

# ANNUAL REPORT

513

OF THE

# DIRECTOR OF THE CENSUS

TO THE

SECRETARY OF COMMERCE AND LABOR

FOR THE

FISCAL YEAR ENDED JUNE 30, 1912



WASHINGTON  
GOVERNMENT PRINTING OFFICE

1913

1912  
REPORT  
OF THE  
DIRECTOR OF THE CENSUS.

---

DEPARTMENT OF COMMERCE AND LABOR,  
BUREAU OF THE CENSUS,  
*Washington, December 31, 1912.*

SIR: The fiscal year ended June 30, 1912, was the last of the three years which constituted the decennial census period as defined by the Thirteenth Census act. Within this period of three years the organization and operations of the Census Bureau were governed in the main by that act, which was passed July 2, 1909. The greater part of the work of the Bureau during the year was devoted to compiling the results of the Thirteenth Decennial Census, but the annual work required under the permanent census act and its amendments was carried on as usual.

**GENERAL PROGRESS OF DECENNIAL CENSUS WORK.**

As forecasted in the preceding annual report, the Bureau of the Census found it necessary to defer until the fiscal year 1913 certain extensive branches of the decennial census work which under the requirements of law ought to have been completed by June 30, 1912. The Bureau had requested a deficiency appropriation of \$1,000,000 to enable it to complete the work within the prescribed time, but of this sum only \$500,000 was appropriated by Congress. It was deemed best, therefore, to defer substantially all of the work with reference to two or three large subjects and to endeavor to complete that with reference to other subjects as nearly as possible within the fiscal year 1912. The principal lines of work which were thus wholly or mainly deferred included the statistics of occupations and the statistics of institutions for defective, delinquent, and dependent classes. Work on these subjects was less advanced than that on other features of the decennial census.

Even with these branches of the work deferred, however, it was found impossible wholly to complete and publish the results of the other decennial census inquiries by June 30, 1912. Some of the reasons why the tabulation and publication of the results of the

census have required somewhat more time and expense than was originally contemplated have been set forth in the two preceding annual reports of the Director. Briefly stated, they were: The fact that certain new inquiries had been inserted in the schedules by requirement of law just before the census was taken, which added materially to the amount of labor; that the officials of the Census Bureau felt it essential, in order to bring out properly the significance of the statistics, to make certain classifications and analyses which had not been made at previous censuses; and that it was deemed wise to provide adequate analytical texts in connection with the original publication of the statistics on each subject, rather than to put out the tables with little, or merely perfunctory, comment, deferring the text analyses to a later date, as was done in large measure at the Twelfth Census. Moreover, a complete change was made in the scheme of presentation of local details derived from the census, which change made it impracticable to publish the statistics for localities—counties, cities, villages, and the like—in a piecemeal manner, one subject at a time, as was done at the Twelfth Census. The disadvantage of the slight delay due to this change in the form of publication is undoubtedly much more than offset by the added convenience of having all the results regarding any given locality presented in one place.

#### ENUMERATION OF UNION AND CONFEDERATE VETERANS.

It is necessary at this point to call attention to the fact that in the course of the tabulation of the Thirteenth Census it was found that the enumeration of Union and Confederate veterans, called for by law and covered by the general population schedule, had been decidedly incomplete. The error was found to be so great that the Bureau does not feel justified in publishing the statistics as part of its regular reports.

One of the thirty or more columns in the population schedule was headed as follows: "Whether a survivor of the Union or Confederate Army or Navy." Instructions to the enumerators with regard to this inquiry were as follows:

*Column 30—Whether a survivor of the Union or Confederate Army or Navy.*—This question should be asked as to all males over 50 years of age who were born in the United States and all foreign-born males who immigrated to this country before 1865. Write "UA" if a survivor of the Union Army; "UN" if a survivor of the Union Navy; "CA" if a survivor of the Confederate Army; and "CN" if a survivor of the Confederate Navy. For all other persons leave the column blank. (Instructions to Enumerators, par. 192.)

That the returns were exceedingly incomplete is evidenced from the fact that the number of survivors of the Union Army and Navy reported on the schedules was only 435,508, while there were on the pension rolls of the Federal Government at the close of the fiscal year

1910, 562,615 surviving Union veterans of the Civil War. Since not all of the veterans are on the pension rolls, the total number is somewhat greater than this, and the number reported by the enumerators probably does not exceed seven-tenths of the correct figure.

The reason for this deficiency in the enumeration of veterans is entirely clear. Most of the columns of the population schedule apply to every individual in the population, and most of the others apply to a very large proportion of the population. On the other hand, it was obvious that this inquiry did not apply to women, and that practically no man under 60 years of age in 1910 could be a veteran of the Civil War. In other words, this question was applicable to only a very small proportion of the persons enumerated. The enumerators, not having any occasion to ask this question regarding the great majority of persons, evidently fell into the habit in many cases of not asking it of persons to whom it might be applicable and left the column blank when an answer should have been given. There was no inducement in the form of extra compensation for asking the question, whereas at the census of 1890, when a similar inquiry was made, an additional compensation of 5 cents was offered for detailed information regarding the service of each veteran.

There were thus special reasons for the failure of this inquiry to elicit complete returns, and it must not be supposed that the large margin of error in the statistics as to veterans is at all typical of the margin of error with respect to other inquiries on the population schedule. It is true, however, that for about 10 per cent of the foreign-born population the inquiries as to citizenship and as to date of immigration were left unanswered by the enumerators; and doubtless there is an appreciable margin of error due to incorrect answers to some of the inquiries which are uniformly or almost invariably answered. The census returns of 1910 were quite as complete and accurate as those of any previous census, as can readily be demonstrated by careful analysis. As to most subjects the census statistics are accurate enough to permit substantially correct conclusions to be drawn. Nevertheless, the margin of error in the population statistics, as well as in the agricultural statistics, is distinctly higher than it should be, and suggests the desirability of radical changes in the method of enumeration, as well as of simplifying the schedules. This subject is more fully discussed in another section of the present report.

#### PUBLICATION OF REPORTS.

The general scheme of publications adopted by the Bureau in connection with the Thirteenth Census was described in detail in the preceding annual report. That scheme has been carried out essentially as outlined. The two main new features are the amplification and improvement of the Abstract of the Census, the only census

report which can be extensively distributed, and the scheme of State supplements to the abstract, containing the details for the individual State in which the person receiving it resides.

The complete reports of each census are published in large quarto volumes containing a large number of details regarding the counties, cities, villages, and other minor civil subdivisions of the country, together with highly elaborate analyses of the statistics for each State as a whole and for each large city. These volumes, on account of their great bulk, can not be issued in large editions, and, moreover, very few persons have any occasion to refer to the larger part of the contents of the reports. The business man, the farmer, even the professional statistician, ordinarily desire a more condensed report summarizing the census results; or if they wish local details they usually desire them only for their own communities or immediately neighboring communities. Consequently an Abstract of the Census, which summarizes the statistics, is by all odds the most useful census publication. Consequently also it is desirable that a method of publishing the local details should be adopted which will enable any person to obtain conveniently the statistics for his own locality and neighboring localities without thrusting upon him a mass of similar details for localities in which he has no interest.

#### ABSTRACT OF THE CENSUS.

At preceding censuses it has been the practice to publish all or nearly all the large general reports of the census before publishing the abstract. At the present census the abstract is the first bound volume which has been issued. The first edition of the abstract was published in the latter part of December, 1912, which was about a month earlier than the date of publication of the Abstract of the Twelfth Census. It should, however, be borne in mind that the census of 1910 was taken six weeks earlier than that of 1900.

The Abstract of the Thirteenth Census is a much larger volume than that of the Twelfth Census. Not taking into account the statistics of mortality, a subject not covered by the Thirteenth Census, the Abstract of the Census of 1900 contained about 400 pages of octavo size; whereas the Abstract of the Thirteenth Census, not counting the State supplement, contains about 560 pages of quarto size, which is double the octavo. In fact, the new abstract contains fully three times as much material as its predecessor. While the volume is thus a trifle less convenient to handle, the additional material greatly increases its value and makes it, with the appropriate supplement, the only census publication which ninety-nine persons out of a hundred would care to possess.

The additional bulk of the new abstract is due to several causes. In the first place, with respect to practically every subject it con-

tains comparative statistics for one or more preceding censuses, by States and leading cities as well as for the country as a whole. Such comparative statistics were very much less numerous in the abstracts of the censuses of 1900 and 1890. The great interest which attaches to changes in conditions from one census to another makes such comparative data an essential part of a report intended for general use. Again, the Abstract of the Thirteenth Census contains innumerable percentages and averages designed to facilitate comparison between censuses, between statistical classes, such as races and other population groups or farms of differing tenures, and between different sections of the country, States, and cities. It is all but impossible to grasp such comparisons with reference to many subjects except by means of averages and percentages. It is obvious, for example, that statistics showing the absolute number of illiterates have little significance except when compared with the total population within which the illiterates are included, and that such a comparison when extended to different classes of the population or different areas can only be comprehended by means of percentages.

The Abstract of the Census of 1910 also contains a condensed and yet comprehensive text analysis of the statistics. This text serves the purpose of calling attention to the more important results of the census inquiries, and it is hoped that it will make the census abstract a volume which will be read for general information by large numbers of people and not merely one occasionally consulted when some particular item of information is desired. This text is not intended to be an exhaustive analysis of the statistics. It is confined mainly to a discussion of the statistics concerning the United States as a whole and the main geographic divisions of the country, with only occasional reference to individual States or cities. It should, however, serve as a guide in the interpretation of the figures for such smaller geographical units. A text is particularly necessary in connection with census statistics in order to prevent erroneous conclusions, which are not infrequently drawn from the consideration of isolated tables without taking into account their relation to other census data.

Another new feature of the abstract is the extensive use of maps and diagrams which present graphically the more important facts ascertained by the census. A much clearer picture of conditions can often be secured by means of such maps and diagrams than by means of tables of figures. At previous censuses very extensive use was made of this method of presentation, but no maps or diagrams were included in the abstract. The method, however, is one peculiarly adapted to popular use, and should therefore be utilized in the volume which has the widest circulation.

## THE STATE SUPPLEMENTS TO THE ABSTRACT.

Another important new feature of the census publications, however, as already intimated, is the State supplement appended to the abstract. The first edition of the abstract, issued in December, 1912, contained a supplement for Maine, being intended chiefly for distribution in that State. Editions containing supplements for other States will follow. The supplements for all the States are in proof, and it is hoped to issue the entire series within two or three months. The supplement for Maine contains about 80 pages, while those for some of the States with more numerous subdivisions will be correspondingly larger.

Each State supplement contains all the details which the Census Bureau will ever publish with regard to the counties, smaller cities, and other minor civil subdivisions of the State; and in the final census reports the presentation of statistics for all such areas within the entire United States will be made merely by binding together the chapters of the several State supplements. There is also in each State supplement a detailed presentation and analysis, with text comment, of the statistics for the State as a whole and for its larger cities.

For all ordinary purposes the State supplement for any given State is a complete presentation of census results for that State. It contains comparative figures from previous censuses with reference to practically every item relating to the State as a whole, together with numerous comparative figures regarding the subdivisions of the State. A large number of percentages and averages are also included, even with respect to the smaller areas such as counties or minor cities. It is believed that these will render the local statistics much more valuable than those published at previous censuses, when even in the large general volumes percentages and averages relating to small areas were almost wholly lacking. An idea of the completeness of the presentation of local statistics may be gained from the statement that as to each county there appear no fewer than 164 entries regarding the number, composition, and characteristics of the population, and no fewer than 233 entries with regard to its farms and their products. The items for any given county are arranged one below another in the same column, so as to be conveniently examined. The local statistics at former censuses were available only in unbound preliminary bulletins or in the large general volumes of reports. Comparatively few people could obtain the large volumes, and even if they did so it was difficult to assemble all the information regarding any given locality from the very numerous tables scattered through the several volumes.

## DATA FOR URBAN AND RURAL COMMUNITIES.

Attention may also be called to the fact that in the presentation of population statistics in the new Abstract of the Census, the data regarding each subject are given for urban and rural communities separately. This distinction is also carried into the analysis of the statistics for individual States contained in the various supplements. Fundamental differences in industrial and social life between cities and rural districts result in marked differences in the composition and characteristics of the population. In many cases it is impossible to understand the differences between States or sections of the country with respect to population statistics except by taking account of this distinction between urban and rural communities. Conditions in the rural districts of one State, for example, may be substantially similar to those in the rural districts of another, and conditions in the cities of the two States may likewise be substantially similar; but in the population of the two States as a whole radical differences may appear because the one contains a much larger proportion of urban population than the other. The tabulation of the statistics in such a manner as to distinguish urban from rural communities as to every population subject has involved a considerable increase of labor and expense, but the value of the results much more than justifies the cost.

## PUBLICATION OF BULLETINS.

Prior to the publication of the Abstract of the Census a large number of bulletins had been issued by the Bureau. These bulletins, unlike most of those published at previous censuses, were not merely preliminary announcements, but in general constituted separate sections of the final census reports. They contained text, maps, percentages, and averages, and were, in fact, in such form as to furnish an adequate final presentation of the material. This policy was believed desirable, both in order to save expense of reprinting and in order to prevent misuse of the statistics for lack of proper explanation.

Six separate series of State bulletins have been published or are being published. The first series consisted of a bulletin for each State showing the population by counties, cities, and minor civil divisions, together with the density of population and the number dwelling in urban and rural communities, by counties. This series was published before the end of the calendar year 1911. A second series of State bulletins, part of which have already been issued, presents data as to the composition and characteristics of the population of each State and its subdivisions, covering such subjects as sex, color, nativity, citizenship, illiteracy, and school attendance. The first series of State agricultural bulletins, the last of which was

issued on March 1, 1912, contains statistics by counties regarding the number, acreage, and value of farms; the number and value of the various classes of domestic animals; the acreage and production of the principal crops, and the tenure of farms. A second series of agricultural bulletins, all of which have been issued or are now being printed, reproduces all of the details contained in the first series, and presents all of the remaining county statistics of agriculture, including those relating to dairy and other animal products, those relating to minor crops, and those relating to domestic animals not on farms. A series of State bulletins on manufactures giving all the statistics on that subject was issued, the last of which appeared in July, 1912. State bulletins regarding mining are now being issued, but for most of the States these are far less important than those regarding agriculture and manufactures.

The several bulletins for any given State are combined to form the supplement for that State to the Abstract of the Census, the same type being used for both publications. The same bulletins, bound up in another form, will constitute several of the final census volumes intended for libraries and the few persons who have need of details for localities through the entire country.

In addition to these State bulletins, a number of bulletins giving statistics for the United States as a whole and by States and principal cities have been issued. Most of these constituted separate sections of the Abstract of the Census, subsequently published. The object in the publication of such bulletins is partly to furnish information in advance of the publication of bound volumes whenever practicable, and partly to afford a convenient means of furnishing any person with information regarding some particular subject in which he is interested without the necessity of supplying a larger report covering other subjects as well.

#### TABULATING MACHINERY.

As fully explained in previous reports of this Bureau, the population statistics of the Thirteenth Census, like those of the two preceding censuses, have been tabulated by means of a punched-card system. Prior to the Thirteenth Census the punching machines, electrical card-sorting machines, and electrical tabulating machines required in connection with this method of tabulation were rented from private concerns. Those used at the Thirteenth Census, on the other hand, were devised by experts employed by the Bureau, and were either constructed in the machine shop of the Bureau or by outside concerns under contract. Thus the Census Bureau now owns its tabulating machinery.

## RECENT IMPROVEMENTS IN TABULATING MACHINES.

While the new machines devised by the Bureau proved more satisfactory than those used at previous censuses, experience demonstrated that the card-tabulating machines could be still further greatly improved. For reasons already stated, it was found necessary, about the beginning of the calendar year 1912, to defer for some months the tabulation of occupation statistics. During a considerable interval of time, therefore, practically no use was made of any of the tabulating machines. The opportunity was accordingly taken to devise some important modifications of the tabulating machines and to remodel a sufficient number of them to tabulate the occupation statistics.

The changes made have a twofold purpose—first, to provide for printing in more convenient form the results appearing on the counters, and, second, to provide for carrying forward cumulative or grand totals.

The tabulating machines used at the Twelfth Census had dial counters only, and the figures indicated by the dials had to be copied off by hand. The machines heretofore used at the Thirteenth Census were equipped with printing counters, and to that extent were a marked improvement over the machines previously used. The results were, however, printed in very inconvenient form. They appeared upon strips of paper about 3 feet long and 1 inch wide. Each of these long strips contained only ten items. In order to assemble and totalize the items for different groups of cards, the figures had to be copied from the strips by hand upon posting sheets of convenient form, since totals could not be obtained conveniently by direct addition of the figures appearing on separate strips.

A device has now been perfected and applied to a number of the tabulating machines by which the results are recorded on large sheets of convenient form. In a width of about 12 inches the ten items which on the strips required nearly 3 feet are printed side by side, and the results for a considerable number of different groups of cards, which would have required as many different strips, now appear one below another on a single sheet.

Not only does this change do away entirely with the first process of posting the results from strips upon tabulating sheets, but a further improvement enables the tabulating machines to carry forward cumulative totals and thus greatly to reduce the work of addition. For example, if ten counters only are being used and tabulations are being made by counties, ten different items with regard to each of fifty or more counties can be entered, one row below another, and the grand total for all of the counties printed at the bottom. This is accomplished by means of duplicate counters, both of which are actuated

at the same time by the electric contacts through the holes in the cards. The results on the counters designed to give totals for primary groups of cards are printed and the counters set back to zero as soon as a given group of cards has been run through the machine. The cumulative counters, however, are not set back to zero, but continue to operate until numerous groups of cards have been tabulated.

These are the most important mechanical improvements which have been made since electric tabulating machines were first introduced in census work. The saving of labor in the posting of the results and the preparation of group totals is a greater saving than that secured by substituting the printed strips for the recording dials, or than that secured by substituting an automatic method of feeding the cards to the tabulating machines for a hand method. As stated in previous reports of this Bureau, most of the tabulating machines used at the present census had to be fed by hand, but the Bureau during the progress of the census perfected an automatic machine which was used on part of the work. While these automatic machines, which will be used almost entirely in connection with the tabulation of occupation statistics, operate several times as rapidly as the hand-feed machine, yet the economy in cost resulting from their use is much less than that effected by the introduction of the new recording and cumulating mechanism. As a matter of fact, so long as the results were recorded only on strips, the entire cost of putting the cards through the tabulating machines even by hand was less than the cost of the primary posting and primary addition of the results after the machines had completed their work, processes now performed by the machines in the first instance.

#### USE OF MACHINES AT FUTURE CENSUSES.

As the result of the expenditures of the Census Bureau during the past few years for devising and constructing tabulating machinery, the Bureau now has in its possession machines which can be used with little additional investment for future censuses. In other words, a considerable fraction of the large expenditures for machinery at the Thirteenth Census could properly be considered as assignable to future censuses or as representing a permanent investment rather than current expense. The present tabulating machines of the Census Bureau will, with little modification, prove adequate to the needs of the Bureau for several censuses to come. Some minor improvements in detail may perhaps be found desirable at the next census, but none of a fundamental character. It will be necessary to remodel a somewhat greater number of tabulating machines than will be required for the completion of the occupation statistics of the Thirteenth Census.

Moreover, the punching and sorting machines now owned by the Census Bureau can be used, with a little additional expense for adjustment and improvements, at the next census. It may be deemed wise, however, to abandon the use of the present punching machines in favor of machines of very much simpler character. The punching machines used for most of the Thirteenth Census work are elaborate. Each contains 240 keys corresponding to all the possible facts to be recorded regarding any given individual in the population. Each key is labeled with an abbreviation of the item to be recorded, save only that in the case of occupations arbitrary combinations of numbers have to be used to designate the very large number of possible classes. Much simpler punching machines were used in connection with the agricultural census of 1900, and the Bureau owns a large number of them. Each such machine has only twelve keys, numbered serially. A hole is punched in the first column of the card, and the card then moves forward to the next column, and so on. Such a machine is peculiarly adapted to tabulating numbers. This simpler machine has not heretofore been used on population work, because most of the data are not expressed in numbers. Such facts as sex, marital condition, and birthplace would have to be indicated by arbitrary numerical symbols. It was considered that the designation of the proper symbols would require a preliminary editing of the schedules coming from the enumerator, which would involve too great expense.

Experience seems to indicate, however, that the expense connected with the use of these machines would not be greater than that with the 240-key machines. A large part of the population returns, such as those relating to sex, race, marital condition, citizenship, illiteracy, and school attendance, are so simple that the punching clerk could memorize the numerical symbols, and preliminary marking of symbols on the schedules would be necessary only as to a few items. The schedules in any case have to be edited so as to indicate symbols for occupations, and the additional cost of indicating symbols for other items would not be very great. These small punching machines can be operated somewhat more rapidly and accurately than the present elaborate machines, and are much less likely to get out of order. Careful tests of the relative cost and efficiency of these two methods of card punching should be made before the next census.

#### DESIRABILITY OF CONSTRUCTING INTEGRATING TABULATING MACHINES.

There are two types of card-tabulating machines. The one merely counts the holes in the punched cards and is sufficient for all population work, as well as for the tabulation of vital statistics and of certain other classes of data. The other adds the numbers

indicated by holes punched in the cards and is commonly spoken of as an integrating type of machine. Machines of this character accomplish by means of holes punched in cards results similar to those accomplished by an ordinary adding machine operated by hand.

The Census Bureau used integrating card machines, rented from a private concern, in connection with the agricultural census of 1900, but for various reasons it was deemed more economical at the present census to tabulate the agricultural statistics by means of ordinary adding machines without the use of punched cards. Experience proved conclusively that the change was a wise one, at least as regards the great bulk of the agricultural data. The office work of the agricultural census cost much less at the Thirteenth than at the Twelfth Census. Nevertheless, it is believed that the interests of the Government as a whole would be greatly promoted if the Census Bureau should devise a satisfactory integrating machine which could be constructed by the Government and used for the various purposes to which such a machine is adapted. The Census Bureau itself would probably have less occasion to use these machines than other bureaus of the Department of Commerce and Labor and of other departments. Even with highly perfected machines, owned by the Government, it would hardly be profitable to use the punched-card method in connection with any great part of the agricultural and manufacturing statistics of the census, although they might perhaps be used for some minor branches of the work on those subjects and for certain other census statistics. Machines of this type, however, would, almost beyond question, be extremely advantageous in the tabulation of statistics of exports and imports by the Bureau of Foreign and Domestic Commerce, in the tabulation of money-order and other postal statistics, in cost accounting throughout the Government service, and for many other purposes. Integrating card machines are, indeed, now employed extensively in the Post Office Department, being rented from a private concern.

The experts of the Census Bureau have already made a thorough investigation of the patent situation with reference to integrating machines and have reached the conclusion that machines can be constructed which will in no way infringe upon existing patents. Designs for such machines are well under way. With a view to completing these designs, constructing a model machine, and beginning the construction of others for actual use, the Bureau of the Census has included in its estimates for the fiscal year 1914 an item of \$20,000 for its machine shop.

Aside from the economy to the Government which would certainly result from the perfection of an integrating machine, it is desirable that an appropriation of this character should be made to enable

the Bureau to continue the employment of as large a part of its force of patent experts, inventors, and mechanics as possible. Should the Bureau lose the services of all or the greater part of its present mechanical force, it would be almost impossible to secure competent men for the expert mechanical work which will have to be performed in connection with the census of 1920. There are very few persons in the country who have given attention to the subject of tabulating machinery, and it would be unfortunate if the Bureau should lose the benefit of the long and successful experience of the men now in its employ.

#### FURNISHING OF CENSUS STATISTICS TO LOCAL GOVERNMENTS AND PRIVATE ORGANIZATIONS AND INDIVIDUALS.

One of the difficult questions confronting the Bureau of the Census is the extent to which census statistics shall be tabulated and published with reference to small areas. Naturally it is proper that more details should be published for the United States as a whole and for the States as units than for such areas as counties, villages, or wards of cities. The drawing of the line with respect to the amount of detail to be tabulated for small areas has for the most part been left by Congress to the judgment of the Director of the Census. The constantly increasing demand for local information has led to a gradual increase from census to census in the amount of such data published, and, in the judgment of the Director, the Federal Government can scarcely afford, at its own expense, to go further in that direction than it now does.

Nevertheless, State or local governments and individuals frequently express a strong and legitimate desire for local information which might be derived from the schedules but which in the ordinary course of the work is not compiled or, if compiled, is not published by the Census Bureau. In some cases information is desired for small areas which are not distinguished at all by the Bureau in its reports. For example, the demand has come from certain States for agricultural statistics by townships, whereas the smallest area for which the Bureau tabulates such statistics is the county. From several of the large cities of the country has come the request for the tabulation of population statistics according to areas smaller than wards (or assembly districts), which are the smallest units for which such statistics have hitherto been published in the census reports. Some persons have gone so far as to request a considerable number of items as to population for individual city blocks, but the needs of most persons would be satisfied by data for somewhat larger areas. It is pointed out that the wards in great cities often contain many times as much population as the average county, for which statistics are separately presented, and that conditions often vary greatly in different parts

of a single ward. In particular, it is urged that the boundary lines of wards are frequently changed, so that comparisons can not be made between the results of one census and those of another as published in the reports. It is urged, therefore, that the Census Bureau lay out permanent areas of moderate size—say about 40 acres each in the more densely populated parts of the cities—and tabulate and publish statistics for each successive census according to those areas.

The Census Bureau has not thought itself justified in incurring the expense necessary to satisfy all these local demands for statistical information. It greatly increases the cost of tabulation, whether of agricultural or population statistics, to add materially to the number of areas of tabulation; and the cost of printing is substantially proportionate to the number of areas distinguished. Moreover, if the Bureau should, at the expense of the Federal Government, meet the demand of some one locality for such detailed information, a similar demand would quickly arise from other localities; in fact, there would be an obvious unfairness in furnishing relatively more information for one community than for another.

In view of this situation, the suggestion has often been made that the Census Bureau should compile and publish detailed information, when desired, at the expense of the local governments or individuals desiring it. The Bureau already has authority of law for doing so. This authority is contained in section 32 of the Thirteenth Census act, which reads as follows:

That the Director of the Census is hereby authorized, at his discretion, upon the written request of the governor of any State or Territory, or of a court of record, to furnish such governor or court of record with certified copies of so much of the population or agricultural returns as may be requested, upon the payment of the actual cost of making such copies, and one dollar additional for certification; and that the Director of the Census is further authorized, in his discretion, to furnish to individuals such data from the population schedules as may be desired for genealogical or other proper purposes, upon payment of the actual cost of searching the records and one dollar for supplying a certificate; and the amounts so received shall be covered into the Treasury of the United States, to be placed to the credit of, and in addition to, the appropriations made for taking the census.

This section has been interpreted as authorizing the Bureau not merely to furnish copies of original schedules or extracts therefrom, but also to furnish, at the expense of those desiring them, compilations and tabulations from the schedules. As a matter of fact, however, since the expiration of the Thirteenth Census period it has become impracticable for the Bureau to perform any extensive work of this character at the expense of others, even under the provisions of this section, for the reason that the number of clerks who can be employed by the Bureau is fixed by law. During the Thirteenth Census period, when the appropriations for the Census Bureau were in lump sums, it was possible to use any moneys paid in from outside

sources for the employment of additional clerks to do the additional work, but this can not be done under present appropriation acts. In other words, any sum received by the Bureau in payment for such work must be turned into the Treasury of the United States, and, although nominally credited to the appropriations of the Bureau, most of the sum ordinarily remains unused and ultimately lapses.

Appropriations are obviously made to enable the Bureau to perform its regular official work, and there could apparently be no desire on the part of Congress that the performance of work at the expense of private individuals or local governments should reduce the amount of clerical labor available for such regular work. It appears, therefore, desirable that an amendment should be made to this section of the Thirteenth Census act which would permit the Bureau of the Census to employ additional clerks, provided the amount of salaries paid to such clerks, together with other expenses, should not exceed the amount received from outside sources for work performed. If it were thought desirable to restrict more or less closely the amount of such outside work, a limit to the number of such additional clerks who could be employed at any one time, or, preferably, a limit to the amount which could be expended in any one year, could be fixed by the law.

It will probably never be possible, however, for the Census Bureau fully to meet all such demands for special information regarding particular localities. Some of the demands are scarcely reasonable, and others would involve greater expense than individuals or local governments are likely to be willing to meet. If when the tabulation of any given census began the Bureau knew in advance all the local demands which would be made, the original tabulations could be adjusted—although usually, of course, only at some increase of expense, which should be borne by those concerned—so that the data could be obtained as incidental to the compilation of the statistics regularly published by the Government. When, however, a demand for such local details is received after the regular tabulations have been made, it usually becomes necessary to do the work substantially *de novo*. Even in the case of the population statistics, where the data regarding each individual are punched on a separate card, it is practically impossible, after the regular tabulations are completed, to segregate the cards for any small area, since they have become intermingled with those for other areas and sorted according to numerous complicated classifications. It may be that at future censuses arrangements for cooperation on a more or less extensive scale can be made between the Federal Government and such of the States and cities as desire special tabulations, the expense being properly distributed between the Federal and the local governments.

Meantime, to a limited extent the Census Bureau is now in a position to furnish to local governments and individuals, at little cost, statistical details more elaborate than those actually published in the census reports. When, as often happens, the scheme of census reports includes items on various topics for small units, say counties, and at the same time fuller details on the same topics for States, it is sometimes most economical to obtain both sets of statistics by a single tabulation. In such cases, as incidental to the process, more or less numerous details for the smaller areas may be obtained on the tabulation sheets which are not published in the reports. To assemble such data from the tabulation sheets for any particular locality, and to furnish them to individuals in manuscript form involve comparatively little expense. It is rather to provide for doing work of this limited character for outside parties than to permit new and extensive original tabulations that an amendment to the existing law, such as is above suggested, seems desirable. It is also desirable in connection with the frequent requests for genealogical information and other data concerning individuals.

#### PROPOSED WORK FOR THE FISCAL YEAR 1914.

As already stated, a considerable amount of Thirteenth Census work was deferred from the fiscal year 1912 to the fiscal year 1913 on account of the shortage of appropriations. In view of the fact that substantially the full amount of appropriation requested by the Bureau for the fiscal year 1913 was granted by Congress, including an appropriation of \$120,000 for the employment of temporary clerks to complete the Thirteenth Census work, it should be possible substantially to complete that work during the present fiscal year. However, as elsewhere more fully set forth, the probability of doing so will be the greater if Congress grants the authority requested to employ a larger number of temporary clerks under the appropriation of \$120,000 without increasing the amount of the appropriation.

For the most part, therefore, the work of the Bureau during the fiscal year 1914 should consist of the conduct of the regular annual investigations required by law, and of certain special intercensal investigations authorized by the permanent census act. During the spring of 1913 the Bureau will undertake the collection of statistics relating to the electrical industries, which by law are to be obtained every five years. The last report on this subject related to 1907, and the forthcoming investigation will relate to the calendar year 1912. Most of the work of collecting the statistics will be completed during the present fiscal year, but the larger part of the work of tabulation and preparation for publication will fall in the fiscal year 1914.

Another important and extensive intercensal investigation which should be taken up during the fiscal year 1914 is that relating to wealth, debt, and taxation. The permanent census act authorizes a decennial investigation of "public indebtedness, valuation, taxation, and expenditures." An investigation relating to the year 1902 was made under the authority of this act. Substantially the same field had been covered at previous decennial censuses under the authority of the special acts providing for those censuses. It was deemed wisest not to undertake to make such an investigation as of the calendar year 1912, because the force of the Bureau was so fully occupied with the completion of the Thirteenth Census work; but in order that the series of investigations of wealth, debt, and taxation may not be broken or an unduly long interval appear between them, the subject should properly be taken up during the fiscal year 1914. The inquiry would, in that case, cover the calendar year 1913, or the last completed fiscal year in the case of those States, cities, and other localities which have fiscal years ending on June 30 or at other dates than December 31.

While the investigation of wealth, debt, and taxation is a very extensive one, it is not proposed to employ additional clerks or special agents to perform any part of the work. The statistics can be collected by sending clerks from the regular permanent force of the Bureau into the field, and the results can be tabulated by the regular force. It is, however, necessary that a special appropriation should be provided for the travel expenses and subsistence of the clerks engaged in collecting the statistics. Experience in the past shows that it is impossible to collect statistics involving any considerable degree of complexity by correspondence methods. A large proportion of the many thousands of persons to whom schedules would have to be sent in connection with an investigation of wealth, debt, and taxation would fail to report at all, and a large proportion of those who did report would do so in an imperfect manner. It is essential to the completeness and correctness of the results that experienced clerks should visit every State capital, every county seat, and every city of considerable size. The estimated cost of the travel and subsistence of clerks engaged in this investigation is \$100,000, and a special item of that amount has been included in the estimates of this Bureau for the fiscal year 1914. Unless this appropriation is provided, it will be necessary to defer the work on wealth, debt, and taxation still further.

These two extensive investigations of electrical industries and of wealth, debt, and taxation, together with the annual work of the Bureau, will be sufficient to occupy the entire clerical force during the fiscal year 1914.

**PROPOSED CENSUS OF AGRICULTURE IN 1915 AND ITS RELATION TO DECENNIAL CENSUSES.**

The Thirteenth Census act contains the following provision:

That there shall be in the year nineteen hundred and fifteen, and once every ten years thereafter, a census of agriculture and live stock, which shall show the acreage of farm land, the acreage of the principal crops, and the number and value of domestic animals on the farms and ranges of the country. The schedule employed in this census shall be prepared by the Director of the Census. Such census shall be taken as of October first, and shall relate to the current year. The Director of the Census may appoint enumerators or special agents for the purpose of this census, in accordance with the provisions of the permanent Census Act.

This section undoubtedly gives the Director of the Census all the necessary authority, provided proper appropriations are made, for the taking of a census of agriculture in 1915. The present Director, however, is of the opinion that the method of collecting the statistics should be radically different from that employed in connection with the last decennial census. Should such marked changes be made, it would seem desirable that they should be expressly authorized in advance by legislation of Congress. It is questionable also whether the date fixed for the agricultural census of 1915 (October 1) would be as satisfactory as one later in the year. The scope of the census, as authorized in the section above quoted, is comparatively narrow, and additional information of great value could be secured with little more expense. If further legislation is to be passed, it is desirable that it should be introduced during the first regular session of the next Congress, beginning in December, 1913, although it would scarcely be essential that it should be finally passed before the short session of 1914-15. It is desirable that the entire subject should be carefully considered by the Administration, by Congress, and by the general public, and therefore reference to it in the present report is not inappropriate.

There can be no question of the extreme desirability of taking a census of agriculture every five years. In the absence of such an actual enumeration of the principal facts with regard to the farms of the country and their products, the estimates made by the Department of Agriculture and by private individuals from year to year necessarily become increasingly wide of the mark. The rapidity with which changes in agricultural conditions are taking place, and the bearing of those changes upon the problem of the cost of living and other fundamental economic problems, make it essential that an agricultural census should be taken more frequently than once in a decade.

Moreover, the plan of taking a census of agriculture in 1915 has the further advantage that it will permit much-needed experiments with reference to methods of collecting statistics. The methods followed

at recent decennial censuses have failed to give entirely satisfactory results either as to population statistics or as to agricultural statistics. Errors are too numerous, and expenses high, though in both respects the census of 1910 compares most favorably with its predecessors. It is possible, in the light of past experience, to suggest radical changes in methods and to predict with reasonable certainty that they would secure greater accuracy with less expense. It would doubtless be taking some risk, however, to introduce wholly new methods at a great decennial census, when, should they prove unsatisfactory, the result would affect a very wide field. It is therefore desirable to test such methods on a less elaborate scale, as could very readily be done by applying them in 1915 to a census of agriculture of a simpler character than the decennial census.

#### METHOD OF COLLECTING STATISTICS.

Briefly stated, the chief changes which, in the opinion of the present Director, are desirable are:

(1) To use the mail carriers to perform as large a part of the census field work as possible.

(2) To provide for supervision of the field work by trained census employees, in addition to supervisors or other directing officers chosen locally.

In addition to these two changes, which can be recommended as being beyond question advantageous, it is believed that advantage might be gained from a third change, namely:

(3) In the agricultural census to collect statistics as to certain subjects—such as the prices of farm products—only from part and not from all of the farms, and to apply averages or percentages thus obtained to the calculation of totals for all.

A preliminary test of this method on a limited scale should be made in order to determine its merits.

#### UNSATISFACTORY CHARACTER OF PRESENT METHODS.

While greater efforts were made at the census of 1910 than at any previous census to secure competent supervisors and enumerators and to eliminate political influence in their selection, the general method of selecting, directing, and paying them was substantially the same as at the three preceding censuses. The chief objection to that method is not the fact that politics is bound to a greater or less extent to enter into the appointments. It is rather that both supervisors and enumerators are in the great majority of instances entirely inexperienced in census work; that there is no way of guaranteeing that they shall be well acquainted with the people and the conditions of their districts; that the term of employment, par-

ticularly of enumerators, is so short and the pay so small that it is very difficult to induce competent persons to take the job; and, finally, that there is no adequate means of holding supervisors or enumerators responsible for conscientious and thorough work. Seventy thousand or more enumerators must be secured for work lasting not over fifteen days in the cities and not over thirty days in the rural districts, and at moderate rates of pay. The persons who would make most competent enumerators are usually already employed and can not give their time to the work. An enumerator, once selected, knows that at most the only penalty for unsatisfactory work will be failure to receive his comparatively small compensation, and that in fact it is scarcely likely that his incompetence will be discovered until after he has received his pay.

Incompetence and irresponsibility of enumerators are by no means the only cause of the errors found in census statistics. The excessive number of questions on the schedules and the ignorance or lack of interest on the part of many of the people called upon to answer them are also important causes. That the results are not entirely satisfactory is well known to the general public, but best known by the officials of the Census Bureau. There is reason to believe that the actual number of inhabitants is ascertained with approximate accuracy, and that the principal interrogatories on the population and agricultural schedules are answered with a fair degree of accuracy. Many of the less important inquiries, however, obtain much less satisfactory results. There is no way of measuring precisely the margin of error in any case. It is, however, sufficient evidence of the need of improved methods that in multitudes of cases interrogatories which are properly applicable are not answered at all, and that the statistics on several subjects as tabulated show relationships which are self-evidently incorrect.

For example, as already stated, in the population census of 1910 the enumerators failed to make any report at all regarding the citizenship of more than one-tenth of the foreign-born males of voting age, and failed to report the year of immigration of about one-tenth of the foreign-born population. The number of persons reported as being veterans of the Union Army during the Civil War was very much smaller than the number of such veterans actually on the pension rolls of the Government; special reasons, elsewhere mentioned, account, however, for a large part of this error. The age statistics of the census present numerous peculiarities which can be attributed only to a considerable margin of error in the returns. There can be little doubt that as to some other subjects, where there is no means of proving inaccuracy, the inaccuracy is quite as great. In the case of the agricultural census particular difficulty is encountered with respect to animal products and the minor crops. At the last census,

for example, 598,000 farms were reported as having sheep of shearing age on April 15, 1910, but of these only 424,000 were reported as having produced any wool during the preceding year, whereas, in fact, nearly all of them must have produced some wool. Again, there were 5,141,000 farms reported as having dairy cows on hand in 1910, but for only 4,021,000 of these farms was there a satisfactory report as to the quantity of milk produced in 1909, and for only 4,413,000 was an acceptable statement of the production of any kind of dairy products in 1909 reported. Similarly incomplete were the reports for the production of eggs and poultry; and, although there is no means of testing the results, there is little reason to doubt that the reports for minor crops are about equally incomplete. It goes without saying that, aside from the deficiencies due to failure to secure reports, there are many errors in the reports actually secured.

#### USE OF MAIL CARRIERS AS ENUMERATORS.

The need for more competent enumerators is thus obvious. There seems to be little hope of securing any great improvement in the character of enumerators by mere minor modifications of the present method of selecting them. The difficulties in the present method are fundamental and not a mere matter of detail. After careful consideration the Census Bureau has reached the conclusion that much better results can be obtained by utilizing the services of the mail carriers to do the larger part of the census enumeration than by any other feasible plan. The Postmaster General has also given consideration to this plan and believes it would be entirely feasible, at least in the case of the rural districts, and that it would not materially interfere with the regular and prompt distribution of the mails. There would be somewhat greater difficulties involved in utilizing the city mail carriers. It is probable, however, that they also could be advantageously employed, but the precise method by which the greatest advantage could be gained from using the city mail carriers, with the least inconvenience to the public, must be a matter of further investigation and consideration at the proper time, when preparations are being made for the census of 1920. Meantime, if the plan of using the rural mail carriers is adopted at the special agricultural census of 1915, much valuable experience will be secured which will be applicable to the solution of the problem of the proper taking of the decennial census.

In most of the leading foreign countries the work of census enumeration is largely or wholly performed by permanent employees either of the central government or of the local governments. Postal employees, policemen, and other officers of cities and local governments are called into service. In this country, on account of the dual system of government, the Federal Government would have no

authority to require the services of State or local officials; nor would it have any adequate control over them should they perform the work either voluntarily or at the direction of the States and local governments. The only large body of employees distributed through the country who are employed by the Federal Government and subject to its control are the mail carriers. The total number of such carriers, including the substitute carriers, is approximately equal to the total number of enumerators employed at the last census. The system of rural mail delivery has now been extended to a very large proportion of the country, and by 1915 will doubtless cover all except the most sparsely settled districts.

