is broadly similar to that used ten years ago. A few significant changes have, however, been introduced, and the instructions to the enumerators regarding the filling of the schedule have been revised with great care.

The schedule of agriculture necessarily comprises a very large number of interrogatories in order to cover all the different classes of farm animals and of crops and other products. The arrangement of the schedule, however, has been simplified and the difficulty of filling it is by no means commensurate with its length. The instructions have also been shortened and made clearer.

The general schedule of manufactures has been very materially simplified as compared with that used in 1900 and at the quinquennial census of 1905, and still greater simplification has been made in the special schedules for individual industries. These changes have been partly designed to meet the objections raised by certain manufacturers against the alleged inquisitorial character [of the inquiries, but the principal object has been to reduce the amount of work required of the special agent, or of the manufacturer who himself fills out the schedule. The policy has been to eliminate questions calling for details which experience has shown can not be obtained with accuracy or which, if obtained, are not of sufficient importance to warrant the extra cost, labor, and space required for their presentation. Most manufacturers keep records from which all the information essential to the census can be secured with accuracy. The schedule has been devised with a view to eliminating estimates as far as possible, and special agents will be instructed to lay particular stress on securing bookkeeping figures. Leading manufacturers and officers of associations of manufacturers have been consulted regarding the form of

the general and special schedules of manufactures, with a view to making them practical and to securing information of the greatest possible value.

It is believed that the amount of time required to fill out the general manufactures schedule for the present census from actual bookkeeping records is not more than a fraction as great as the amount which would have been required to fill it correctly from such records in 1900. This great reduction has been brought about chiefly by eliminating the question regarding classified wages, and by calling only for the total number of employees—regardless of sex or age—for a given day of each month, instead of calling for the average number, distinguishing sex and age, for each month. The calculation of this average number from bookkeeping records was highly intricate, and, as a matter of fact, estimates were very generally resorted to. The true average number for the year can be computed with a very close approximation to accuracy from the number for one day of each month. The distribution by sex and age is asked for a single date only, but the conditions on that date may be considered typical of the entire year.

Another change in the manufactures schedule which tends to eliminate estimates is the abandonment, in the inquiry regarding materials used, of the distinction between strictly raw materials and partly manufactured materials. This distinction, if accurately made, furnished information of some value for eliminating duplication in the value of products, due to the use of the product of one manufacturing establishment as the material of another. But, as pointed out in the reports of the censuses of 1900 and 1905, the duplications can be eliminated only in the total for the United States, and not in the figures of individual states or cities or individual industries, and in view of the fact that the books of manufacturers are not ordinarily kept in such a way as to distinguish these two classes of materials, it was deemed unwise to call for the separation, thereby encouraging the practice of making estimates. What is probably the fairest measure of the relative importance of the different states, cities, and industries in manufacturing can be accurately determined without this distinction by simply subtracting the total value of all the materials from the value of the finished product, the difference representing the contribution of the manufacturing process to the wealth of the country.

In the special schedules for individual manufacturing industries much simplification has been secured, chiefly by eliminating inquiries regarding quantity and value of individual articles used as raw materials, except the most important, and by eliminating inquiries regarding the number and character of minor machines used, while calling for

the leading classes of machines. It was found that there had been in previous censuses much lack of uniformity in the amount of detail called for in different industries. In some cases information was sought which could be of very little general public utility. It has been deemed wise to some extent to sacrifice even information which might be of appreciable value in order, by lessening the work required of special agents or manufacturers, to make sure that they will do more thoroughly and conscientiously the work essential to securing correct information regarding the fundamental facts of the industry.

IMPORTANCE OF EXPERT SERVICE IN THE CENSUS.

The decennial census as now required by law is vastly more complex than the simple enumeration of the inhabitants which was undertaken in the earlier censuses. Inquiries regarding the population itself have been greatly expanded with a view to ascertaining the elements and characteristics of the population. Great public interest attaches to such questions as the family, the foreign born and their descendants, and the negro race. A proper analysis and interpretation of the statistics of the population thus requires highly expert service. Moreover, the census has now been expanded to cover the basic industries of the country, agriculture, mining and quarrying, and manufactures. Each of these three great branches of industry, and particularly mining and manufacturing, is by no means a simple and uniform whole, but is made up of a large number of separate industries differing radically in their methods. A proper compliance with the requirements of law which call for the quantity and value of the raw material of manufacture, the quantity and value of the products of both manufacture and mining, and the number and character of machines, necessitates the use of special schedules for each of the principal mining and manufacturing industries in addition to the general schedule. A proper presentation and analysis of the statistics of the many individual mining and manufacturing industries thus collected requires again a very large amount of highly expert service.