Mail carriers, whether in cities or in rural districts, appear to be conspicuously well qualified to act as census enumerators. They are selected without reference to political considerations and as the result of tests which guarantee a fair degree of education and ability. There is no doubt that, independently of special experience, the average mail carrier is quite as intelligent as the average enumerator at the last census. Their peculiar experience, however, adds immensely to their fitness for the work. They are personally acquainted with almost every family and individual in the districts which they serve. Such acquaintance would not only result in saving the carrier much time which the ordinary enumerator finds it necessary to devote to introducing himself and explaining the purposes of his visit, but would enable him to secure more complete and accurate information. Again, the mail carriers have a permanent responsibility to the Government as their employer, and if utilized for census work would feel under obligation to do it to the best of their ability, lest otherwise their permanent positions might be endangered. It is inconceivable, for example, that mail carriers acting as enumerators would permit themselves to become parties to a scheme of elaborate padding of the census, such as was attempted in a number of the cities and towns of the country at the last census, or that they should neglect their work to any such degree as did some of the enumerators in 1910.

Another peculiar advantage of the employment of mail carriers as census enumerators is the fact that their duties require them day by day to go over the same territory. It is believed that a large part of the required census work could be done by the carriers as incidental to their mail deliveries, although of course a considerable amount of additional time would be required. Under the method heretofore employed, an enumerator who finds a family absent on his first visit is under a strong temptation not to return to that family to complete his work. To do so, particularly in the rural districts, may mean a special trip of considerable distance. The mail carrier who is unable to obtain the required schedules on one visit could visit the same family on a later trip without loss of time.

It is believed that by the employment of mail carriers as enumerators it would be possible to have the families themselves in a large majority of cases fill out the required schedules, whether of agriculture or of population. At the census of 1910 for the first time an effort was made to enlist the cooperation of families in filling out the schedules. In the larger cities so-called "advance schedules of population" were distributed by the enumerators themselves, one to each family, and in the rural districts of a large part of the country similar advance schedules of agriculture were distributed, more or less completely, through the mails. Each family was requested to fill out the answers and hold the schedule ready for the enumerator on his arrival. While in a considerable number of cases the schedules were carefully and promptly filled out by the families, yet in a large majority of instances they were either not filled out at all or were filled so imperfectly that the enumerator on his regular visit had practically to ask all the questions orally and prepare the schedules himself. It obviously took less time for him to do so than to make still another visit in the hope that the schedule might in the mean time have been filled up by the family concerned.

The mail carrier, however, going his rounds every day, could make more effective use of such a system. He could distribute the schedules on one or more of his trips and briefly explain to the families the importance of preparing them promptly and carefully and the significance of the inquiries. On subsequent trips he could collect these schedules, and if on any given trip he found schedules for certain families as yet lacking he could arrange without inconvenience to secure them on later trips.

As already stated, it is believed by the Post Office Department that mail carriers in the rural districts could perform the work of enumeration without interfering at all seriously with the public convenience as regards the delivery of mail. Doubtless the carriers would have to work more than the ordinary number of hours, and in some cases, perhaps generally, it would be necessary for the regular rural carriers to call upon their substitutes for more or less assistance in the delivery of mail during the time of enumeration. Even, however, if there should be some little temporary inconvenience to the public, it should be borne in mind that the taking of a census is a great national enterprise, in which every citizen should be interested and for which he should be, and in most cases would be, willing to sacrifice a trifle of his personal convenience.

If mail carriers were called upon for such service, they should, of course, be properly compensated for the additional work thrust upon them. It is believed that just compensation to the carriers would amount to a decidedly smaller sum than must necessarily be paid to enumerators employed exclusively for census work. The

saving of cost, however, is less important than greater accuracy in the statistics, and there can be no reasonable doubt that much greater accuracy could be secured by the proposed method than by the methods heretofore employed. There would, of course, be sections of the country where, in the absence of mail carriers or by reason of their insufficient number, the employment of other enumerators would be necessary.

#### USE OF PERMANENT EMPLOYEES IN SUPERVISING CENSUS WORK.

Without any reflection upon the general ability or the conscientiousness of the supervisors of the Thirteenth Census, it can be said that the same objections which apply to the methods heretofore used for the selection of enumerators apply also, though with somewhat less force, to the practice of intrusting the entire supervision of the field work of the census to men most of whom are wholly inexperienced in census work. Very few supervisors of the last census had had any previous work in connection with the census, or with any other statistical inquiry.

If enumerators continue to be chosen by the method followed at recent censuses, or by any substantially similar method, it will always be necessary to have a large number of supervisors of the census, each resident in the district over which he has charge. Under any such method by far the most important function of the supervisors is the selection of enumerators, and it is essential that some local official should be in charge of the selection. It is one of the chief advantages of the plan for the employment of mail carriers as enumerators that this function of supervisors of the census would largely or wholly disappear.

The second great function of supervisors of the census is the direction of the enumerators during their work. For such direction persons without previous census experience can be only partially qualified. There is need of the cooperation of trained employees in the local supervision of the census, by whatever method taken. Experienced employees of the Census Bureau should be distributed over the country to aid in instructing the enumerators and directing their work. It will doubtless also be desirable to continue the employment of a certain number of locally chosen officials, whether designated as supervisors of the census or by some other name, who are familiar with local conditions, but these should work in cooperation with the trained employees of the Census Bureau.

The proposed census of agriculture of 1915 will furnish a convenient opportunity of testing such a system of supervision by permanent employees of the Census Bureau. Particularly in case the rural mail carriers are utilized as enumerators, there will be little occasion for the employment of a large number of supervisors of the census or any

other specially appointed local officials having functions similar to those of the supervisors of the decennial census of 1910. Employees detailed from the office in Washington and assisted by a limited number of local special agents ought to be able to give the enumerators the necessary instructions and to direct their work. The experience along this line gained in connection with this intermediate census would be invaluable in helping to determine upon a proper method of organizing the field force for the coming decennial census of 1920.

#### RELIANCE UPON TYPICAL DATA FOR CERTAIN CLASSES OF STATISTICS.

One of the chief causes of the imperfection of the censuses of agriculture has been the great elaboration of the schedules. The agricultural schedule of 1910 was not much more detailed than that of 1900, yet it contained spaces for more than 500 different items regarding each farm. Many of the inquiries, of course, did not apply to the majority of farms, but their presence on the schedule nevertheless made it confusing and discouraging to the enumerator and to the farmer. Among the inquiries were many which the average farmer could not be expected to answer except by the roughest sort of estimates, and the presence of inquiries of this class tended to make the enumerators and farmers less careful in answering those questions as to which reasonably precise replies could have been made. It is the firm conviction of the officials of the Census Bureau that at future decennial censuses the number of inquiries on the regular agricultural schedule used for all farms must be greatly reduced—if possible to not exceeding one-half or one-third the number used at the census of 1910. Either the public must get along without so much information or a part of the information must be secured by other methods than that of general enumeration.

As more fully shown later, the proposed agricultural census of 1915, as contemplated by those who advocated it and as authorized by Congress, will not in itself suffer from too great an amount of detail. The law authorizes only a relatively small number of inquiries at that census. It seems desirable, however, at this intermediate census of agriculture to make tests covering a few selected areas and looking to the possibility of using a new method for collecting part of the more detailed information required at decennial censuses.

The method thus tentatively proposed consists in addressing certain classes of inquiries to selected farmers only, and obtaining from the data thus secured averages and percentages which can be applied to all farms in calculating totals. For example, all questions relating to the values of domestic animals, crops, and other farm products might conceivably be omitted from the general schedules used for all farms, and information as to values be obtained from selected farms only. It is possible, too, that better results would be secured by

omitting from the general schedule inquiries as to the quantities as well as the values of certain dairy and poultry products and as to the yield per acre of such of the minor crops as are returned in the scheme of inquiry, and by securing this information from typical farms. Such inquiries as to values and as to dairy and poultry products and yield per acre of minor crops, if eliminated from the general schedule, would be incorporated in special schedules. The regular enumerators, or, still better, enumerators specially trained for the purpose, would then secure answers to the inquiries on these special schedules from selected farms—say one out of ten or one out of twenty-five of the total number. It would be essential that such farms should be selected at random and not by reason of special fitness of the farmer to furnish the information, because those most qualified to furnish the information would very likely not represent average conditions.

By devoting to the canvass of each selected farm three or four times the amount of time required for filling the general schedule, and by pushing home each inquiry with special care and criticising the answers conscientiously, enumerators could obtain substantially complete and approximately accurate information for these selected farms. There can be little question that by applying the average values, yields, or percentages shown for these typical farms to the figures obtained for other farms in the same vicinity, quite as satisfactory, and probably more nearly correct, totals would be obtained than by the present method of addressing all the inquiries to all the farmers. For example, if the amount received for wheat were correctly furnished by one farmer out of ten, or even one out of twenty-five, and the average price calculated from these returns applied to the quantity of wheat produced as reported by all farmers, the result would undoubtedly be substantially accurate.

The chief gain likely to be derived from such a plan would not, however, be in the exceptional accuracy of the reports obtained for the typical farms, but in relieving the general schedule of a mass of details the presence of which tends to cause inaccuracy even as to the most important and fundamental inquiries. At the same time the question would have to be considered whether, at least as to the domestic animals and the principal crops, the elimination of inquiries as to values from the general schedule might not indirectly cause a certain amount of error. It occasionally happens that a careless farmer or enumerator enters a given class of animals or crops on the wrong line in the schedule. The data as to values in such cases often afford the Bureau a means of detecting such errors, which might otherwise escape notice. A test could, however, readily be made as to the relative importance of such errors as compared with errors due to the excessive number

of inquiries on the schedule. A compromise method might be found most effective, by which some data as to values or as to animal products might be left in the general schedule and others transferred to special schedules.

It is highly desirable that, at the proper time, authority be given by Congress to test this system of special schedules for selected farms on a limited scale, either in connection with the agricultural census of 1915 or at some other time before the next decennial census. A few counties scattered throughout the country would furnish a sufficient basis for the experiment. In order to furnish a comparison between the results of the new method and those of the method previously in vogue, it would be desirable to apply both methods to the same territory. A detailed schedule similar to that employed at the census of 1910 ought to be secured from every farmer in the counties chosen, and later there should be another canvass of the same territory, using a much simplified schedule for every farm, together with a supplemental detailed schedule for selected farms. If, as is quite likely, considerable differences should appear between the results of the two methods, then further careful inquiry as to the cause of the differences and as to the relative accuracy of the two methods should be made. An expenditure of, say, \$100,000 upon such an experiment would go a long way toward demonstrating conclusively and finally which is the more effective, and might easily save several times that sum at the next decennial census. For, should the method of enumeration of typical farms for the purpose of securing details prove satisfactory in its results, it would also have the further advantage, in all probability, of materially reducing expense.

If it should prove that the proposed method was unsatisfactory, the only remedy, aside from a change in the manner of selecting enumerators, for the difficulties heretofore encountered in the agricultural census would appear to be the entire elimination of many of the less important inquiries. The general schedule must be simplified in some manner.

#### DATE OF PROPOSED CENSUS AND OF FUTURE DECENNIAL CENSUSES.

The section of the Thirteenth Census act previously quoted provides that the census of agriculture to be taken in 1915 shall be taken as of October 1. This is a far better date for the agricultural census than April 15, the date of the last decennial census. The date April 15 was chosen as being more satisfactory for population purposes than June 1, the date of previous censuses, but it was less rather than more satisfactory from the standpoint of agricultural statistics. It was in the midst of the season when most animals are born, and therefore very ill adapted to the enumeration of live stock. All

inquiries as to crops and other farm products at the census of 1910 necessarily related to the preceding calendar year, yet they were addressed to the farmers months after the end of that year, when recollection of the facts had become dimmed from lapse of time. Moreover, a very large number of farms, particularly tenant farms, change hands from one year to another. The question on the agricultural schedule of 1910 with reference to the length of time the farmers had occupied their farms showed that about 17 per cent of the total number had not operated in 1909 the farms which they occupied at the time of the enumeration in 1910. Since each farmer is asked to report for the particular farm which he occupies at the time of the enumeration, it is obvious that in many cases those answering the inquiries could not possess any accurate information as to the products of 1909. It seems likely, moreover, that in some instances farmers through misunderstanding gave data for the farm which they occupied in the previous year instead of that occupied by them at the time of the census.

The plan of taking the census of agriculture during the actual year to which it relates is absolutely essential to satisfactory results and ought to be applied at the decennial censuses as well as at the intermediate censuses. Since at the decennial censuses population statistics must for the sake of economy be collected at the same time and by the same enumerators as agricultural statistics, this means that the population as well as the agricultural census of 1920 ought to be taken toward the end of that year.

October 1 would be as satisfactory a date for a population census as any that could be selected. It is believed, however, that somewhat more satisfactory results as to agriculture would be secured if the census were taken somewhat later in the year. If neither the decennial census nor the intermediate census called for any other information than that specified in section 31 of the Thirteenth Census act (previously quoted), it would not make a great deal of difference whether the census were taken early or late in the fall or early in the winter. The inquiries as to acreage of the crops harvested and as to the number and value of domestic animals could usually be satisfactorily answered on October 1. But, at least at the decennial census, inquiries will presumably also be made as to the production and value of crops and as to the production and value of animal products. There are many crops the production and value of which are not accurately known by the farmers as early as October 1. Approximately correct statements regarding animal products for a given calendar year, of course, can not be made until at least almost the close of that year. It is highly desirable that the intermediate censuses of agriculture, even if they include fewer inquiries, shall be taken as of precisely the same time of the year as the decennial censuses. Other-

wise there can be no close comparison with respect to the number of domestic animals from one census to another, as the number of domestic animals changes materially from month to month during the year.

After careful consideration, it is the opinion of the Census Bureau that the best time for a census of agriculture is in November and December. Farmers are less busy then than in October, and have more complete information as to the results of the year's operations. In some ways it would be even more satisfactory if the enumeration could be taken as late as January, but in some sections the conditions of weather and roads might make work more difficult at that time than in the late fall and early winter. If the enumeration could be begun, say, November 15 and completed December 15, there should be no serious difficulty in any considerable section of the country with reference to weather or roads.

Objections have been raised in the past to the idea of having the census taken in the fall, on the ground that it should not be closely associated in point of time with election day. It has been argued that if the census were taken just before or just after election political considerations would have an undue influence in the selection of enumerators and other employees. This objection certainly ought not to outweigh the fundamental importance of collecting agricultural statistics in the late fall. It ought to be possible, by proper methods of organization, to eliminate political influence wholly or almost wholly, whatever the date of the census. If, in accordance with the suggestion already made, a large part of the work were done by the mail carriers, who are chosen strictly by civil-service methods, this objection would to that extent cease to apply.

#### SCOPE OF THE PROPOSED CENSUS OF AGRICULTURE.

It was the idea of the preceding Director of the Census, of the Secretary of Agriculture, who urged the measure, and of Congress in enacting the provision above quoted, that the "intermediate" census of agriculture, to be taken in 1915 and every ten years thereafter, should be much less elaborate than the decennial census of agriculture. The scope of this special census as defined in the law differs from that of the decennial census chiefly in not calling for the tenure of farms, the acreage of woodland on farms, the value of farms and farm property, or the quantity or value of crops; in calling only for the acreage of the principal crops, rather than that of all crops; and in omitting inquiries as to farm products other than crops. A schedule formulated in accordance with section 31 of the Thirteenth Census act would not need to include more than one-tenth as many inquiries as the schedule for the Thirteenth Census.

It is perhaps questionable, however, whether the information specified in the section of the Thirteenth Census act providing for the census of 1915 is altogether adequate. A limited amount of additional information could be obtained with very little increase in cost. The very rapid changes which have been taking place in recent years in the value of farm land—the average value per acre having more than doubled between 1900 and 1910—make it desirable that the value of farm land as well as its acreage should be obtained. The subject of the high cost of living and of the difference between the rate of increase in food supply and in population is prominently before the public at the present time, and it may be queried, therefore, whether the production of the principal crops, as well as the acreage, ought not to be ascertained. The act does authorize an inquiry not only as to the number but also as to the value of domestic animals, and it would seem that the production of crops is quite as important as the value of domestic animals. In fact, it is possible that the values of the principal crops also should be asked, not only because of the importance of the information in itself, but also because, as already suggested, its presence on the individual schedules at times serves as a means of detecting errors.

Even if production and value of the principal crops were added to the schedule for the 1915 census, it could still be made not over one-fifth as extensive as the schedule used at the decennial census. The latter contained a multitude of inquiries as to minor crops, farm tenure, values of buildings and implements, animal products, purchases and sales of animals, and the like, which need not appear in the schedule for the intermediate census.

#### OFFICE FORCE.

##### CHANGES IN ADMINISTRATIVE FORCE.

During the Thirteenth Census period the administrative officials of the Bureau included an Assistant Director, an appointment clerk, and a disbursing clerk. At the close of the period these positions ceased to exist, and an important change was made in the administrative organization of the Bureau. Between the Twelfth and Thirteenth Census periods the Bureau had its own disbursing office and appointment division, under the supervision of the disbursing clerk, who also acted as appointment clerk. During the Thirteenth Census period the work of these two divisions naturally increased, and a separate appointment clerk was provided to take charge of the appointment division. At the close of that period, however, following a policy of concentration of administrative functions, which had been adopted by the Department of Commerce and Labor, the disbursing and appointment divisions were abolished as separate

divisions. As much as possible of the work which had theretofore been performed by these divisions was transferred to the corresponding divisions of the Department, the remainder of their activities being consolidated with the work of the chief clerk's division of the Bureau.

At the close of the census period, moreover, the number of chief statisticians, which had been increased to five during that period, was again reduced to four. Several reductions in salaries of administrative officials also occurred at the same time.

#### TEMPORARY FORCE.

On December 31, 1911, there were in the Bureau 1,622 temporary employees. The appropriation of \$500,000 made in December was not much more than sufficient to maintain the permanent force of the Bureau for the remainder of the fiscal year, and steps were at once taken to drop the temporary force as rapidly as possible. Reductions in that force were made as follows: December 31, 223; during the first ten days of January, 1,030; and on February 29, 276. These dismissals, although they came only a few months earlier than had been anticipated, involved considerable hardship in many cases, and every possible effort was made to minimize such hardship. Some of the temporary employees had been transferred to the Bureau from other branches of the departmental service. Measures were taken to secure the restoration of such employees, as far as possible, to the positions previously held by them. Again, a large number had, during their service in the Bureau, obtained eligibility on the civil-service registers. The President intimated to the departments generally his desire that when such persons were certified for vacancies they should be given special consideration.

In planning for the fiscal year 1913, the Bureau recognized the importance of pushing to a conclusion the essential features of the Thirteenth Census work. It was readily seen that it would be difficult or impossible, by means of the unaided services of the permanent force, to complete this work during the year, and at the same time to carry on the annual work required by law. The Bureau did not deem it advisable, however, to meet these conditions by requesting Congress to add clerks to the permanent force, with the prospect of having later to dismiss such clerks when conditions had returned to a normal basis. It was therefore considered preferable to endeavor to secure for the fiscal year the services of a small temporary force. At the request of the Bureau, Congress appropriated \$120,000 for the employment of temporary clerks, not exceeding 175 in number, for a period not to extend beyond June 30, 1913, and at a maximum salary of \$900. These clerks were, under the law, appointed

from among the former members of the Thirteenth Census temporary force. The appointments were, so far as possible, apportioned among the States, but to obviate the bringing of clerks to Washington from a distance preference was given to those locally available.

The Bureau had calculated on being able to avail itself of the services of these temporary clerks immediately after July 1, 1912, but the delay in the passage of the legislative, executive, and judicial appropriation act until August 23, 1912, made it impossible to take advantage of this provision until September; in fact, the full temporary force was not secured until some time in October. Hence, the program of work laid down for this force was considerably deranged. This delay, in conjunction with the limit fixed as to the number of temporary clerks, will prevent the Bureau from economically utilizing to the full amount the appropriation of \$120,000. Steps are now being taken to secure authority of Congress to increase the temporary force for the remainder of the fiscal year, without increasing the appropriation.

#### PERMANENT FORCE.

During the greater part of the Thirteenth Census period no effort was made to fill the vacancies which occurred from time to time in the permanent force of the Bureau. The hope was entertained that at the termination of the census period means would be found to fill such vacancies by the selection of some of the best clerks in the temporary force, thus securing to the service the benefits of the training and experience which such employees had obtained. This hope has been in a measure realized. At the request of the Bureau, Congress inserted a provision in the legislative, executive, and judicial appropriation act approved August 23, 1912, that "in certifying eligibles from the civil-service registers for the purpose of appointment to positions of clerkships in the Census Office hereinbefore provided for at salaries of \$1,200 or less, the Civil Service Commission shall, so far as practicable under the law of apportionment, certify those who have had at least one year's experience in census work." While the operation of this proviso was not as general as had been hoped, by reason of the fact that a number of the States entitled to appointments under the rule of apportionment had no eligibles with the required experience, the Bureau was nevertheless enabled to secure as permanent employees a considerable number of its experienced Thirteenth Census clerks, and doubtless others will be obtained as vacancies occur during the remainder of the fiscal year.

The Thirteenth Census act authorized during the census period an increase in the number of clerks above the \$1,200 class from 16, as provided for in the permanent census act, to 116. Immediately prior

to that period, the number of such positions in the Bureau had been, under the appropriation acts, only 36, equal to 7 per cent of the total number of clerks, as compared with from 24 to 55 per cent prevailing in other branches of the departmental service. While a certain number of the promotions to the higher grades, which, during the Thirteenth Census period, the Bureau was able to give to its permanent clerks, were justified chiefly by reason of the additional responsibility temporarily placed upon them, many of the promotions were long-delayed and well-deserved rewards for faithful and efficient service extending over many years, which by reason of the limitation mentioned it had been impossible previously to recognize. Congress, in the legislative, executive, and judicial appropriation act for 1913 provided for 63 clerks in the grades referred to, but this number was still decidedly disproportionate to the total number of clerks and insufficient for the needs of the Bureau. The diminution of the number of high-grade clerical positions from 116 to 63 involved very numerous demotions in the higher salary classes, and consequently also in the lower ones. The total number of demotions was 185. While it is the intention to give those demoted clerks, where their efficiency justifies it, preference in the matter of promotions whenever opportunity occurs, the vacancies which permit such restoration of salary occur but slowly. Up to December 31, 1912, the total number of clerks who had been restored to their previous salaries was 42, of which number 10 had been restored to salaries above \$1,200. One of the objects of maintaining a permanent Census Bureau is to have a nucleus for the great force which must be employed during decennial census periods. A large part of this nucleus must of necessity consist of persons of high qualifications, well trained in census work, and capable of undertaking supervisory duties involving great responsibility. Persons thus qualified can demand larger salaries than the average clerk, and if not able to secure them in the Bureau will seek employment elsewhere. Thus, by reason of its inability to provide salaries adequate to those qualifications, the Bureau is constantly suffering a considerable loss of trained employees and has to educate, at Government expense, others to take their places. The fact that the Bureau must expand so greatly at each decennial census would indicate that during the intervals between censuses there should be a greater proportion of high-grade places in the Bureau than in other branches of the Government service, rather than the contrary condition, which has so long prevailed. In the four months subsequent to the reorganization of the force and the enforced reduction of so large a proportion of the higher-grade employees, 28 experienced clerks have left for other fields, where the prospect for advancement is better than in this Bureau.

## QUARTERS.

At the commencement of the fiscal year 1912 the personnel of the Bureau occupied three buildings—the main office at First and B Streets NW., which has been rented since the Twelfth Census; Annex No. 1, a four-story brick building located on First Street, immediately adjoining the main building; and Annex No. 2, a four-story brick building located on L Street near Fifth Street NW. On account of the rapid reduction of the temporary clerical force the Bureau vacated Annex No. 2 on January 31, 1912, and Annex No. 1 on March 30, 1912, the force being concentrated in the Census building proper. Since for many reasons this building has not the advantages that could be secured in more modern and suitable quarters, there was some hesitation about retaining it during 1913, but after thoroughly canvassing the situation it was decided upon as the most advisable course, especially as the lessor offered to expend several thousand dollars in much-needed changes, chiefly designed to improve the sanitary condition of the building. A more modern building erected with a view to present and future needs of the permanent Bureau, with better facilities for lighting and sanitation, and a large amount of storage space for documents, records, equipment, and furniture carried over between census periods, would greatly facilitate the work of the Bureau and would add to the comfort and well-being of its employees. The need of a fireproof building is particularly great, in view of the vast quantity of valuable records which must be stored.

## APPROPRIATIONS.

## THIRTEENTH CENSUS APPROPRIATIONS AND EXPENSES.

Although appropriations amounting to \$14,500,000 had been made for carrying on the Thirteenth Census and conducting during the three-year census period the annual inquiries required by law, it was perceived, as the year 1911 was drawing to a close, that this amount would be insufficient to complete the work within the period allowed by law. It was estimated that \$1,000,000 more would be required for that purpose, and an additional appropriation of that amount was therefore requested. Congress, however, granted only \$500,000, and in consequence a considerable quantity of Thirteenth Census work had to be deferred until the fiscal year 1913, and some lines of proposed work, not expressly required by law, had to be dropped entirely. The failure to complete the work within the cost originally estimated by the former Director of the Census may be attributed to various causes, which have been more fully discussed in previous reports. Among these may be mentioned the unexpectedly heavy outlay for field work (it being found necessary to pay higher rates to

supervisors and enumerators than had been estimated); the additions made by law to the inquiries on the schedules after the work was planned; and the fact that the mechanical equipment, although reasonably satisfactory, failed to effect economies as great as had been anticipated. Even with these adverse conditions, however, the cost per capita of the Thirteenth Census, when finally completed, will not be greater than at the Twelfth Census. Close comparison of costs is impracticable because at the Twelfth Census some work was done after the close of the census period which at the Thirteenth Census was performed within that period, while as to some other lines of work the reverse was the case. Just what was the ultimate total expenditure on Twelfth Census work, some little of which was still going on as late as 1905 or 1906, can not be determined. Had the recent improvements in the tabulating machines, elsewhere described, been available throughout the Thirteenth Census work, very considerable saving in money and time could have been effected.

A detailed statement of the expenditures of the Bureau to date in connection with the Thirteenth Census work appears in the appendix.

#### APPROPRIATIONS FOR 1913.

The Bureau's estimates of expenditures required for the fiscal year 1913 was \$1,612,440. Of this amount, \$40,000 for printing was subsequently deducted and included in a general estimate for printing for the Department of Commerce and Labor, leaving \$1,572,440 to provide for all other operations of the Bureau. The legislative, executive, and judicial appropriation act of 1913, as finally passed, appropriated \$1,503,920. To this sum were later added by the sundry civil appropriation act items of \$15,000 and \$30,000, respectively, for carrying out inquiries regarding tobacco and cotton required by new legislation enacted in 1912. These additions made a total appropriation for the year of \$1,548,920. Included in this amount were \$120,000 for the employment of temporary clerks to complete the Thirteenth Census work and \$272,000 for the printing of Thirteenth Census reports.

#### ESTIMATES FOR 1914.

The estimates for the work of the Bureau for the fiscal year 1914 amounted to \$1,238,320, a net decrease as compared with the appropriation made for the previous year. If, however, the items in the appropriations of 1913 for temporary clerks to complete the Thirteenth Census and for printing the results of that census are disregarded, there is an increase of \$81,400. Decreased amounts are requested for the ordinary field expenses of collecting statistics and for construction and improvement of mechanical appliances, and a slight increase for miscellaneous expenses and for the library. The decen-

nial inquiry regarding wealth, debt, and taxation of the nation should be made in 1913-14, and an estimate of \$100,000 to provide for the travel and subsistence of the clerks in the field collecting these statistics is inserted, which accounts for the net increase above mentioned. An increase of 11 clerks is requested on account of additional office work connected with the inquiries recently added by Congress relative to tobacco and cotton. This does not, however, represent a new expenditure, but is merely a change in the form of the appropriation, that work having been covered last year by the lump-sum appropriations above mentioned.

Respectfully submitted.

E. DANA DURAND,  
*Director of the Census.*

To Hon. CHARLES NAGEL,  
*Secretary of Commerce and Labor.*

## APPENDIXES.

## APPENDIX I.

## FINANCIAL STATEMENT OF THE THIRTEENTH DECENNIAL CENSUS.

## APPROPRIATIONS, RECEIPTS, ETC.

Expenses of the Thirteenth Census, 1910-1912.....	\$15,000,000.00
Preliminary expenses of the Thirteenth Census, 1909-10.....	150,000.00
Recoveries on account of overpayments.....	2,875.68
Receipts for transcripts of records.....	1,520.96
Reimbursement from Bureau of Immigration and Naturalization.....	13,980.05
Reimbursement from Government Printing Office.....	6,610.20
Reimbursement for photostat.....	500.00
<b>Total.....</b>	<b>15,175,486.89</b>

## EXPENDITURES.

THIRTEENTH CENSUS FIELD WORK.		COMPILATION AND PUBLICATION OF THIRTEENTH CENSUS STATISTICS—continued.	
<b>Continental United States:</b>		<b>Salaries of special agents.....</b> \$195,358.84	
Supervisors—		Tabulating machinery and mechanical equipment.....	>330,891.43
Salaries.....	\$585,188.00	Stationery.....	87,854.41
Expenses.....	99,349.77	Rent.....	105,479.42
Assistance.....	495,755.85	Cards.....	67,322.50
Enumerators.....	4,755,160.06	Printing:	
Interpreters.....	37,349.51	Reports, including press notices.....	87,608.40
Institutions, field work.....	118,730.40	Other.....	149,433.11
Manufactures census—		Office maintenance.....	91,559.90
Salaries of special agents.....	412,730.21	Furniture.....	17,688.78
Salaries of clerks detailed for field work.....	61,730.08	Miscellaneous supplies.....	69,001.70
Travel, subsistence, etc.....	251,737.15	<b>Total.....</b>	<b>6,271,445.71</b>
Irrigation—		<b>ANNUAL AND OTHER INVESTIGATIONS OF PERMANENT BUREAU.</b>	
Salaries of special agents.....	43,025.50	Cotton:	
Salaries of clerks detailed for field work.....	7,390.54	Office work, salaries.....	\$42,850.83
Travel, subsistence, etc.....	46,793.87	Field work.....	656,407.91
Other investigations—		Printing.....	14,755.52
Salary and medical expenses of Alice V. Houghton.....	1,821.00	Statistics of cities:	
Salary, C. W. G. Brett, "Employees' liability act, 1908".....	101.11	Office work, salaries.....	94,356.29
Frauds and reenumeration.....	29,068.09	Field work—	
All other.....	50,663.26	Salaries of special agents.....	30,465.50
Alaska.....	78,303.15	Salaries of clerks detailed for field work.....	55,967.00
Porto Rico.....	113,728.85	Travel, subsistence, etc.....	60,831.23
Hawaii.....	34,749.79	Printing.....	19,942.56
<b>Total.....</b>	<b>7,223,385.19</b>	Vital statistics:	
<b>COMPILATION AND PUBLICATION OF THIRTEENTH CENSUS STATISTICS.</b>		Office work, salaries.....	216,762.21
Salaries by divisions:		Field work (transcripts of records).....	121,875.41
Director's.....	\$55,803.47	Printing.....	51,075.19
Chief clerk's.....	336,739.57	Forest statistics:	
Machine shop.....	118,254.63	Office work, salaries.....	105,146.40
Appointment.....	99,495.38	Printing.....	10,101.20
Disbursements.....	70,274.10	Official Register:	
Geographer's.....	140,536.10	Office work, salaries.....	32,768.99
Publication.....	53,672.95	Printing.....	44,180.67
Revision and results.....	183,915.70	International Commission at Paris.....	2,155.75
Population.....	2,181,987.81	All other investigations:	
Agriculture.....	1,002,189.72	Office work, salaries.....	41,639.93
Irrigation.....	25,463.65	Travel, subsistence, etc.....	13,009.23
Manufactures.....	673,124.12	Printing.....	61,861.53
Mining.....	118,489.44	<b>Total.....</b>	<b>1,676,762.35</b>
<b>Total salaries.....</b>	<b>5,059,940.64</b>	<b>Grand total.....</b>	<b>15,171,593.25</b>

APPENDIX II.

STATEMENT SHOWING NATURE AND DISTRIBUTION OF OFFICE AND FIELD FORCE, DECEMBER 31, 1912.

OFFICIALS.

Chief clerk.....	William A. Hathaway.
Chief statisticians:	
Population.....	William C. Hunt.
Statistics of cities.....	Lo Grand Powers.
Manufactures.....	William M. Stuart.
Vital statistics.....	Cressy L. Wilbur.
Expert special agent in charge of agriculture.....	John Leo Coulter.
Expert special agent in charge of mines.....	Isaac A. Hourwich.
Expert special agent in charge of census of institutions.....	Joseph A. Hill.
Geographer.....	Charles S. Sloane.
Expert chiefs of division:	
Population.....	William H. Jarvis.
Statistics of cities.....	Edward W. Koch.
Manufactures.....	William J. Burrows.
	Joseph D. Lewis.
	Frank L. Sanford.
	Hickman P. Childers.
Vital statistics.....	Richard C. Lippin.
Publication.....	Harry H. Pierce.
Expert on tabulating machinery.....	Harry Hayward Allen.
Chief mechanician.....	B. M. La Boiteaux.

CLERICAL FORCE.

CLASS.	Perma- nent.	Tempo- rary.	Total.
Stenographer, \$1,500.....	1		1
Clerks:			
Class 4.....	11		11
Class 3.....	20		20
Class 2.....	32		32
Class 1.....	209		209
\$1,000.....	80		80
\$900.....	63	16	79
\$720.....		173	173
Total.....			695

SUBCLERICAL FORCE.

Engineer, \$1,000.....	1		1
Electrician, \$1,000.....	1		1
Skilled laborers:			
\$1,000.....	2		2
\$900.....	4		4
\$720.....	10		10
Unskilled laborers, \$720.....	8		8
Messengers, \$840.....	3		3
Assistant messengers, \$720.....	5		5
Messenger boys, \$480.....	4		4
Watchmen, \$720.....	5		5
Firemen, \$720.....	3		3
Charwomen, \$240.....	14		14
Total.....			60

MACHINE-SHOP FORCE.

Electrical expert, \$1,800.....	1
Mechanical expert, \$1,600.....	1
Mechanical experts, \$1,400.....	2
Mechanicians, \$1,400.....	2
Electricians, \$1,200.....	2
Machinists, \$1,200.....	2
Machinists, \$1,000.....	4
Machinists, \$900.....	1
Machinists, \$720.....	1
Machinist's helper, \$840.....	1
Apprentice boys, \$480.....	2
Total.....	19

## REPORT OF THE DIRECTOR OF THE CENSUS.

*Statement showing nature and distribution of office and field force, December 31, 1912—Con.*

## SPECIAL AGENT FORCE.

Experts, agents for general field work, etc..... 23

## SUMMARY OF CENSUS FORCE.

Officials.....	16
Clerical.....	695
Subclerical.....	60
Machine shop.....	19
Special agents (general force).....	23
Total office force.....	813
Special agents to collect statistics of cotton.....	742



ANNUAL REPORT

555

OF THE

# DIRECTOR OF THE CENSUS

TO THE

## SECRETARY OF COMMERCE

FOR THE

FISCAL YEAR ENDED JUNE 30, 1913



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1913

1913

557

# REPORT

## OF THE

# DIRECTOR OF THE CENSUS.

DEPARTMENT OF COMMERCE,  
BUREAU OF THE CENSUS,  
*Washington, November 26, 1913.*

SIR: There is submitted herewith the following report upon the operations of the Bureau of the Census during the fiscal year ended June 30, 1913, and upon the work now in progress. As I did not take the oath of office until July 1, 1913, the work of this Bureau during the entire fiscal year 1913 was under the charge of my predecessor, Director E. Dana Durand.

A very considerable part of the Bureau's force was engaged during the fiscal year upon the deferred work of the Thirteenth Decennial Census, but the usual annual investigations regarding financial statistics of cities, production and consumption of cotton, vital statistics, and forest products were carried on, and in addition work was done on the tobacco inquiry (authorized by act of Congress approved Apr. 30, 1912) and the quinquennial census of electrical industries.

### PROGRESS OF DEFERRED THIRTEENTH CENSUS WORK.

#### POPULATION.

The Division of Population was engaged during the fiscal year ended June 30, 1913, wholly on work in connection with the Thirteenth Census. This work comprised, first, the preparation and, in large part, the completion of the text and tables for the general and State reports on population (Vols. I, II, and III of the Thirteenth Census reports), and second, the practical completion of the machine tabulation and other work preceding the actual preparation of the tables for the occupation report (Vol. IV).

*Publications issued.*—The State bulletins giving the composition and characteristics of the population had been issued at the close of June, 1912, for Alabama and Indiana and were issued for the remaining States of continental United States by the end of June, 1913.

These State bulletins, together with the series giving for each State the population by minor civil divisions, were bound up together to form Volumes II and III of the Thirteenth Census reports. Volume II, covering in alphabetical order the States from Alabama to Montana, inclusive, was released for printing in May, 1913, and

issued in August, 1913. Volume III, covering the States from Nebraska to Wyoming, together with Alaska, Hawaii, and Porto Rico, was in process of verification at the close of June, 1913, but was not released for printing until the following August, and was issued in September.

The following-named Abstract bulletins—that is, bulletins reprinted from the Abstract—were also issued during the fiscal year:

State of Birth of Native Population.  
Age and Marital Condition.  
Country of Origin and Date of Immigration.  
Color or Race, Nativity, Parentage, and Sex.  
School Attendance and Illiteracy.

The following branches of work were deferred in February, 1912, after the discontinuance of the temporary Thirteenth Census force, in order that the general and State reports on population might be completed as soon as possible: Occupations; ownership of homes; Indian population; foreign stock; and birthplace of mother, for vital-statistics purposes. The occupation work and the tabulation of ownership of homes are the only branches of the deferred work which have since been resumed (in September, 1912, and April, 1913, respectively), although a bulletin, Statistics of the Indian Population, based on the material already prepared for the first section of the Indian report, was compiled and issued on June 26, 1913.

The preparation of the tables and text for the general report on population, covering a total of 16 chapters, was not actively begun until December, 1912, and the first copy, covering three chapters, was sent to the printer in March, 1913; but by the close of June, 1913, copy was in the hands of the printer for 12 chapters, and for 10 of them proofs, in whole or in part, had been received.

The work of preparing the tables for the general and State reports, as originally outlined, included the computation (in duplicate) of very nearly 500,000 percentages, but in the revision of the tables this number was reduced to a little more than 400,000. These percentages were largely computed on slide-rule machines, an average of five machines being in operation during the fiscal year. At the close of June, 1912, the percentage work for the general tables had been completed for 21 States and partially completed for 10 other States. It was substantially completed for all the general and text tables for the Abstract in December, 1912, and for the general and State reports in June, 1913.

The tables and text for the entire 16 chapters are now (Nov. 26, 1913) in proof. The material for 15 chapters is substantially ready to be released for printing, and it is expected that the material for the remaining one will be ready early in December. This will complete the publication of the Thirteenth Census reports on population.

#### OCCUPATIONS.

The work on occupations was begun in May, 1911, but was suspended in the following January, owing to the large reduction in the temporary force. It was resumed on September 4, 1912, when temporary clerks were again employed. The revision and correction work with respect to this subject had been completed at the close of June, 1913, for 13 States, but the necessity of providing for the com-

pletion of the general report on population and the requirements of the occupation work in other directions made it impossible to give much attention to the results of the occupation count in these States up to that time, but this work was actively taken in hand in September, 1913, and it is expected to complete and publish the report on occupations by the end of the present calendar year.

#### INSTITUTIONAL POPULATION.

The tabulation of statistics of the institutional population—that is, insane, feeble-minded, paupers, and prisoners and juvenile delinquents—was practically suspended early in the calendar year 1912 because of the great reduction made necessary in the temporary force of the Bureau, and was not resumed until September 4 of that year, when the temporary clerks, reappointed under authority of the appropriation act for 1913, became available. During the remainder of the fiscal year this work was carried on, and by June 30, 1913, the statistics of insane and feeble-minded in institutions had been tabulated and those for paupers in almshouses had been partly tabulated, while a part of the preliminary work (editing and card punching) had been done on the schedules for prisoners and juvenile delinquents.<sup>a</sup>

#### BLIND AND DEAF.

In the regular population census the enumerators were instructed to make a return for all persons who were either blind or deaf and dumb. Special schedules for obtaining information relative to these classes were then mailed to the appropriate names and addresses given on the regular population schedules. Most of these special schedules which have been returned were in possession of the Bureau before the beginning of the fiscal year 1912-13. During that year, however, owing to the pressure of other work, very little was done on this inquiry beyond examining and filing such schedules as continued to come in, and preparing lists of the blind or deaf and dumb for the use of institutions for these classes.

#### BENEVOLENT INSTITUTIONS.

During the fiscal year the principal tabulations relative to benevolent institutions were completed, and considerable work was done on the preparation of derivative or text tables.<sup>b</sup>

#### MANUFACTURES.

*State bulletins (Vol. IX, Thirteenth Census reports).*—State bulletins giving the principal statistics of manufactures were issued for all States except Illinois, Ohio, and Pennsylvania prior to July 1, 1912. The bulletins for these three States were printed during the fiscal year, and the entire series was assembled and bound together in one volume, constituting Volume IX of the Thirteenth Census reports.

*General report on manufactures (Vol. VIII, Thirteenth Census reports).*—Practically all of the copy for this volume was sent to the

<sup>a</sup> For present status and plans for future work on this subject, see p. 13.

<sup>b</sup> For present status and plans for future work on this subject, see p. 14.

printer before the close of the fiscal year; it was printed and distributed during September, 1913. This report assembles the statistics for each industry, gives a detailed description of the scope of each classification, and analyzes the statistics of manufactures for all industries. The data for each industry are summarized by States. Separate chapters are presented discussing manufactures in cities, localization of manufacturing industries, character of ownership, size of establishments, expenses, persons employed in manufacturing industries, power used, and fuel consumed.

*Bulletins on selected industries (Vol. X, Thirteenth Census reports).*—Copy for some of the separate bulletins on the principal industries was sent the printer during the fiscal year, and a large number of these bulletins were printed and distributed. In addition to the general statistics concerning capital, employees, wages, and expenses most of these bulletins contain detailed statistics in regard to the quantity and cost of the principal materials used and the quantity and value of the different classes of products, and in some cases in regard to the equipment employed. These bulletins will be assembled and printed as Volume X of the final reports. This volume will be ready for distribution before the close of the calendar year.

#### MINES AND QUARRIES.

A bulletin giving the statistics for the mining and quarrying industries for the United States and for each State, and also giving separate totals for each mining industry, was printed during the fiscal year. The bulletin giving detailed statistics for the production of anthracite and bituminous coal was also printed and distributed. Copy for the bulletin on iron mines was sent to the printer before the close of the fiscal year, and the bulletin was issued in the following September.<sup>a</sup>

#### AGRICULTURE.

*Abstract bulletins.*—A series of Abstract bulletins was issued, each pertaining to a given branch of agriculture and including data for the United States as a whole and for divisions and States. Some of these were published prior to July 1, 1912; others were issued during the last fiscal year. All were later included as chapters in the Abstract of the Thirteenth Census.

*State bulletins—Agriculture.*—A preliminary series of State bulletins was issued prior to July 1, 1912. A second series of State bulletins, giving the complete statistics for each State and for each of the outlying possessions—Alaska, Hawaii, and Porto Rico—was issued between July 1, 1912, and June 30, 1913. The last of the bulletins issued for continental United States were those for Texas and West Virginia, which appeared in February. The bulletin for Hawaii was issued in March and that for Porto Rico in April, these being the last of the series.

*Irrigation bulletins.*—Only one series of bulletins pertaining to irrigation was issued. These bulletins were for the various Western and Southern States where irrigation is practised to a considerable

<sup>a</sup> For present status and plans for future work on this subject, see p. 13.

## REPORT OF THE DIRECTOR OF THE CENSUS.

extent. Some of the bulletins of this series were issued prior to July 1, 1912, and the remainder during the last fiscal year.

*Thirteenth Census reports, Volumes VI and VII.*—The series of State bulletins pertaining to agriculture and irrigation were also assembled, arranged, consolidated, and bound during the last fiscal year, appearing as Volumes VI and VII of the Thirteenth Census reports.

*Thirteenth Census reports, Volume V.*—The agricultural statistics obtained at the Thirteenth Census are contained in Volumes V, VI, and VII of the Thirteenth Census reports. The preparation of Volume V, referred to as "General report and analysis," was undertaken and completed during the last fiscal year, all the copy having been sent to the printer by June 30, 1913. On account of the inclusion of a very comprehensive series of maps and charts, and by reason of the necessity for thorough verification of data, the volume did not come from the press until November 21. This completes the Thirteenth Census reports on agriculture.

## ABSTRACT OF THE THIRTEENTH CENSUS.

The Abstract of the Thirteenth Census was published in December, 1912. This volume presents the principal statistics gathered at the census of 1910, covering the subjects of population (with the exception of occupation data), agriculture, manufactures, and mining. It contains a condensed but comprehensive text analysis of the data; many diagrams and maps; and many tables which include, for comparison, the statistics of prior censuses and give innumerable averages and percentages without which it would be difficult or impossible to grasp the significance of the data presented. It also includes a supplement giving complete and detailed statistics for some one State.

The abstracts of former censuses contained no State supplement, no text, no diagrams or maps, and very few averages, percentages, or comparative statistics. Any person possessing a copy of the Abstract of the Thirteenth Census will find in it the main results of that census for the United States, for the individual States, and for all principal cities. He will have, furthermore, the statistics for the counties and minor civil divisions of the State of which he is a resident—assuming that he has selected the edition for that State. He will find in it, for the county in which he lives, and of course for any other county in the State, such facts as the population at each census from 1870 to 1910, inclusive; the number of whites, negroes, foreign-born whites, native whites of native parentage, and native whites of foreign or mixed parentage; a classification of the foreign white element according to country of origin; the number of males of voting age classified by color and nativity; the number and percentage of illiterates; the number and percentage of children attending school; and the number of dwellings and families. He will also find the number of farms, classified according to size; the farm acreage and the value of farm property, distinguishing land, buildings, implements and machinery, and domestic animals; the number and value of cattle, horses, swine, sheep, and other domestic animals kept on farms; the number of farms operated by owners, by tenants, and by managers,

respectively; the mortgage-debt of farms; the acreage and value of the principal farm crops; the quantity and value of the principal classes of live-stock products, etc. For each of the principal cities in the State the supplement presents population details similar to those given for counties, and also statistics for manufacturing industries giving number of wage earners, horsepower, expenditures for wages, cost of materials, value of products, etc.

The Abstract was prepared with the idea of making it possible to supply, in one volume, complete and detailed information regarding all States and principal cities of the United States. Therefore this volume furnishes all the census information which ninety-nine persons in a hundred desire to have, and thus to a great extent takes the place of the large volumes issued at previous censuses. With the belief that this was, for the general public, the most important volume to be issued in connection with the Thirteenth Census, it was given precedence and the right of way over the main reports, and consequently, instead of being one of the last volumes to appear, as has been the case at most censuses, it was the first.

#### WORK OF THE PERMANENT CENSUS BUREAU.

##### VITAL STATISTICS.

*Annual Report, 1909.*—The annual report on mortality statistics for 1909 was published in September, 1912. The delay in the publication of this report was due chiefly to two causes—(1) interference of the Thirteenth Census work with the annual work of the Bureau; and (2) the revision of the mortality rates for the 10 years of the intercensal period on the basis of the population statistics available from the census of 1910. The report for 1909 is more than a mere annual report, and constitutes a permanent volume for reference concerning rates for each of the years 1900–1909.

*Annual Report, 1910.*—Work on the annual report for 1910 was also delayed by the Thirteenth Census work. This report was published in October, 1913.

*Annual Report, 1911.*—The compilation of the annual report for 1911 was under way on July 1, 1912, and was carried on during the fiscal year. It will be published in December, 1913, as will the annual report for 1912. Bulletin 112, Mortality Statistics, 1911, containing some of the more important data and text, with standardized and specific death rates, was issued in May, 1913.

*Registration area.*—The extension of the registration area is a very important part of the vital-statistics work of the Census Bureau, and it is very gratifying to be able to state that satisfactory laws, based on the model bill recommended by the Census Bureau, or laws which, with slight revision, should give good results, have been adopted in Arkansas, North Carolina, and Tennessee during the year just closed and are soon to go into effect.

The model registration law recommended by the Bureau of the Census was adopted and put into practical operation in Mississippi and Virginia in 1912, and is giving excellent results, although the difficulties of registration are very great, especially in Mississippi, in which State the law has been in force for less than a year. The results in Virginia, although registration is evidently defective in

certain parts of the State, were on the whole sufficiently good to warrant the admission of that State to the registration area for deaths in the year 1913.

New York, one of the registration States, has also recently adopted the model law as a substitute for the legislation formerly in force. Louisiana is preparing to enforce the registration of vital statistics under regulations adopted by the State Board of Health, based on the model law. Earnest efforts have been made during the past year in Georgia, Illinois, Iowa, and other States to secure adequate legislation.

The progress of this movement is, on the whole, satisfactory, although it is unfortunately true that the enforcement of registration laws does not advance as rapidly as their enactment.<sup>a</sup>

#### STATISTICS OF CITIES.

*Annual Reports, 1909, 1910, 1911, and 1912.*—The field and most of the office work on the reports on general statistics of cities and on financial statistics of cities for 1909 and on the report on financial statistics of cities for 1910 had been finished before June 30, 1912. Owing to the pressure of the Thirteenth Census work, however, and to the probability that the Bureau's appropriations for printing would be insufficient to permit the prompt publication of these reports without delaying those of the Thirteenth Census, the final work on them was suspended for a time. In order not to delay the Thirteenth Census work, the field work for the report on financial statistics of cities for 1911, which would ordinarily have been begun early in 1912, was postponed until September of that year. This work was completed in April, 1913, and during the same month the field work was begun on the 1912 report.

The office work on the reports on financial statistics of cities for 1909 and 1910 was completed early in the fiscal year 1913, and these two reports were issued during that year, the former in February and the latter in April. At the close of the fiscal year the office was engaged in completing the tabulation and preparing the text for the 1911 report. The revised page proof for this report was returned to the printer for plating about November 1.

The field work for the 1912 report had been completed for 42 cities by June 30, 1913, and was making commendable progress elsewhere, considering the smallness of the force available for this work.<sup>b</sup>

The report on general statistics of cities for 1909 was in page proof on June 30, 1913, and was issued soon thereafter. It had been the custom of the Bureau up to 1909 to issue this report biennially. By reason, however, of the necessity for concentrating the force of the office so far as possible on Thirteenth Census work, no data for a report on general statistics of cities were collected for 1911.

#### ELECTRICAL INDUSTRIES.

The preliminary work on this inquiry was begun in the latter part of the calendar year 1912. The field work was started in the spring of

<sup>a</sup> For present status of vital-statistics work, see pp. 14 and 17.

<sup>b</sup> For the present status of the work on Financial Statistics of Cities, see p. 14.

1913, and was finished in the following October. The examination of the returns is now (Nov. 26) in progress, and the tabulation has been begun. It is expected that the preliminary report will be ready for publication some time in February, 1914, and that the final report will be ready for the printer early in the following spring.

#### MECHANICAL LABORATORY.

Operations in the mechanical laboratory during the past year comprised the completion of seven automatic and four semiautomatic tabulating machines to such an extent that they may be used upon work requiring not more than 33 per cent of their total capacity in counters; maintenance and repairs of machines of the old type, for use on vital-statistics work; maintenance of sorting machines engaged upon the sort for statistics of occupations, representing the handling of 156,000,000 cards; maintenance of the Bureau of Immigration tabulating equipment; and repairs to adding and computing machines and machines in general.

The remaining counters and parts necessary to a full equipment for the above-mentioned tabulating machines were 60 per cent complete at the end of the fiscal year. Construction of three of the original number of machines of the semiautomatic type was about 30 per cent complete.

The results attained by the aid of devices and accessories originated and placed upon a practical working basis by the mechanical laboratory during the past two years stand as ocular proofs of consistent progress. The increase in speed and efficiency of the tabulating work of the Bureau, together with the added economy resulting from the work of the mechanical laboratory, entitles this branch of the Bureau's work to the fullest consideration.

#### ESTIMATES OF POPULATION.

The work of preparing estimates of the present population of the United States, of the various States and counties, and of cities of 8,000 or more population in 1910 was carried on as usual. These estimates are used in the annual reports on mortality statistics and on statistics of cities, and are furnished to health officers and other State, county, and municipal officials. Estimates of the population of a specified list of townships, cities, and villages as of November 24, 1913, have been made for the State Liquor Licensing Board of Ohio, in accordance with the provisions of the liquor licensing law of that State.

The preparation of estimates of population of cities involves considerable correspondence with city officials each year in order to ascertain the changes in area which have been made during the year. These estimates are based upon the population at the last census, the rate of growth during the period between the last two censuses, and the changes in area, if any, which have been made.

#### FOREST PRODUCTS.

The annual collection of statistics of forest products was made.<sup>a</sup>

<sup>a</sup> For discussion of the origin and present status of this inquiry, see p. 14.

## COTTON STATISTICS. 1913

In July, 1912, Congress passed an act providing that statistics of the consumption, stocks, exports, and imports of cotton and of the number of cotton-consuming spindles should be collected by the Bureau of the Census monthly, instead of quarterly, as had been the practice, and making certain minor changes in the method of publishing the statistics of cotton production. The purpose of this legislation was to furnish producers with information concerning demand as frequently as consumers are furnished with statistics concerning supply. The first report made under the authority of this act was issued in August, 1912.

There were published during the year the usual reports, 10 in number, showing the amounts of cotton ginned to specified dates during the ginning season.

In January, 1913, there was issued a mid-season report showing the amount of cottonseed crushed and linters obtained during the ginning season up to December 31. Theretofore such data had been published annually at the end of the cotton season.<sup>a</sup>

## TOBACCO STATISTICS.

In April, 1912, Congress passed an act providing for the collection, as of April 1 and October 1 of each year, of statistics regarding the stocks of leaf tobacco held by manufacturers and dealers. The first report under this act was made on November 27, 1912, and was received with much interest by those engaged in the tobacco trade. The second report, relating to April 1, 1913, was made on May 26 of that year. The third report, relating to October 1, 1913, was issued on November 13 of the present year.<sup>b</sup>

## INCREASE OF WORK IMPOSED BY RECENT LEGISLATION.

The two acts of Congress just referred to have materially increased the work of the Census Bureau. The appropriations for carrying on this additional work have been much less than were requested, but the Bureau has endeavored to make the best use possible of the funds provided.

## WORK FOR THE FISCAL YEAR 1914.

In view of the delay in the publication of the results of the Thirteenth Census, the Director, early in the fiscal year 1914, appointed a committee consisting of the Chief Statistician for Manufactures, the Chief Clerk, and the Expert Special Agent in charge of the Division of Agriculture, to investigate the work in all the divisions of the Bureau and to make recommendations which would lead gradually to a complete reorganization. This committee accumulated a large quantity of material and made a number of recommendations which resulted in great improvement in certain branches of the Bureau's work.

It has also been the earnest desire of the Director to bring the work up to date, and to this end he deemed it desirable to have the assistance and advice of persons who were outside of the Census Bureau

<sup>a</sup> For present status and plans for future work on this subject, see p. 15.

<sup>b</sup> For present status and plans for future work on this subject, see p. 16.

but who were familiar with its work. He accordingly selected for this purpose Hon. S. N. D. North and Hon. W. R. Merriam, former Directors of the Census; Prof. Walter F. Willcox, of Cornell University, who had been a chief statistician in the Bureau during the census of 1900, and who for the greater part of the time since has been connected in some capacity with the work of the office; Mr. W. S. Rossiter, who had been a chief of division and later Chief Clerk of the Bureau; and Hon. Daniel C. Roper, First Assistant Postmaster General, who had been an expert special agent and chief of division in the Census Bureau. These gentlemen, with the exception of Mr. Roper, were given appointments as expert special agents. After examining the material and recommendations made by the committee of the regular employees of the office, they conducted an independent investigation of conditions in the Bureau, conferring with the chief statisticians and other officials in charge of the different branches of the work. They found that, while the larger proportion of the work of the Thirteenth Census had been finished and published, nevertheless a considerable quantity of statistical information collected at that census still remained to be tabulated and published. The most serious delay was in the work on statistics of occupations. This, however, as already stated, had been deferred, along with certain other branches of the work, in order to permit the publication of the balance of the reports at the earliest possible date. The work on some of the annual reports of the Bureau—in particular, Financial Statistics of Cities, 1912, and Mortality Statistics, 1911 and 1912—was also far in arrears.

The expert special agents advised the Director that no additional tabulations or analyses should be undertaken in connection with the unfinished branches of the Thirteenth Census work, and that the work on those branches and on the delayed annual reports could and should be curtailed so as to insure their publication not later than December 31, 1913.

The recommendations of the expert special agents were as follows:

1. That the proposed second machine run of the cards for the purpose of tabulating occupations be abandoned, thus expediting the time of production by about six months and reducing the cost of finishing that branch by about \$65,000; and that the tables yielded by the first run of the cards be printed without derivative tables or text. These tables give the number of persons of each sex in each occupation, and classify them by race, nativity, and parent nativity, and five age periods, thus insuring the publication of the primary classification of occupational data as reported at previous censuses.

2. That the report upon native tongues be limited to the chapter to appear in the forthcoming final volume on population.

3. That the tables relating to mines and quarries now in the form of printed bulletins, proofs, or manuscript be sent to the Public Printer at once, the same to constitute the final report on mines and quarries, and that no further tabulation or text be prepared in connection with that report.

4. That tables for the benevolent institutions, and for the institutional population—namely, prisoners, insane and feeble-minded, and paupers—be prepared and published without further percentage or other derivative tables and without analytical text.

5. That the annual compilation of the statistics of forest products be abandoned. There appears to be no authority of law for an annual inquiry of this character, which the records show to have cost from \$20,000 to \$40,000 a year.

6. That the annual report on financial statistics of cities for 1912 be completed and published by January 1, 1914, by curtailing the amount of detail to be included; that the schedules and report for 1913 be similarly curtailed; that the reports for the years 1912 and 1913 be printed without text, except such

As is necessary for explanation and definition, and that until the annual reports on the financial statistics of cities are brought up to date no attempt be made to prepare a report on general municipal statistics. This recommendation is based on the fact that delay in the compilation and publication of the annual municipal reports detracts seriously from their value.

7. That reports on mortality statistics for the years 1911 and 1912 be published before the close of the present calendar year. To make this possible, the text of these reports should be reduced to a minimum or omitted, the tables condensed, and no effort made to publish a report on births until the mortality reports are published.

8. That work upon the standardization of death rates, life tables, and occupational mortality be suspended until the above reports have been published. There is no reason why the mortality report for each year should not be compiled and published prior to the close of the succeeding calendar year.

9. That the emergency presented by the delay in completing the Thirteenth Census justifies the Director in requesting the Secretary of Commerce to lay the matter before the President, with the view of securing his instructions to the Public Printer to give precedence so far as practicable to the remaining publications of the Thirteenth Census and the annual reports long overdue.

#### OCCUPATIONS.

In accordance with recommendation 1, the report on occupations will be based upon the results of the first machine count of the cards. It is expected that all the copy will be in the hands of the printer before the close of the calendar year.

#### NATIVE TONGUES.

Recommendation 2 is being carried out.

#### MINES AND QUARRIES.

In accordance with recommendation 3, no further tabulation or text is being prepared in connection with the report on mines and quarries. The work on this branch of the Thirteenth Census work was very much in arrears, and it became evident that in order to print the report within any reasonable time it would be necessary to abandon some of the bulletins and monographs which had been contemplated. The copy for the final report, which will be Volume XI of the reports of the Thirteenth Census, is now in the hands of the printer, and the proof is being compared as rapidly as possible.

#### INSTITUTIONAL POPULATION.

In order to carry out recommendation 4, the work on the census of institutional population was restricted to the publication of the general tables, without percentages and without interpretative text. After the expert special agents had made their recommendations, however, it was found necessary to make a further very material curtailment of the work on the census of prisoners and juvenile delinquents, in order to limit it to tabulations which could be completed before January 1, 1914. The work authorized now includes only the completion of the tables giving the number present in each prison, jail, or reformatory on January 1, 1910, classified by sex, color, and nativity, and by offense and sentence, together with the number committed and discharged during the year, classified only by sex, color, and nativity.

## BENEVOLENT INSTITUTIONS.

The report on benevolent institutions will be published by the close of the year in accordance with the original plan, without any substantial curtailment.

## FOREST PRODUCTS.

In accordance with recommendation 5, no further compilation of statistics of forest products will be undertaken in the absence of legislation authorizing it.

The first collection of annual statistics concerning the production of lumber, lath, shingles, cooperage stock, and other forest products was made for the year 1906, in compliance with authority contained in a letter dated September 18, 1906, from the Assistant Secretary of Commerce and Labor to the Director of the Census. A letter dated September 26, 1907, from the Secretary of Commerce and Labor authorized the Director to collect these statistics for the year 1907. There appears to have been no further authorization for the annual collection of such statistics. The work, however, has been continued annually and reports have been issued for every year up to and including 1911. The report for 1912 is now being prepared. It is evident from the correspondence and records that it was not the original intention to establish a permanent annual investigation of this character. All other inquiries undertaken by the Bureau of the Census are based upon acts or resolutions of Congress, and in the absence of such specific legislation with reference to forest products the Director and the expert special agents concluded that the Bureau was not justified in continuing this annual investigation. The Director, accordingly, ordered that it be discontinued after the issuance of the report for 1912.

A number of lumber manufacturers and associations of manufacturers have protested against the discontinuance of these annual reports. In reply the Director has stated that there was no direct provision of law authorizing an annual expenditure of from \$20,000 to \$40,000 to collect the statistics and that without such authority he did not feel justified in continuing this work, but that he would be perfectly willing to renew it if authorized to do so by appropriate legislation.

## STATISTICS OF CITIES.

In compliance with recommendation 6, the 1912 financial statistics of cities will be completed and published by January 1, 1914. In order to insure the publication of these statistics by the close of the calendar year the tabulation has been arranged so as to make a bulletin of about 70 pages, whereas the report for 1911 contained 400 pages. The other provisions of this recommendation are also being carried out.

## MORTALITY STATISTICS.

In accordance with recommendation 7, the reports on mortality statistics for 1911 and 1912 have been sufficiently curtailed to make possible their publication before the close of the calendar year, and the bulletin for 1912 has been abandoned. This practically clears the

way so that the annual report for 1913 will be fully up to date. The Bureau anticipates no difficulty in issuing this report by about November 1, 1914.

Recommendation 8 is being carried out.

#### ARRANGEMENTS FOR PRINTING THIRTEENTH CENSUS REPORTS.

In compliance with recommendation 9 arrangements have been made with the Public Printer whereby the printing of the reports of the Thirteenth Census will be expedited so far as possible without undue interference with the work on other Government publications.

#### AGRICULTURE.

A number of subjects pertaining to agriculture were considered from time to time as proper for future analysis and special reports. After the Thirteenth Census reports, as such, had been completed, it was deemed wise to undertake the preparation of two bulletins, each covering a special subject which had been considered only briefly, or not referred to at all, in the general reports. Such a bulletin, pertaining to "Plantation systems of conducting agriculture in the Southern States," is now in course of preparation. A chapter on this subject was included in Volume V of the Thirteenth Census reports, previously referred to. The other special bulletin, which shows character of tenure and size of farm operated, classified by age of farmer, is also in course of preparation. This latter bulletin contains a section relating to the stability of the agricultural population, showing, for white and colored farmers separately, by character of tenure, the length of the average period of occupancy of farms.

#### COTTON STATISTICS.

During the fiscal year beginning July 1, 1913, there will be issued 10 reports showing the quantity of cotton ginned up to specified dates during the ginning season; twelve—one for each month—showing the quantity of cotton consumed, stocks of cotton on hand, and number of active spindles; three giving statistics of cottonseed crushed and linters obtained; one summarizing the statistics for the production of cotton as reported by the ginners; and one summarizing the statistics for the consumption of cotton, stocks on hand, and spindles. These 27 reports will constitute a complete statistical presentation of the production and consumption of cotton in the United States during the year.

The Bureau has made arrangements for the more frequent publication of county statistics of cotton ginned. It had been the practice to publish county figures only for December 13 of each year and at the end of the season, the State totals alone being given at other times. There was, however, a great demand for information as to the quantity of cotton ginned in the individual counties up to the date of each ginning report, and the Census Bureau, accordingly, gave the local special agents permission to publish this information in the county newspapers just as soon as their reports could be received at the office in Washington and the data verified. The local papers throughout the Southern States have been greatly pleased by this action, and

many of them have written the Bureau expressing their appreciation of it.

Requests have been made of ginners for suggestions in regard to improving the method of collecting and publishing statistics of the quantity of cotton ginned, and almost invariably the replies have indicated complete satisfaction with the way in which the work is now being done.

The Bureau of the Census has also arranged for an additional report on cottonseed and linters, which will show the quantity of seed crushed and linters obtained from the crop prior to December 1 of each year. Heretofore there have been only two reports issued annually on this important subject, one showing the quantity of seed crushed prior to January 1, and the other, published at the end of the crushing season, showing statistics of the total quantity treated; and prior to January, 1913, only one such report, issued at the end of the cotton season, had been made annually.

Before deciding to make an additional report on this subject the Bureau communicated by letter with all of the cottonseed-oil mills throughout the entire country. The replies indicated a great diversity of opinion in regard to the date to which the report should relate. Some of the mills even contended that the collection of these statistics was not desirable, and recommended that the work be abandoned. A vast majority of them, however, were of the opinion that the figures should be published at more frequent intervals, and some went so far as to recommend that they be collected and published monthly during the active season.

From these letters and other recommendations which have been received, the Bureau is satisfied that the publication of official statistics concerning the quantity of cottonseed crushed and linters obtained tends to reduce speculation in these commodities and to make for greater stability in price. The decision to publish another report showing the quantity of seed crushed and linters obtained from each crop prior to December 1 was based upon the recommendations of the majority of the mills.

#### TOBACCO STATISTICS.

The Bureau of the Census has been able to make more satisfactory cooperative arrangements with the Internal-Revenue Service in connection with the collection of statistics of stocks of leaf tobacco for the report issued November 13, 1913 (relating to October 1), than it was able to make for either of the two preceding ones, so that it is now possible for the Bureau to secure, by correspondence with collectors of internal revenue, the names and addresses of the establishments covered by the law, together with all the information it requires in regard to delinquent establishments and establishments whose mail has been returned by the post offices as undelivered. The collectors have responded very promptly to the Bureau's requests for information of this character.

This arrangement obviates the necessity of sending special agents into the field to secure the information, thus materially reducing the cost of the work and enabling the Bureau to complete the canvass for the reports showing the quality of tobacco on hand October 1, 1913, at a much earlier date than was possible in the case of prior reports. The field work incident to the collection of the statistics was virtually

completed on November 4 and, as already stated, they were made public November 13. The corresponding dates for the report of April 1 were May 22 and May 26, respectively.

Under the law tobacco dealers and manufacturers are allowed 10 days after the first day of April and the first day of October of each year in which to make their reports. The law further provides that the Director of the Census shall make a demand in writing of all persons who have failed to furnish the statistics within this time, and that such persons shall be given an additional 20 days. It, therefore, requires from 30 to 40 days to collect the reports of the quantity of tobacco on hand, so that it is virtually impossible to publish the statistics at a much earlier date than that at which they were published for the report of October 1, 1913.

#### IMPROVEMENT IN METHODS OF REPORTING VITAL STATISTICS.

In connection with the extension of the registration area for vital statistics, it is desirable to increase the accuracy of the information received. It is also important that the methods of reporting and the presentation of the data in the registration States be standardized. With these objects in view, a second edition of the Physicians' Pocket Reference to the International List of Causes of Death has recently been prepared and is now in course of distribution to all physicians in the United States, accompanied by a special circular letter signed by the Director, and by additional multigraph letters to the physicians in certain States. A reprint of the Manual of the International List of Causes of Death, prepared for the use of registration offices in the compilation of State and city reports, has also been published since the close of the fiscal year 1913.

#### OFFICIAL REGISTER OF THE UNITED STATES.

Work on the Official Register of the United States is progressing rapidly. The necessary information has been obtained from the several departments and offices, as provided by law, and its compilation is now well toward completion.

The Census Bureau encountered increasing difficulty in the preparation of Volume II (relating to the Postal Service) of each succeeding issue of the Official Register. This volume in 1911 contained 774 pages, and the cost of printing alone was \$12,600. It was necessary to obtain the names of the employees in the Postal Service by correspondence with each postmaster in the United States. The number of such employees on June 30, 1913, was 290,605. The task of preparing this volume was of such magnitude that a period of at least six months usually elapsed between the date to which it related and the date of its publication.

In view of these facts it was believed by the officials of the Census Bureau and of the Post Office Department that the practical value of this volume was not sufficient to justify the labor and expense involved in its preparation; and in compliance with recommendations made by those officials, the following provision was incorporated in the urgent deficiency act for 1914, approved October 22, 1913:

Hereafter the Official Register of the United States shall not contain the names of those persons heretofore published in Volume II relating to the postal service, namely, postmasters, assistant postmasters, clerks in post offices, city

and rural carriers, employees of the sea-post service, employees of the Railway Mail Service, employees of the mail messenger service, and mail contractors; nor shall it contain the statement of allowances made to contractors for carrying the mails or the list of ships and vessels belonging to the United States, as heretofore published in the said Official Register; and all Acts or parts of Acts inconsistent with the foregoing provision are hereby repealed.

This legislation will greatly simplify the preparation of the Official Register and will very materially decrease the expense of the work.

The Director of the Census has called attention to the fact, already pointed out by his predecessor, that the Official Register in its present form is unnecessarily cumbersome and expensive. The volume as now published contains an alphabetical list or directory of all Government employees except those in the Postal Service, the name of each employee being followed by data showing the department and bureau or office in which employed; the official title; compensation; State or country of birth; congressional district, county, and State from which appointed; and place of employment. The information is presented in so abbreviated a form that in nearly all cases it occupies but a single line following the name of the person to whom it relates. Preceding the directory are lists, arranged by departments and offices, showing the principal officials in each, without clerical or other minor employees. This form is very compact and permits the presentation of the data in the smallest possible space. Nevertheless, the directory volume of the Official Register for 1911 contained 878 quarto pages.

The preparation of the Register is becoming more and more difficult with the growth and increasing complexity of the Government service; and the task of furnishing the required information is becoming more and more onerous for the executive departments and offices, especially in the cases of those departments which have services in the outlying possessions of the United States and in foreign countries. It is, therefore, very difficult to compile and issue the Register before the assembling of the regular session of Congress in December; and during the period between July 1 and the following December many changes—of which it is impracticable to make any record in the Register—are bound to occur.

In view of these conditions the adoption of the following plan, which modifies slightly the one proposed by the former Director, is recommended:

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 Revenue Cutter Service. 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 Revenue Cutter

Service) 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.

This plan, if adopted, will result in very material saving to the Government, will preserve all the valuable features of the present Official Register, and will provide for a complete and up-to-date record of the entire personnel of the Government in one central office (the Civil Service Commission), from which the Census Bureau will be able to prepare accurate statistical statements when called upon to do so by the President or by Congress.

A bill substantially embodying the foregoing plan (except that \$1,500 instead of \$2,000 was fixed as the lowest compensation of employees whose names should be included in the Official Register) was introduced in the House of Representatives on August 8, 1913, by Hon. W. C. Houston, of Tennessee.

#### WEALTH, DEBT, AND TAXATION.

An important and extensive intercensal investigation which has been planned for the fiscal year 1914 is that relating to wealth, debt, and taxation. The permanent census act authorized a decennial investigation of "All public indebtedness, values, taxation, and expenditures." An inquiry relating to the year 1902 was made under the authority of this act. In view of the fact that the great body of data contained in the report based upon that inquiry covered, for the various governmental units, the period of one fiscal year closing at some time between July 1, 1902, and June 30, 1903, it seemed wise to make the investigation now under consideration for the fiscal year ending between July 1, 1912, and June 30, 1913. This is six months earlier than recommended in the annual report of the former Director of the Census. The change has been decided upon for the two following reasons: (1) That the data contained in the report will thus relate, as nearly as possible, to a period 10 years later than that covered by the last report, and will therefore be more nearly comparable in all details; and (2) that it will thus be possible to compile a very large part of the report from published reports of the various governmental units to be investigated, with the result of effecting a very material saving to this Bureau.

Prior estimates made by the Bureau of the Census called for an appropriation of \$100,000 to provide for travel and subsistence of clerks engaged in this investigation. The urgent deficiency act for the fiscal year 1914, however, authorized the use, during that year, of only \$50,000 of the unexpended balance for collecting statistics for the fiscal year 1913; and the Bureau will make the best use possible of this sum in conducting the inquiry on wealth, debt, and taxation. So far as practicable the printed reports of the United States and of the various States and other governmental units, and such other data as may be available, will be used by the Census Bureau as sources of information. The Bureau is now engaged in collecting such of these reports as can be secured without cost, and has already accumulated a considerable amount of material. A careful

analysis of the data at hand is being made, with a view to ascertaining just what can be done with printed reports and other available data before Census employees enter the field to make the actual canvass. While the investigation of wealth, debt, and taxation is an extensive one, it is not proposed to employ any additional clerks or any considerable number of special agents to perform any part of the work. Aside from the use of published reports and other material which is being accumulated, the statistics will be collected largely by sending clerks from the regular permanent force of the Bureau into the field. A small number of special agents will be necessary to supplement the regular permanent force. The Post Office Department has been requested to cooperate with the Department of Commerce by directing postmasters in small towns, to which it would not be feasible to send agents of the Census Bureau, to furnish certain of the data needed. All of the results of this inquiry will be tabulated by the regular force in the office.

The scope of the forthcoming report on wealth, debt, and taxation will be substantially the same as that of the preceding one, which was prepared some 10 years ago.

#### USE OF RECORDS FOR GENEALOGICAL PURPOSES AND TO DETERMINE AGES OF APPLICANTS FOR PENSIONS.

Constant use is made of the schedules of former censuses for genealogical purposes. Of late the records of the censuses of 1850 and 1860 have been proving of immense value to applicants for pensions who are unable to furnish other satisfactory evidence of their ages; and the labor of examining the schedules in order to secure such evidence has become so great that it has been found necessary to obtain the detail of a force of 28 clerks from the Pension Bureau to perform this work.

#### ESTIMATES OF POPULATION.

The Bureau contemplates the issuance, early in the calendar year 1914, of a bulletin giving estimates of the population of the United States, of the various States and counties, and of cities of 8,000 population or over in 1910, for the years 1911, 1912, 1913, and 1914. Two similar bulletins were issued during the period between the Twelfth and Thirteenth Censuses.

#### CENSUS OF MANUFACTURES, 1914.

Under the existing law a census of manufactures is taken every fifth year. The canvass is made in the fifth and tenth years of each decade and relates in each case to the calendar year preceding the one in which the statistics are collected. The next report will, therefore, cover the year 1914 and the canvass will be made in 1915.

The delay in compiling and publishing the statistics for previous censuses of manufactures has been due largely to the fact that the preliminary work incident to the canvass was not finished in time to have the field work begun promptly at the beginning of the year. While the field work can not start until January 1, 1915, it is the purpose of the Bureau to begin at once to make the preparatory arrangements. The preliminary work will be done thoroughly and

everything will be in shape to put a large force of special agents and clerks in the field promptly with the beginning of 1915, so that the canvass can be pushed to completion and the results printed at a much earlier date than has been possible heretofore.

### CENSUS OF AGRICULTURE, 1915.

The Thirteenth Census act contains the following provision:

That there shall be in the year nineteen hundred and fifteen, and once every ten years thereafter, a census of agriculture and live stock, which shall show the acreage of farm land, the acreage of the principal crops, and the number and value of domestic animals on the farms and ranges of the country. The schedule employed in this census shall be prepared by the Director of the Census. Such census shall be taken as of October first, and shall relate to the current year. The Director of the Census may appoint enumerators or special agents for the purpose of this census, in accordance with the provisions of the permanent Census Act.

This section undoubtedly gives the Director of the Census all of the necessary authority, providing proper appropriations are made, for the taking of the census of agriculture in 1915. It is probable that a few slight changes in the law will be desirable, particularly with reference to scope, the method of taking the census, and the time of the year at which it shall be taken. But no legislation will be necessary prior to the regular session of Congress beginning in the early part of December, 1914, when estimates for appropriations needed will be submitted, as well as requests for such slight changes in regard to date of enumeration, scope, and method as may seem desirable at that time.

### OFFICE FORCE.

#### CHANGES IN ADMINISTRATIVE FORCE.

At the beginning of the fiscal year a number of important changes were made in the administrative force of the Bureau. During the period between the Twelfth and Thirteenth Censuses the Bureau had its own Disbursing Office and Appointment Division, under the supervision of the disbursing clerk. During the Thirteenth Census period the work of these two divisions was, of course, very much heavier, and provision was made for a separate appointment clerk to take charge of the Appointment Division. The administrative force also included an Assistant Director during the Thirteenth Census period. At the close of this period, however, the positions of Assistant Director, appointment clerk, and disbursing clerk ceased to exist. As much as possible of the work which had been performed by the Disbursing and Appointment Divisions was transferred to the corresponding divisions of the Department, the remainder of their duties being placed under the supervision of the Chief Clerk of the Bureau.

At the close of the Thirteenth Census period the number of chief statisticians, which had been increased to five during that period, was again reduced to four. Several reductions were made at the same time in the salaries of administrative officials.

The appropriations for the compensation of administrative officials for the fiscal year 1914 were the same as those for 1913.

## PERMANENT EMPLOYEES.

During the Thirteenth Census period the Bureau operated under a lump-sum appropriation. The Thirteenth Census act, however, limited the number of clerical positions at salaries above \$1,200 to 116. For several years prior to that period the number of such positions had been, under the appropriation acts, only 36. The appropriation act for the fiscal year 1913 provided for a total of 610 permanent employees, or a slightly smaller number than the Bureau had had during the fiscal year 1909 (626), prior to the Thirteenth Census period. Sixty-three clerks at salaries above \$1,200 were authorized. This number, while much greater than the number of such clerks prior to the Thirteenth Census period, was still only a little more than half as great as the corresponding number (116) during that period. It became necessary, therefore, to demote a large proportion of the employees in the higher salary classes, together with some of those in the lower ones; the total number of demotions was 185 (this number including 5 demotions of special agents and 15 of subclerical employees). The Census Bureau, when opportunities for promotion have arisen, has in nearly all cases given preference to these demoted employees. Vacancies in the higher-paid positions occur but slowly, however, and during the fiscal year it was possible to restore, in all, only 55 employees to their former salaries; and only 9 of the 77 employees who had been demoted from salaries of \$1,400 or more were restored to their former compensation.

The appropriation act for 1913 provided that the Civil Service Commission, in certifying eligibles from the examination registers for appointment to positions on the permanent roll of the Bureau during the fiscal year 1913, at salaries of \$1,200 or less, should, so far as practicable under the law of apportionment, give preference to those who had had at least one year's experience in census work. A statistical-clerk register was established by the Civil Service Commission for the special use of the Census Bureau. Prior to the establishment of this register, appointments to the Bureau's permanent force were made principally from the departmental-clerk register, but later, after the statistical-clerk register had been established, most of the permanent appointments were made therefrom. The majority of the clerks drawn from these two registers had been temporary Thirteenth Census employees, and were given preference in certification under the provision of law just mentioned.

The appropriation act for 1914 created 7 additional positions at \$1,400 and 5 at \$1,200, and reduced the number of \$900 places by 1, thus increasing by 11 the total number of positions on the permanent roll of the Bureau, and bringing the number of places above \$1,200 up to 70, equal to 13 per cent of the total number of clerical positions, as compared with from 24 to 55 per cent in other branches of the departmental service.

One of the objects which it was desired to attain by the establishment of a permanent Census Bureau was the maintenance of a nucleus for the large force which must be employed during the decennial census periods. A considerable part of this nucleus must consist of employees thoroughly trained in census work and qualified to discharge responsible supervisory duties. Persons so qualified can demand larger salaries than the average clerk, and if they are unable to

obtain them in the Census Bureau, will seek them elsewhere. For this reason the Bureau is constantly losing some of its most valuable employees and is obliged to train, at Government expense, others to take their places. The very fact that the Bureau must expand so greatly at each decennial census period constitutes a strong argument in favor of granting it a larger, rather than a smaller, proportion of high-salaried employees than is found in other branches of the Government service. During the fiscal year 1913, following the reorganization of the force and the enforced demotion of so large a proportion of the high-salaried employees, 51 experienced clerks resigned to seek employment elsewhere, where the prospects for advancement were superior to those in the Census Bureau.

With a view to remedying this condition so far as possible without asking for a material increase in the appropriation for salaries, a proposal for reclassification will be submitted to Congress. The present and the proposed constitution of the office force of the Bureau, exclusive of special agents, are shown in Appendix I.

The object of this proposed change is twofold: First, to provide a larger proportion of places in the higher-salaried classes; and second, by increasing the number of salary classes to make possible more frequent promotions.

As already indicated, an unduly large proportion of the Bureau's employees are in the \$1,200 class. The proposed reclassification, while calling for only a slight increase in the total appropriation for salaries, provides for a material increase in the number of higher-salaried positions. The estimate calls for 12 clerks at \$1,800, as compared with 11 at present; for 12 at \$1,680 and 15 at \$1,560, or 27 at an average salary of about \$1,620, as compared with 20 at \$1,600 in the present classification; and for 18 at \$1,440, 23 at \$1,380, and 34 at \$1,320, or an aggregate of 75 at salaries ranging from \$80 below to \$40 above \$1,400, as compared with 39 at \$1,400 in the present classification. The estimate calls for 559 officials and employees (exclusive of special agents) above the subclerical grade, as compared with 560 such officials and employees in the force as at present constituted.

Furthermore, as already stated, the proposed reclassification, if carried into effect, will, by providing so many more salary classes, make possible more frequent promotions, with a resultant improvement in the esprit de corps.