The chief statisticians can not possibly, in the limited time allowed by law, themselves perform all of the expert service thus required. Much of their time is necessarily given to administrative work, and what remains no more than suffices for the preparation of the general reports dealing with the population or the industries of the country as a whole, leaving them not sufficient time to take up special subjects or individual industries. The expert chiefs of division provided by law find their time almost wholly employed in directing the great force of clerks and in other primarily administrative work. It is, therefore, necessary to secure a large part of the expert service needed for

a proper presentation of the statistics and preparation of the reports from expert special agents. The law permits the employment of an indefinite number of special agents for the collection of statistics and for the expert analysis of them, but prior to the passage of the urgent deficiency act of August 5, 1909, the compensation of such special agents was limited to \$6 per day. While this rate is adequate for the great majority of field agents and for many of those special agents who are employed for office work, it is entirely inadequate to secure the highly expert service which is needed on the part of those who are to accept practically the final responsibility for the preparation of the reports on special subjects and industries. Men of capacity sufficient to do this work properly are in nearly all cases already commanding a higher rate of compensation than \$6 per day, and it is particularly difficult to secure the services of such men for temporary work, such as the Census offers.

With a view to providing for such expert service the Director of the Census requested from Congress the authority to pay to not more than 20 of the special agents a greater compensation, not in excess of \$10 per day. By the urgent deficiency act of August 5, 1909, a maximum rate of \$8 per day was authorized for not over 20 of such agents. This provision has already been of great advantage in enabling the Census Bureau to secure expert service, and will be of still greater advantage later on when the work of analyzing the statistics and preparing the final reports is taken up. It is believed, however, that still better results can be obtained if the maximum rate is fixed at \$10 per day as originally suggested, and the importance of a careful and scientific presentation of the statistics seems fully to justify this increase in the rate.

It is not the intention of the Director to employ the full number of 20 expert special agents—whether at the rate of \$8 per day or at a higher rate, in case such higher rate is authorized—during the entire census period. At the present time only 9 special agents are paid at a rate in excess of \$6 per day. In many cases the services of an expert special agent, who is especially familiar with some particular subject or industry, will be required for a few months only. It is believed that such additional compensation to special agents for expert service will not at all increase the total expense of the census, since their service will beyond question result in economy in clerical work and in the cost of publication.

Much assistance has been secured in drafting the new census schedules of interrogatories through the temporary employment of expert special agents. A number of trained statisticians and economists were called to Washington during the summer of 1909 for

his purpose. Experts connected with various manufacturing and mining industries have also been called on for assistance, either coming to Washington for that purpose or working at their own homes.

The law providing for the increased rate of pay for twenty expert special agents contains the proviso that such special agents shall be persons of known and tried experience in statistical work. It is the intention of the Director to conform strictly to this proviso. The expert special agents will be either men who have had thorough economic and statistical training in universities or in public positions, or men who have had special experience in connection with the leading industries of the country.

Respectfully submitted.

E. DANA DURAND, *Director.*

Hon. CHARLES NAGEL,
Secretary of Commerce and Labor.

Report of the Director of the Census

APPENDIX A.

STATEMENT OF APPROPRIATIONS AND DISBURSEMENTS DURING THE FISCAL YEAR ENDED JUNE 30, 1909, ON ACCOUNT OF THE BUREAU OF THE CENSUS.