#### TEMPORARY FORCE.

The Census Bureau's appropriations for the fiscal year 1912 were insufficient to enable it to maintain its force of temporary Thirteenth Census employees throughout the fiscal year. Immediately upon the passage of the urgent deficiency act in December, 1911, steps were taken to drop the temporary force as rapidly as possible, and by February 29, 1912, practically all of these employees had been dropped from the Bureau's roll. In view of the unfinished condition of much of the Thirteenth Census work, an appropriation of \$120,000 for temporary clerical service was requested for the fiscal year 1913, in order that this work might be brought to completion as rapidly as possible. On August 23, 1912, this amount was appropriated by Congress, it being stipulated that not to exceed 175 clerks should be employed, at salaries

not to exceed \$900 per annum, that their terms of service should expire on June 30, 1913, and that they should be appointed from among former Thirteenth Census employees. The Bureau appointed these 175 temporary clerks at \$720 per annum, apportioning them (although not required to do so by the terms of the appropriation act), so far as practicable, among the States on the basis of their population, but, in order to avoid bringing persons to Washington from a distance for a comparatively short period of service, preference was given to those locally available. It was possible in most cases to give a State its quota of appointments from among persons who, while legal residents of that State, were actually living in or near Washington at the time.

Inasmuch as the appropriation act did not become a law until late in August, it was not possible to appoint any of these temporary clerks before September 1, and many were not appointed until about October 1. Consequently, the appropriation of \$120,000 was considerably more than sufficient to compensate these 175 employees until the end of the fiscal year. The Bureau, therefore, asked for authority to increase the number of temporary clerks without an increase in the amount of the appropriation. This authority was granted by the appropriation act for the fiscal year 1914, which was approved March 4, 1913. The temporary force was, accordingly, increased until it reached a maximum of 265 in May and June, 1913. On June 30, 1913, all these temporary positions lapsed under the terms of the act creating them.

#### DISTRIBUTION OF FORCE.

The distribution of the office and field force of the Bureau of the Census on October 31, 1913, is shown in Appendix II.

#### QUARTERS.

The building in which the Census Bureau is at present housed is unsatisfactory in respect to sanitary and lighting conditions and in respect to danger from fire. Greater space for the storage of records and equipment is also highly desirable. A fireproof building, erected with proper regard for lighting and sanitary conditions, and having ample storage space, would facilitate the work of the Bureau and would greatly increase the comfort and well-being of its employees. In view of the vast quantity of valuable records which must be stored, many of which could not be replaced if destroyed, the need of a fireproof building is especially pronounced; and while the Census Bureau remains in its present quarters there is great need of a larger fireproof vault for the storage of population schedules of past censuses, as the capacity of the vault now in use is insufficient to meet the Bureau's requirements.

In this connection the Director of the Census, on September 27, 1913, wrote the Secretary of Commerce as follows:

There are in my custody in the Census building a number of volumes of the returns of the census from 1790 to 1900, which are of great value, and it would be impossible to replace them if they were destroyed. The names of the heads of families returned at the census of 1790 were considered of such great value that they were published, in order that they might be placed on record in different libraries and render it impossible for all to be destroyed.

These returns, however, are incomplete, as we have no returns for the State of Delaware for 1790; none for the State of Georgia for 1790, 1800, and 1810; Kentucky is missing for 1790 and 1800; New Jersey from 1790 to and including 1820; Tennessee from 1790 to and including 1810, and Virginia for 1790 and 1800. A number of the missing returns referred to were destroyed when the Capitol was burned by the British, and the others by fires in the Patent Office.

In addition to the records of population, we have the following-named bound volumes:

Subject.	Number of volumes.
Agriculture.....	644
Mortality.....	131
Social statistics.....	43
Industries.....	197
Defectives.....	68
Total.....	1,083

The total number of volumes from 1790 to 1880 comprised 4,622. In 1890, when the schedules were not bound, we had approximately 44,000 bundles of schedules. For 1900, we have 2,812 volumes. The population returns for 1910 are in a fireproof vault and fill it completely. They have not been bound and are constantly referred to. The census returns from 1790 to and including 1900 are continually referred to for genealogical purposes, and the returns for 1850 and 1860 are constantly being examined to secure data showing the ages of pensioners, as they are unable to obtain any other record evidence of their ages. These volumes, especially, are proving invaluable and could not, of course, be replaced if they were destroyed, and as time passes by the census returns will prove of greater value, as it is the only list to which individuals can refer in order to establish relationship in their families, often required in settling estates.

In addition to the census returns, we have many division records, the loss of which would cause great embarrassment and thousands of dollars would have to be expended to attempt to replace them. For instance, the Geographer's Division has the plans of division into enumeration districts, into which the country was divided in 1910. These official records, if lost, could not be replaced and would involve great expense in the preparation for the Fourteenth Census. There are in all the divisions of the Census Bureau division records that are essential in preparing for another census, and they would all be lost if there was a fire which destroyed the present building occupied by the Census Bureau. As a precautionary measure, I have had the chief clerk post "No smoking" placards throughout the building and have issued an order positively prohibiting smoking in any part of the present building. While orders against smoking were previously issued by my predecessors, I have been informed that no action was taken to enforce them in toilet rooms and among the higher officials. It will probably be necessary for me to take drastic action in some case in order to show, by example, that there must be no smoking in the present Census building.

The necessity for a fireproof vault to inclose these records has been conceded at every enumeration, and when the present Census building was built a vault was placed therein, which was large enough to hold all the returns of population from 1790 to 1900, except the schedules for 1890. This vault now contains only the unbound population schedules for 1910. The bound volumes containing the returns of the other censuses, except 1890, have been placed on metallic shelves in the northern part of the large east room. The census schedules from 1790 to 1900, except those of 1890, now occupy in the Census Bureau a space 45 by 26 feet, 12 feet high. The population returns for the census of 1890 require about as much space as the returns for the other enumerations; that is, if we attempted to place the returns in a vault, it would have to have approximately 2,340 square feet for cases at least 12 feet high.

To the foregoing letter the Secretary of Commerce, on October 3, 1913, replied as follows:

Referring to your communication of the 27th on conditions as regards the fire risk to valuable records in the building at present occupied by your Bureau,

let me say that your instructions prohibiting smoking are approved, as is also your intention to enforce them strictly. Kindly give consideration to any other precautions that may further provide safety, such as absolute cleanliness in out-of-the-way places, supervision of the night watchmen, provision of fire-extinguishing appliances readily accessible, arrangements for the prompt removal of the more valuable part of the records in case of fire. In short, take whatever steps your judgment suggests and the means at your disposal permit to prevent loss.

Take a note to bring the matter again to my attention the latter part of November that I may bring the subject before both Houses of Congress in the hope that they may provide funds which will permit our putting these invaluable records into a condition of safety. In the meantime I suggest your sending a copy of your letter to me and of this, my reply, to the Chairmen of the House Committee on the Census and the Senate Committee on the Census, in order that they may be fully informed.

### APPROPRIATIONS, EXPENDITURES, ETC.

In Appendix III is presented a financial statement for the permanent Census Bureau for the fiscal year 1913 and for the Thirteenth Decennial Census from July 1, 1909, to June 30, 1913.

#### COMPARATIVE COST OF PRINTING FOR TWELFTH AND THIRTEENTH CENSUSES.

It is impossible to make an exact comparison of the printing costs of the Twelfth and Thirteenth Censuses, owing to the radical difference between the methods of printing employed at the two censuses. A rough comparison may be made, however.

There was spent for Thirteenth Census printing up to June 30, 1912, out of the lump-sum appropriations available for the expenses of the Thirteenth Census, \$303,349.73. In February, 1912, an estimate of \$272,000 to complete the printing of the results of the Thirteenth Census was submitted to Congress. This item was included in the legislative, executive, and judicial appropriation act for the fiscal year 1913, and the same act for 1914 reappropriated the unexpended balance of this amount, all or substantially all of which will be spent. The total cost of printing the results of the Thirteenth Census will not, therefore, exceed the sum of these two amounts, or \$575,349.73. The approximate cost of the Twelfth Census printing, as given on page 29 of the Annual Report of the Director of the Census for the Fiscal Year 1908, was \$820,000.

Careful computations have been made for the purpose of verifying this figure, so far as it was possible to do so, and it is found to be substantially correct. There will be, therefore, a decrease of about \$245,000, or almost 30 per cent, in the printing cost of the Thirteenth Census as compared with that of the Twelfth.

In this connection it may be stated that the estimated cost of printing Thirteenth Census publications was given as \$800,000 on page 29 of the Annual Report of the Director of the Census for the Fiscal Year 1908, already referred to.

It may not be inappropriate here to mention briefly a few of the more salient points of difference between the methods of publishing and distributing the results of the two censuses.

At each census the Abstract has been published in much larger numbers than any of the other volumes. In all, 66,000 copies of the

Abstract of the Twelfth Census were printed, 35,000 of which had been printed up to January 1, 1904, as compared with 58,425 copies of the Abstract of the Thirteenth Census up to January 1, 1914. The Abstract of the Thirteenth Census contains about three times as much material relative to the United States as a whole as was contained in the Abstract of the Twelfth Census.<sup>a</sup>

Five thousand copies of each of the large final volumes of the reports of the Thirteenth Census have been or will be printed, as compared with from 5,000 to 25,000 each of the volumes constituting the Twelfth Census reports.

Greater care has been taken at the Thirteenth Census than ever before in respect to the distribution of publications, an earnest effort having been made to furnish them only to such persons and institutions as really desire them.

The most important feature of the Thirteenth Census series of publications, and one which is not found in those of any previous census, is the provision of State supplements to the Abstract containing complete and detailed statistics, more comprehensive in some respects than those found even in the large volumes constituting the final reports of former censuses. The local statistics of previous censuses could be secured only in the preliminary bulletins or in the final reports. Comparatively few could obtain access to the final reports, and even then it was difficult to assemble all the data with reference to any one locality from the numerous tables scattered through the various volumes.

It will be seen, therefore, that, although smaller editions of the final reports of the Thirteenth Census have been issued than were issued of those of the Twelfth, the substantial results of the last census, in such form as to be readily grasped, have been placed in the hands of a much larger number of persons than received the reports of the Twelfth Census, and at the same time at a materially reduced cost for printing.

#### FISCAL YEAR 1914.

The appropriation for 1914 was \$1,122,820. The item for salaries was increased to \$711,240, the item for collecting statistics reduced to \$354,000 (as compared with \$387,000 in 1913, this amount including \$45,000 for collecting statistics of cotton and tobacco), and the item for tabulating machines reduced to \$10,000. No new appropriation was made for printing and binding the results of the Thirteenth Census, but the unexpended balance of the 1913 appropriation for Thirteenth Census printing was reappropriated and made available for 1914.

#### FISCAL YEAR 1915.

The amount estimated for the fiscal year 1915 is \$1,709,720. The estimate for salaries has been increased to \$722,140 (see Appendix I, and discussion under "Office force—Permanent employees"), that for tabulating machines to \$15,000, and that for collecting statistics to \$925,000. The estimates for the other items are the same as the amounts appropriated for 1914.

<sup>a</sup> For description of the Abstract, see p. 7.

The increase of \$5,000 in the estimate for tabulating machines is made because of the increase of work in the mechanical laboratory incident to the census of manufactures.

The large increase (\$571,000) in the estimate for collecting statistics is accounted for mainly by the item of \$566,400 for the quinquennial census of manufactures, which will relate to the calendar year 1914. The last previous census of manufactures, relating to the calendar year 1909, was taken at a cost for field work of \$517,044. The increase in the estimated cost is due largely to the fact that the census of 1909 was taken in connection with other field work, so that the cost of each branch was greatly reduced.

An item of \$18,000 is included for transcripts of birth records. No corresponding appropriation was made for 1914. Slight increases are made in the items for transcripts of death records and statistics of cities, and slight decreases appear in the items for cotton statistics and tobacco statistics.

A reduction of \$4,400 is made in the estimate for salaries of expert special agents to offset an item of that amount for salaries of two assistant statisticians (new positions) at \$2,200.

Respectfully submitted.

WM. J. HARRIS,  
*Director of the Census.*

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

## APPENDIXES.

## APPENDIX I.

## PROPOSED RECLASSIFICATION OF FORCE.

PRESENT OFFICE FORCE.	OFFICE FORCE ACCORDING TO ESTIMATES FOR 1915.
Director -----	Director -----
Chief Clerk -----	Chief Clerk -----
4 chief statisticians at \$3,000 ----	2 statisticians at \$3,000 ----
Geographer -----	Statisticians at \$3,000 ----
Stenographer -----	2 assistant statisticians at \$2,200 <sup>a</sup> ----
8 expert chiefs of division at \$2,000 -----	Geographer -----
11 clerks at \$1,800 -----	Stenographer -----
20 clerks at \$1,600 -----	8 expert chiefs of division at \$2,000 -----
30 clerks at \$1,400 -----	12 clerks at \$1,800 -----
305 clerks at \$1,200 -----	12 clerks at \$1,680 -----
83 clerks at \$1,000 -----	15 clerks at \$1,560 -----
86 clerks at \$900 -----	18 clerks at \$1,440 -----
Subclerical force -----	23 clerks at \$1,380 -----
	34 clerks at \$1,320 -----
	54 clerks at \$1,260 -----
	149 clerks at \$1,200 -----
	46 clerks at \$1,140 -----
	34 clerks at \$1,080 -----
	41 clerks at \$1,020 -----
	18 clerks at \$960 -----
	85 clerks at \$900 -----
	Subclerical force -----
Total -----	Total -----
711,240	722,140

## APPENDIX II.

## STATEMENT SHOWING NATURE AND DISTRIBUTION OF OFFICE AND FIELD FORCE, OCTOBER 31, 1913.

## OFFICIALS.

Chief Clerk -----	WILLIAM L. AUSTIN.
Chief statisticians:	
Population -----	WILLIAM C. HUNT.
Statistics of cities -----	LE GRAND POWERS.
Manufactures -----	WILLIAM M. STEUART.
Vital statistics -----	CRESSY L. WILBUR.
Expert special agent in charge of agriculture -----	JOHN LEE COULTER.
Expert special agent in charge of revision and results -----	JOSEPH A. HILL.
Geographer -----	CHARLES S. SLOANE.
Expert chiefs of division:	
Population -----	WILLIAM H. JARVIS.
Agriculture -----	EDWARD W. KOCH.
Manufactures -----	ARTHUR J. HIRSCH.
Vital statistics -----	HICKMAN P. CHILDERS.
Publication -----	JOSEPH D. LEWIS.
Chief mechanician -----	FRANK L. SANFORD.
	RICHARD C. LAPPIN.
	HARRY H. PIERCE.
	E. M. LABOITTEAUX.

<sup>a</sup> The two assistant statisticians at \$2,200 are in lieu of two office special agents at \$6 per day, whose compensation would be paid from the appropriation for collecting statistics. A corresponding reduction has been made in the estimate for this item, so that, while the increase in the estimate for salaries as compared with the appropriation for 1914 is \$10,900, the net increase in the estimate for compensation of office employees, including special agents, is only \$6,500.

## CLERICAL FORCE.

Stenographer, \$1,500-----	1	Clerks:	
Clerks:		\$1,000-----	83
Class 4-----	11	\$900-----	81
Class 3-----	20		
Class 2-----	38	Total-----	536
Class 1-----	302		

## SUBCLERICAL FORCE.

Engineer, \$1,000-----	1	Assistant messengers, \$720-----	4
Electrician, \$1,000-----	1	Messenger boys, \$480-----	4
Skilled laborers:	2	Watchmen, \$720-----	5
\$1,000-----	1	Firemen, \$720-----	3
\$900-----	4	Charwomen, \$240-----	14
\$720-----	10		
Unskilled laborers, \$720-----	8	Total-----	59
Messengers, \$840-----	3		

## MACHINE-SHOP FORCE.

Electrical expert, \$1,600-----	1	Mechanician, \$1,200-----	2
Mechanical expert, \$1,800-----	1		
Mechanical expert, \$1,200-----	1	Total-----	5

## SPECIAL-AGENT FORCE.

Experts, agents for general field work, etc-----	31
--	----

## SUMMARY OF CENSUS FORCE.

Officials-----	17	Special agents (general force)-----	31
Clerical-----	536		
Subclerical-----	59	Total office force-----	648
Machine shop-----	5		
Special agents to collect statistics of cotton-----	750		

## APPENDIX III.

## FINANCIAL STATEMENT.

## FISCAL YEAR 1913.

Administrative:		
Salaries for administrative places-----	\$36,179.15	
Salaries for division of correspondence and mail-----	20,028.50	
Salaries for library-----	4,987.24	
Salaries for watch, labor and char forces-----	26,580.07	
Rent-----	21,000.00	
Stationery-----	9,869.20	
Miscellaneous expenses-----	14,767.29	
Books and periodicals-----	487.72	
Total-----		\$133,897.17
Geographer's division: Salaries-----		10,740.28
Machine shop:		
Salaries-----	28,246.00	
Materials, supplies, etc-----	3,349.12	
Total-----		26,595.12
Thirteenth Census work:		
Population-----		
Supervision-----	\$11,518.35	
General and State reports-----	98,458.32	
Occupations-----	177,985.38	
Foreign-born-----	445.12	
Tenure of homes-----	16,138.59	
Total-----		304,545.76
Agriculture-----		
Supervision-----	8,362.38	
General and State reports-----	31,396.73	
Color, tenure, and size-----	16,051.42	
Plantations and ownership of tenant farms-----	14,913.17	
Irrigation-----	2,831.29	
Total-----		74,154.99

## Thirteenth Census work—Continued.

Manufactures			
Supervision <sup>a</sup> .....	\$9,708.99		
Completion of manufactures reports .....	41,819.74		
Industrial districts .....	1,276.62		
Mines and quarries .....	17,416.89		
Total .....	\$70,222.24		
Institutions .....	30,167.07		
Revision and results .....	24,319.79		
Publications .....	11,332.21		
Total .....		\$523,743.06	
Annual investigations:			
Cotton .....	253,291.44		
Tobacco .....	25,509.76		
Electrical industries .....	24,344.18		
Forest products .....	19,045.37		
Vital statistics .....	81,709.16		
Statistics of cities .....	82,371.41		
Total .....		486,471.32	
Miscellaneous .....		7,393.91	
Grand total .....		1,197,840.81	✓

	Appropriations.	Expenditures.	Balance.
Expenses of the Thirteenth Census, 1913 .....	\$102,339.30	\$99,998.68	\$2,340.62
Salaries, Bureau of the Census, 1913 .....	593,823.28	574,250.58	19,572.70
Temporary clerks, Bureau of the Census, 1913 .....	120,000.00	116,194.66	3,805.34
Tabulating machines, Bureau of the Census, 1913 .....	26,643.93	26,595.12	48.81
Collecting statistics, Bureau of the Census, 1913 .....	342,000.00	291,137.25	50,862.75
Tobacco statistics, Bureau of the Census, 1913 .....	15,000.00	14,099.83	.17
Cotton statistics, Bureau of the Census, 1913 .....	30,000.00	28,543.97	1,456.03
Rent, Bureau of the Census, 1913 .....	22,080.00	21,000.00	1,080.00
Contingent expenses, Department of Commerce and Labor, 1913 .....	25,500.00	25,120.72	379.28
Total .....	1,277,386.51	1,197,840.81	79,545.70

## COST OF THIRTEENTH DECENNIAL CENSUS TO JUNE 30, 1913.

Thirteenth Census appropriations:		
Paid to Dec. 31, 1912 .....	\$15,171,593.25	
Paid, Jan. 1, 1913, to June 30, 1913 .....	1,328.72	
Appropriations for fiscal year 1913:		
Salaries of employees on Thirteenth Census work .....	528,743.06	
Printing .....	152,916.41	
Total .....	15,849,581.44	

## COST OF THIRTEENTH CENSUS PRINTING.

Payments to June 30, 1912 .....	\$303,349.73
Payments from 1913 appropriation .....	152,916.41
Balance of appropriation for Thirteenth Census printing (all will probably be used) .....	119,083.59
Estimated total Dec. 31, 1913 .....	575,349.73

<sup>a</sup> Includes cost of supervision for forest products, cotton, tobacco, and electrical industries.

<sup>b</sup> Because of complications arising from the fact that the Bureau operated under joint resolutions of Congress from July 1 to Aug. 23, 1912, inclusive, the appropriation for "Salaries, Bureau of the Census, 1913," was divided by the Treasury Department into two parts: One, under the head "Expenses of the Thirteenth Census, 1913," amounting to \$102,339.30; and the other, under the original head of "Salaries, Bureau of the Census, 1913," amounting to \$593,823.28. The sum of these two items, \$696,162.58, is a little less than the amount originally appropriated, \$696,340.

<sup>c</sup> Includes \$643.93 reimbursement for work done for Bureau of Immigration.

ANNUAL REPORT

OF THE

587

DIRECTOR OF THE CENSUS

TO THE

SECRETARY OF COMMERCE

FOR THE

FISCAL YEAR ENDED JUNE 30, 1914



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1914

# 1914

## CONTENTS

---

	Page.
Work completed during fiscal year.....	6
Steps taken to expedite delayed work.....	6
Deferred Thirteenth Census work.....	7
Vital statistics.....	8
Statistics of cities.....	9
Official Register of the United States.....	9
Dependent, defective, and delinquent classes.....	10
Cotton and tobacco.....	10
Forest products.....	10
Statistical atlas.....	11
Estimates of population.....	11
Current work.....	11
Wealth, debt, and taxation.....	11
Electrical industries.....	12
Vital statistics.....	13
Cotton and cottonseed.....	14
Tobacco.....	15
Dependent, defective, and delinquent classes.....	16
Special compilations of Thirteenth Census statistics.....	17
Information furnished by correspondence.....	19
Plans for future work.....	19
Census of manufactures.....	19
Census of agriculture.....	20
Statistics of Federal employees.....	20
Publications issued.....	21
Cost of printing and method of distributing Thirteenth Census reports.....	21
Office force.....	22
Mechanical laboratory.....	23
Removal to Department of Commerce Building.....	23
Appropriations and expenditures.....	24
Financial statement, fiscal year 1914.....	24
Appropriations, fiscal year 1915.....	24
Recommendations.....	24
Appendix I—Publications issued.....	26
July 1, 1913, to June 30, 1914.....	26
July 1, 1914, to October 15, 1914.....	27
Appendix II—Statement showing nature and distribution of office and field force, September 30, 1914.....	28
Appendix III—Financial statement, fiscal year 1914.....	28

1914

REPORT

OF THE

DIRECTOR OF THE CENSUS.

---

DEPARTMENT OF COMMERCE,  
BUREAU OF THE CENSUS,  
*Washington, October 15, 1914.*

SIR: There is submitted herewith the following report upon the operations of the Bureau of the Census during the fiscal year ended June 30, 1914, and upon the work now in progress.

My oath of office was taken on July 1, 1913, so that the period covered by this report is identical with that of my incumbency of the Directorship.

During the fiscal year the Bureau brought to completion the deferred work of the Thirteenth Decennial Census; began various special compilations of Thirteenth Census statistics; commenced and brought well toward completion the preparation of a "statistical atlas," based on data collected at the Thirteenth Census; tabulated and published data relating to the dependent, defective, and delinquent classes; conducted the decennial inquiry on wealth, debt, and taxation; completed its quinquennial canvass of electrical industries and a considerable part of the work of compiling the statistics obtained; began preparations for its quinquennial census of manufactures, the field work for which will commence early in the calendar year 1915; compiled and published the biennial Official Register of the United States; made its regular annual collections and publications of statistics relating to mortality, finances of cities, and production, distribution, and consumption of cotton; completed the annual forest-products inquiry, covering the calendar year 1912, and issued its report thereon; made its semiannual collections and publications of statistics of stocks of leaf tobacco held by manufacturers and dealers; and answered numerous mail requests for information contained in its records.

Since the close of the fiscal year the Bureau has continued its preparations for the coming census of manufactures; has carried on its ordinary routine work; and has issued various publications embodying the results of the inquiries along the lines named in the preceding paragraph, with the exception of those on which work was completed before July 1, 1914.

The publications issued during the fiscal year and since its close are listed in Appendix I.

**WORK COMPLETED DURING FISCAL YEAR.****STEPS TAKEN TO EXPEDITE DELAYED WORK.**

On assuming charge of the Bureau I found the Thirteenth Census work still unfinished, and the publication of the results of certain of the annual inquiries considerably in arrears. From the first it has been my earnest desire to bring the work up to date and to keep it in that condition, and my first step toward the attainment of this end was the appointment of a committee consisting of the chief statistician for manufactures, the chief clerk, and the expert special agent in charge of the division of agriculture, to investigate the work in all the divisions of the Bureau and to make recommendations which would lead gradually to a complete reorganization. This committee accumulated a large quantity of material and made a number of recommendations which resulted in great improvement in certain branches of the work.

It also seemed desirable in this undertaking to have the assistance and advice of persons who were outside of the Census Bureau but who were familiar with its work. I accordingly selected for this purpose Hon. S. N. D. North and Hon. W. R. Merriam, former Directors of the Census; Prof. Walter F. Willcox, of Cornell University, who had been a chief statistician in the Bureau during the census of 1900, and who for the greater part of the time since has been connected in some capacity with the work of the office; Mr. W. S. Rossiter, who had been a chief of division and later chief clerk of the Bureau; and Hon. Daniel C. Roper, First Assistant Postmaster General, who had been an expert special agent and chief of division in the Census Bureau. These gentlemen, with the exception of Mr. Roper, were given appointments as expert special agents.

After examining the material and recommendations made by the committee of the regular employees of the office, they conducted an independent investigation of conditions in the Bureau, conferring with the chief statisticians and other officials in charge of the different branches of the work. They found that, while the larger proportion of the work of the Thirteenth Census had been finished and the results published, nevertheless a considerable quantity of the statistical information collected still remained to be tabulated and printed. This had been deferred, along with certain other branches of the work, in order to permit the publication of the balance of the reports at the earliest possible date. The work on some of the annual reports of the Bureau—in particular, Financial Statistics of Cities for 1912 and Mortality Statistics for 1910, 1911, and 1912—was also far in arrears.

The expert special agents advised me that no additional tabulations or analyses should be undertaken in connection with the unfinished branches of the Thirteenth Census work; that the work on these branches and on the delayed annual reports could and should be curtailed so as to insure their publication not later than December 31, 1913; and that the annual compilation of statistics of forest products should be abandoned.

Substantial compliance with these recommendations has been possible; and, furthermore, along a number of lines improvements in methods have been made, with consequent saving in time and ex-

## REPORT OF THE DIRECTOR OF THE CENSUS.

pense, which were not covered by the recommendations, so that greater progress has actually been made during the period to which this report relates than was contemplated by the expert special agents. It gives me pleasure to be able to state that the work of the Bureau of the Census is now in a most gratifying condition. The deferred publications have all been issued; the current inquiries and compilations are progressing smoothly, satisfactorily, and speedily; and thorough and comprehensive preparations are being made for the 1915 census of manufactures.

## DEFERRED THIRTEENTH CENSUS WORK.

During the fiscal year Volumes I, II, III, V, VIII, X, and XI of the final reports of the Thirteenth Census were issued. With the exception of Volume I, which was ready for distribution January 5, 1914, all these reports were published before the close of the calendar year 1913. The only report remaining to be issued at the close of the fiscal year was Volume IV, relating to occupations, and this was issued a week later, on July 7, 1914. The bulk of the material for most of these reports was in the hands of the printer before the beginning of the fiscal year, but the proof reading and verification necessarily took considerable time.

*Mines and Quarries (Vol. XI).*—This report was issued December 30, 1913. Its scope, as originally planned, was considerably curtailed, upon recommendation of the expert special agents,<sup>a</sup> in order to avoid greater delay in its publication.

*Occupation Statistics (Vol. IV).*—This report deserves particular mention. Work on it began in May, 1911, but was suspended in January, 1912, owing to the large reduction in the temporary force at that time. It was resumed in the following September, when temporary clerks were again employed; was suspended early in August, 1913, because of the necessity of providing for the completion of the general report on population; and was again taken up in the latter part of the following month.

This report, although treated as one of the Thirteenth Census publications, partakes more of the nature of the special or "inter-censal" reports which the Bureau issues from time to time during the intervals between decennial censuses; and, in fact, at the census of 1900 the occupation report was so treated.

In order that there might be as little delay as possible in the publication of the report on occupations, it was limited to nine general tables, brief explanatory text, and 35 "text tables." The general tables occupied 525 quarto pages, and the text and text tables 74 pages. The total number of pages in the volume is 615. The report was ordered to print in June, and was ready for distribution July 7, 1914. Of the nine general tables included in this publication, the first three present, for the United States, individual States, and principal cities, a distribution, according to number and sex, of gainfully employed persons 10 years of age and over among 428 occupation groups and subgroups. The fourth and fifth tables give, for the smaller cities and for the outlying territories, a similar distribution among 215 occupation groups and subgroups. The sixth

<sup>a</sup> See p. 6.

table, relating to the United States only, gives a distribution, according to sex, color, and age groups, of gainfully employed persons 10 years of age and over among specific occupations in detail under each of 129 general industry or service groups. The three remaining tables give, for each State, each principal city, and each of the three outlying Territories, a similar distribution, according to color and age periods, of males and females engaged in the principal or leading occupation groups.

A bulletin on occupations, covering 106 pages, was also prepared. This bulletin, which was issued August 14, 1914, is a summary of the statistics presented in the detailed report, including the first two general tables. In order to enable the Bureau to comply with the numerous requests received by it for occupation statistics, reprints also have been made of the two general tables containing data for the larger and smaller cities of the country, and of the two general tables relating to Alaska, Hawaii, and Porto Rico.

*Abstract supplements and bulletins.*—In addition to the reports already named, there were issued during the fiscal year three editions of the Abstract of the Census, with supplements for Alaska, Hawaii, and Porto Rico, respectively; 16 reprints, in bulletin form, of chapters in Volume I (Population—General Report and Analysis); 12 reprints, in bulletin form, of chapters in Volume V (Agriculture—General Report and Analysis); 1 reprint, in bulletin form, of a chapter and table in Volume VIII (Manufactures—General Report and Analysis); 38 bulletins on manufacturing industries, which later formed sections of Volume X (Manufactures—Reports for Principal Industries); 2 reprints, in bulletin form, of sections of Volume X, each relating to a group of industries; 1 reprint, in bulletin form, of a section of Volume X relating to manufactures in metropolitan districts; 1 bulletin relating to iron mines, which later formed a section of Volume XI (Mines and Quarries); and 1 special bulletin, Stability of Farm Operators, or Term of Occupancy of Farms, showing, for white and colored farmers separately, by character of tenure, the length of the average period of occupancy of farms. Another special bulletin, Age of Farmers, by Color of Operator, Character of Tenure, and Size of Farm, was prepared during the fiscal year and issued shortly after its close. This bulletin, which is the first of its kind ever issued by the Census Bureau, analyzes the relationship existing between the age of the farmer, on the one hand, and his color, the character of his tenure, and the size of the farm operated by him, on the other hand.

#### VITAL STATISTICS.

The annual reports on mortality statistics, relating to the calendar years 1910, 1911, and 1912, were issued on October 2, 1913, December 17, 1913, and January 5, 1914, respectively. These reports, and particularly those for 1910 and 1911, had been delayed because of the pressure of the Thirteenth Census work. In order to expedite the publication of the 1912 report, the tables giving the detailed death rates were omitted. These rates will be included in the 1913 report.

On July 1, 1913, 260,956 deaths had been reported for the calendar year 1913. The editing was begun in the following December; and the editing, punching, and machine tabulation for the total of 890,848

deaths reported for the year were completed during the last week in June, 1914.

During the fiscal year the States of Georgia and South Carolina passed satisfactory death-registration laws, based upon the "model law" recommended by the Bureau of the Census. The enactment of this legislation was due in large part to the efforts of the Bureau.<sup>a</sup>

#### STATISTICS OF CITIES.

The report on general statistics of cities for 1909, a quarto volume of 197 pages, was in page proof on June 30, 1913, and was issued soon thereafter. Up to 1909 this report had been issued biennially, but, owing to the necessity for concentrating the force of the office so far as possible on the work of the Thirteenth Census, the report for that year was considerably delayed, and it was decided not to issue it at all for 1911 and 1913. The annual reports on financial statistics of cities, however, carry a few statistics of a general character.

The 1911 report on Financial Statistics of Cities Having a Population of 30,000 and Over, containing 401 pages, was completed November 15, 1913, and was ready for distribution December 8.

The special agents appointed to devise methods of expediting the delayed census work<sup>b</sup> recommended that the 1912 and 1913 reports on Financial Statistics of Cities Having a Population of 30,000 and Over be issued only in bulletin form, with no more text than was necessary for explanation and definition. The 1912 bulletin was completed December 15, 1913, and was ready for distribution seven days later. After the issuance of this bulletin it was found practicable to publish the regular report for 1912. This publication, a quarto volume of 410 pages, was ready for distribution June 6, 1914.

The 1913 report was completed during the fiscal year ended June 30, 1914, and copy transmitted to the printer. This publication was issued in the form of a quarto bulletin of 73 pages, and was ready for distribution September 14, 1914.

#### OFFICIAL REGISTER OF THE UNITED STATES.<sup>c</sup>

This publication, a quarto volume of 876 pages, was compiled during the first half of the fiscal year, and was ready for distribution January 7, 1914. As a result of suggestions made by the Department of Commerce, upon the recommendation of the Census Bureau, the urgent deficiency bill approved October 22, 1913, provided for the discontinuance of the publication of Volume II of the Official Register, relating to the Postal Service. The bill also provided for the omission of the list of ships and vessels belonging to the United States, formerly included in Volume I.

This legislation greatly simplified the preparation of the Official Register and very materially decreased the expense of the work (the cost of compiling and printing Volume II being estimated at \$20,000).

<sup>a</sup> For present status of vital-statistics work, see p. 13.

<sup>b</sup> See p. 6.

<sup>c</sup> See also pp. 20 and 24.

## DEPENDENT, DEFECTIVE, AND DELINQUENT CLASSES.

Under this heading come the Bureau's decennial reports on benevolent institutions, paupers in almshouses, the insane and feeble-minded in institutions, prisoners and juvenile delinquents, and the blind and the deaf and dumb. The statistics for these reports are obtained, except in the case of those for the blind and deaf,<sup>a</sup> by correspondence with officials of the institutions canvassed.

Three bulletins, relating, respectively, to the insane and feeble-minded in institutions, to paupers in almshouses, and to prisoners and juvenile delinquents, were published during the fiscal year. Final reports on these classes will be issued later.<sup>b</sup>

*Benevolent Institutions, 1910.*—This report, a quarto volume of 411 pages, including explanatory text and "text tables," was published early in January, 1914. A second edition was called for and printed, with some revisions, in June, 1914.

## COTTON AND TOBACCO.

During the fiscal year the Bureau conducted its regular inquiries relating to cotton and tobacco. These investigations are discussed on pages 14 to 16.

## FOREST PRODUCTS.

The annual collection of statistics of forest products was inaugurated in 1906, in accordance with an order of the Secretary of Commerce and Labor, on the initiative of the Forest Service of the Department of Agriculture. The inquiry, although never directly or indirectly authorized by Congress, was continued by the Bureau of the Census, in cooperation with the Forest Service, from 1906 until 1912, when it was abandoned by the Census Bureau upon the recommendation of the expert special agents referred to on page 6. This recommendation was as follows:

That the annual compilation of the statistics of forest products be abandoned. There appears to be no authority of law for an annual inquiry of this character, which the records show to have cost from \$20,000 to \$40,000 a year.

In view of the importance of these statistics and of the demand for them from large consumers of forest products and others interested in the conservation of natural resources, the Forest Service undertook the task of collecting the data for 1913. It has been decided that the Bureau of the Census collect the figures for 1914 in connection with its regular quinquennial census of manufactures, which will cover that year; and an effort will be made to secure the passage of an act of Congress authorizing the Bureau, in cooperation with the Forest Service, to continue the annual collection of these statistics. A draft of such an act has been submitted to the Secretary of Agriculture and has been examined by him, approved, and returned with a few changes. The Secretary of Commerce has sent a copy of this draft to the chairman of the House Committee on the Census, with the recommendation that it be enacted into law. If this recommendation is complied with, duplication in the collection of the statistics will be avoided and it will be possible to utilize to the best advantage the services of the technical employees of the two Departments.

<sup>a</sup> See p. 17.

<sup>b</sup> See pp. 16 and 17.

The work done during the fiscal year consisted in the completion of the canvass covering the calendar year 1912, the compilation of the results, and the preparation of the report, an octavo pamphlet of 60 pages, which was issued February 7, 1914.

#### STATISTICAL ATLAS.

The Statistical Atlas of the United States was prepared and the great bulk of the copy sent to the printer before the beginning of the present fiscal year. It will be ready for distribution in November, 1914. This publication is a quarto volume containing 99 pages of text and 503 plates carrying maps and diagrams presenting graphically the more important facts brought out by the various decennial and other census inquiries. The current Statistical Atlas covers the subjects of population, agriculture, manufactures, mines and quarries, cotton production and consumption, financial statistics of cities, vital statistics, religious bodies, marriage and divorce, and insane in hospitals. The purpose of this volume is the presentation of the more significant statistics collected by the Bureau of the Census in such form that they may be readily grasped and understood.

In connection with the preparation of this publication, computations were made to determine, for the United States as a whole, the location of the "centers" of Negro and foreign-born white population, of urban and rural population, and of the value of all farm property. In addition, the center of population of each of the States of the United States was determined for each census from 1880 to and including 1910, and a series of State maps has been presented in the Statistical Atlas showing the location of these centers. This is the first time such a series of maps has been included in a census report.

#### ESTIMATES OF POPULATION.

During the years intervening between the decennial-census periods the Bureau of the Census prepares estimates of population, based on the returns of the last preceding census and the rates of growth during the period between the last two censuses. Such estimates, projected forward from 1910 to 1914, through each of the intervening years, inclusive, for the States, and for cities which had in 1910 a population of 8,000 or over, were computed during the fiscal year and published in Bulletin No. 122, issued in March, 1914. These estimates are used not only for general statistical purposes but also by health officers of the various cities for the purpose of computing death rates for intercensal years.

The Bureau has also prepared estimates of population for a number of townships, cities, and villages for the Ohio State Liquor Licensing Board.

#### CURRENT WORK.

##### WEALTH, DEBT, AND TAXATION.

This is one of the most important of the Bureau's "intercensal" inquiries. A portion of the data for the current series of bulletins, which relate to the fiscal year ended June 30, 1913, were obtained from printed reports of the Federal Government and of States, cities, and counties; the remainder were gathered by personal canvass. The

office work on this investigation was commenced in October, 1913. The field work began March 21, 1914, and during the period from that date to June 30, 1914, the employees in the field numbered, on the average, 86.

Work is progressing rapidly and satisfactorily on this inquiry. Two bulletins—"National and State Indebtedness and Funds and Investments" and "Taxation and Revenue Systems of State and Local Governments"—have been issued since the close of the fiscal year 1914; another, "National and State Revenues and Expenditures, 1913 and 1903, and Public Properties of States, 1913," will come from the press in a short time; and four more—"County and Municipal Indebtedness, 1913, 1902, and 1890, and Sinking Fund Assets, 1913," "County Revenues, Expenditures, and Public Properties, 1913," "Municipal Revenues, Expenditures, and Public Properties, 1913," and "Assessed Valuation of Property and Amounts and Rates of Levy, 1860-1912"—will be issued late in 1914 or early in 1915. The final bulletin, "Abstract—Wealth, Debt, and Taxation," will contain an abstract of the statistics presented in the seven bulletins just named, together with an estimate of the true value of all property in the United States, both subject to and exempt from taxation. This final bulletin will be issued early in 1915—about a year and a half from the commencement of the office work and about a year from the commencement of the field work. In this connection it may be stated that the field work on the last preceding inquiry on this subject was commenced March 1, 1903; that two bulletins, relating to municipalities, were issued August 31, 1905, and July 12, 1906, respectively; and that the complete report was ready for distribution May 7, 1907, more than four years from the beginning of the field work. No data are available from which to make anything like an exact comparison of the two investigations with respect to cost; but there has been a very material saving in this respect, due in large part to the fact that some 15 or 20 per cent of the statistics collected at the present inquiry were obtained from published reports of the various governmental units, the work being done in the office at Washington instead of by personal canvass in the field.

#### ELECTRICAL INDUSTRIES.

Statistics of electrical industries are collected quinquennially by this Bureau. The current inquiry relates to the calendar year 1912. The field work for this census was begun in January, 1913, and was completed in November of the same year, there being, on the average, 27 clerks employed in the field during this time. Press summaries of the statistics were issued from time to time as the tabulation progressed, beginning in December, 1913; and two bulletins were issued, in May and June, 1914, respectively, the first presenting the principal data in regard to telephones and telegraphs and the second giving the more important statistics relating to central electric light and power stations and street and electric railways. The final reports will be issued late in 1914 or early in 1915, in the form of two quarto volumes. One, entitled "Central Electric Light and Power Stations, and Street and Electric Railways," and comprising nearly 600 pages, will include in more detailed form the statistics contained in the bulletin under the same name. The other, entitled "Telephones and Telegraphs," and comprising about 250 pages, will

contain in amplified form the data given in the bulletin on telephones and telegraphs, together with a section showing telephone rates throughout the United States. Statistics relating to municipal electric fire-alarm and police-patrol signaling systems will also be included. Comparative statistics will be given, covering two five-year periods (1902-1907 and 1907-1912), thus bringing out definitely and clearly the enormous growth of electrical industries during the past decade.

The preparation of these reports has been finished, and the complete copy was sent to the printer during the month of August. I am glad to be able to state that the copy for these bulletins and the final reports has been sent to the printer at relatively much earlier dates than was the copy for the corresponding publications relating to the census of electrical industries for 1907.

#### VITAL STATISTICS.

The vital-statistics work done during the fiscal year 1913-14 is discussed on pages 8 and 9.

The preparation of the report on mortality statistics for the calendar year 1913 is now nearly completed. The copy has already been sent to the printer, and some of the proof has been received and read. The report will contain more than 600 pages, and will include summary and rate tables for 1912, which were omitted from the report for that year.<sup>a</sup> In this report will be included, for the first time, mortality statistics for the State of Virginia, which has recently been added to the death-registration area.

The Index of Joint Causes of Death, intended for the use of registrars of mortality statistics, showing the assignment to the preferred title of the International List of Causes of Death when two or more causes are simultaneously reported, has recently been issued. This publication, an octavo volume of 308 pages, has been "printed as proof," in order to enlist constructive criticism from registrars and others concerned or interested in the recording, transcription, compilation, and publication of mortality data.

An important piece of work now in progress is the preparation of a series of life, or mortality, tables, based on the population and mortality statistics of 1900 and 1910, showing "expectation of life" for various elements of the population—male and female, white, Negro, urban, rural, etc.—in the original registration States (Connecticut, Indiana, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Rhode Island, Vermont, and the District of Columbia) as they existed in 1900, taken as a group. Certain of these States, ranking high in population, such as New York, Massachusetts, Michigan, Indiana, and New Jersey, will also be represented individually. These tables are similar to those used by life insurance companies, and their preparation, which is under the charge of Prof. James W. Glover, of the University of Michigan, involves actuarial computation of an intricate character. This is the first time that life tables of such an extensive nature have been published by any Federal or State bureau.

Constant effort is being made to bring these reports to a higher standard of usefulness, both to the professional and scientific classes

<sup>a</sup> See p. 8.

and to the public in general. Separate statistics are now shown with reference to the white and colored races for all localities in the registration area which had at least 10 per cent of their population colored in 1910 (that is, for all such localities in the South), and for all municipalities having a total colored population of at least 10,000 in 1910 (that is, for all cities of considerable size in any part of the country).

In preparing the report for 1914, data for deaths of nonresidents will be shown separately, so far as it is possible to do so, thus avoiding the injustice which is now done certain cities for which high death rates, due in considerable part to deaths of nonresidents, are shown. This is particularly the case with respect to cities having unusually healthful climates, by reason of which consumptives and other invalids are attracted thither, and with respect to cities as compared with rural localities, since an appreciable percentage of the deaths in city hospitals are of persons resident in near-by small towns and rural territory.

#### COTTON AND COTTONSEED.

The Bureau collects and publishes each year statistics relating to cotton ginned, to cotton consumed, imported, exported, and on hand, and active cotton spindles, and to cottonseed and linters. There are now 10 reports on cotton ginned issued during each crop year, beginning with that relating to August 31 and ending with that for February 28. Each of these reports shows the season's ginnings up to the date to which it relates, the last one summarizing the output for the entire cotton year. The reports on stocks held and consumption of raw cotton by warehouses, mills, etc., are published monthly during the entire year. Three reports on cottonseed crushed and linters obtained are issued each year, the first relating to November 30, the second to December 31, and the third, covering the season's crush, to February 28. These reports are all distributed in card form.

In no other line of the Bureau's work is promptness of publication so important a factor as in the case of these cotton reports, and it is gratifying to be able to state that the ginning reports are published only eight days after the dates to which they relate. One week is allowed the agents in the field in which to make their canvass, and only one day more is consumed at the Bureau of the Census in getting the figures ready to give out. The reports on stocks and consumption are issued approximately 14 days, and those on cottonseed and linters approximately 16 days, after the dates to which they relate.

The Bureau also publishes annually two quarto bulletins, one relating to production of cotton, cottonseed, and cottonseed products, with condensed data relating to supply and distribution of cotton, and the other giving more detailed statistics of supply and distribution of cotton, together with data regarding active cotton spindles and exports and imports of raw cotton and its manufactures. The bulletin on the production of cotton and cottonseed products, relating to the crop of 1913, comprised 79 quarto pages, and was issued in July, 1914. The bulletin on supply and distribution of cotton for

the year ended August 31, 1914, will be issued at an early date and will contain approximately 40 quarto pages.

The chief statistician for manufactures, who has charge of the cotton work, visited, while on his vacation in England, a number of the correspondents of the Bureau and made arrangements for more satisfactory reports concerning the production and consumption of cotton in foreign countries.

It has been my desire to make such changes in the present system of collecting and publishing cotton statistics as will enable the Bureau to avoid the necessity for publishing annually two bulletins, one dealing with the production, which covers the crop year and is distributed about June 30, and the other covering the supply and distribution for the commercial cotton year ending August 31, which is distributed about October 31. The greatly increased use of fertilizers, which hastens the maturity of the crop, together with the extension of cotton cultivation in southern Texas, has resulted in placing on the market a larger quantity of new-crop cotton than formerly, prior to the termination of the commercial year. This is a disturbing factor in arriving at the quantity covered by the report on supply and distribution, and many have been advocating a change in the cotton year. Action on the matter was taken by the cotton convention held at Augusta, Ga., in May, 1914, where representatives of the American cotton exchanges passed a resolution making the cotton year end on July 31, and the reports of the cotton movement are now made up accordingly. In England the cotton organizations also prefer to have the commercial year end July 31, rather than June 30, if any change is made. The fixing of this year, however, would be less advantageous to the work of the Bureau than would the adoption of a fiscal year ending June 30.

In view of the facts stated in the preceding paragraph, I have given instructions that after this year only one annual cotton bulletin shall be compiled. This bulletin will relate both to the production and to the supply and distribution of cotton, and will be ready for distribution about September 15. As already stated, the final report of the preliminary series relating to ginning, which is issued about March 8, shows the total season's ginnings. This report is supplemented by a summary showing the ginnings by counties. The placing of all the information collected by the Bureau in one annual publication will make reference much easier than if two bulletins were to be compiled.

#### TOBACCO.

Under authority of an act of Congress approved in April, 1912, the Bureau makes semiannual collections and publications of statistics of stocks of leaf tobacco held by manufacturers and dealers. The reports for the fiscal year 1914 relate to October 1, 1913, and April 1, 1914, and were issued, in card form, November 13, 1913, and May 9, 1914, respectively. The preliminary work on the report for October 1, 1914, has been finished, and the schedules used for collecting the statistics were mailed on September 19 to the various manufacturers and dealers whose duty it is to make the returns.

These statistics are collected almost entirely by correspondence, but the Bureau of Internal Revenue of the Treasury Department

renders valuable assistance in correcting the reports and in obtaining returns from establishments which fail to respond promptly to the inquiries of the Bureau of the Census.

A special effort is made to publish the figures as soon as possible after the date to which they refer, and it is gratifying to note that each report since the inauguration of this work has been issued more promptly than the preceding one. In fact, the last report, relating to April 1, 1914, was ready for distribution in only two-thirds the time required for the preparation and publication of the first one, relating to October 1, 1912.

In July, 1914, five representative tobacco planters, dealers, and manufacturers, each a resident of a separate tobacco-growing State, were given appointments as expert special agents and called to Washington for the purpose of discussing improvements in the method of collecting these statistics. Their report has been printed, and copies of it have been sent to Senators and Representatives and to the establishments from which the statistics are obtained. It is my intention to hold a similar meeting of these special agents immediately after the publication of the forthcoming semiannual report, in order that they may examine and criticize the statistics and suggest such further changes in the work as may seem desirable. It is expected that substantial benefit will result from the adoption of some of the suggestions made by these tobacco experts.

In addition, correspondence has been carried on with the leading tobaccoists of the country for the purpose of obtaining suggestions of better methods of collecting and publishing the statistics. In short, while the Bureau's tobacco reports have been generally approved by those interested and have received but little adverse criticism, everything possible is being done to increase their usefulness.

#### DEPENDENT, DEFECTIVE, AND DELINQUENT CLASSES.

The work done on the inquiries relating to the dependent, defective, and delinquent classes during the fiscal year 1914 has already been described in the section relating to the work completed during that year.<sup>a</sup> As stated in that section, the Bureau issued during the fiscal year three bulletins, relating, respectively, to the insane and feeble-minded in institutions, to paupers in almshouses, and to prisoners and juvenile delinquents. These bulletins, which were prepared in accordance with the recommendations of the expert special agents<sup>b</sup> who were appointed to devise methods of expediting the delayed census work, contained the general tables presenting the fundamental data, but included no derivative tables, percentages, or explanatory text. Final reports on the insane and feeble-minded and on paupers have since been prepared, and a report on prisoners and juvenile delinquents is now in course of preparation.

These reports will be more complete and comprehensive in scope than any which the Bureau has previously published on these subjects. The report on the insane in particular, which has been submitted in proof to well-known authorities on insanity, has been commended as representing a marked advance in the statistical treatment of that subject.

<sup>a</sup> See p. 10.

<sup>b</sup> See p. 6.

*Paupers in almshouses.*—The final report on this class, containing, in addition to the general tables already published in the bulletin above referred to, analytical tables and interpretative text, is now in the hands of the printer and will probably be ready for distribution early in 1915.

*Insane and feeble-minded in institutions.*—The final report on the insane and feeble-minded in institutions contains, in addition to the general tables already published in the bulletin above referred to, analytical tables and a text discussion of the statistics, together with a comparative summary of the principal features of the various State laws relating to the insane. This is now in the hands of the printer, and will probably be ready for distribution some time in December, 1914.

*Prisoners and juvenile delinquents.*—The final report on this class will include, in addition to the general tables already published in the preliminary bulletin, detailed data relative to prisoners committed during the year 1910, together with analytical tables and interpretative text. It is expected that the tabulation work for this report will be finished late this fall and that the report will be published toward the close of the present fiscal year.

*The blind and the deaf and dumb.*—The statistics for the reports on these classes were collected by correspondence directly with the individuals themselves, whose names were obtained from the population schedules of the Thirteenth Census. Early in 1914 work on these reports, which, owing to the pressure of other work, had been practically suspended since January, 1912, was actively resumed. All the preliminary work necessary in preparation for tabulation has been completed for the blind population, and the statistics are now being tabulated, while much of the preliminary work with reference to the deaf and dumb population has also been completed. It is expected that the reports on these two classes of the population will be ready for publication toward the close of the present fiscal year.

*Summary of laws relating to the dependent classes.*—To supply material for a better understanding and interpretation of the statistics relating to the dependent and defective classes, a summary of the State laws relating to the care of these classes, in force in 1913, has been prepared and published, in an octavo volume of 346 pages.

#### SPECIAL COMPILATIONS OF THIRTEENTH CENSUS STATISTICS.

After the completion of the work of a decennial census, the Bureau makes various special compilations of the statistics collected at that census which it would not be feasible to include in the regular reports. Such compilations of Thirteenth Census material include a report on Indians; supplementary occupation statistics; bulletins on Chinese and Japanese in the United States, the stability of the agricultural population, and ages of farmers; and a report and bulletin on Negroes in the United States.

*Indian report.*—Work on this report, which is largely based upon data obtained from the special Indian schedule used at the Thirteenth Census, was discontinued in February, 1912, because of the large reduction in the Thirteenth Census force, and was not resumed until the close of April, 1914. In June, 1913, the Bureau issued a

bulletin based on the compilations already made, in which the Indian population was classified according to stock, tribe, blood (full or mixed), sex, age, fecundity, and vitality.

The tabulations, except with respect to occupations, were substantially completed prior to the suspension of the work in February, 1912, and the more recent work has consisted largely of the examination and verification of the tabulated results and the preparation of the general tables and textual matter. Considerable revision and rearrangement, however, have been necessary in order to make the presentations for the several subjects harmonious with one another, so far as necessary and practicable. The work was well in hand at the close of the fiscal year and was substantially completed in July, 1914, except for the employment in August and part of September of a few clerks in final verification and some additional percentage work. All the tables and text for the report are completed, and the copy has gone to the printer.

The special report on Indians, which will occupy a bound volume of several hundred pages, covers 12 subjects—population, stock and tribe, blood, sex, age, marital condition, school attendance, illiteracy, inability to speak English, occupations, fecundity and vitality, and Indians not taxed.

*Supplementary occupation statistics.*—Work is now under way on a special report presenting supplementary occupation statistics. This report will include the following subjects: Distribution of all persons occupied, by sex, according to color or race, nativity, and parentage, and age periods in detail; occupations of women; occupations of children; occupations of foreign-born workers according to country of birth; occupations according to class of worker; and unemployment data for wage workers only.

These supplementary statistics are based on the second "run" of the occupation cards through the tabulating machines, which is made for each of 428 occupation groups and subgroups, for each State as a whole and for each city of 100,000 inhabitants or more. This work was suspended from May 29 until July 17, 1914, on account of the removal of the Bureau of the Census to the new Department of Commerce Building. On the latter date one machine was made ready, and from time to time thereafter additional machines were installed, until on September 9 eight machines in all (six automatic and two semiautomatic) were in operation on this work. At present about one-third of the total of nearly 39,000,000 cards have been put through the machines on the second run.

*Chinese and Japanese.*—The Bureau has just issued a 50-page bulletin in which are brought together practically all the statistics regarding Chinese and Japanese in the United States which are found in the Thirteenth Census reports on population (including occupations) and agriculture. A large part of this material has been previously published in the population volumes of the Thirteenth Census and in the bulletins for individual States. The agricultural statistics, however, are practically all published here for the first time, since the previous publications gave only the numbers of Chinese and Japanese farmers.

There has been a great demand for this bulletin from the Pacific Coast and Rocky Mountain States.

*Agricultural bulletins.*—Two special bulletins relating to the agricultural population have been issued.\* Another, *Plantation Systems of Conducting Agriculture in the Southern States*, presenting an amplification of the material contained in Chapter XII, Volume V, Reports of the Thirteenth Census, is in course of preparation and will be issued early in the calendar year 1915. This chapter has been reprinted in bulletin form under the title "Plantations in the South."

*Negroes.*—Early in August, 1914, the Bureau began the preparation of a special report relating to Negroes in the United States. A preliminary bulletin will soon be issued, and it is expected that the complete report will be published about March 1, 1915. It will show, for the Negro race, the principal census data relating to population, occupations, agriculture, mortality, membership in religious bodies, and marriage and divorce. The figures are being compiled from census publications or other material already in possession of the Bureau. A similar report, based on the census of 1900, was one of the most popular of the Bureau's publications.

#### INFORMATION FURNISHED BY CORRESPONDENCE.

In addition to the collection and publication of statistics along the various lines already mentioned, the Bureau handles numerous requests from local governments and from individuals for information of one kind and another. More than 1,200 such requests for population data alone were received and answered during the fiscal year. In all nearly 24,000 requests for Thirteenth Census population data have been received to date, of which about 23,000 have been complied with in full. A great many requests are also received for genealogical data and for transcripts of census records regarding ages of soldiers, to be used in connection with applications for pensions or increases of pensions.

The demands for information relating to ages of soldiers are now so numerous that it has become impracticable for the Bureau of the Census to assign a sufficiently large force of its own clerks to this work to enable it to furnish the information promptly. The Commissioner of Pensions, therefore, has from time to time detailed clerks from his bureau. At one period during the past fiscal year the number of clerks so detailed was as high as 42; at present 8 such employees of the Bureau of Pensions are engaged on this work.

#### PLANS FOR FUTURE WORK.

##### CENSUS OF MANUFACTURES.

This census, the field work for which will begin early in 1915, will relate to the calendar year 1914. Preliminary work, consisting largely in the preparation of index cards for listing the manufacturing establishments, was commenced in December, 1913, and will continue throughout the present calendar year. A special effort—which, it is expected, will be attended by a large measure of success—is being made to unify the Census Bureau's classifications with those

\* See p. 8.

of the Bureau of Foreign and Domestic Commerce, in order to make possible a closer approach to complete comparability of the former Bureau's statistics of manufactures and the latter's statistics of exports and imports.

Another feature of the preparatory arrangements for this census, and one which distinguishes it from preceding censuses, is the effort that has been made to secure the cooperation and assistance of prominent manufacturers and of representative commercial and trade bodies of all kinds. Letters have been written to such manufacturers and to all such organizations of which the Bureau has any knowledge, inviting cooperation and requesting suggestions, particularly in reference to the inquiries carried on the various special or supplementary schedules. A trip was made during January, 1914, by the Director and the chief statistician for manufactures, to Philadelphia, New York, and Boston, where conferences were held with the leading commercial and industrial organizations of those cities with very gratifying results; and a similar trip through the eastern North Central States, extending as far south and west as St. Louis, has been arranged for the latter part of 1914, from which equally satisfactory results are anticipated. Conferences have also been held in Washington with associations and manufacturers, and the forms have already been agreed upon for a large proportion of the schedules. Many of these organizations have, at the request of the Bureau of the Census, passed resolutions to the effect that they recognize the importance of the census of manufactures and will endeavor in every way possible to assist in and expedite the work.

The aid of Members of the Senate and House of Representatives, of the Department of Agriculture, of the Bureau of Corporations, and of State statistical organizations has also been enlisted.

In short, more has been done already, and will be done, in these directions in preparation for the census of 1915 than has been undertaken in connection with any preceding census of manufactures; and it is confidently expected that the results will be published more promptly and will be of greater value than ever before.

#### CENSUS OF AGRICULTURE.

The Thirteenth Census act, passed in 1909, provided for a census of agriculture, to be taken in 1915 and at 10-year intervals thereafter. This intercensal inquiry will be much more limited in scope than the agricultural inquiry made in connection with each decennial census of population. Estimates for the appropriation needed will be submitted to Congress at its next regular session, together with requests for such slight changes in regard to date of enumeration, scope, and method, as may seem desirable at that time.

#### STATISTICS OF FEDERAL EMPLOYEES.

The Bureau has under consideration the compilation of statistics of the executive civil service similar in scope to those in Bulletin 94, Statistics of Employees: Executive Civil Service of the United States: 1907. This work could be taken up in connection with the preparation of the next edition of the Official Register, which will relate to July 1, 1915, and the results could be published in bulletin form after the issuance of the Register. In this bulletin the em-

ployees of the executive civil service, exclusive of postmasters and certain other specified employees, would be classified according to sex, race and nativity, age, marital condition, character of appointment with reference to the civil-service rules, character of work, period of service, compensation, State, Territory, or District from which appointed, and military or naval service.

There is a considerable demand for statistics of this nature, which are not now available in any Government publication. The extra data needed for their compilation could be obtained from the departments and independent offices, in connection with the preparation of the Official Register, at a comparatively small increase of expense; and it is believed that their usefulness would furnish ample justification for undertaking the work.<sup>a</sup>

#### PUBLICATIONS ISSUED.

The publications issued during the fiscal year and since its close are shown in Appendix I.

#### COST OF PRINTING AND METHOD OF DISTRIBUTING THIRTEENTH CENSUS REPORTS.

The cost of completing the printing of the Thirteenth Census publications according to the plan originally adopted has been kept within the amount (\$272,000) provided in the legislative, executive, and judicial appropriation bill for 1913, which amount was based on an estimate made in February, 1912. The total cost of printing the Thirteenth Census publications was \$575,439.73, as compared with an approximate cost of \$820,000 for printing the results of the Twelfth Census. In my last annual report (pp. 26 and 27) is given a somewhat more detailed statement of the comparative printing cost of the two censuses, together with a brief description of the methods of publishing and distributing their results.

There has been a constant demand for the Abstract and for the various bulletins of the Thirteenth Census, but the requests for the final reports have been much more limited in number, the careful distribution scheme adopted by the Bureau when the reports were being issued having so placed them that they are in possession of or accessible to those who are interested in all details of the subjects covered by the census, while the comparatively inexpensive Abstract and the still less expensive bulletins furnish information which will comply with the great majority of requests. The Abstract, a quarto volume, containing, exclusive of its supplement, 569 pages, was issued in 53 editions, one without supplement and each of the others including a supplement giving full and detailed statistics, relating to population, agriculture, manufactures, and mines and quarries, for some one State or for the District of Columbia, Alaska, Hawaii, or Porto Rico. A more detailed description of the Abstract was given in my last report (pp. 7 and 8).

The entire contents of Volumes I, II, III, V, VI, VII, IX, and X, and portions of the contents of Volumes IV, VIII, and XI, of the final reports have been issued in the form of preliminary bulletins or of reprints, so that very nearly all the information collected and

<sup>a</sup> See p. 24.

published at the Thirteenth Census is available for general distribution at trifling expense.

In all there have been issued, in addition to the 11 volumes constituting the final reports, 53 editions of the Abstract, 52 separate editions of Abstract supplements, and 379 preliminary bulletins and reprints.

It is feared that the provision in the sundry civil appropriation bill for the current fiscal year, prohibiting the use of any of the Department's printing appropriation for the printing or binding of Thirteenth Census bulletins or reports, will embarrass the Bureau. The editions of several of the most popular of its bulletins are rapidly becoming exhausted; but, since the specific appropriation for printing and binding the results of the Thirteenth Census has all been spent, reprints can not, under the law, be ordered, though their cost would be small, as all of the matter is in plates at the Government Printing Office, so that the only expense would be for press-work and binding. Elsewhere<sup>a</sup> I am recommending the incorporation in the next urgent deficiency bill of a provision authorizing the payment from the Department's printing appropriation of the cost of making necessary reprints of Thirteenth Census publications.

#### OFFICE FORCE.

The appropriation act for the fiscal year 1914 provided for 621 permanent employees of the Bureau of the Census; the number provided by the act for 1915 was 589. This reduction, with the consequent material decrease of expense, was due to the removal of the Bureau to the new Department of Commerce Building and the consequent consolidation of its subclerical or labor force with that of the Department.

No material change has been made in the size of the administrative and clerical force, but very considerable rearrangements of this force have been made in order to provide for the change in the character of the Bureau's current work. In view of the near approach of the 1915 census of manufactures, a very great augmentation of the force of the manufactures division has been necessary, and clerks have accordingly been transferred to that division from other parts of the office, particularly the population division. This transfer will delay the latter division somewhat in getting out the various special compilations of Thirteenth Census statistics on which it is now engaged and will prevent it from taking up other such special compilations which would be of value to statisticians, students, and economists; but it has been my policy from the beginning not to allow work of this character to delay that on the major census inquiries, of which the manufactures census is the most important one conducted during the intercensal period. On pages 19 and 20 is given a statement of the preparations being made for taking this census.

Two important changes have been made in the organization of the force. The first, which took effect January 16, 1914, consisted in the consolidation of the division of revision and results and the division of publication, the name of the former being retained as that of the combined division. The division of publication had been organ-

<sup>a</sup> See p. 25.

ized for the purpose of looking after the printing of the Thirteenth Census reports and bulletins, and, this work having been accomplished, the necessity for its separate maintenance ceased to exist. At the same time a considerable portion of the force of the former division of revision and results, which had been engaged in editing, proof reading, and checking, was given constructive work to do, so that the division is now a producing, not merely an editorial, branch of the office.

The second change in the organization of the office, which took effect July 1, 1914, was the consolidation of the division of statistics of cities with the division of agriculture, the name of the former being retained. The work of the division of agriculture was practically finished when the agricultural reports of the Thirteenth Census had been issued, and for some time prior to the consolidation the personnel of this division had been employed on work in connection with the wealth, debt, and taxation inquiry, which is under the charge of the chief statistician for statistics of cities.

These changes have all been in the interest of economy and efficiency; and what may be termed the major work of the office has not been allowed to suffer by reason of the employment of an unduly large proportion of the force upon the minor work.

In Appendix II are shown the nature and distribution of the Bureau's office and field force on September 30, 1914.

#### MECHANICAL LABORATORY.

Operations in the mechanical laboratory during the census year and since its close have been as follows:

Maintenance of tabulating machines (seven automatic and four semiautomatic) for the completion of the first run of the occupation cards; design and partial completion of a new type of automatic tabulator and accessories; equipment and maintenance of machines for the second run of the occupation cards; reestablishment of laboratory equipment in new quarters; equipment and maintenance of tabulating machines for the division of vital statistics; equipment and maintenance of machines for the division of revision and results; maintenance of the tabulating equipment of the Bureau of Immigration and its reestablishment in new quarters; and repairs in general.

Several features embodied in the new model tabulator have been put to practical test with highly satisfactory results as to both output and maintenance.

The great gain in economy and efficiency due to the work of the mechanical laboratory—a gain which, as in the case of practically all successful work in mechanical development, far outweighs the monetary outlay which made it possible—will appear at future decennial censuses in much greater degree than at the Thirteenth; but if the shop is adequately to fulfill its functions at the Fourteenth Census, consideration of future means and methods can begin none too early.

#### REMOVAL TO DEPARTMENT OF COMMERCE BUILDING.

During June and July, 1914, the Bureau moved from its old quarters at First and B Streets NW. to the new Department of Commerce Building at Nineteenth Street and Pennsylvania Avenue NW., where

it occupies the greater part of the basement, a portion of the first floor, all of the second, third, fourth, and fifth floors, and parts of the sixth, seventh, and eighth floors. Its former library, which now forms the major portion of the consolidated Department library, is located on the tenth floor.

The new location is preferable to the old in many respects, not the least of which are better light, vastly improved facilities for ventilation, less heat in summer, more desk room, and more satisfactory physical conditions in general, resulting in better health and a greater degree of contentment on the part of the personnel, with a consequent increase in quality and quantity of output. Another advantage that should not be overlooked is the greatly minimized danger from fire. Since many of the Bureau's records are of great value and could not be duplicated if lost, their safety from destruction is a matter of more than ordinary importance.

### APPROPRIATIONS AND EXPENDITURES.

#### FINANCIAL STATEMENT, FISCAL YEAR 1914.

In Appendix III is presented a financial statement for the Bureau of the Census, covering the fiscal year ended June 30, 1914.

#### APPROPRIATIONS, FISCAL YEAR 1915.

The appropriations for 1915 amounted to \$1,537,460. There was a decrease of \$21,280 in the item for salaries, due in part to the discontinuance of one clerical position and the transfer of certain others to the roll of the Department of Commerce, but principally to the discontinuance of a number of subclerical positions and the transfer of others to the roll of the Department as a result of the removal of the Bureau of the Census from its old quarters to the new Department building.

The appropriation for tabulating machines was reduced to \$12,000.

The item for collecting statistics was increased to \$835,000 in order to provide for the quinquennial census of manufactures, to be taken during the calendar year 1915.

The item for rent was discontinued by reason of the removal of the Bureau of the Census to the new Department building.

The appropriation for the purchase of books and periodicals remained unchanged.

The item for contingent expenses was discontinued, such expenses now being paid from the appropriations for the Department of Commerce.

### RECOMMENDATIONS.

I.—I renew the following recommendation of changes in the scope of the Official Register,<sup>a</sup> made in my annual report for the fiscal year ended June 30, 1914:

The enactment of legislation authorizing—

(1) The establishment of a card directory, prepared and maintained by the Civil Service Commission from information furnished

<sup>a</sup> See also pp. 9 and 20.

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 Revenue-Cutter Service. 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 Revenue-Cutter Service) 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 proposed plan, if adopted, will result in very material saving to the Government, will at the same time preserve all the valuable features of the present Official Register, and will 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 Bureau of the Census, by the aid of its tabulating machinery, can quickly and accurately compile statistics relative to Federal employees when called upon to do so by the President or by Congress.

A bill substantially embodying the foregoing plan (except that \$1,500 instead of \$2,000 was fixed as the lowest compensation of employees whose names should be included in the Official Register) was introduced in the House of Representatives on August 8, 1913, by Hon. W. C. Houston, of Tennessee.

II.—I recommend the incorporation in the next urgent deficiency appropriation bill of a provision authorizing the payment, from the current printing appropriation for the Department of Commerce, of the cost of making necessary reprints of Thirteenth Census publications.<sup>a</sup>

The adoption of this recommendation would make it possible for the Bureau to comply with numerous requests for Thirteenth Census information which otherwise could not be furnished; the amount involved would be small; and no increase in the sum already appropriated would be needed.

Respectfully,

WM. J. HARRIS,  
*Director of the Census.*

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

---

<sup>a</sup> See p. 22.

1914  
APPENDIXES.

APPENDIX I.  
PUBLICATIONS ISSUED. <sup>a</sup>  
JULY 1, 1913, TO JUNE 30, 1914.

Name or description.	When issued.	Pages.
<b>Thirteenth Census Reports (bound quarto volumes):</b>		
Population, 1910—		
Vol. I. General report and analysis. . . . .	Jan. 5, 1914. . . . .	1,369
Vol. II. Reports by States, with statistics for counties, cities, and other civil divisions—Alabama to Montana. . . . .	Aug. 23, 1913. . . . .	1,160
Vol. III. Reports by States, with statistics for counties, cities, and other civil divisions—Nebraska to Wyoming; Alaska, Hawaii, and Porto Rico. . . . .	Sept. 27, 1913. . . . .	1,225
Agriculture, 1910—Vol. V. General report and analysis. . . . .	Nov. 21, 1913. . . . .	927
Manufactures, 1909—		
Vol. VIII. General report and analysis. . . . .	Sept. 15, 1913. . . . .	845
Vol. X. Reports for principal industries. . . . .	Dec. 30, 1913. . . . .	975
Mining, 1910—Vol. XI. Mines and quarries. . . . .	Dec. 30, 1913. . . . .	369
Abstract of the Census <sup>b</sup> —three editions, with supplements for Alaska, Hawaii, and Porto Rico. . . . .	Sept. 2—Oct. 3, 1913. . . . .	. . . . .
Total. . . . .		6,870
<b>Annual and other reports (bound quarto volumes):</b>		
General statistics of cities, 1909. . . . .	Sept. 18, 1913. . . . .	197
Financial statistics of cities, 1911. . . . .	Dec. 8, 1913. . . . .	401
Financial statistics of cities, 1912. . . . .	June 6, 1914. . . . .	410
Mortality statistics, 1910. . . . .	Oct. 2, 1913. . . . .	611
Mortality statistics, 1911. . . . .	Dec. 17, 1913. . . . .	572
Mortality statistics, 1912. . . . .	Jan. 8, 1914. . . . .	352
Benevolent institutions, 1910. . . . .	Jan. 6, 1914. . . . .	411
Official Register of the United States, 1913. . . . .	Jan. 7, 1914. . . . .	870
Total. . . . .		3,830
<b>Thirteenth Census bulletins (quarto; unbound):</b>		
3 additions of supplements to abstract of the census, relating, respectively, to Alaska, Hawaii, and Porto Rico. . . . .	Sept. 2—Oct. 3, 1913. . . . .	190
16 reprints of chapters in Vol. I, Thirteenth Census reports. . . . .	Feb. 26—28, 1914. . . . .	1,846
12 reprints of chapters in Vol. V, Thirteenth Census reports. . . . .	Jan. 17—Feb. 5, 1914. . . . .	863
1 reprint of a chapter in Vol. VIII, Thirteenth Census reports—"Description of individual industries with principal statistics for each." . . . .	June 19, 1914. . . . .	145
38 bulletins, each relating to a particular industry or group of industries, the contents of which were later included in Vol. X, Thirteenth Census reports. . . . .	July 2—Dec. 17, 1913. . . . .	679
2 reprints of sections of Vol. X, Thirteenth Census reports, each relating to a group of industries—"Chemicals and allied products" and "Textiles." . . . .	Feb. 4, 1914. . . . .	274
1 reprint of a section of Vol. X, Thirteenth Census reports, relating to manufactures in metropolitan districts. . . . .	Jan. 28, 1914. . . . .	77
1 bulletin, "Iron mines," which later formed a section of Vol. XI, Thirteenth Census reports. . . . .	Sept. 8, 1913. . . . .	25
1 special Thirteenth Census bulletin, "Stability of farm operators, or term of occupancy of farms." . . . .	June 15, 1914. . . . .	22
Total. . . . .		3,621

<sup>a</sup> In addition to the publications listed, the Bureau issued during the fiscal year approximately 250 press summaries of its reports and bulletins, and has issued about 75 such summaries since the close of the year. These summaries are in printed or multigraphed form, varying in length from three-fourths of a column to a column, and are distributed to an average of 1,200 to 1,500 daily newspapers and oftentimes to numerous weeklies as well. They are also sent to State officials, manufacturers, and others interested in the particular industries or subjects covered.

<sup>b</sup> An edition of the Abstract without supplement and 48 editions with supplements for the 48 States, respectively, were issued prior to July 1, 1913. The number of pages in the supplements for Alaska, Hawaii, and Porto Rico is shown under the heading "Thirteenth Census bulletins."

## PUBLICATIONS ISSUED—Continued.

JULY 1, 1913, TO JUNE 30, 1914—Continued.

Name or description.	When issued.	Pages.
<b>Annual and other publications (unbound):</b>		
Bulletin 116. Cotton production, 1912 (quarto).....	July 19, 1913.....	63
Bulletin 117. Supply and distribution of cotton for the year ending Aug. 31, 1913 (quarto).....	Dec. 22, 1913.....	40
Bulletin 118. Financial statistics of cities, 1912 (quarto).....	Dec. 22, 1913.....	83
Bulletin 119. Insane and feeble-minded in institutions, 1910 (quarto).....	Dec. 17, 1913.....	99
Bulletin 120. Paupers in almshouses, 1910 (quarto).....	Dec. 31, 1913.....	99
Bulletin 121. Prisoners and juvenile delinquents, 1910 (quarto).....	Jan. 8, 1914.....	130
Bulletin 122. Estimates of population, 1910 to 1914 (quarto).....	Apr. 25, 1914.....	12
Bulletin 123. Telephones and telegraphs, 1912.....	May 21, 1914.....	26
Bulletin 124. Central electric light and power stations, and street and electric railways, 1912 (quarto).....	June 12, 1914.....	113
Lumber, lath, and shingles, 1912 (octavo).....	Jan. 29, 1914.....	60
Manual of the international list of causes of death, 1909 (second revision, octavo).....	Oct. 4, 1913.....	307
Physicians' pocket reference to the international list of causes of death, 1913 (pamphlet, pocket size).....	Sept. 6, 1913.....	28
Annual report of the Director of the Census to the Secretary of Commerce, 1912-13 (octavo).....	Dec. 13, 1913.....	31
Ravages of the boll weevil (pamphlet, 12mo).....	Jan. 27, 1914.....	12
Tentative program of the Bureau of the Census (circular of information, No. 1, octavo).....	Feb. 9, 1914.....	8
Work of the permanent Census Bureau (circular of information, No. 3, octavo).....	Apr. 28, 1914.....	31
25 reports, in card form, relating to cotton and cottonseed.....	July 14, 1913, to June 11, 1914.....	25
2 reports, in card form, relating to stocks of leaf tobacco.....	Nov. 13, 1913, and May 9, 1914.....	2
Total.....		1,169
Grand total.....		15,520

JULY 1, 1914, TO OCTOBER 15, 1914.

Thirteenth Census report (quarto): Occupation statistics (Vol. IV).....	July 7, 1914.....	615
<b>Thirteenth Census bulletins (quarto):</b>		
Occupation statistics (abstract of full report).....	Aug. 14, 1914.....	107
Occupation statistics—Cities of 100,000 inhabitants or more (reprint of Table III, Vol. IV).....	July 21, 1914.....	57
Occupation statistics—Cities of 25,000 to 100,000 inhabitants (reprint of Table IV, Vol. IV).....	July 21, 1914.....	85
Occupation statistics—Alaska, Hawaii, and Porto Rico (reprint of Tables V and IX, Vol. IV).....	July 10, 1914.....	18
Age of farmers, by color of operator, character of tenure, and size of farm.....	Aug. 13, 1914.....	26
Total.....		917
<b>Annual and other publications (unbound):</b>		
Bulletin 125. Cotton production, 1913 (quarto).....	July 23, 1914.....	79
Bulletin 126. Financial statistics of cities, 1913 (quarto).....	Sept. 14, 1914.....	73
National and State indebtedness and funds and investments, 1870-1913 (quarto).....	July 10, 1914.....	203
Index of joint causes of death (octavo).....	Aug. 27, 1914.....	308
6 reports, in card form, relating to cotton production and consumption.....	July 14 to Oct. 14, 1914.....	6
Total.....		669
Grand total.....		1,686

## APPENDIX II.

STATEMENT SHOWING NATURE AND DISTRIBUTION OF OFFICE AND  
FIELD FORCE, SEPTEMBER 30, 1914.

## OFFICIALS.

Chief clerk	WILLIAM L. AUSTIN.
Chief statisticians:	
Population	WILLIAM C. HUNT.
Statistics of cities	STARKE M. GROGAN.
Manufactures	WILLIAM M. STEUART.
Expert special agent in charge of revision and results	JOSEPH A. HILL.
Geographer	CHARLES S. SLOANE.
Expert chiefs of division:	
Population	WILLIAM H. JARVIS.
Statistics of cities	EDWARD W. KOCH.
Manufactures	ARTHUR J. HIRSCH.
	HICKMAN P. CHILDERS.
	JOSEPH D. LEWIS.
Vital statistics	FRANK L. SANFORD.
Revision and results	RICHARD C. LAPPIN.
Chief mechanician	HARRY H. PIERCE.
	D. M. LABOITEAUX.

## CLERICAL FORCE.

Stenographer, \$1,500	1	Clerks:	
Clerks:		\$1,000	82
Class 4	11	\$900	78
Class 3	20		
Class 2	88	Total	531
Class 1	301		

## SUBCLERICAL FORCE.

Engineer, \$1,000	1	Assistant messengers, \$720	5
Skilled laborers:		Messenger boys, \$480	4
\$1,000	1	Watchmen, \$720	2
\$900	3	Firemen, \$720	1
\$720	5	Charwomen, \$240	5
Unskilled laborers, \$720	3		
Messengers, \$840	3	Total	33

## MACHINE-SHOP FORCE.

Electrical expert, \$1,600	1	Electrician, \$1,200	1
Mechanical expert, \$1,600	1	General mechanic, \$1,000	1
Mechanical expert, \$1,200	1		
Mechanician, \$1,200	2	Total	7

## SPECIAL-AGENT FORCE.

Expert agents for general field work, etc	58
---	----

## SUMMARY OF CENSUS FORCE.

Officials	15	Special agents (general force)	58
Clerical	531		
Subclerical	33	Total office force	644
Machine shop	7		
Special agents to collect statistics of cotton			754

## APPENDIX III.

## FINANCIAL STATEMENT, FISCAL YEAR 1914.

<b>Administrative:</b>		
Salaries for administrative places	-----	\$34,868.61
Salaries for division of correspondence and mail	-----	21,148.48
Salaries for library	-----	5,362.60
Salaries for watch, labor, and char forces	-----	25,740.51
Rent	-----	21,000.00
Stationery	-----	3,218.32
Miscellaneous expenses	-----	21,590.69
Books and periodicals	-----	490.73
<b>Total</b>	-----	<b>\$133,514.94</b>
<b>Machine shop:</b>		
Salaries	-----	10,730.43
Materials, supplies, etc.	-----	34.40
<b>Total</b>	-----	<b>10,773.89</b>
<b>Geographer's division: Salaries</b>		<b>20,697.84</b>
<b>Thirteenth Census work:</b>		
<b>Population</b>		
Supervision	-----	\$11,291.64
General and State reports	-----	19,141.13
Occupations	-----	114,052.44
Tenure of homes	-----	31,124.56
Miscellaneous work	-----	9,546.68
<b>Total</b>	-----	<b>185,156.45</b>
<b>Agriculture</b>		
Supervision <sup>a</sup>	-----	7,780.11
General and State reports	-----	8,553.63
Color, tenure, and size	-----	1,243.83
Plantations	-----	194.04
Irrigation	-----	116.66
<b>Total</b>	-----	<b>17,888.32</b>
<b>Manufactures</b>		
Supervision <sup>b</sup>	-----	9,445.77
Completion of manufactures reports	-----	11,332.36
Industrial districts	-----	2,281.66
Mines and quarries	-----	2,541.39
<b>Total</b>	-----	<b>25,651.18</b>
Institutions	-----	22,715.17
Revision and results	-----	16,769.30
Publications	-----	9,950.23
Negroes in the United States	-----	695.56
Chinese and Japanese	-----	216.67
<b>Total</b>	-----	<b>279,042.93</b>
<b>Annual investigations:</b>		
Cotton	-----	257,100.03
Tobacco	-----	10,239.29
Forest products	-----	3,670.73
Electrical industries	-----	73,280.87
Vital statistics	-----	82,423.41
Statistics of cities	-----	66,445.36
<b>Total</b>	-----	<b>493,159.74</b>
<b>Wealth, debt, and taxation</b>		<b>151,477.86</b>
<b>Census of manufactures, 1914</b>		<b>32,804.89</b>
<b>Official Register</b>		<b>3,911.84</b>
<b>Miscellaneous</b>		<b>7,642.33</b>
<b>Grand total</b>	-----	<b>1,133,026.26</b>

Title of appropriation.	Appropriation.	Expenditure.
Salaries, Bureau of the Census, 1914	\$711,240.00	\$693,245.52
Tabulating machines, Bureau of the Census, 1914	12,500.00	10,773.89
Collecting statistics, Bureau of the Census, 1914 <sup>c</sup>	404,000.00	382,707.11
Rent, Bureau of the Census, 1914	22,030.00	21,000.00
Purchase of books of reference and periodicals	500.00	490.73
Contingent expenses	25,000.00	24,809.01
<b>Total</b>	<b>1,175,320.00</b>	<b>1,133,026.26</b>

<sup>a</sup> Includes cost of supervision for wealth, debt, and taxation.