Appropriations.	Amounts appropriated.	Disbursements prior to July 1, 1908.	Disbursements by disbursing clerk, Bureau of Census, during fiscal year ended June 30, 1909.	Claims settled by the Auditor for the State and other Departments during fiscal year ended June 30, 1909.	Balances June 30, 1909.
Collecting statistics:					
1907-8.....	\$150,000.00	\$145,403.29	\$2,265.96	\$642.72	\$1,688.03
1908.....	375,000.00	370,113.20	4,526.58	150.49	203.73
Salaries, 1908.....	706,860.00	638,839.87	57,030.88	41.00	10,947.59
Stationery, 1908.....	6,000.00	5,751.89	19.47	218.16	10.48
Library, 1908.....	1,000.00	725.97	267.58	.25	6.20
Rent, 1908.....	22,080.00	20,240.00	1,840.00	.....	.....
Tabulating statistics, 1908.....	30,000.00	22,951.07	6,521.34	377.48	150.11
Miscellaneous expenses, 1908.....	15,000.00	13,695.98	1,188.00	109.67	6.85
Collecting statistics:					
1908-9.....	30,000.00	4,457.16	24,892.32	444.90	205.62
1909.....	325,000.00	.....	305,206.74	208.35	19,584.91
Salaries, 1909.....	704,860.00	.....	604,188.17	.....	100,703.03
Stationery, 1909.....	8,000.00	.....	3,634.65	1,836.97	2,523.38
Library, 1909.....	1,000.00	.....	763.59	.....	230.41
Rent, 1909.....	22,080.00	.....	20,240.00	.....	1,840.00
Tabulating statistics, 1909.....	40,000.00	.....	29,593.52	16.61	10,889.87
Miscellaneous expenses, 1909.....	20,000.00	.....	14,975.91	2,993.75	2,025.34
Preliminary expense of the Thirteenth Census, 1909-10.....	150,000.00	.....	1,947.12	.....	148,052.88
Total.....	2,606,880.00	1,222,178.43	1,079,101.83	7,052.01	298,579.83

* Includes \$32.10 received for transcripts of census records.

APPENDIX B.

OFFICE FORCE AS OF DECEMBER 1, 1909.

Assistant Director.....	William F. Willoughby.
Chief Clerk.....	Albertus H. Baldwin.
Appointment Clerk.....	Robert M. Pindell, jr.
Disbursing Clerk.....	George Johannes.
Chief Statisticians:	
Population.....	William C. Hunt.
Manufactures.....	William M. Steuart.
Agriculture.....	Le Grand Powers.
Vital Statistics.....	Cressy L. Wilbur.
Revision and Results.....	Joseph A. Hill.
Geographer.....	Charles S. Sloane.
Secretary to the Director.....	Hugh A. Brown.
Expert Chiefs of Division:	
Population.....	Edward W. Koch.
	William H. Jarvis.

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Expert Chiefs of Division—Continued.

Manufactures	Joseph D. Lewis.	
	Frank L. Sanford.	
	Jasper E. Whelchel.	
	William A. Hathaway.	
Agriculture	Hickman P. Childers.	
	Ernest H. Maling.	
Vital Statistics	Richard C. Lappin.	
Disbursing Office	George W. Crane.	
Publication	Voler V. Viles.	
Supervisors' Correspondence	Arthur E. Seymour.	
Expert on tabulating machinery	Harry Hayward Allen.	
Chief Mechanician	Charles W. Spicer.	
Total administrative staff		25
Stenographers, \$1,800		2
Clerks, class 4		7
Clerks, class 3		18
Clerks, class 2		47
Clerks, class 1		322
Clerks, \$1,000		121
Clerks, \$900		32
Clerks, \$720		36
Mechanical experts, \$1,800		2
Mechanical expert, \$1,600		1
Electrical expert, \$1,400		1
Electrical experts, \$1,200		2
Mechanicians, \$1,200		2
Machinist, \$1,200		1
Toolmaker, \$1,200		1
Machinist's helper, \$720		1
Apprentice boy, \$720		1
Apprentice boys, \$420		5
Skilled laborers, \$1,000		6
Skilled laborers, \$900		3
Skilled laborers, \$840		2
Skilled laborers, \$720		17
Unskilled laborers, \$720		17
Messengers, \$840		5
Assistant messengers, \$720		10
Messenger boys, \$480		4
Watchmen, \$720		11
Charwomen, \$240		24
		<u>701</u>
Total		726
SPECIAL AGENTS AS OF DECEMBER 1, 1909.		
Special agents, "persons of known and tried experience in statistical work"		9
Special agents, including experts, agents for general field work, etc.		56
Special agents, cotton		736
		<u>801</u>
Total number of employees		1,527

Report of the Director of the Census

The figures given above include the following temporary employees selected from civil-service registers pending the result of the census examination which was held on October 23:

Clerks, \$1,000.....	3
Clerks, \$720.....	33
Skilled laborer, \$1,000.....	1
Unskilled laborers, \$720.....	7
Assistant messengers, \$720.....	2
Total.....	<u>46</u>

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