<sup>b</sup> Includes cost of supervision for forest products, cotton, tobacco, electrical industries, and preliminary work on census of 1914.

<sup>c</sup> Includes unexpended balance of appropriation for collecting statistics, Bureau of the Census, 1913, \$50,000, transferred to appropriation for 1914 by urgent deficiency act of Oct. 22, 1913.

ANNUAL REPORT

617

OF THE

DIRECTOR OF THE CENSUS

TO THE

SECRETARY OF COMMERCE

FOR THE

FISCAL YEAR ENDED JUNE 30, 1915



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1915

1915

## CONTENTS.

	Page.
Progress of routine work.....	5
Census of manufactures.....	5
Electrical industries.....	6
Wealth, debt, and taxation.....	6
Financial statistics of cities.....	7
General statistics of cities.....	7
Cotton and cottonseed.....	8
Tobacco.....	8
Vital statistics.....	9
Defective, dependent, and delinquent classes.....	10
Negroes in the United States.....	11
Indians in the United States.....	11
Occupations.....	12
Statistical Atlas.....	12
Official Register.....	12
Method of distributing Bureau's statistics.....	13
Information furnished by correspondence.....	14
Work in machine shop.....	14
New work undertaken during the year and since its close.....	14
Financial statistics of States.....	14
Life, or mortality, tables.....	15
Monograph on cancer.....	15
Directory of institutions.....	16
Index to occupations.....	16
Censuses of Tulsa, Okla., and Hamtramck, Mich.....	16
Plans for future work.....	16
Religious bodies.....	16
Forest products.....	17
Marriage and divorce.....	17
Water transportation.....	18
Monograph on tuberculosis.....	18
Supplementary studies of occupation statistics.....	18
Child labor.....	18
Children born and living.....	19
Machine shop.....	19
Office accommodations and storage space.....	19
Office force.....	20
Legislation needed.....	22
Marriage and divorce.....	22
Forest products.....	22
State finance.....	22
Cottonseed and cottonseed products.....	22
Official Register.....	23
Statistical compilations for State officials and private individuals.....	23
Tobacco statistics.....	23
Express business.....	24
Appropriations and expenditures.....	24
Appendix I—Publications issued.....	25
July 1, 1914, to June 30, 1915.....	25
July 1, 1915, to September 13, 1915.....	26
Appendix II—Report of the interdepartmental committee on tobacco.....	26
Appendix III—Proposed change in distribution of appropriation for salaries.....	27
Appendix IV—Statement showing nature and distribution of office and field force, September 30, 1915.....	27
Appendix V—Financial statement, fiscal year 1915.....	28

1915

621

## REPORT

OF THE

## DIRECTOR OF THE CENSUS.

DEPARTMENT OF COMMERCE,  
BUREAU OF THE CENSUS,  
*Washington, October 2, 1915.*

SIR: There is submitted herewith the following report upon the operations of the Bureau of the Census during the fiscal year ended June 30, 1915, and upon the work now in progress.

My oath of office was taken March 16, 1915, so that during the greater part of the period covered by this report the Census Bureau was under the management of my predecessor, Hon. William J. Harris; and I am fortunate in being associated with his well-organized and capable official force.

During the fiscal year the Bureau completed its decennial inquiry relating to wealth, debt, and taxation; issued its decennial reports on insane and feeble-minded, paupers, and Indians in the United States; published a decennial bulletin on Negroes in the United States and carried on the compilation of a detailed report on the same subject; completed and issued its decennial "statistical atlas"; completed its quinquennial census of electrical industries; conducted and brought well toward completion its quinquennial canvass of manufacturing industries; carried on its regular annual investigations relating to mortality, municipalities, and cotton and cottonseed; made its semiannual collections and publications of tobacco statistics; undertook a new line of work, the collection of financial statistics of States; took two special censuses of municipalities; and complied with numerous mail requests for information contained in its records.

Since the close of the fiscal year the Bureau has been engaged in compiling the results of the census of manufactures, in the preparation of the Official Register of the United States, which is issued biennially, and in the conduct of annual and special inquiries.

The publications issued during the fiscal year and since its close are listed in Appendix I.

## PROGRESS OF ROUTINE WORK.

## CENSUS OF MANUFACTURES.

The largest single task undertaken by the Bureau of the Census in the past fiscal year was the quinquennial census of manufactures, relating to the calendar year 1914. In making the preparations for this census, some little inconvenience was caused by the lack of an appropriation for the purchase of city directories from which to

obtain the names and addresses of manufacturers. With the assistance of the Secretary of Commerce arrangements were finally made by the Bureau to borrow directories from mayors and other officials of some of the cities and to obtain them for other cities from the Library of Congress. This not only facilitated the work, but resulted in a material saving.

A force of more than 1,300 special agents was organized during December, 1914, to collect reports concerning capital invested, persons employed, cost of materials, value of products, character and quantity of power used, and quantity of fuel consumed from every manufacturing establishment in the United States. The proper administration of this force required a great deal of preliminary detail work. The entire United States was laid out into suitable districts. The agents were appointed, received the necessary instructions, and during the latter part of January began their work. The canvass proceeded rapidly—in fact, more rapidly than at any preceding census—and virtually the entire force of local agents was dispensed with by the first of July. In point of rapidity and accuracy of work the record of this investigation promises to be more satisfactory than that of any preceding one.

At present the work of compiling the manufactures statistics is proceeding rapidly. The value of promptness in placing the results of this important inquiry in the hands of the public is fully appreciated, and every effort is being made to expedite the work. Already a large number of press summaries have been issued giving statistics for individual cities.

#### ELECTRICAL INDUSTRIES.

The compilation of the quinquennial census of electrical industries, relating to the year 1912, which covered central electric light and power stations, street and electric railways, telephones, telegraphs, and municipal electric fire-alarm and police-patrol signaling systems, was completed in August, 1914. The printing, proof reading, checking, and various other detail work in connection with printing, however, consumed so much time that the reports were not issued until April, 1915. Two volumes were published, the first relating to central electric light and power stations and street and electric railways and the second to the remaining subjects named.

#### WEALTH, DEBT, AND TAXATION.

This decennial inquiry, which related to the fiscal year 1913, was completed during the period covered by this report. The results were published in the form of eight separate bulletins and an abstract. The final copy was sent to the printer on March 15, 1915—less than a year and a half from the beginning of the office work and about a year from the commencement of the field canvass. This establishes a record for rapidity of work.

After the issuance of the entire series of bulletins, their contents were bound together in two volumes having a total of 1,642 pages. The subjects covered comprise the following: Estimated valuation of national wealth, 1850-1912; national and State indebtedness and funds and investments, 1870-1913; county and municipal indebted-

ness, 1913, 1902, and 1890, and sinking fund assets, 1913; taxation and revenue systems of State and local governments; assessed valuation of property and amounts and rates of levy, 1860-1912; national and State revenues and expenditures, 1913 and 1903, and public properties of States, 1913; county revenues, expenditures, and public properties, 1913; and municipal revenues, expenditures, and public properties, 1913.

The investigation relating to wealth, debt, and taxation is one of the most important made by the Census Bureau during "intercensal" years; and its results have attracted widespread attention, including much press comment.

#### FINANCIAL STATISTICS OF CITIES.

The preparation of Bulletin 126, presenting financial statistics of cities for the fiscal year 1913, was completed July 30, 1914, and the bulletin was issued in the following September.

The field work on the current investigation under this head, which relates to the latest fiscal period terminating prior to July 1, 1915, was begun early in the present calendar year and is being rapidly completed. It is proposed to have the results of this inquiry in the hands of the printer by December 15 or January 1—an advance of nearly a year as compared with most of the similar reports previously issued.

The cities covered by this investigation, of which there are 204, are those estimated to have over 30,000 inhabitants on the median dates of their fiscal years. The equivalent of about 4,000 days of field work for one employee is required to collect the statistics. As many of the data as possible are secured from printed reports of various cities, thus reducing the cost of field work considerably without impairing the accuracy of the figures obtained.

#### GENERAL STATISTICS OF CITIES.

This investigation, which relates to the latest fiscal period terminating prior to July 1, 1915, is carried on in connection with the collection of financial statistics of cities, and pertains to the same municipalities, namely, those having over 30,000 inhabitants. The current investigation covers (a) character of government—mayor and council or commission, annual salaries of principal officers, etc.; (b) police departments—organization, salaries, equipment, requirements for appointment, civil-service regulations, systems of retirement, pensions, etc.; (c) liquor licenses and taxes—number of saloons and annual licenses, disposition of receipts, regulations, results of elections on this subject, etc.; and (d) water-supply systems—equipment, description of system, purification process, earnings, rates to consumers, etc. Similar statistics were collected for the years 1902, 1903, 1905, 1907, and 1909, but, because of the pressure of the Thirteenth Census work, it was decided not to compile the reports for 1911 and 1913. The annual reports on financial statistics of cities, however, have carried a few statistics of a general character, and it is the purpose to make annual collections hereafter of general statistics on certain subjects for cities of over 30,000.

## COTTON AND COTTONSEED.

During the year the Census Bureau gathered and published statistics relating to cotton ginned, to cotton consumed, imported, exported, and on hand, and active spindles, and to cottonseed and linters. As shown by the official report, the cotton crop of 1914 amounted to over 15,900,000 bales. This was the largest crop ever grown, and in view of the disturbed conditions in foreign countries its disposition was one of the most serious problems confronting the cotton market. Special importance was attached, therefore, to the census statistics relating to cotton.

Notwithstanding the unusual difficulties attending the movement of the crop of 1914, there was no delay in the collection and publication of the data. All of the reports were issued on dates corresponding with those on which they were published in preceding years.

Special attention is called to the consumption of linters for the manufacture of explosives. There is no definite provision of law for the collection of statistics in regard to linters, but the Bureau has acted on the theory that linters properly form a part of the cotton crop, and the data concerning them have been collected in connection with statistics relating to the quantity of cotton ginned. It would be of considerable assistance to the Bureau in carrying on this work if there were a special provision of law requiring the Director of the Census to collect statistics of the quantity of cottonseed crushed and linters obtained and of the distribution of linters. A recommendation to this effect is made on p. 22.

## TOBACCO.

Under authority of an act of Congress approved April 30, 1912, the Bureau makes semiannual collections and publications of statistics of stocks of leaf tobacco held by manufacturers and dealers. The reports for the fiscal year 1915 related to October 1, 1914, and April 1, 1915, and were issued November 9, 1914, and May 5, 1915, respectively. The Bureau of Internal Revenue of the Treasury Department collects statistics on this subject, and it has recently made some changes in its methods of conducting this work so as to permit it to secure more promptly data concerning stocks of tobacco on fixed dates. The Bureau of Crop Estimates of the Department of Agriculture also collect statistics concerning tobacco, and the Bureau of Foreign and Domestic Commerce of the Department of Commerce has published reports in regard to the tobacco industry of the world. There will necessarily be considerable duplication in the work of the Census Bureau and that of the Bureau of Internal Revenue, and more or less confusion will arise because of the publication of statistical and other information concerning tobacco by the four bureaus referred to.

In order to avoid this duplication, to systematize the work, and to make it possible to publish an authoritative report concerning the production, consumption, and stocks of tobacco, an interdepartmental committee was appointed to consider the entire subject. This committee held several meetings and conferred with representatives of the Tobacco Association of the United States and the National Cigar Leaf Tobacco Association. The report of the committee, which is

given in full as Appendix II, included recommendations to the effect that the act of April 30, 1912, be repealed and that the Bureau of the Census discontinue the collection of statistics concerning tobacco, except such as are incident to the decennial census of agriculture and the quinquennial census of manufactures; that legislation be enacted providing for the collection and publication, by the Bureau of Internal Revenue, of statistics in regard to the principal types of tobacco held by dealers at the end of each quarter and by manufacturers at the end of each year; and that an annual report containing all the statistical information concerning tobacco collected by the several Federal bureaus be prepared by the Bureau of Crop Estimates.

I concur in these recommendations. (See p. 23.)

#### VITAL STATISTICS.

The annual report on mortality statistics for 1913 was completed and published early in the present calendar year. In this report there were included, for the first time, mortality statistics for the State of Virginia, which was added to the death-registration area for 1913.

The Index of Joint Causes of Death, intended for use of registrars of mortality statistics, showing the assignments to the preferred title of the international list of causes of death when two or more causes are simultaneously reported, was issued in August, 1914. This publication, an octavo volume of over 300 pages, was "printed as proof," in order to enlist constructive criticism from registrars and others concerned or interested in the recording, transcription, compilation, and publication of mortality data.

The work of preparing the annual report on mortality statistics for 1914 has been somewhat delayed by the sending of about 37,000 circular letters to attending physicians in cases in which the deaths were reported as due to cancer in order to ascertain whether the diagnoses were based on clinical findings or whether autopsies or surgical operations were performed. It is expected, however, that a considerable part of the time thus lost will be made up, and that the report will be ready for the printer by January 1, 1916, or very shortly thereafter.

The Census Bureau's reports relating to vital statistics are constantly being brought to a higher standard of usefulness. Separate statistics are now shown with reference to the white and colored races for all localities in the registration area in the south and for all cities in any part of the country having a colored population of 10,000 or over in 1910. In the report for 1914 data for deaths of nonresidents will be shown separately, so far as it is possible to do so, thus avoiding the injustice which is now done certain cities for which high death rates, due in considerable part to deaths of nonresidents, are shown. This is particularly the case with respect to cities having unusually healthful climates, by reason of which consumptives and other invalids are attracted thither, and with respect to cities as compared with rural localities, since an appreciable percentage of the deaths in city hospitals are of persons resident in near-by small towns and rural territory.

## DEFECTIVE, DEPENDENT, AND DELINQUENT CLASSES.

The law establishing the permanent Census Bureau authorizes the collection decennially of statistics relating to defective, dependent, and delinquent classes. Under this authorization the Bureau has taken special censuses of the insane and feeble-minded in institutions, of paupers in almshouses, of prisoners and juvenile delinquents, and of the blind and the deaf. The work on the censuses of the insane, feeble-minded, and paupers has been completed, and the reports were published early this calendar year. A bulletin on the blind population of the United States was published in February, and more recently a brief bulletin or preliminary statement was issued regarding the census of the deaf. There remain still to be published in this series the complete or final reports on the blind and the deaf and on prisoners and juvenile delinquents. A bulletin giving statistical tables relating to prisoners and juvenile delinquents enumerated on January 1, 1910, has already been published, but the final report to be issued will be much more comprehensive, as it will include, and, in fact, will relate mainly to, offenders sentenced to prisons, jails, or reformatories in the course of the year as distinguished from those confined in such institutions on a given day. The statistics thus obtained, relating as they do to convictions occurring within a definite period, are beyond question more valuable and significant than those of the prison population on a particular date. The latter, considered as an index of criminality, not only do not relate to a definite period of time but distort the relative frequency of different crimes or offenses for the reason that the accumulation of prisoners sentenced for serious crimes and serving long-term sentences extends back for many years, while the minor or less serious misdemeanors as represented in the prison population are all of recent dates. The tabulation of the data for this report has already been completed. In this work the 493,934 persons sentenced to prisons, jails, workhouses, or reformatories in one year are classified according to offense for which committed (homicide, assault, larceny, vagrancy, etc.) and according to sentence (death, life, and years or months of imprisonment), and these facts are further tabulated in combination with the ages of the offenders and their nativity (country in which born), race (white or colored), illiteracy (whether able to read and write), and former occupations. The material thus obtained is of great interest in many ways. The statistics, it is true, can not be regarded as an index of criminality in the sense of showing the volume of crime committed—we have no statistics in this country that will show that—but they do show the amount of crime detected and punished, and they indicate the classes from which the prison population is recruited.

In publishing the data relative to the defective, dependent, and delinquent classes it has been the aim of the Bureau to make its reports something more than a collection of elaborate statistical tables or a mass of figures. The intention has been to present the statistics in such a way that their significance may be readily perceived and to bring out features of special interest by means of text discussion and analysis and summary tables. The reception accorded the publications already issued in this series, especially the reports relating to the insane and paupers and the bulletin on the blind,

encourages the Bureau to believe that it is meeting with a good degree of success in this undertaking.

As an incident to this work the Bureau is publishing a statistical directory of the State institutions for the care or custody of defective, dependent, and delinquent classes. This directory is described on p. 16 in the section relating to new work undertaken during the year and since its close.

#### NEGROES IN THE UNITED STATES, 1910.

In the last annual report of the Director of the Census reference was made to the plans for a special census report on Negroes in the United States. A bulletin on this subject was issued last April. It was a publication of about 200 pages, which was prepared in order to meet, without further delay, the demand for census statistics relative to the Negro, a demand which before could only be met by sending out several large volumes of census reports in which the statistics for Negroes were more or less buried in a mass of data relating to all classes of population. This bulletin has been a very popular publication, and already more than 12,000 copies have been distributed.

This bulletin, however, is to be followed by a more carefully prepared and complete report which will contain many additional data derived both from published census reports and from manuscript records in the Bureau. The statistics will be compiled and presented with a view to bringing out features of interest and throwing as much light as possible upon the conditions under which the Negroes live and the progress they have made during the past 60 years. The report will show, for the Negro population, growth, 1790-1910; geographical distribution; migration; dispersion and segregation; marriage and divorce; fecundity; intermixture with whites; mortality; educational progress; occupations; agricultural conditions; economic progress; religious affiliations; and criminality, insanity, and pauperism. This report should be a most useful publication and of great permanent statistical value. The Bureau anticipates a widespread demand for it.

#### INDIANS IN THE UNITED STATES, 1910.

The work on this report, which is based largely on data contained on the special Indian schedule used at the Thirteenth Census, was discontinued in February, 1912, because of the large reduction in the temporary Thirteenth Census force, and little more was done on the report until the close of April, 1914. A bulletin embodying the results of the work already done, however, was issued in June, 1913. The last section of the report was released for printing in October, 1914. There was considerable delay, however, in checking and proof reading, on account of the limited force of clerks available for this work. The report was finally issued on July 3, 1915.

This report covers twelve subjects, namely, population, stock and tribe, blood, sex, age, marital condition, school attendance, illiteracy, inability to speak English, occupations, fecundity and vitality, and Indians taxed and not taxed.

## OCCUPATIONS.

Work was done in preparation of supplementary occupation statistics, showing certain details not brought out in the general report on occupations. This work, however, was suspended early in October, 1914, in order to advance the work on the census of manufactures, and has not since been resumed. The plans for future work on these statistics are discussed on page 18.

## STATISTICAL ATLAS, 1914.

The Statistical Atlas, which is issued decennially, was prepared and the great bulk of the copy sent to the printer before the beginning of the fiscal year, but the printing, proof reading, checking, etc., took up so much time that it was not issued until January, 1915. The current edition is a quarto volume containing 99 pages of text and 503 plates carrying maps, charts, and diagrams presenting graphically the more important facts brought out by the various decennial and other census inquiries. It covers the subjects of population, agriculture, manufactures, mines and quarries, cotton production and consumption, financial statistics of cities, vital statistics, religious bodies, marriage and divorce, and insane in hospitals. The purpose of this volume is the presentation of the more significant data collected by the Bureau of the Census in such form that they may be readily grasped and understood by the nonstatistical reader.

## OFFICIAL REGISTER OF THE UNITED STATES.

The Official Register of the United States is being prepared in accordance with the requirements of law and will be issued in December.

In this connection I again call attention to the need of a revision of the law relating to this publication. The preparation of the Official Register in its present form involves a considerable amount of work on the part of the executive departments, particularly those which have a large number of outlying services, especially in foreign countries or the dependencies of the United States. Furthermore, each edition of this publication relates to a date some five months earlier than that upon which it is issued, and is about two years and five months out of date by the time the next edition is published. Meanwhile appointments, resignations, transfers, promotions, and other changes in status are continually occurring throughout the Government service. The Official Register, as now published, consists principally of an alphabetical list of all officers and employees in the Federal civil service, exclusive of the Postal Service, together with commissioned officers of the Army, Navy, and Marine Corps, with brief data as to department and bureau or service in which employed, compensation; State or country of birth; congressional district, State, and county from which appointed; and place of employment. The information presented by departments, bureaus, and divisions is restricted to the names, positions, and salaries of the officials. The register is useful, therefore, only to show the superclerical organiza-

tion and personnel of each department or bureau and to serve as a book of reference in which may be found, under the name of each clerk or other employee, the above-mentioned facts as to location, compensation, etc., on the date to which the register relates. If it is desired to ascertain how many clerical positions at \$900, \$1,000, \$1,200, etc., there are in a given department or office, or the numbers of persons employed at various rates of compensation under lump-sum appropriations, or the present status of a particular individual, it is necessary to obtain the information elsewhere. The changes in status which occur in the Federal service in the course of two years are many thousands in number.

For these reasons I renew the recommendation in reference to the Official Register made by my predecessor in his annual reports for the fiscal years 1913 and 1914. (See p. 23.)

#### METHOD OF DISTRIBUTING THE BUREAU'S STATISTICS.

The usefulness of the statistical work done by the Census Bureau depends to a large extent upon the manner in which its results are disseminated. The easiest way, of course, would be to print the reports and let them remain in the Government Printing Office until they were asked for by persons interested in them. Another way would be to send them, without previous inquiry, to persons whose names were already on the department's mailing lists and also to members of statistical and other associations who might be presumed to have an interest in the subjects covered. The method employed by the Bureau, however, is to send each of the more important of its publications to persons by whom or in whose behalf the publication has been specifically requested and to persons whose names are on the departmental mailing lists and who, upon receipt of an inquiry from the department, express their desire for the particular publication in question. In these cases a printed or multigraphed mailing card with return card attached is used, so that all the recipient has to do is to detach the return portion of the card, sign his name, and mail it, no postage being required. It is assumed that any one who does not care to take this small amount of trouble would have little use for the report.

In some cases another method is employed. This consists in sending a multigraphed circular letter to members of associations, etc., who are presumed to have an interest in the subjects covered by the report. The letter gives a brief description of the report and requests the addressee to notify the Bureau in case he wishes to receive it. This plan was employed, with most gratifying results, in distributing the reports on electrical industries, the insane and feeble-minded, the blind population of the United States, and Indians in the United States. A large percentage of letters thus sent out elicit affirmative replies.

The bureau's periodical reports on cotton, of which 25 are issued annually, and its semiannual reports on tobacco are sent out in the form of mailing cards to vast numbers of growers, dealers, and manufacturers.

*Press summaries.*—The preparation and distribution of press summaries of the Bureau's reports and bulletins is a matter of no small

importance, since through this medium the census statistics are placed before millions of readers, whereas the reports and bulletins themselves reach only thousands. These summaries are carefully prepared, with the view of making them readable and easily comprehensible by nontechnical persons, and at the same time preserving absolute accuracy. They range from three-fourths of an ordinary newspaper column to a column or more in length, and most of them are given a very wide circulation. They are often printed in full, but when a paper can not spare sufficient space for the entire summary it usually omits certain paragraphs or parts of paragraphs and prints the remainder verbatim. In this way the danger of presenting garbled and misleading statements of census statistics, hastily prepared by newspaper men unfamiliar with the subjects covered, is practically eliminated.

#### INFORMATION FURNISHED BY CORRESPONDENCE.

An important branch of the Bureau's work is the furnishing of information by correspondence. Many thousands of requests for population data have been received and complied with since the Thirteenth Census was taken. A great many requests are also received for genealogical data and for transcripts of census records regarding ages of soldiers, to be used in connection with applications for pensions and increases of pensions.

#### WORK IN THE MACHINE SHOP.<sup>a</sup>

A new-model tabulator head has been constructed in the machine shop. This machine in its present form has been in use for several weeks in the tabulation of mortality statistics and has operated in a very satisfactory manner. It presents a number of advantages as compared with the earlier model.

#### NEW WORK UNDERTAKEN DURING THE YEAR AND SINCE ITS CLOSE.

##### FINANCIAL STATISTICS OF STATES.<sup>b</sup>

The collection of financial statistics of States, similar in scope to the financial statistics of cities which are gathered annually by the Bureau, was authorized by the Secretary of Commerce on June 20, 1915, and the work was immediately begun. The statistics cover (1) total and per capita receipts from revenues, in detail; (2) total and per capita payments for expenses, interest, and outlays, in detail; (3) assets and liabilities; and (4) total and assessed valuations of property subject to taxation, tax levies, methods of assessment, etc. The statistics will relate to the latest fiscal period terminating prior to July 1, 1915, and it is the purpose to have them ready for distribution in January, 1916.

This work was taken up at the request of many prominent associations, State officials, and accountants, and there is no question that the statistics obtained will be of great value, not only on their own account, but also in connection with those relating to municipalities of 30,000 or over.

<sup>a</sup> See also p. 19.

<sup>b</sup> See also p. 22.

## LIFE OR MORTALITY TABLES.

An important piece of work now nearing completion is the preparation of a series of life, or mortality, tables, based on the population of 1900 and 1910, and the mortality statistics of 1900, 1901, and 1902, and of 1909, 1910, and 1911. These tables present data for various elements of the population—male and female, white, Negro, urban, rural, etc.—in the original registration States (Connecticut, Indiana, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Rhode Island, Vermont, and the District of Columbia) as they existed in 1900, taken as a group. Certain of these States, ranking high in population, such as New York, Massachusetts, Michigan, Indiana, and New Jersey, as well as the cities of Boston, Chicago, New York, and Philadelphia, will also be represented individually. Among the results shown in the tables will be the death rate and expectation of life at each age. These tables are similar to those published by the European countries, and their preparation, which is under the charge of Prof. James W. Glover, of the University of Michigan, involves actuarial computation of an intricate character. This will be the first time that life tables of such an extensive nature have been published by any Federal or State bureau. It is expected that these tables will be ready for the printer by February 1, 1916.

## MONOGRAPH ON CANCER.

A statistical monograph on cancer, relating to the calendar year 1914, is being compiled and will probably be ready for the printer by the close of the present calendar year. In addition to showing the number of deaths from cancer throughout the registration area and in each of its subdivisions, this monograph will present information of a more detailed character than that given in the Bureau's annual reports on mortality.

The American Public Health Association, which has always been active in cooperating with the Census Bureau in connection with its work on vital statistics, is especially interested in this bulletin. At the recent meeting of that association in Rochester, N. Y., held early in September, 1915, the section on vital statistics adopted the following resolution:

Whereas the American Public Health Association at its last annual meeting recommended the closest possible cooperation between the Bureau of the Census and the registration officials of the several States in order to improve the collection and publication of vital statistics in the United States; and

Whereas the Director of the Census, at the suggestion of students of the cancer problem, has recently undertaken with commendable interest and zeal the improvement of cancer mortality statistics and the publication of detailed tables in a special report thereon for the year 1914, which promises to be a notable contribution to the study of malignant disease, indicating that similar special tabulations of other diseases will be made in the future; and

Whereas certificates of death from cancer and other diseases are frequently so incomplete as to necessitate query letters to the medical attendant to obtain fuller details, and it is desirable to avoid delay and duplication of effort by coordinating the work of the Federal and State authorities in a uniform administrative plan which will insure the earliest possible receipt of accurate statements of causes of death and the prompt sending of a uniform query for fuller details when necessary; Therefore, be it

*Resolved*, That the section on vital statistics and the section of public health officials recommend that a committee of the American Public Health Association be appointed to confer with the Director of the Census relative to the appointment of appropriate

State officials as cooperating statisticians of the Bureau of the Census, who as Federal agents shall be empowered to use the franking privilege of the Federal Government for the sole purpose of obtaining necessary supplemental information on certificates of death in the fulfillment of Federal requirements, and further recommends that the Federal and State authorities cooperate in such other procedures as will contribute to the better registration of vital statistics in the United States.

#### DIRECTORY OF INSTITUTIONS.

The Bureau is publishing a statistical directory of State institutions for the care and custody of defective, dependent, and delinquent classes. This directory will show for each institution the number of inmates; cost of maintenance; number of officials, assistants, or employees; acreage of grounds or land; and other data, all of which have been supplied by the officials of the institutions and will be published with their knowledge and consent. It will show the cost of maintenance per inmate and the total cost of maintaining such institutions in each State computed as a per capita of the total population of the State and also as a ratio of the total wealth of the State.

#### INDEX TO OCCUPATIONS.

A revised occupation index was issued, showing in alphabetical order the 9,000 or more occupational designations covered by the work of the Thirteenth Census and classifying these occupational designations into the 428 occupations and occupation groups listed in the occupations report of that census. This index will be used by the Bureau of the Census, by other Federal and State bureaus, and by associations, societies, institutions, etc., which desire to classify occupations in conformity with the classification followed by the Census Bureau.

#### CENSUSES OF TULSA, OKLA., AND HAMTRAMCK, MICH.

A special census of Tulsa, Okla., was taken in April, 1915, by direction of the President, at the request of the Tulsa Commercial Club. The work was done by local enumerators under the supervision of an official of the Census Bureau, and the entire expense was met by the city. This census established a precedent, in that it was the first Federal enumeration of the population of a city, separately from that of the State in which located, ever made between decennial census years. A similar census of Hamtramck, Mich., was taken in June, 1915.

#### PLANS FOR FUTURE WORK.

##### RELIGIOUS BODIES.

Preparatory work on the decennial census of religious bodies, relating to the calendar year 1916, will be begun as soon as possible. A widespread interest in this census is already being manifested. At the conference of the committees of the Federal Council of the Churches of Christ in America, recently held at Atlantic City, N. J.,

the subject of a church census was discussed, representatives of the Bureau being present by invitation, and as a result of this discussion the conference adopted the following special finding:

It is the judgment of this conference that the administrative committee of the Federal Council should take up with the constituent bodies of the council, the various commissions of the council, and the organizations here represented the matter of making suggestions to the Bureau of the Census at Washington concerning information on religious subjects that might, if gathered in the religious census of 1916, prove valuable to the various religious agencies of the country.

Preparations for taking this census will be made as rapidly as possible, in order that there may be no delay when the time arrives to begin the actual canvass.

#### FOREST PRODUCTS.

The Bureau desires to take up again the annual collection of statistics of forest products, which was discontinued after the publication of the report for 1912, by reason of the absence of any specific provision of law authorizing the inquiry. These statistics were collected by the Census Bureau in cooperation with the Forest Service of the Department of Agriculture for the years 1907 to 1912, inclusive. The Forest Service thereupon undertook the task of collecting the statistics for 1913. Those for 1914 have been gathered in connection with the quinquennial census of manufactures, but in the absence of legislation it will be impossible for the Census Bureau to obtain them for 1915 or any subsequent year in which a census of manufactures is not taken.

These statistics are in great demand by large consumers of forest products and others interested in the conservation of natural resources. The Forest Service has requested the renewal of this annual work and has recommended legislation authorizing it. Under the head of "Legislation needed" (p. 22) I am making a similar recommendation.

#### MARRIAGE AND DIVORCE.

The first Federal investigation of marriage and divorce as a distinct subject was made in 1887 by the Department of Labor and covered the 20 years from 1867 to 1886, inclusive. The next was made 20 years later by the Bureau of the Census and covered the period from 1887 to 1906, inclusive. Each of these investigations was specifically authorized by Congress, but no provision was made for future inquiries relating to this highly important subject. No argument is needed to demonstrate the desirability of making this inquiry at regular intervals. Legislation is therefore recommended (see p. 22) authorizing the decennial collection of statistics of marriage and divorce, beginning in 1917. The period covered by the next inquiry would thus be 1907 to 1916, inclusive, making a total of 50 years—from 1867 to 1916, inclusive—for which these statistics would be available.

## WATER TRANSPORTATION.

The next decennial census of water transportation will relate to 1916. The work of preparing schedules and organizing a field force will begin shortly before or immediately after the close of the current fiscal year.

## MONOGRAPH ON TUBERCULOSIS.

A statistical monograph on tuberculosis, relating to the calendar year 1915, is to be prepared. This monograph, like that on cancer, will show, in addition to the number of deaths from tuberculosis in the registration area and in each of its subdivisions, various detailed statistics not given in the regular report on mortality.

## SUPPLEMENTARY STUDIES OF OCCUPATION STATISTICS.

As stated under the heading "Occupations" (p. 12), some work has been done in the compilation of occupation statistics supplemental to those published in Volume IV of the Thirteenth Census reports. This work was begun in March, 1914, but was suspended early in October, 1914, and has not since been resumed. These statistics cover (a) a more detailed age classification, to be presented in connection with the classification by color or race, nativity, and parentage; (b) a tabulation by marital condition; (c) data as to unemployment, showing unemployment on census day (Apr. 15, 1910), and number of weeks unemployed during the year 1909; (d) status of worker—that is, whether an employer, working on own account, or a wage earner. So much work has already been done in the compilation of these data that it is deemed desirable to finish the undertaking. The Bureau is still receiving, even at this late date, many inquiries for statistics of this character from associations and individuals. Not only will such statistics have some considerable value in themselves, but they will furnish a basis for the compilation of data regarding child labor. Furthermore, these statistics, together with those already compiled and published, will provide a complete basis for comparison with the occupation statistics derived from the census of 1900, as well as with those which will be obtained at future censuses.

It is not the intention to take up this special study of Thirteenth Census statistics at the expense of delaying the tabulation of the current manufactures census, now under way; but it is deemed desirable to resume the occupation work in the near future if this can be done without hampering the Bureau in the performance of the duties devolved upon it by law and for the discharge of which its annual appropriations are made.

## CHILD LABOR.

The Bureau desires, if the pressure of other work is not too great, to issue a bulletin on child labor, based on the occupation statistics of the Thirteenth Census. There were in 1910 about 2,000,000 children under 16 years of age who were employed in gainful occupations, and statistics showing the distribution of these children according to color and nativity in connection with age expressed in single years will be of great significance and value as a basis for legislation and child-welfare work.

## CHILDREN BORN AND LIVING.

An important special tabulation which the Bureau of the Census is planning to make in the near future will show, for various race and nativity classes and age groups, for urban and rural localities, etc., the number of children borne by women enumerated at the last census and the number still living on the census date. Statistics of this character will throw much light on such subjects as the decline in the birth rate, fecundity of native as compared with foreign-born women, vitality of native stock as compared with foreign, infant and child mortality, etc.

## MACHINE SHOP.

It will be necessary soon to begin the construction of new tabulating machinery and the remodeling and repair of machinery already on hand in order that the Bureau may be prepared to tabulate the results of the Fourteenth Census, to be taken in 1920. Although more than four years will elapse before this tabulation will commence, the amount of work to be done in constructing new machines and remodeling and repairing old ones is so great that it should be begun at an early date. A portion of the Bureau's tabulating equipment—namely, the sorting machines and automatic tabulating machines—has been brought to a high state of perfection. The number of sorting machines (17) is sufficient, but these machines require a thorough overhauling. Of the automatic tabulating machines, however, the Bureau will need 25 more. Several of these machines were used in tabulating the results of the Thirteenth Census, and their efficiency was thoroughly demonstrated. Four of them are now in use in tabulating mortality statistics, including one with the new-model head (p. 14), which has proved highly satisfactory. The automatic punching machines used at the last census must be not only overhauled but in some respects remodeled, in order to eliminate certain defects.

A very considerable increase in the force of the machine shop will be needed to take care of this extra work, but it is believed to be preferable to do the work at the Bureau rather than elsewhere, for the reason that an exact knowledge of what is required, coupled with direct supervision, must necessarily result in a better product.

The employment of the Bureau's own tabulating machinery in preference to renting such machinery from outside firms results in a material saving.

## OFFICE ACCOMMODATIONS AND STORAGE SPACE.

Although the increase in the Bureau's office force incident to the next census of population will not take place until 1919, the tabulation of the manufactures census—a very large piece of work—is now under way, and several other very important investigations—the censuses of religious bodies and water transportation, as well as the inquiry relating to marriage and divorce, in case that is authorized by law—will begin in the near future. It becomes necessary, therefore, to give immediate and serious consideration to the matter of an increase in office accommodations.

More storage space is also needed. At present most of the Bureau's tabulating machinery is stored in the Department's stables; and the agricultural schedules for 1910, as well as a large number of records

and files, are stored in the Washington Light Infantry Armory Building, at the corner of Fifteenth and E Streets NW. While it is not necessary to consult these records and files frequently, reference is occasionally made to them. The population schedules, which form a portion of the Bureau's permanent records, are stored in the Commerce Building. All these schedules, excepting those for 1890 and 1910, are bound and are so arranged as to be readily accessible. About five-sixths of the 1890 schedules, although unbound, are properly filed, and the remainder are so arranged that a given schedule can be found in a comparatively short time. The 1910 schedules are in order, but not in convenient form for easy reference. These schedules are consulted frequently for the purpose of supplying information as to ages of pension applicants, genealogical data, etc. It is important, therefore, that they be readily accessible. All the space available for them is now occupied, leaving none for the schedules of the next census.

#### OFFICE FORCE.

The appropriation act for the fiscal year 1915 provided for 589 permanent officials and employees of the Census Bureau; the number provided by the act for 1916, under which the Bureau is now operating, is 569.

The Census Bureau is seriously handicapped in carrying on its work not only by reason of the inadequacy of its force at times, as during a quinquennial census of manufactures, but also because of its exceedingly low average salary scale. The percentage of the Bureau's force receiving more than \$1,200 per annum, as provided for by the appropriation act for the fiscal year 1916, is only 14.8. This percentage is hardly more than three-fifths as high as that for the other bureaus and offices of the Department of Commerce taken as a group (24), and is much lower than that for any other individual bureau or office of the Department.

With respect to other departments and bureaus, the latest figures in the possession of the Census Bureau relate to February, 1912, at which time the percentage for positions above \$1,200 in all the executive departments combined, exclusive of the Census Bureau, was 36.1. The corresponding percentage in the Census Bureau at the present time is only 14.8, or a little more than two-fifths of the February, 1912, percentage for the remainder of the departmental service. These percentages are based on the number of employees in the District of Columbia only. It is safe to say that in no other Federal bureau or office of equal or greater size is the salary scale for the official and clerical forces so low as in the Census Bureau.

During the past fiscal year the Bureau lost 34 clerks by transfer to other Government offices, one official and 15 clerks by resignation, and 2 officials and 4 clerks by death. Of the clerks transferred, 2 were receiving \$1,600 per annum: 3, \$1,400; 18, \$1,200; 2, \$1,000; and 9, \$900. Of these 34 clerks, 1, whose salary in the Census Bureau had been \$1,600, was transferred to an \$1,800 position; 2, receiving \$1,200 in the Census Bureau, were transferred to \$1,600 positions; 2, receiving \$1,200 in the Census Bureau, were transferred to \$1,400 positions; and 1, whose salary in the Census Bureau had been \$1,000, was transferred to a \$1,200 place. In three cases the salary paid the transferred

employee in his new position is not known to the Bureau. In the other 25 cases the employee was transferred at the salary he had been receiving, but in most, if not all, of these cases the prospects of promotion appeared brighter in the new position than in the Census Bureau.

Of the 16 persons who resigned, 1 was a chief statistician at \$3,000, 1 a clerk at \$1,400, 4 were clerks at \$1,200, 2 were clerks at \$1,000, and 8 were clerks at \$900. Of these 16 resignations, 7 were of men and 9 were of women. Although in many cases the Bureau has no official knowledge of the work in which these persons are at present engaged, it may be safely assumed that all or nearly all the men, and probably some of the women, have obtained more lucrative positions—or, at least, positions which offered better prospects of advancement—than those which they had at the Census Bureau. Of the 6 deaths, 2 were of chiefs of division at \$2,000, 3 of clerks at \$1,200, and 1 of a clerk at \$900.

It is impossible to lay too great stress on the injustice, both to the Bureau as an office and to its personnel as individuals, which results from this state of affairs. On the one hand, the Bureau has lost a considerable number of its experienced employees, and has thus become, to that extent, a training school for governmental bureaus and commercial institutions with more liberal salary scales. Many of these employees had become especially valuable and efficient as a result of their long service, and their places can not be adequately filled by the simple process of promotion or appointment. Months, and even years, of training will be necessary to fit their successors to discharge their duties with the desired degree of efficiency. On the other hand, the employees who remain are, in many cases, drawing far less pay than is given for comparable service in other bureaus in this and other departments. From the standpoint of the employees, this is unjust; and from the standpoint of the Bureau, it is a disadvantage, in that it tends to engender a spirit of discontent and indifference. Most employees will not develop their maximum possible efficiency when they believe themselves to be illtreated.

In addition to being handicapped by a low salary scale, the Census Bureau's statutory force is too small to handle the constantly increasing amount of work devolving upon it. Not only are new lines of work assigned to the Bureau from time to time by congressional enactment and by direction of the President or the Secretary of Commerce, but the amount of work represented by each of the old lines is constantly increasing with the growth of the country. Yet the Bureau's statutory force for the fiscal year 1916 numbers only 569, whereas 10 years ago, in the fiscal year 1906, it had 691 statutory employees. At that time, as at the present, the Bureau was busily engaged in taking and tabulating a census of manufactures. Since the fiscal year 1906, however, two new lines of work—the biennial compilation of the Official Register of the United States and the semi-annual collection and publication of tobacco statistics—have been assigned by Congress to the Census Bureau. Furthermore, as just stated, the work of carrying on the original investigations, such as the censuses of population, manufactures, agriculture, etc., is materially greater than it was 10 years ago, by reason of the increases in population and industry which have taken place during the past decade. Fortunately, the Census Bureau has been able, through improve-

ments in organization and methods, to neutralize in part the disadvantage under which it labors in respect to the size of its force. The difficulty is, nevertheless, a grave one, and its seriousness is steadily increasing.

In its estimates for appropriations for the fiscal year 1917 the Bureau has not asked for an increase in its force or in its total appropriation for salaries, although both are sorely needed. It has, however, recommended a change in the distribution of the amount appropriated so as to provide a greater number of places at \$2,000, \$1,800, \$1,600, \$1,400, \$1,000, and \$900, and a smaller number at \$1,200. The present \$1,200 class is inordinately large in comparison with the others. In fact, the line between this and the \$1,400 class constitutes a sort of "dead line" which a great many of the Bureau's employees have little or no hope of passing. The present and proposed classifications are shown in Appendix III. Under the proposed plan, if it is put into effect, it will be necessary to make a number of reductions from \$1,200 to \$1,000 and from \$1,000 to \$900 on July 1, 1916. The Bureau will, however, prepare for the change by making temporary instead of permanent promotions to vacancies occurring in the \$1,200 and \$1,000 classes before the close of the present fiscal year. The persons so promoted will then accept reduction on July 1 as a matter of course. Others will have to be reduced also, but these will be restored to their former salaries at the earliest opportunity. A total of 45 promotions of \$200 per annum will be provided for by this plan, and they can not fail to have an immediate and regenerative effect on the Bureau's personnel. While, as has already been pointed out, the present force is too small, a still more serious handicap is the tendency of the officials and clerks to leave for more profitable employment elsewhere; and this tendency will be materially checked by the adoption of the plan described.

The nature and distribution of the Bureau's office and field force on September 30, 1915, are shown in Appendix IV.

#### LEGISLATION NEEDED.

##### MARRIAGE AND DIVORCE.<sup>a</sup>

The decennial collection of statistics of marriage and divorce should be authorized.

##### FOREST PRODUCTS.<sup>a</sup>

The annual collection of statistics of forest products should be provided for by law.

##### STATE FINANCE.<sup>b</sup>

The annual collection of statistics of State finance should be authorized by appropriate legislation.

##### COTTONSEED AND COTTONSEED PRODUCTS.<sup>c</sup>

The collection of statistics of cottonseed and cottonseed products at intervals during the ginning and crushing season should also be authorized. A bill for the collection of such statistics was introduced in the Sixty-third Congress.

<sup>a</sup> See also p. 17.

<sup>b</sup> See also p. 14.

<sup>c</sup> See also p. 8.

## OFFICIAL REGISTER OF THE UNITED STATES.

For the reasons stated on pages 12 and 13, I renew the following recommendation of changes in the scope of the Official Register, made by my predecessor in his annual reports for the fiscal years 1913 and 1914:

The enactment of legislation authorizing—

(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 proposed plan, if adopted, will result in very material saving to the Government, will at the same time preserve all the valuable features of the present Official Register, and will 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 Bureau of the Census, by the aid of its tabulating machinery, can quickly and accurately compile statistics relative to Federal employees when called upon to do so by the President or by Congress.

## STATISTICAL COMPILATIONS FOR STATE OFFICIALS AND PRIVATE INDIVIDUALS.

Express, rather than implied, authority should be given the Director of the Census to furnish transcripts of tables and other records and to prepare special statistical compilations for State officers and private individuals, and the provision should be so drawn as to make the amounts received for work thus done for outside parties 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.

TOBACCO STATISTICS.<sup>a</sup>

The act of April 30, 1912, providing for the collection of statistics of stocks of leaf tobacco in the hands of manufacturers and dealers on April 1 and October 1 of each year should be repealed and legislation should be enacted authorizing the Bureau of Internal Revenue of

<sup>a</sup> See also p. 8.

the Treasury Department to collect statistics in regard to the principal types of tobacco held by dealers and manufacturers.

#### EXPRESS BUSINESS.

The requirement of the decennial collection of statistics relating to the business of express companies, now contained in the act of June 7, 1906, should be repealed. Annual statistics of this character are collected and published by the Interstate Commerce Commission, and the decennial conduct of a similar investigation by the Census Bureau is wholly unnecessary.

#### APPROPRIATIONS AND EXPENDITURES.

##### FINANCIAL STATEMENT, FISCAL YEAR 1915.

In Appendix V is presented a financial statement for the Bureau of the Census, covering the fiscal year ended June 30, 1915.

##### APPROPRIATIONS, FISCAL YEAR 1916.

The appropriations for the fiscal year 1916 amounted to \$1,198,740. The appropriation for salaries was decreased from \$690,846.67 to \$674,740 because of the transfer of 7 clerical and 13 subclerical positions to the roll of the Department of Commerce.

The item for tabulating machines remained unchanged, at \$12,000.

The appropriation for collecting statistics was reduced from \$835,000 to \$512,000, of which amount \$150,000 was made immediately available for the completion of the manufactures canvass.

The item for the purchase of books and periodicals was discontinued, all expenses connected with the library now being paid from the appropriation for the Department of Commerce.

Respectfully,

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

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

1915  
APPENDIXES.

641

APPENDIX I.

PUBLICATIONS ISSUED.<sup>a</sup>

JULY 1, 1914, TO JUNE 30, 1915.

Class and title.	Date issued.	Pages.	Edition.
<b>Bound volumes:</b>			
Occupation statistics, 1910 (Vol. IV, Thirteenth Census reports) (quarto).....	July 7, 1914	615	6,000
Insane and feeble-minded, 1910 (quarto).....	Jan. 8, 1915	217	6,000
Paupers in almshouses, 1910 (quarto).....	Mar. 10, 1915	141	5,000
Central electric light and power stations and street and electric railways, 1912 (quarto).....	Apr. 13, 1915	440	6,500
Telephones and telegraphs and municipal electric fire-alarm and police-patrol signaling systems, 1912 (quarto).....	Apr. 17, 1915	208	5,500
Statistical Atlas of the United States, 1914 (quarto).....	Jan. 7, 1915	642	7,500
Summary of State laws relating to dependent classes, 1913 (octavo)	Dec. 17, 1914	346	6,000
Mortality statistics, 1913 (quarto).....	Feb. 18, 1915	631	6,000
Index of joint causes of death (octavo).....	Aug. 27, 1914	308	1,000
Total.....		3,548	49,500
<b>Unbound quarto bulletins:</b>			
<b>Thirteenth Census (unnumbered)—</b>			
Age of farmers, by color of operator, character of tenure, and size of farm.....	Aug. 13, 1914	35	5,000
Occupation statistics (abstract of full report).....	Aug. 14, 1914	107	3,000
Occupation statistics—Cities of 100,000 inhabitants or more (reprint of Table III from full report).....	July 21, 1914	57	1,000
Occupation statistics—Cities of 25,000 to 100,000 inhabitants (reprint of Table IV from full report).....	.....do.....	85	1,000
Occupation statistics—Alaska, Hawaii, and Porto Rico (reprint of Tables V and IX from full report).....	July 10, 1914	18	500
<b>Wealth, debt, and taxation (unnumbered)—</b>			
Abstract of special bulletins, 1913.....	Feb. 24, 1915	63	20,000
National and State indebtedness and funds and investments, 1870-1913.....	July 10, 1914	203	6,000
Taxation and revenue systems of State and local governments. National and State revenues and expenditures, 1913 and 1903; and public properties of States, 1913.....	Oct. 30, 1914	275	18,000
County and municipal indebtedness, 1912, 1903, and 1890, and sinking fund assets, 1913.....	Dec. 17, 1914	44	5,000
County revenues, expenditures, and public properties, 1913.....	Apr. 10, 1915	228	9,000
Assessed valuation of property and amounts and rates of levy, 1860-1912.....	Apr. 20, 1915	388	5,000
Municipal revenues, expenditures, and public properties, 1913.....	.....do.....	176	10,000
Estimated valuation of national wealth, 1860-1912.....	May 1, 1915	378	7,000
	May 22, 1915	20	10,000
<b>Annual and decennial (numbered)—</b>			
Bulletin 125. Cotton production, 1913.....	July 23, 1914	79	60,000
Bulletin 126. Financial statistics of cities, 1913.....	Sept. 14, 1914	73	8,000
Bulletin 127. Chinese and Japanese in the United States, 1910.....	Nov. 5, 1914	50	5,500
Bulletin 128. Supply and distribution of cotton for the year ending Aug. 31, 1914.....	Dec. 17, 1914	30	60,000
Bulletin 129. Negroes in the United States, 1910.....	Apr. 23, 1915	207	15,000
Bulletin 130. The blind population of the United States, 1910.....	June 24, 1915	52	7,000
Total.....		2,518	256,000
<b>Miscellaneous publications:</b>			
Index to occupations, alphabetical and classified (octavo).....	May 28, 1915	414	725
The Story of the Census, 1790-1915 (octavo).....	Apr. 6, 1915	36	20,000
List of publications—Circular of information, No. 2 (octavo).....	Oct. 28, 1914	91	5,000
Annual report of the Director of the Census to the Secretary of Commerce, fiscal year 1914 (octavo).....	Oct. 31, 1914	29	2,000
25 reports, in card form, relating to cotton and cottouseed.....	July 14, 1914	25	1,000,000
	July 14, 1915		
	June 14, 1915		
2 reports, in card form, relating to stocks of leaf tobacco.....	Nov. 9, 1914	2	47,500
	May 5, 1915		
Total.....		597	1,075,225
Grand total.....		6,663	1,380,725

<sup>a</sup> In addition to the publications listed, the Bureau has issued during the fiscal year and since its close a large number of press summaries of its reports and bulletins. (See p. 13.)

## Publications issued—Continued.

JULY 1, 1915, TO SEPTEMBER 30, 1915.

Class and title.	Date issued.	Pages.	Edition.
<b>Bound volumes (quarto):</b>			
Indians in the United States, 1910.....	July 3, 1915	285	5,000
Wealth, debt, and taxation, 1913—Vol. I.....	July 9, 1915	886	2,500
Wealth, debt, and taxation, 1913—Vol. II.....	July 20, 1915	756	2,500
Total.....		1,927	10,000
<b>Unbound bulletins and pamphlets:</b>			
Leaf tobacco held by manufacturers and dealers, Apr. 1, 1915 (octavo).....	July 1, 1915	22	12,500
Special census of the population of Tulsa, Okla., taken Apr. 15, 1915 (octavo).....	Aug. 3, 1915	15	2,000
Advance tables of cotton ginned from the crop of 1914 (quarto)...	July 10, 1915	30	42,500
Census of the deaf and dumb (quarto).....	Sept. 3, 1915	8	2,500
Total.....		75	59,500
Grand total.....		2,002	69,500

APPENDIX II.<sup>a</sup>

## REPORT OF THE INTERDEPARTMENTAL COMMITTEE.

We have examined the reports issued by the Federal Government which contain statistics and other information in regard to the growth, harvesting, warehousing, manufacturing, exports, and imports of tobacco, also the reports which contain information in regard to the tobacco industry of the world.

We have conferred with representative committees of the Tobacco Association of the United States and of the National Cigar Leaf Tobacco Association, who made recommendations for the improvement of the statistical reports concerning tobacco now being published by the Federal Government.

We have examined the laws authorizing the collection of statistical and other information concerning tobacco. The statistics being compiled by the Bureau of the Census, of the Department of Commerce, in compliance with the act of Congress approved April 30, 1912, are incomplete and, to a certain degree, misleading because they do not relate to the tobacco held by all dealers and manufacturers or by the original growers. These statistics are supposed to represent the stocks of tobacco held April 1 and October 1 of each year—the stocks being distributed by the principal types. The Bureau of Internal Revenue, of the Treasury Department, collects quarterly complete statistics of the stocks held by dealers in leaf tobacco. The work of the Bureaus of the Census and Internal Revenue, therefore, in so far as it relates to the total stocks of tobacco, is a duplication, and the incomplete statistics compiled by the Bureau of the Census can not agree with the complete report of the Bureau of Internal Revenue; therefore the publication of the two totals, both of which purport to show stocks of tobacco, is misleading to the public and necessarily will result in adverse criticism of the statistical reports of the Federal Government.

We find that the Treasury Department and the Departments of Agriculture and Commerce publish reports containing statistical and other information in regard to the tobacco industry. These reports, in some instances, are issued at fixed times and relate to definite periods. Some of them, however, are issued to meet what is supposed to be a demand for information concerning certain phases of the tobacco industry and are issued at such times as they can be most conveniently prepared. The information contained in these reports is, to a certain extent, a reproduction of the data contained in other Government reports.

After considering all of these matters, the committee make the following recommendations:

First. That the act of Congress approved April 30, 1912, be repealed and that the Bureau of the Census discontinue the collection of statistics concerning tobacco, except such as are incidental to the decennial census of agriculture and the quinquennial census of manufactures.

<sup>a</sup> See p. 8.

Second. That arrangements be made by the enactment of additional legislation for the Bureau of Internal Revenue, of the Treasury Department, to so extend the statistics collected by it as to secure data in regard to the principal types of tobacco held by dealers at the end of each quarter and by manufacturers at the end of each year; also that the Bureau of Internal Revenue arrange to publish this information as quickly as possible after it has been secured.

Third. That an annual report be prepared by the Bureau of Crop Estimates, of the Department of Agriculture, which shall contain in quite elaborate form all of the statistical information concerning tobacco collected by the several bureaus of the Federal Government.

APPENDIX III.

PROPOSED CHANGE IN DISTRIBUTION OF APPROPRIATION FOR SALARIES.

Grade.	Office force, 1916.			Estimates, 1917.		
	Number.	Salary.	Amount.	Number.	Salary.	Amount.
Director.....	1	\$6,000	\$6,000	1	\$6,000	\$6,000
Chief statisticians.....	4	3,000	12,000	4	3,000	12,000
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.....	8	2,000	16,000	10	2,000	20,000
Clerks.....	11	1,800	19,800	15	1,800	27,000
Clerks.....	20	1,600	32,000	27	1,600	43,200
Clerks.....	37	1,400	51,800	48	1,400	67,200
Clerks.....	300	1,200	360,000	236	1,200	283,200
Clerks.....	82	1,000	82,000	113	1,000	113,000
Clerks.....	82	900	73,800	92	900	82,800
Skilled laborers.....	3	800	2,400	3	800	2,400
Skilled laborers.....	2	720	1,440	2	720	1,440
Messengers.....	3	840	2,520	3	840	2,520
Assistant messengers.....	5	720	3,600	5	720	3,600
Unskilled laborers.....	3	720	2,160	3	720	2,160
Messenger boys.....	4	450	1,800	4	450	1,800
Total.....	500		674,740	500		674,740

APPENDIX IV.

STATEMENT SHOWING NATURE AND DISTRIBUTION OF OFFICE AND FIELD FORCE, SEPTEMBER 30, 1915.

OFFICIALS.

Director.....	SAM. L. ROGERS.
Chief clerk.....	WILLIAM L. AUSTIN.
Chief statisticians:	
Population.....	WILLIAM C. HUNT.
Statistics of cities.....	STARKE M. GROGAN.
Manufactures.....	WILLIAM M. STEUART.
Vital statistics.....	RICHARD C. LAPPIN.
Expert special agent in charge of revision and results.....	JOSEPH A. HILL.
Geographer.....	CHARLES S. SLOANE.
Experts chiefs of division:	
Administrative.....	EUGENE F. HARTLEY.
Population.....	WILLIAM H. JARVIS.
Statistics of cities.....	EDWARD W. KOCH.
Manufactures.....	ARTHUR J. HIRSCH.
Vital statistics.....	FRANK L. SANFORD.
Revision and results.....	GEORGE E. OLLER.
Chief, mechanical laboratory.....	GEORGE H. VAN BUREN.
	HARRY H. PIERCE.
	E. M. LABOITEAUX.

CLERICAL FORCE.

Stenographer, \$1,500.....	1	Clerks:	
Clerks:		\$1,000.....	83
Class 4.....	11	\$900.....	82
Class 3.....	20		
Class 2.....	37	Total.....	534
Class 1.....	300		

## SUBCLERICAL FORCE.

Skilled laborers:		Assistant messengers, \$720	5
\$900	3	Messenger boys, \$430	4
\$720	2		
Unskilled laborers, \$720	3	Total	20
Messengers, \$840	3		

## MECHANICAL LABORATORY FORCE.

Expert, \$1,600	1	Electrician, \$1,200	1
Electrical expert, \$1,600	1	General mechanic, \$1,000	1
Mechanical expert, \$1,400	1		
Mechanician, \$1,400	1	Total	6

## SPECIAL-AGENT FORCE.

Expert agents for general field work, etc.	22
Temporary agents for census of manufactures	141
Total	163

## SUMMARY OF CENSUS FORCE.

Officials	17	Special agents (general force)	22
Clerical	534	Special agents (temporary force)	141
Subclerical	20		
Machine shop	6	Total	740
Special agents to collect statistics of cotton			740

## APPENDIX V.

## FINANCIAL STATEMENT, FISCAL YEAR 1915.

Administrative:			
Salaries for administrative places	\$39,294.12		
Salaries for division of correspondence and mail	16,457.34		
Salaries for labor force	4,393.16		
Stationery	9,855.19		
Miscellaneous expenses	5,511.77		
Books and periodicals	600.00		
			\$75,981.55
Machine shop:			
Salaries	11,711.11		
Materials, supplies, etc.	165.47		
			11,876.58
Population division:			
Supervision	7,322.21		
Occupations	17,209.02		
Miscellaneous	9,149.14		
			33,680.37
Manufactures division:			
Supervision	9,675.30		
Quinquennial census of manufactures	743,511.04		
Cotton statistics	256,983.37		
Tobacco statistics	11,695.40		
Electrical industries, completion of	2,879.42		
			1,024,744.53
Division of vital statistics:			
Supervision	3,885.55		
Mortality statistics	85,250.21		
Life tables	8,417.35		
			97,559.11
Division of statistics of cities:			
Supervision	9,566.30		
Financial and general statistics	21,809.24		
Wealth, debt, and taxation, completion of	120,166.26		
Miscellaneous	533.53		
			161,075.33
Division of revision and results:			
Supervision	7,280.54		
Publications	6,355.04		
Dependent, defective, and delinquent classes	22,512.66		
Negroes in the United States	10,499.22		
Chinese and Japanese	233.34		
Official Register	126.66		
			47,007.46
Geographer's division: Salaries			19,010.15
Salaries of employees detailed to Department of Commerce			19,812.38
Grand total			1,400,747.46

Title of appropriation.	Appropriation.	Expenditure.
Salaries, Bureau of the Census, 1915.....	8690,846.67	8074,249.93
Collecting statistics, Bureau of the Census, 1915.....	835,000.00	738,754.02
Tabulating machines, Bureau of the Census, 1915.....	12,000.00	11,875.53
Purchase of books of reference and periodicals, Bureau of the Census, 1915.....	500.00	500.00
Printing and binding <sup>a</sup> .....	122,302.82	122,302.82
Contingent expenses <sup>a</sup> .....	15,366.93	15,366.93
Total.....	1,676,016.42	1,613,050.28

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

ANNUAL REPORT

647

OF THE

DIRECTOR OF THE CENSUS

TO THE

SECRETARY OF COMMERCE

FOR THE

FISCAL YEAR ENDED JUNE 30, 1916



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1916

## CONTENTS.

	Page.
Introduction.....	5
Current and completed work on statutory inquiries.....	5
Census of manufactures: 1914.....	5
Vital statistics.....	7
Mortality statistics.....	7
Birth statistics.....	7
International list of causes of death.....	8
Financial statistics of cities.....	8
General statistics of cities.....	9
Cotton and tobacco statistics.....	9
Cotton and cottonseed.....	9
Stocks of leaf tobacco held by manufacturers and dealers.....	10
Creation of new division; quarterly tobacco reports.....	10
Negroes in the United States.....	10
The blind and the deaf.....	11
Prisoners and juvenile delinquents.....	11
Estimates of population.....	11
Special and miscellaneous lines of work.....	12
Vital statistics.....	12
United States life tables.....	12
Monograph on cancer.....	12
The Federal registration service.....	13
Financial statistics of States.....	13
Financial statistics for cities under council and commission government.....	13
Supplementary occupation statistics.....	13
Special censuses of population.....	14
Report of the United States Geographic Board.....	14
Pamphlets giving information relating to the work of the Bureau.....	14
Statistical Directory of State Institutions.....	15
The Census exhibit.....	15
Assistance rendered other departments.....	15
Publications issued.....	16
Plans for future work.....	17
Transportation by water.....	17
Religious bodies.....	18
Marriage and divorce.....	18
Monograph on tuberculosis.....	19
Electrical industries.....	19
Forest products.....	19
Executive civil service.....	19
Census of city distribution.....	20
Machine shop.....	20
Development of integrating tabulator.....	21
Office accommodations, furniture, and storage space.....	21
Office accommodations.....	21
Furniture.....	22
Storage space.....	22
Office force.....	22
Method of distributing the Bureau's statistics.....	26
Reports and bulletins.....	26
Information furnished by correspondence.....	27
Legislation needed.....	27
Marriage and divorce.....	27
Forest products.....	28
Financial statistics of States.....	28
Official Register of the United States.....	28
Express business.....	29
Special statistical compilations.....	29
Intermediate census of manufactures.....	30
Appropriations and expenditures.....	30
Financial statement, fiscal year 1916.....	30
Appropriations, fiscal year 1917.....	31

1916

REPORT  
OF THE  
DIRECTOR OF THE CENSUS.

---

DEPARTMENT OF COMMERCE,  
BUREAU OF THE CENSUS,  
*Washington, October 2, 1916.*

SIR: There is submitted herewith the following report upon the operations of the Bureau of the Census during the fiscal year ended June 30, 1916, and upon the work now in progress.

INTRODUCTION.

During the fiscal year the Bureau of the Census compiled and published a considerable part of the primary or fundamental statistics based on its latest canvass of manufacturing industries and carried on the compilation of more detailed statistics for later publications; conducted its regular annual inquiries relating to mortality, to municipalities, and to cotton and cottonseed; prepared and published the Official Register of the United States; completed the preparation of a report on the blind and brought well toward completion one on the deaf; made semiannual collections of statistics relating to stocks of leaf tobacco; prepared and published a pamphlet giving comparative financial statistics for cities operating under the council and commission forms of government; issued a set of tables showing expectation of life for various classes of the population; carried on the compilation of a monograph giving detailed statistics relative to deaths from cancer; prepared estimates of population for States and municipalities; took special censuses of four cities and towns; and complied with many requests for information contained in its records.

Since the close of the fiscal year the Bureau has completed the compilation and publication of the primary statistics of manufactures and has been engaged in the preparation of the analytical tables and text for the final reports on that subject, in the conduct of the usual annual inquiries, and in preparatory work on the forthcoming censuses of religious bodies, transportation by water, and electrical industries.

CURRENT AND COMPLETED WORK ON STATUTORY INQUIRIES.

CENSUS OF MANUFACTURES: 1914.

The canvass for this census was completed early in the fiscal year, reports being secured from all manufacturing establishments in the United States which were in operation at any time within the calen-

dar year 1914, and, during that period, made products at the rate of \$500 worth per annum. It has been the endeavor of the Bureau to complete this canvass and to publish the results at earlier dates, relatively to the period covered, than the corresponding ones for any preceding similar census. To accomplish this, many changes and improvements were made in the methods employed, and I am pleased to report that not only was the canvass brought to completion more expeditiously than at preceding censuses, but the results were published more promptly than heretofore. The work was so arranged as to permit the publication of the "general tables"—that is, those giving the principal statistics relating to all manufacturing industries combined—for individual States and cities as soon as they could be compiled.

The first of these general tables, with text discussion, was published in June, 1915, in the form of a preliminary statement or press summary; and since July 1, 1915, there have been issued 751 similar preliminary statements, of which 1 related to all manufacturing industries combined, for the United States as a whole; 48 to all manufacturing industries combined, for individual States; 652 to all manufacturing industries combined, for individual cities of 10,000 inhabitants or more; and 50 to power laundries, for individual States, the District of Columbia, and the United States as a whole. In addition, 63 press summaries, each giving the principal statistics for a single important industry and covering the United States as a whole, were published, the last of which was sent to the printer on August 15, 1916.

The aggregate number of these summaries (including the one issued in June, 1915) is thus 815. The statistics relating to all manufacturing industries combined, for the entire United States, were sent to the printer on July 24, 1916—an earlier date, relatively to the period covered by the inquiry, than that at which the comparable figures for any preceding similar census had gone to press, and fully two months earlier than the corresponding date in the case of the last preceding census, that of 1909. The results of this census show that, notwithstanding the abnormal conditions existing in the latter part of 1914, the industrial activities of the country during that year were materially greater than in 1909.

The primary or fundamental figures having thus been published, the clerical force of the Bureau has been concentrated, so far as possible, upon the preparation of the analytical tables and text for the final reports. It is the intention to publish an abstract in a convenient-sized octavo volume of about 500 pages which will present all the essential statistical facts collected at the census. This will be in some respects, a new departure in census work, and it is my belief that it will be a very popular publication. It will differ from the octavo abstracts of the decennial censuses of 1890 and 1900 in that it will contain analytical tables, comparative figures for earlier years, and text discussion; it will differ from the abstract of the Thirteenth (1910) Decennial Census in that it will present the statistics in considerably greater detail and at the same time will be of octavo instead of quarto size and therefore much more convenient for handling; and it will differ from all former abstracts in that it will pertain to manufactures alone. Since the abstract will supply the needs of the great majority of those using the statistics of manu-

factures, it will be the first volume issued. The final reports will be published first in the form of a series of State bulletins, each presenting detailed statistics for a State and its cities; a series of bulletins or monographs, each giving detailed statistics for a single important industry and covering the United States as a whole; and a bulletin presenting statistics for all industries combined and for important industries separately, for the United States as a whole; and these bulletins will later be bound together in the form of three or four quarto volumes of about 1,000 pages each.

(See recommendation for legislation authorizing an intermediate census of manufactures, under "Legislation needed.")

#### VITAL STATISTICS.

*Mortality statistics.*—The compilation of the annual report, Mortality Statistics, 1914, was completed during the fiscal year, the last of the copy being sent to the printer on April 8, 1916. In this report there were included for the first time statistics for the State of Kansas, which had been added to the death-registration area for 1914.

The work on the report, Mortality Statistics, 1915, is progressing satisfactorily, and the copy will probably be in the hands of the printer by December 1, 1916. A preliminary statement, in the form of a press summary, giving the number of deaths and death rate for each registration State and each city having a population of more than 100,000 in 1910, has already been issued. This was sent to the printer on August 29, 1916—about three months earlier, relatively, than the corresponding summary for 1914.

The mortality statistics issued by the Census Bureau are, from year to year, being brought to a higher standard of usefulness. The registration of deaths—which, under the Constitution of the United States, is necessarily a function of the State and municipal authorities—is constantly becoming more nearly complete; and the registration area has been extended until it now contains about 70 per cent of the total population of the country. Separate statistics are shown for the white and colored races for that part of the registration area which lies in the South, and for all States, counties, and municipalities elsewhere in the area, in which the colored population forms 5 per cent of the total or numbers 10,000 or more; and data for deaths of nonresidents are shown separately, so far as it is possible to do so, thus avoiding the injustice that has heretofore been suffered by certain cities for which high death rates, due in considerable part to deaths of nonresidents, have been shown. This is a matter of especial importance to cities having unusually healthful climates, by reason of which consumptives and other invalids are attracted thither, and also to cities as compared with rural localities, since an appreciable percentage of the deaths in city hospitals are of persons resident in near-by small towns and rural territory.

*Birth statistics.*—Toward the close of the calendar year 1915 the Bureau established 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. This area, although it represents barely 10 per cent of the territorial extent of continental United States, has an estimated population of about 32,000,000, or more than 31 per cent of the total for the country.

The collection of birth statistics, as well as those of deaths, was authorized by the permanent census act, approved March 6, 1902. This act, however, provided that the statistics should be obtained only from the registration records of such States as in the judgment of the Director of the Census possessed records affording satisfactory data in the necessary detail. Ever since the passage of the permanent census act the Bureau has made annual collections of mortality statistics from a steadily increasing area which now contains about 70 per cent of the total population of the United States; but until recently very few of the States have maintained reliable birth-registration systems. A beginning has now been made, however, and the statistics will relate to an area having a population of such size and heterogeneity as to render them of great value and significance. The data now being gathered are being compiled so as to show births and birth rates for the population as a whole and for the white and colored races. Separate figures will also be given for urban and rural localities.

The work on the report for 1915 is progressing in a satisfactory manner, and the copy will be sent to the printer about December 1, 1916.

*International List of Causes of Death.*—A second edition of the Manual of the International List of Causes of Death was printed. Except for the appendix, which was rearranged alphabetically because of many changes, the original plates were used.

The third edition of the Physicians' Pocket Reference to the International List of Causes of Death was published and a copy was mailed to every physician in the United States.

Transcripts of birth and death certificates for 1916 are being received and edited, and the vital-statistics work of the Bureau is now well up to date.

#### FINANCIAL STATISTICS OF CITIES.

The annual report presenting financial statistics for cities of more than 30,000 population, relating, in the case of each city, to its latest fiscal year terminated prior to July 1, 1915, was completed and sent to the printer in January, 1916, less than seven months after the close of the period covered. This report, which fills 338 pages, gives detailed statistics relating to (1) total and per capita receipts from revenues and from the principal classes thereof; (2) total and per capita payments for current expenses, for interest, and for outlays for permanent improvements, and for each of the principal classes of expenses and outlays; (3) total value of municipal properties; (4) total and per capita municipal indebtedness; and (5) total and per capita assessed valuation of property subject to taxation. In addition, a number of pages are devoted to accounting terminology as used in the collection of the statistics. The Bureau's classification of municipal financial statistics has received the endorsement of the leading civic organizations of the country, and is now followed to a greater or less extent by many of the cities having more than 30,000 inhabitants.

An abstract containing the principal tables in this report has been prepared and will be used to meet the constantly growing demands

made upon the Bureau by persons who desire its primary or fundamental statistics in relation to municipal finance but do not care for the more detailed information given in the full report.

The field work on the current investigation pertaining to municipal finance, which covers the 213 American cities estimated to have more than 30,000 inhabitants on the medial dates of their fiscal years, and relates, in the case of each city, to its latest fiscal period terminated prior to July 1, 1916, was begun early in the present calendar year and is being rapidly brought toward completion. It is the intention to have the results of this inquiry in the hands of the printer in November of this year, or less than five months after the close of the period covered.

#### GENERAL STATISTICS OF CITIES.

The report on this inquiry, which also referred, in the case of each municipality, to its latest fiscal period ended prior to July 1, 1915, related to the subjects of governmental organization, police departments, water-supply systems, and liquor licenses and taxes. It was completed and sent to the printer in November, 1915, five months after the close of the period covered. The demand for this report has been so great as to necessitate a reprint.

The 1916 report on general statistics of cities will present detailed data in reference to recreation facilities, such as park areas and buildings, organization of park administration, playgrounds and athletics, baths and bathing beaches, zoological parks and collections, music and entertainment provided by the city, art galleries, museums, etc. Practically all the data for these subjects have already been collected, and their compilation is well under way. The report will probably go to the printer in October, 1916.

#### COTTON AND TOBACCO STATISTICS.

*Cotton and cottonseed.*—Ten reports giving statistics as to quantities of cotton ginned to fixed dates and four presenting data as to cottonseed crushed and linters obtained were published, in the form of postal cards, at the usual intervals during the ginning season of 1915-16; and monthly reports on consumption, stocks, and imports and exports of cotton, and number of active cotton spindles, also in the form of postal cards, were issued. In addition, an annual bulletin covering the year ended July 31, 1915, was prepared and published, in which was presented, in amplified form, with text discussion, the statistical material contained in the postal-card reports for that year, together with other information not given in those reports.

For some time past there has been a great demand for authoritative statistics as to the quantity of cotton fiber consumed in the manufacture of explosives, which culminated in the passage of the act approved August 7, 1916, authorizing the Director of the Census to collect and publish, at quarterly intervals, statistics of raw and prepared cotton and linters, cotton waste, and hull fiber consumed in the manufacture of guncotton and explosives of all kinds and of absorbent and medicated cotton. The first publication of these statistics will cover the calendar year 1915.

There also has been a demand for more frequent and more detailed statistics in relation to cottonseed and its products. Heretofore, although there has been no definitive provision of law authorizing the collection of such statistics, they have been gathered on the theory that cottonseed and linters properly formed a part of the cotton crop, but the Bureau has not felt justified in publishing them in any great detail nor so frequently as they were desired by cotton growers and by those interested in the industries using material derived from cottonseed and its products. Legislation authorizing an extension of the Bureau's work along this line was recommended in the last annual reports of the Secretary of Commerce and the Director of the Census; and such legislation is included in the act of August 7, 1916 (referred to in the foregoing paragraph), which provides for the collection and publication monthly of statistics concerning the quantities of cottonseed received at oil mills, of seed crushed in such mills, and of crude cottonseed products and refined oil produced; the quantities of these products shipped out of the mills and the quantities of these products and of cottonseed on hand; and the quantities of crude and refined cottonseed oil held by refiners, by manufacturers of compound lard, butterine, oleomargarine, and soap, and by brokers, exporters, and warehousemen. Arrangements have been made to carry into effect these provisions of the law, and it is believed that the statistics to be published during the coming year will be of great value to all interests concerned in the production, merchandising, or manufacture of cotton and its various products.

*Stocks of leaf tobacco held by manufacturers and dealers.*—During the fiscal year the Bureau issued, in the form of postal cards, its regular semiannual reports—the first relating to October 1, 1915, and the second to April 1, 1916—giving statistics in regard to the quantities of leaf tobacco held by manufacturers and dealers. This work has been carried on in accordance with the provisions of the act of April 30, 1912.

*Creation of new division; quarterly tobacco reports.*—The legislative, executive, and judicial appropriation act for the current fiscal year, approved May 10, 1916, contains the following provisions:

For securing information for census reports, provided for by law, \* \* \* quarterly reports of tobacco; \* \* \* including \$15,000 for collecting tobacco statistics authorized by law in addition to any other fund available therefor: *Provided*, That hereafter there shall be in the official organization of the bureau a separate, distinct, and independent division called the Division of Cotton and Tobacco Statistics: *Provided further*, That hereafter the Director of the Census may procure the information for the tobacco reports required by this Act and the Act approved April thirtieth, nineteen hundred and twelve, by mail or by special agents or by other employees of the Bureau of the Census.

Arrangements have been made for putting into effect the above-quoted provisions of law. The quarterly series of tobacco reports will begin with that for October 1, 1916.

#### NEGROES IN THE UNITED STATES.

In the reports of the Thirteenth Census, as in those of preceding ones, the statistics relating to the Negro population were scattered through a number of volumes in which the primary classifications were other than racial. After the publication of the reports of that census a bulletin entitled "Negroes in the United States" was pre-

pared, in which were brought together and assembled in a systematic form all the principal statistics relating to the Negro race. This bulletin, which was issued in April, 1915, has been a very popular publication, and already more than 15,000 copies have been distributed.

A report, in considerably greater detail, is now nearing completion, which will cover, among other things, such subjects as geographical distribution of the Negro population; nativity; rate of increase; school attendance; illiteracy; occupations; marital condition; death rates; ownership of homes; farm ownership, farm tenure, size of farms operated, and value of the various classes of farm property; religious organizations; and inmates of institutions for the dependent, defective, and delinquent classes.

#### THE BLIND AND THE DEAF.

At the Thirteenth Census, as at the preceding one, the enumerators were required to make an appropriate entry opposite the name of each person who was blind or deaf and dumb. To persons thus reported special schedules were afterwards mailed requesting data as to cause, degree, and duration of the defect; existence of blindness or deafness among relatives; education, occupation, etc. The schedules which were returned furnish data for significant and interesting tabulations. Bulletins presenting the fundamental figures derived from these tabulations have already been published, and the final reports are now in the hands of the printer.

#### PRISONERS AND JUVENILE DELINQUENTS.

The last census of prisoners was taken at the same time as the Thirteenth Decennial Census, but was entirely separate and distinct from it. This inquiry covered (1) sentenced prisoners in penal institutions on January 1, 1910, and (2) those committed to such institutions during the year 1910. A bulletin (121) giving in detail the statistics relating to the prisoners enumerated on January 1, together with the number committed during the year, classified by race and nativity, has already been published. The details relating to prisoners committed have since been tabulated, and the final report, presenting an analysis and discussion of all the statistics, with ratios and percentages, is nearly completed and will soon be ready for publication.

#### ESTIMATES OF POPULATION.

The preparation of a bulletin presenting midyear estimates of the population of States and cities for the years 1910 to 1916, inclusive, was practically completed during the fiscal year, and the copy has since been sent to the printer. These "intercensal" estimates of population, which are based upon the returns of the last census and the increase between the last two censuses—changes in area, if any, being also taken into consideration—are needed as a basis for the calculation of birth and death rates and per capita figures of various kinds; and in several States they are also used as bases for fixing the compensation of county officials and for establishing the number of liquor licenses to be granted.

## SPECIAL AND MISCELLANEOUS LINES OF WORK.

## VITAL STATISTICS.

*United States life tables.*—One of the most important of the special lines of work undertaken by the Census Bureau was the preparation of a series of "life tables," relating to the population of the six New England States, New York, New Jersey, Indiana, Michigan, and the District of Columbia. These States and District—sometimes referred to as the "original registration States"—had formed a part of the death-registration area since and including the year 1900.

The Census Bureau's life tables, which are the first of their kind ever compiled by the United States Government, 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. One table gives data for all elements of the population combined, of both sexes; and other tables relate to whites, to Negroes, to native whites, and to foreign-born whites. Still other tables present separate figures for the States of Indiana, Massachusetts, Michigan, New York, and New Jersey, and for the urban and rural populations of the entire area. In all the tables except the first the information is given separately for males and for females. Each table shows, for each year of age, among other things, rate of mortality among persons at that age, rate of mortality among persons at that and all higher ages, and complete expectation of life. A special infant-mortality table appearing at the head of each main table shows rate of mortality, expectation of life, and other data for each month of age throughout the first year of life.

The tables published are based on the population in 1910 and the mortality in the three years 1909, 1910, and 1911. A similar set of tables exhibiting mortality conditions in 1890 and 1901 and during the decennium 1901 to 1910, inclusive, will be prepared and sent to the printer before the end of the current fiscal year. 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.

The Bureau's tables are intended primarily to be of service as a source of information to the public; but they will be particularly useful to scientific men, mathematicians, teachers, public-health officials, physicians, students of vital statistics, sociologists, economists, actuaries, statisticians, sanitary engineers, and others interested in the conservation and betterment of the public health. They will also be useful to lawyers in connection with the valuation of reversions, annuities, retirement funds, and old-age pensions.

*Monograph on cancer.*—A monograph has been prepared and will soon be published, in which will be presented, in much greater detail than in the annual mortality reports issued by the Bureau, statistics in relation to deaths from cancer and other malignant tumors throughout the registration area in the year 1914. The deaths will be classified under 7 general headings and 27 subdivisions, each indicating the particular organ or part of the body affected, whereas in the annual mortality reports only seven classes of cancer are distinguished.

This 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.

*The Federal registration service.*—A paper entitled "The Federal registration service of the United States: Its development, problems, and defects," prepared at the request of the Director of the Census by Cressy L. Wilbur, M. D., formerly chief statistician for vital statistics, Bureau of the Census, and now director of vital statistics, New York State Department of Health, for presentation at the last annual meeting of the American Statistical Association, held in Washington in December, 1915, was published by the Bureau of the Census. The statistical appendixes for this paper were prepared by the Bureau.

#### FINANCIAL STATISTICS OF STATES.

A report on this subject, similar in scope to the Bureau's annual reports giving financial statistics of cities (see section on financial statistics of cities, under "Current and completed work on statutory inquiries"), was prepared and published by order of the Secretary of Commerce. This report, which relates, in the case of each State, to its latest fiscal year ended prior to July 1, 1915, is the first ever compiled in which the statistics pertaining to revenues, expenditures, indebtedness, assessed valuation, and State properties have been given in so great detail. It has aroused much interest among State officials, who have cooperated actively with the Bureau in its preparation and who are desirous that the investigation be made an annual one. (See recommendation relating to financial statistics of States, under "Legislation needed.")

#### FINANCIAL STATISTICS FOR CITIES UNDER COUNCIL AND COMMISSION GOVERNMENT.

A pamphlet giving comparative financial statistics, reduced to a per capita basis, for (1) eight cities operating under the mayor and council form of government during the fiscal years 1913 and 1915, (2) eight cities operating under the commission form during both years, and (3) eight cities having the mayor and council form during 1913 and the commission form during 1915, was prepared early in the calendar year and issued March 13, 1916.

#### SUPPLEMENTARY OCCUPATION STATISTICS.

The Thirteenth Census report on occupations shows, for the United States as a whole, for each State and Territory, and for each principal city, the numbers of males and females 10 years of age and over engaged in each specified occupation, and, for the most part, their distribution according to broad age groups and according to color or race, nativity, and parentage. At the time this report was in course of preparation, and for some time after it was published, the pressure of other work, and particularly that on the 1914 census

of manufactures, was such as to render it impossible for the Bureau to make further analytical studies of the occupation data. The subjects of (1) occupations of women, (2) occupations of children, (3) occupations of the foreign born, and (4) unemployment are, however, of such importance, both as bases for legislation and as matters of general information, that the Bureau later (in October, 1915) began the preparation of a set of bulletins on these subjects, based on the Thirteenth Census data. The compilation is being carried on as rapidly as the condition of the work on the current inquiries will permit. The first bulletin to be issued will relate to occupations of children and will show sex, color or race, nativity, and parentage of child workers in conjunction with single years of age.

#### SPECIAL CENSUSES OF POPULATION.

During the fiscal year the Bureau took special population censuses of Highland Park, Mich., St. Clair Heights, Mich., Hastings, Nebr., and El Paso, Tex. Each of these censuses was taken at the request of the municipality, the actual work of enumeration being done by local employees under the supervision of a representative of the Census Bureau. The expense of the enumeration, except the salaries of the supervisor and his assistant (also an employee of the Census Bureau), was borne by the municipality. The Bureau is in receipt of a number of other requests for similar "intercensal" counts of population.

#### REPORT OF THE UNITED STATES GEOGRAPHIC BOARD.

The Fourth Report of the United States Geographic Board, of which the geographer of the Census Bureau is secretary, was compiled during the year. This report contained about 12,000 names.

#### PAMPHLETS GIVING INFORMATION RELATING TO THE WORK OF THE BUREAU.

Under the titles, "Information concerning Federal estimates of population and Federal supervision of local censuses" and "Tentative program of the Bureau of the Census: 1916-1919," respectively, the Bureau issued, during the fiscal year, two pamphlets giving information of the character indicated by their titles.

In all, the Bureau has published six such pamphlets since the beginning of the fiscal year 1913-1914, of which the first four were entitled, "Circular of information concerning tentative program of the Bureau of the Census: 1914-1916," "Circular of information concerning Census publications: 1790-1914," "Circular of information concerning the work of the permanent Census Bureau: 1902-1913," and "The story of the Census: 1790-1915," respectively. The Circular of Information Concerning Census Publications presents descriptive and chronological lists of all the publications issued by the Bureau. The Story of the Census gives a brief historical sketch of the inception and growth of the census work from 1790 until the present time, together with an outline of the statistical field now covered. Both these pamphlets have recently been revised and brought down to date.

## STATISTICAL DIRECTORY OF STATE INSTITUTIONS.

The Bureau is compiling a statistical directory of State institutions for the care and custody of the dependent, defective, and delinquent classes. This directory will show for each institution the number of inmates; cost of maintenance; number of officials, assistants, or employees; acreage of grounds or land; and other data, all of which have been supplied by the officials of the institutions and will be published with their knowledge and consent. It will show the cost of maintenance per inmate and the total cost of maintaining such institutions in each State computed as a per capita of the total population of the State and also as a ratio of the total wealth of the State.

## THE CENSUS EXHIBIT.

The Panama-Pacific International Exposition, San Francisco, Cal., in 1915, awarded the Census Bureau the Grand Prize and Gold Medal "For an exhibit of methods and machines employed in the collection and tabulation of statistics," and also a Diploma of Honorable Mention "For the illustrations contained in the Census report" (the maps, cartograms, charts, and diagrams in the Statistical Atlas).

At the close of the exposition the exhibit was returned to the Bureau and has been made a permanent one. A number of new charts and maps have recently been added, and the exhibit now 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 maps and charts were on display at the last annual meeting of the National Chamber of Commerce, in Washington; the entire exhibit is now at the Western Pennsylvania Exposition, in Pittsburgh; and it is later to be taken to the New York Electrical Exposition, in New York City. Requests for the use of this exhibit at other expositions have been received, but it has been necessary to decline them because of conflicting dates.

Two or three persons are always sent with the exhibit to demonstrate the machines, explain the maps and charts, take orders for Census publications, etc. All expenses, except the salaries of these persons, are paid by the exposition.

When not in use elsewhere this exhibit is installed in room 511, the fifth floor of the Commerce Building, and is always open to the public.

## ASSISTANCE RENDERED OTHER DEPARTMENTS.

Lists of names and addresses of large manufacturing establishments (about 30,000 in number) were furnished the Secretary of the Navy, to be used by him in organizing the industries of the country in furtherance of the plans for military and naval preparedness. Lists of this character were also furnished the Federal Trade Commission and the Department of Agriculture, for use in connection with the activities of those offices.

Four thousand two hundred letters from the Pension Bureau, requesting data from the enumerators' returns for use in establishing the ages of pensioners and applicants for pensions and increases of pensions, were received and answered during the year.

The Census Bureau has two photostats (devices for making photographic copies of letters, documents, etc.), installed primarily for its own use, on which it has done and is doing considerable work for other Federal bureaus and offices, both in and outside the Department of Commerce. This work is done at actual cost. Only a few photostats are owned by the Government, and the Census Bureau's equipment in this respect is probably the best in the Federal service.

By crowding its own employees to a greater extent than is desirable, the Census Bureau has provided space on the fourth floor of the Commerce Building for some 25 or 30 employees of the Federal Trade Commission.

The census schedules containing agricultural data are of value to the Department of Agriculture in connection with its work; and employees of that department are given access to the schedules and provided with facilities for examining them and transcribing therefrom such information as is needed.

Employees of the Forest Service, of the Department of Agriculture, have been given access to the schedules returned at the recent census of manufactures from establishments engaged in the lumber and timber industry, for use in the preparation of the Forest Service's series of statistical bulletins relating to forest products. The Census Bureau also has lent the Forest Service some of its adding machines for use in the compilation of the statistics contained in these bulletins. (See section relating to forest products, under "Plans for future work.")

This Bureau has supplied the Bureau of Animal Industry, of the Department of Agriculture, for use in connection with its work, the names and addresses of slaughtering and meat-packing establishments, together with certain preliminary statistics in reference to the slaughtering and meat-packing industry, derived from the 1914 census of manufactures.

As explained in the section, "Executive civil service," under "Plans for future work," the Census Bureau is cooperating with the Bureau of Efficiency in the collection of data in reference to Federal employees. This Bureau has assigned five of its clerks to the work at the Bureau of Efficiency, where they will "edit" the returns from the various departments and independent offices in respect to their personnel.

One census clerk has been detailed to the General Supply Committee.

#### 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, of which more than 800 were based on the manufactures census of 1914. (See subsection relating to census of manufactures, under "Current and completed work on statutory inquiries"; also subsection headed "Press summaries," under "Method of distributing the Bureau's statistics.")

Class and title.	Date issued.	Pages.	Edition.
JULY 1, 1915, TO JUNE 30, 1916.			
<b>Bound volumes (quarto):</b>			
Indians in the United States and Alaska: 1910.....	July 3, 1915	285	5,000
Wealth, debt, and taxation, 1913—Vol. I.....	July 9, 1915	886	2,500
Wealth, debt, and taxation, 1913—Vol. II.....	July 20, 1915	756	2,500
Official Register of the United States, 1915. Directory.....	Dec. 6, 1915	910	25
General statistics of cities, 1915.....	Apr. 18, 1916	185	10,000
United States life tables, 1910.....	June 7, 1916	65	7,500
Total.....		3,087	27,525
<b>Bulletin (quarto): No. 131—Cotton production and distribution, season of 1914-15.....</b>	Dec. 11, 1915	102	45,000
<b>Reports of special censuses (octavo):</b>			
Population of Tulsa, Okla. (enumerated Apr. 15, 1915).....	Aug. 3, 1915	15	2,000
Population of Hamtramck, Mich. (enumerated June 25, 1915).....	Oct. 10, 1915	10	1,000
Population of St. Clair Heights, Mich. (enumerated Nov. 18, 1915).....	Jan. 17, 1916	4	500
Population of Highland Park, Mich. (enumerated Nov. 15, 1915).....	Feb. 1, 1916	8	500
Population of Hastings, Nebr. (enumerated Dec. 13, 1915).....	Feb. 23, 1916	7	500
Population of El Paso, Tex. (enumerated Jan. 15, 1916).....	Mar. 25, 1916	8	500
Total.....		58	5,000
<b>Miscellaneous publications:</b>			
Leaf tobacco held by manufacturers and dealers, Apr. 1, 1915 (octavo).....	July 1, 1915	22	12,500
Advance tables of cotton ginned from crop of 1914 (quarto).....	July 10, 1915	30	42,500
Census of the deaf and dumb, 1910 (quarto).....	Sept. 3, 1915	8	2,500
Annual report of the Director of the Census to the Secretary of Commerce, fiscal year 1915 (octavo).....	Oct. 25, 1915	29	2,500
Comparative financial statistics of cities under council and commission government, 1913 and 1915 (octavo).....	Mar. 13, 1916	16	15,000
Circular No. 4—Federal estimates of population and Federal supervision of local censuses (octavo).....	May 11, 1916	15	5,000
The Federal registration service of the United States: Its development, problems, and defects (octavo).....	June 9, 1916	85	5,000
Advance tables of cotton production in the United States—crop of 1915 (quarto).....	June 13, 1916	28	41,000
26 reports, in card form, relating to cotton and cotton seed.....	July 31, 1915	26	1,040,000
2 reports, in card form, relating to stocks of leaf tobacco.....	June 30, 1916	2	50,000
	Nov. 2, 1915		
	May 1, 1916		
Total.....		261	1,216,000
Grand total, July 1, 1915, to June 30, 1916.....		3,508	1,293,525
JULY 1, 1916, TO SEPT. 15, 1916.			
<b>Bound volume (quarto):</b> General statistics of cities: 1915.....	Aug. 7, 1916	338	7,500
<b>Bulletin (quarto):</b> Power laundries—census of manufactures: 1914.....	July 31, 1916	28	6,500
<b>Miscellaneous publications:</b>			
Manual of the international list of causes of death (second reprint; revised) (octavo).....	July 25, 1916	307	500
Circular No. 5—Preliminary program of the Bureau of the Census: 1916-1919 (octavo).....	Aug. 14, 1916	14	5,000
Financial statistics of states: 1915 (quarto).....	Sept. 5, 1916	125	5,000
Total.....		446	10,500
Grand total, July 1, 1916, to Sept. 15, 1916.....		812	24,500

**PLANS FOR FUTURE WORK.**

**TRANSPORTATION BY WATER.**

The act creating the permanent Census Bureau authorizes the Director of the Census to make an inquiry in regard to water transportation at decennial intervals. The last such inquiry covered the calendar year 1906, and the next will therefore relate to 1916.

Since the census of 1906 there has been a great increase in the number and tonnage of American-owned craft engaged in foreign and domestic commerce, and material changes have been made in the

methods of conducting the shipping business. It is necessary that the great interests concerned be properly represented in the coming report, and to this end their cooperation must be secured. The importance of this matter was submitted to you, and, acting in conformity with your suggestions, I have arranged to obtain the cooperation of the Bureau of Navigation, the Steamboat Inspection Service, and the Bureau of Fisheries, all of which gather information concerning the shipping interests of the country that will be of more or less assistance in conducting the census. In addition, I have been able to obtain the sympathy and cooperation of the American Steamship Association and other associations and individuals that represent a large proportion of the shipping interests of the United States. The names and addresses of operators of documented craft are being secured from the Bureau of Navigation, and the collectors of customs and postmasters throughout the country are assisting in the preparation of lists giving similar information in regard to such of the undocumented craft as will be covered by the census. The blank schedules to be used in gathering the data have been formulated and printed, and will be distributed before the close of the year in the hope that the shipowners will prepare the reports and send them to the Bureau soon thereafter.

Arrangements have also been made to obtain statistics relating to the operations of shipbuilding yards and of fishing vessels. Neither of these important branches of the shipping industry was covered by the census of 1906.

#### RELIGIOUS BODIES.

The census of religious bodies, like the water-transportation inquiry, is, under the law, made at decennial intervals, and the forthcoming one will relate to the calendar year 1916. The report will present, for each religious denomination, detailed statistics in regard to church membership, church property, number and salaries of ministers, Sunday schools, etc.

#### MARRIAGE AND DIVORCE.

A joint resolution is now pending in Congress which, if adopted, will authorize the Bureau of the Census to collect and publish statistics in relation to marriage and divorce, covering the period from 1907 to 1915, inclusive, and at annual intervals thereafter. In case this investigation is thus authorized, the field work will begin within a short time after the adoption of the resolution.

The first Federal investigation of marriage and divorce as a distinct subject was made in 1887 by the Department of Labor and covered the twenty years from 1867 to 1886, inclusive. The next was made twenty years later by the Bureau of the Census and covered the period from 1887 to 1906, inclusive. If another investigation is made in the near future, there will be available, when the report is prepared, statistics on this subject covering a half century. The report will show, among other things, marriage and divorce rates; duration of marriage; causes of divorce; party to which granted, and whether contested; number of children; whether alimony was asked, and whether granted; and statutory regulations covering marriage and divorce in the various States. Comparative figures will be given for

important foreign countries. It is the purpose, if the investigation is made, to present for certain States detailed statistics of marriage, such as number of marriages, age at marriage, color, nativity, etc., so far as these statistics are available in published reports for any or all of the years included in the decade to be covered. (See recommendation relating to marriage and divorce, under "Legislation needed.")

#### MONOGRAPH ON TUBERCULOSIS.

A statistical monograph on deaths from tuberculosis, covering the calendar year 1916, will be prepared and published. This monograph, like that relating to cancer (see Monograph on Cancer, under "Special and miscellaneous lines of work"), will present much more detailed statistics than are given in the Bureau's annual reports on mortality.

#### ELECTRICAL INDUSTRIES.

The next quinquennial census of electrical industries, at which will be collected statistics in regard to the operations of central electric light and power stations, electric railways, and telephones and telegraphs, will cover the year 1917. The preliminary work for this census, therefore, must be begun in the latter part of that year, in order that the actual canvas may commence promptly after the first of January, 1918.

The census reports contain a complete history of the development of electrical industries, which has been so important a factor in the industrial advance of the United States. They are not made up entirely of statistical material, but include also sections describing the changes and improvements which have been made in electrical machinery and apparatus during the period covered. These sections are similar in style to articles in technical and scientific periodicals, and are accompanied by illustrations.

The next census will be the fourth regular quinquennial enumeration that has been made in compliance with the requirements of the permanent census act.

#### FOREST PRODUCTS.

A bill providing for the annual collection of statistics of forest products is now pending in Congress. In the event of its enactment into law the Bureau will collect and publish annually, probably in cooperation with the Forest Service of the Department of Agriculture, statistics showing kinds, quantities, and values of products made by lumber mills, quantity of each species of timber consumed, number of mills, etc. (See recommendation relating to forest products, under "Legislation needed.")

#### EXECUTIVE CIVIL SERVICE.

A bulletin presenting statistics relating to the employees in the executive civil service on July 1, 1916, will be compiled and published. The data will be supplied, on individual cards, by the various departments and other governmental establishments. The Bureau of Efficiency will have charge of the distribution and collection

of these cards, and after making use of the data on them as a basis for estimating the cost of civil-service pensions, will turn them over to the Census Bureau for the purposes of the statistical compilations required for the proposed bulletin.

Two similar bulletins have already been published, one relating to the year 1903 and the other to the year 1907. In these bulletins the employees in the executive civil service are classified by departments and bureaus and by sex, age, race, nativity, marital condition, compensation, length of service, etc. In 1907 the total number of employees, both in and outside the District of Columbia, was 185,874; and it is estimated that the number at the present time is not far from 320,000.

#### CENSUS OF CITY DISTRIBUTION.

Under your direction the Bureau is now planning an inquiry in one or more of the representative cities of the United States into that portion of the cost of distribution which arises from cartage and hauling. There has never been any complete authoritative inquiry on this subject, and the few attempts that have been made by outside investigators to obtain this information have not been continuous and conclusive and have only demonstrated that the problem is a very large one. It is known that the cost of distribution is one of the principal factors in the high cost of living to-day. Any inquiry concerning so extensive a subject to be of value necessarily would have to be undertaken by the Federal Government. It is hoped that the facts to be developed by the preliminary inquiry will lead to a thorough knowledge of this almost unknown but vital phase of the cost of living and to some adequate treatment of it in the future. The Bureau plans to begin this investigation as soon as the condition of its current work will permit—probably shortly after the the first of the coming calendar year.

#### MACHINE SHOP.

The machine shop was engaged during the year in the maintenance of machines in use in the Census Bureau and in the Bureau of Immigration; in making repairs to computing machines and to tabulating equipment damaged in transit; and in preliminary work in connection with new construction, rebuilding, and overhauling. In this preliminary work the shop has been somewhat handicapped by delayed deliveries and by difficulty in securing special materials.

In order that the Bureau may be properly equipped with machinery for tabulating the results of the Fourteenth Census, a great deal of work is necessary during the coming three years. If the appropriations for the machine shop continue adequate, it is planned to have the entire machine equipment completed and thoroughly tested by July 1, 1919—the beginning of the Fourteenth Census period. With this end in view, a progressive plan of work has already been begun. This includes the construction of 25 new-model tabulating machines, complete, and of 5 extra tabulator bases and 114 extra counting units of 10 counters each; the rebuilding of 286 automatic card-punching machines and of 2 card-sorting machines; and the overhauling of 17 card-sorting machines and of 5 card-count-

ing machines. This work, together with the maintenance of the machinery in daily use, will tax the capacity of the machine shop, as now organized, between the present time and July 1, 1919.

The force of the machine shop has been enlarged since July 1, 1916, by the employment of three temporary mechanics; and a register of eligibles for the position of "tabulating mechanic" in the Census Bureau has been established by the Civil Service Commission, through an open competitive examination held September 5.

*Development of integrating tabulator.*—During the last two years the officials of the Bureau have given considerable thought to the development of an "integrating" counter—that is, a counter which will not merely record and add *units* but will record and add *numbers*, thus performing automatically the work done by the operator of an adding machine—for use on certain lines of current work in connection with the mechanical-tabulation system of the Bureau, and some experimental work in this direction has been done in the machine shop. The tabulator already developed by the Bureau, which is a "unit-counting" machine, is successfully operating in connection with the compilation of the data returned for the population and other inquiries involving the assembling of single units only; but the development of an integrating counter would provide mechanism whereby the statistics of the agricultural and manufactures censuses could be similarly tabulated, and it is the opinion of those familiar with the work of the Bureau that the use of such a machine on the compilation of the data obtained at these inquiries would result not only in a great saving of time and money but also in greater accuracy than is now possible.

In order that the Bureau may immediately take up this work it is necessary, and is urgent at this time because of the approaching Fourteenth Census, to have an additional appropriation. It is highly important that the present work of the machine shop be not interfered with because both the appropriation and the force employed are barely sufficient to take care of the current work of the Bureau and prepare properly for the next decennial census. An estimate of \$50,000 has therefore been submitted for the purpose of meeting the expense incident to developing the integrating counter. It is believed that the expenditure of this sum will be repaid many fold through the saving, not merely on the census work alone, but on the statistical work of other governmental bureaus and offices, for the integrating tabulator will be adapted for use on all classes of statistical work.

#### OFFICE ACCOMMODATIONS, FURNITURE, AND STORAGE SPACE.

*Office accommodations.*—Although the increase in the Bureau's office force incident to the next decennial census will not take place until 1919, the compilation of the results of the recent census of manufactures—a very large piece of work—is now under way, and several other important investigations, such as the censuses of religious bodies and water transportation, as well as the inquiry relating to marriage and divorce, in case that inquiry is authorized by law, will begin in the near future; in fact, preliminary work on these investi-

gations is already in progress. It becomes necessary, therefore, to give immediate and serious attention to the matter of an increase in office accommodations. The Census Bureau already occupies four entire floors and parts of three floors of the Commerce Building, and it needs still another entire floor. Furthermore, a portion of its force is not disposed to the best advantage; for example, the division of vital statistics occupies parts of three floors, whereas it should be located entirely on one floor. It is obvious that the highest degree of efficiency can not be attained when a section of the force engaged in a single line or in closely related lines of work is scattered on several floors.

*Furniture.*—Although the Bureau's supply of desks, chairs, and filing cases has been increased somewhat during the past year, a still further increase is necessary in order to meet properly the needs of the daily work.

*Storage space.*—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, in spite of the fact that a large number of buckets of water are kept standing in the vault in order to moisten the atmosphere.

The roof and walls of the old Armory Building are leaky, and some of the records there have already been so badly injured by the rain that portions of them are obliterated.

The Census Bureau is, therefore, in immediate need of additional storage space for its records; and this need will be very greatly increased soon after the beginning of the Fourteenth Census period. It is highly important that steps be taken at once to remedy this condition.

#### OFFICE FORCE.

The appropriation act for the fiscal year 1916 provided for 569 permanent officials and employees of the Census Bureau. The number provided by the act of 1917, under which the Bureau is now oper-

ating, is 562, seven employees having been transferred by that act to the roll of the Department.

The Census Bureau labors under a serious handicap by reason of its low average salary scale, which is driving 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. Although the appropriation act for the current year afforded some slight measure of relief by providing for 13 additional positions in the salary classes above \$1,200 per annum, the number of \$1,200 places being correspondingly reduced, the scale of compensation still remains very low when comparison is made with other Federal offices. Of the Bureau's entire force, including officials, clerks, and subclerical employees, those in the clerical salary classes above \$1,200—that is, in the \$1,400, \$1,600, and \$1,800 classes—form only 14.2 per cent, and the officials and clerks above \$1,200 together constitute only 17.2 per cent, leaving 82.8 per cent—a very large proportion indeed—in the salary classes of \$1,200 and below. The percentage for officials and clerks above \$1,200 combined (17.2) is less than half as large as the corresponding one (36.1) for all the executive departments combined, exclusive of the Census Bureau, in February, 1912, the latest date for which this percentage has been computed. It is safe to say that in no other Federal office of equal or greater size is the salary scale for the official and clerical forces so low as in the Census Bureau.

During the past fiscal year 11 clerks—8 men and 3 women—were transferred to other Federal offices, and 20—7 men and 13 women—resigned. All the clerks transferred and all but one of those who resigned were receiving \$1,200 or less.

During the fiscal year 1914-15, 34 clerks were lost by transfer and 1 official and 15 clerks by resignation. Of the clerks transferred, all but 5, and of those who resigned, all but 1, were receiving \$1,200 per annum or less.

The loss during the year 1915-16, therefore, was somewhat less than during the preceding one, and it is probable that the difference was due in some measure to the fact that the promotions made at the beginning of the present fiscal year had been in prospect for several months. It is obvious, however, that the drain upon the Bureau's personnel remains altogether too large.

I here quote, from my last report, a passage which applies with equal force to present conditions:

It is impossible to lay too great stress on the injustice, both to the Bureau as an office and to its personnel as individuals, which results from this state of affairs. On the one hand, the Bureau has lost a considerable number of its experienced employees, and has thus become, to that extent, a training school for governmental bureaus and commercial institutions with more liberal salary scales. Many of these employees had become especially valuable and efficient as a result of their long service, and their places can not be adequately filled by the simple process of promotion or appointment. Months, and even years, of training will be necessary to fit their successors to discharge their duties with the desired degree of efficiency. On the other hand, the employees who remain are, in many cases, drawing far less pay than is given for comparable service in other bureaus in this and other departments. From the standpoint of the employees, this is unjust; and from the standpoint of the Bureau, it is a disadvantage, in that it tends to engender a spirit of discontent and indifference. Most employees will not develop their maximum possible efficiency when they believe themselves to be ill-treated.

The Bureau also suffers by reason of the inadequate size of its statutory force, which now numbers 562, whereas 10 years ago it was 649, or 87 more than the present number. A portion of this reduction (39 employees) was due to the removal of the Census Bureau to the Department of Commerce Building and the resultant consolidation of part of its force with that of the Department. Making allowance for this consolidation, the Bureau is now operating with 48 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 to the growth of the country during the past decade.

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 normal 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 has recently been begun; and the death statistics, which 10 years ago related to less than one-half, now refer to approximately 70 per cent, of the population of the United States. As a result of this growth in the work on vital statistics it was necessary, in the latter part of the past fiscal year and the early part of the current one, to employ 30 temporary machine operators in the division of vital statistics for a period of about four months. Some of these operators had been formerly in the employ of the Census Bureau, and the remainder were obtained from the registers of the Civil Service Commission.

The Bureau of the Census, therefore, is doing more work to-day with a smaller force than it did years ago. It has been able, by improvements in methods and mechanism, to neutralize in part the effects of this condition, but the handicap under which it labors is still a serious one.

With the view of remedying, in some measure, the unfortunate condition existing in the Census Bureau as a result of its low salary scale, Congress will be asked, in making appropriations for the forthcoming fiscal year, to provide for an increase of 33 in the number of places above \$1,200 and for a corresponding reduction in the number of \$1,200 positions, the total number of places thus being left the same as at present. The changes for which provision is made in the estimates submitted to Congress will necessitate an increase of only \$9,600, or less than 1½ per cent, in the total appropriation for salaries, but will make possible a considerable number of sorely needed promotions. When once the compensation paid in the Bureau of the Census is on a par with that paid elsewhere for comparable work, the Bureau will be able to retain the services of its ablest employees—or at least of most of them—instead of losing them to other branches of the Federal service and to the commercial world.

The present and proposed classifications are shown on the pages following.

Grade.	Office force, 1917.			Estimates, 1918.		
	Number.	Salary.	Amount.	Number.	Salary.	Amount.
Director.....	1	\$6,000	\$6,000	1	\$6,000	\$6,000
Chief statisticians.....	4	3,000	12,000	4	3,000	12,000
Chief clerk.....	1	2,500	2,500	1	3,000	3,000
Geographer.....	1	2,000	2,000	1	2,000	2,000
Stenographer.....	1	1,500	1,500	1	1,600	1,500
Expert chiefs of division.....	9	2,000	18,000	10	2,000	20,000
Clerks:						
Class 4.....	15	1,800	27,000	17	1,800	30,600
Class 3.....	25	1,600	40,000	30	1,600	48,000
Class 2.....	40	1,400	56,000	45	1,400	63,000
Class 1.....	283	1,200	339,600	260	1,200	300,000
\$1,000.....	83	1,000	83,000	83	1,000	83,000
\$900.....	81	900	72,900	81	900	72,900
Expert map mounter.....				1	1,000	1,000
Skilled laborers:						
\$900.....	2	900	1,800	1	900	900
\$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	4	720	2,880
Messenger boys.....	3	480	1,440	3	480	1,440
Total.....	562		673,460	562		683,060

The following statement shows the nature and distribution of the office and field employees on September 30, 1916:

OFFICIALS.

Director.....	SAM. L. ROGERS.
Chief clerk.....	WILLIAM L. AUSTIN.
Chief statisticians:	
Population.....	WILLIAM C. HUNT.
Statistics of cities.....	SPARKS M. GROGAN.
Manufactures.....	WILLIAM M. STEUART.
Vital statistics.....	WILLIAM H. DAVIS, M. D.
Expert special agent in charge of revision and results.....	JOSEPH A. HILL.
Geographer.....	CHARLES S. SLOANE.
Expert chiefs of division:	
Administrative.....	EUGENE F. HARTLEY.
Population.....	WILLIAM H. JARVIS.
Manufactures.....	EDWARD W. KOCH.
	FRANK L. SANFORD.
	GEORGE D. OLLER.
Statistics of cities.....	ARTHUR J. HIRSCH.
Vital statistics.....	RICHARD C. LAPPIN.
Revision and results.....	HARRY H. PIERCE.
Cotton and tobacco.....	
Chief, mechanical laboratory.....	D. M. LABOTTEAUX.

CLERICAL FORCE.

Stenographer, \$1,500.....	1	Clerks—Continued.	
Clerks:		\$1,000.....	83
Class 4.....	15	\$900.....	81
Class 3.....	25		
Class 2.....	40	Total.....	528
Class 1.....	283		

SUBCLERICAL FORCE.

Skilled laborers:		Assistant messengers, \$720.....	5
\$900.....	2	Messenger boys, \$480.....	3
\$720.....	1		
Unskilled laborers, \$720.....	4	Total.....	18
Messengers, \$840.....	3		

MECHANICAL LABORATORY FORCE.

Expert, \$1,800.....	1	Mechanician, \$1,200.....	1
Electrical expert, \$1,800.....	1	General mechanic, \$1,000.....	1
Mechanical expert, \$1,400.....	1	Machinists, \$1,200 (temporary).....	3
Mechanician, \$1,400.....	1		
Toolmaker, \$1,400.....	1	Total.....	11
Electrician, \$1,200.....	1		

## SPECIAL AGENT FORCE.

Expert agents for general field work, etc.----- 19

## SUMMARY.

Officials.....	18	Special agents .....	19
Clerical force .....	528		
Subclerical force .....	18	Total .....	594
Mechanical laboratory force.....	11		

In addition, there are employed throughout the cotton belt 725 local special agents to collect statistics of cotton. These agents perform their work only at intervals and are paid on a piece-price basis.

## METHOD OF DISTRIBUTING THE BUREAU'S STATISTICS.

The usefulness of the statistical work done by the Census Bureau depends to a considerable extent upon the manner in which its results are disseminated. The method employed is to place the preliminary or fundamental statistics derived from a census inquiry before the public through the medium of preliminary announcements or "press summaries," and later to issue the complete report in the form of a paper-bound bulletin or series of bulletins, or in the form of one or more bound volumes. In the case of the more comprehensive reports, separate sections are published in bulletin form, and sometimes an abstract or summary of the entire report is issued. (See section relating to census of manufactures, under "Current and completed work on statutory inquiries.")

By means of its preliminary announcements or press summaries, the Bureau is able to place the salient features of its statistical reports in the hands of millions of readers—not only of newspapers, but also of trade journals, technical and scientific publications, etc.—whereas the reports themselves reach only thousands. These preliminary announcements in some cases summarize entire reports and in other cases only single sections of reports. An example of the latter class is supplied by the press summaries giving statistics from the recent census of manufactures.

These summaries range in length from half an ordinary newspaper column to a column or more, and many of them are given a very wide circulation. They are often printed in full, but when a paper or periodical can not spare sufficient space for the entire summary it usually omits portions and prints all or the greater part of the remainder verbatim. In this way the Bureau minimizes the danger that garbled and misleading statements based on its statistics, hastily prepared by persons unfamiliar with the subjects covered, will be placed before the public.

## REPORTS AND BULLETINS.

In distributing its reports and bulletins the Bureau employs a number of mailing lists. One of these contains names of municipal libraries, libraries of educational institutions, statisticians, economists, and others who have requested that they be supplied with all publications issued by the Bureau; others are made up of names of associations, boards of trade, chambers of commerce, institutions, State and city officials, special students, etc., who desire the Bureau's

reports and bulletins relating to the particular subjects in which they are interested, but do not desire all its publications. In the case of the more important reports, a printed mailing card with franked return card attached is sent to each name on the appropriate list or lists, informing the recipient that the report is about to be issued and requesting him, if he desires to receive it, to notify the Bureau to that effect by detaching the return part of the card, signing his name, and mailing it.

In some cases a mimeographed circular letter is sent to members of associations, etc., who are presumed to be interested in the subjects with which the report deals. In the letter is given a brief description of the report, and the recipient is requested to notify the Bureau in case he wishes to receive it. This plan has been employed, with highly satisfactory results, in the distribution of a number of the publications recently issued.

The periodical reports on cotton, of which 26 are issued annually, are printed upon postal cards and mailed to large numbers of growers, ginnerers, dealers, and manufacturers. They are also printed upon sheets of suitable size and sent to all post offices in the cotton-growing region, for posting therein. In addition, mimeographed statements showing county totals are sent to cotton ginnerers, dealers, and others specially interested in statistics of this character. The annual cotton bulletin, containing in amplified form, with text discussion, the statistical material sent out during the year in the periodical reports just mentioned, is sent to all those who receive the postal-card reports. The mailing list for these reports comprises about 45,000 names.

The quarterly reports on tobacco, like the periodical reports on cotton, are distributed by means of postal cards and printed sheets for display in post offices.

#### INFORMATION FURNISHED BY CORRESPONDENCE.

One phase of the Census Bureau's work is the furnishing of information by correspondence. The Bureau is in daily receipt of scores of letters requesting information contained in its records. Many of these requests are for genealogical data and for information in regard to ages of soldiers, for use in connection with applications for pensions and increases of pensions. Each such request receives a courteous reply, and in the great majority of cases it is possible to supply the information desired.

#### LEGISLATION NEEDED.

##### MARRIAGE AND DIVORCE.

Senate joint resolution 107, authorizing the Bureau of the Census to collect and publish statistics of marriage and divorce covering the nine-year period 1907 to 1915, inclusive, and at annual intervals thereafter, is now pending in the House of Representatives.

In 1906, the last year covered by the previous census report, more than 72,000 divorces were granted in the United States. The annual divorce rate per 100,000 married population advanced from 81 in the year 1870 to 200 in the year 1906. Another compilation of the

data is necessary to show what the present conditions are and whether the increase in the frequency of divorce has continued or has been checked or in any degree retarded within the last 10 years. These and other questions relating to the causes of divorce, its relative prevalence in different States or sections of the country, etc., can be accurately answered only by the aid of statistics. It is obvious that an inquiry of such vital importance as this should be conducted at regular and frequent intervals, especially as the success of the undertaking depends upon the preservation and accessibility of local records, which after the lapse of time are liable to be destroyed or to be stored in inconvenient or inaccessible places. Nearly every important country except the United States makes annual compilations of statistics of marriage and divorce. In this country, however, such statistics have thus far been compiled on two occasions only, each compilation covering retrospectively a period of 20 years. (See section relating to marriage and divorce, under "Plans for future work.")

For these reasons the adoption of Senate joint resolution 107 is strongly recommended.

#### FOREST PRODUCTS.

In my last report I recommended the enactment of legislation providing for the annual collection of statistics of forest products. Bills having this purpose have been introduced in Congress (S. 4589 and H. R. 12417), but neither has become law. Statistics of this character should be collected and published regularly, since they indicate very closely the extent to which the forests of the country are being depleted for commercial purposes. (See section relating to forest products, under "Plans for future work.")

#### FINANCIAL STATISTICS OF STATES.

A report presenting, for the fiscal year 1915, financial statistics of States, similar in scope to the financial statistics of cities now issued annually by the Bureau, has been published. The preparation of this report—the first of its kind which the Bureau has compiled—was undertaken by order of the Secretary of Commerce, issued under authority contained in the act to establish the Department of Commerce and Labor, approved February 14, 1903. State officials and others interested in the investigation are desirous that it be made annually hereafter. Authority for the continuance of the work, however, can be provided only by legislation, and the enactment of such legislation was recommended in my last annual report. Bills to confer the needed authority upon the Director of the Census (S. 4589 and H. R. 12417, also referred to under "Forest products") are now pending in Congress, and the enactment of one of them into law is recommended.

#### OFFICIAL REGISTER OF THE UNITED STATES.

In the annual reports of the Director of the Census for the fiscal years 1913, 1914, and 1915, attention has been called to the need of a revision of the law relating to the publication of the Official Register

of the United States. Under the subhead, "Official Register of the United States," in the section entitled "Progress of routine work," in my annual report for the fiscal year 1915, I set forth my reasons for recommending certain changes in the scope of the Register; and under the subhead, "Official Register of the United States," in the section entitled "Legislation needed," in the same report, are outlined the changes recommended. 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 adoption of the proposed plan would result in a very considerable reduction in the expense of preparing the Official Register, while at the same time preserving all its valuable features, and in addition 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.

For these reasons, and for those given in my last report, I renew my recommendation that the proposed changes be authorized by law.

#### EXPRESS BUSINESS.

I renew the recommendation contained in my last annual report, for the repeal of the requirement of the decennial collection of statistics relating to the business of express companies, now contained in the act of June 7, 1906. Annual statistics of this character are collected and published by the Interstate Commerce Commission, and the decennial conduct of a similar investigation by the Census Bureau is wholly unnecessary.

#### SPECIAL STATISTICAL COMPILATIONS.

I also renew the recommendation contained in my last report, to the effect that express, rather than implied, authority be given the Director of the Census to furnish transcripts of tables and other records and to prepare special statistical compilations 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.

#### INTERMEDIATE CENSUS OF MANUFACTURES.

Under the existing law, a census of manufactures in the United States is taken every fifth year. The last inquiry covered 1914, but conditions have changed so materially that the statistics from that inquiry provide no reliable indication of the production in 1916. There is constant demand for information as to the annual output of our domestic manufactures at more frequent intervals than every fifth year. A census covering only the gross values of the products of the various industries and the quantities and values of some of the principal products could be taken very expeditiously and at a comparatively small cost, and the statistics obtained would be of great value. Such a census would not cover such matters as capital, persons employed, quantity of power used, or various other details for which data are obtained at the regular quinquennial censuses of manufactures. The purpose would be to confine the inquiry to the gross values of the products of each industry and the quantities and values of the principal products, and to compile and publish the statistics in time so that they would be of current interest and value.

I recommend, therefore, that legislation be enacted authorizing the Director of the Census to take an intermediate census of the quantities and values of domestic manufactures for 1916 and for every fifth year thereafter.

#### APPROPRIATIONS AND EXPENDITURES.

##### FINANCIAL STATEMENT, FISCAL YEAR 1916.

The following financial statement covers the operations of the Census Bureau during the fiscal year ended June 30, 1916:

Administrative:			
Salaries for administrative places.....		\$36,394.60	
Salaries for division of correspondence and mail.....		10,176.40	
Salaries for labor force.....		3,497.78	
Contingent expenses <sup>a</sup> .....		13,730.78	
			\$63,799.56
Machine shop:			
Salaries.....		10,450.02	
Materials, supplies, etc.....		439.89	
			10,889.91
Division of revision and results:			
Supervision.....		7,048.00	
Publications.....		3,286.08	
Dependent, defective, and delinquent classes.....		12,567.93	
Negroes in the United States.....		16,687.05	
Official Register of the United States.....		5,112.49	
Directory of institutions.....		794.43	
Editorial and result work.....		1,740.55	
Miscellaneous.....		1,340.84	
			48,577.37
Division of population:			
Supervision.....		7,543.21	
Occupations.....		11,355.15	
Miscellaneous.....		1,378.89	
			20,277.25
Division of manufactures:			
Supervision.....		7,987.61	
Quinquennial census of manufactures.....		443,748.01	
Cotton statistics.....		260,013.21	
Tobacco statistics.....		4,225.73	
			715,979.56

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

Division of vital statistics:		
Supervision	-----	\$6, 819. 61
Mortality statistics	-----	110, 224. 07
Life tables	-----	9, 871. 53
		\$126, 915. 21
Division of statistics of cities:		
Supervision	-----	8, 029. 72
Financial and general statistics	-----	88, 321. 79
State statistics	-----	14, 752. 80
		111, 104. 31
Geographer's division: Salaries		30, 545. 05
Special population censuses		2, 259. 94
Salaries of employees detailed to Department of Commerce		11, 365. 29
Printing and binding <sup>a</sup>		84, 766. 94
Grand total		1, 226, 480. 99

Title of appropriation.	Appropriation.	Expenditures during fiscal year.
Salaries, Bureau of the Census, 1916	\$674, 740. 00	\$664, 496. 89
Collecting statistics, Bureau of the Census, 1916	362, 000. 00	355, 180. 64
Collecting statistics, Bureau of the Census, 1915-16	b 150, 000. 00	97, 415. 83
Tabulating machines, Bureau of the Census, 1916	12, 000. 00	10, 889. 91
Contingent expenses, Department of Commerce, 1916 <sup>a</sup>	13, 730. 78	13, 730. 78
Printing and binding <sup>a</sup>	84, 766. 94	84, 766. 94
Total	1, 207, 237. 72	1, 226, 480. 99

<sup>a</sup> Paid from appropriation for Department of Commerce; no separate appropriation for Bureau of the Census.  
<sup>b</sup> There was also paid from this appropriation \$51,173.83 for liabilities incurred during the fiscal year 1915

APPROPRIATIONS, FISCAL YEAR 1917.

The appropriations for the fiscal year 1917 amounted to \$1,210,460. The item for salaries was decreased from \$674,740 to \$673,460. The change was due to the transfer of 7 employees to the roll of the Department, with a resultant decrease of \$7,080, and to an increase of \$5,800 in the amount appropriated for the salaries of the remaining employees. The net decrease, therefore, was \$1,280.

The appropriation for collecting statistics remained unchanged, at \$512,000.

The item for tabulating machines was increased to \$25,000, to provide for new construction, rebuilding, and overhauling, in preparation for the work of the Fourteenth Census.

Respectfully,

SAM. L. ROGERS,  
 Director of the Census.

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



**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.
<b>Organization and scope of work</b> .....	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
<b>Office force</b> .....	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
<b>Work done during fiscal year and since its close</b> .....	15
<b>Current and completed work on statutory inquiries</b> .....	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
<b>Reports relating to special classes of the population</b> .....	24
The blind.....	24
Deaf-mutes.....	24
Negroes.....	24
Prisoners and juvenile delinquents.....	24
Religious bodies.....	24
Official Register.....	25
<b>Special and miscellaneous lines of work</b> .....	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