## STATISTICAL ATLAS

OF THE

## UNITED STATES,

BASED UPON RESULTS OF THE ELEVENTH CENSUS.



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## DEPARTMENT OF THE INTERIOR,

 Census Office,Washington, D. C., June 17, 1896.
Sir: I beg to transmit herewith the Statistical Atlas of the Eleventh Census.
This work, although appearing nominally under my name as author, is in reality the joint product of many men and many minds. The vast array of figures from which the maps and diagrams herein presented were made have been drawn from all depa tments of the Census. Although most of the illustrations have been prepared by myself, or under my direction, others have been prepared by divisions having that special subject in charge. Classifying the illustrations by subjects and authorship the case will stand as follows: All matters relating to population, with the classification by race, nativity, sex and age, conjugal condition, occupations, illiteracy, education and religion, the defective, dependent, and delinquent classes, the industries of agriculture, manufactures, and mining have been prepared by myself; the illustrations relating to mortality have, with two or three exceptions, been prepared under the direction of Dr. J. S. Billings; those relating to transportation under the direction of Prof. H. C. Adams; those relating to wealth, debt, and taxation under the direction of Mr. J. K. Upton, and thòse relating to mortgage indebtedness under the direction of Mr. G. K. Holmes.

Trusting that this presentation of the results of the Eleventh Census may fulfill its mission in popularizing and extending the study of statistics, I remain,

Very respectfully, yours,
HENRY GANNETT,
Geographer.
Hon. Carroll D. Wright,
Commissioner of Labor in charge of Census.

## DEPARTMENT OF THE INTERIOR,

Census Office,
Washington, June 30, 1896.
Sir: I have the honor to transmit herewith the Statistical Atlas of the Eleventh Census. I desire to call special attention to the accompanying letter from Prof. Henry Gannett, the geographer of the Census, under whose general supervision the Atlas has been prepared.

> I am, very respectfully,

CARROLL D. WRIGHT,
Commissioner of Labor in charge of Eleventh Census.
The Secretary of the Interior.

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# STATISTICAL ATLAS OF THE UNITED STATES. 

ELEEVENTH CENSUS: 1890.

## POPULATION.

The population of the United States on June I, 1890, was $62,622,250$. In 1790 , a century earlier, it was $3,929,214$. At the end of the century the country contained sixteen times as many people as at its beginning. The progress of the country in population, decade by decade, is shown graphically in Diagram I, by the total length of the bars, and is here set forth in tabular form, with the absolute increase and the rates of increase.

| cexsussrs. | Population. | Increase. | (tar $\begin{gathered}\text { Per cent } \\ \text { of increase }\end{gathered}$ |
| :---: | :---: | :---: | :---: |
| 790 | 3, 929,214 <br> 5, 308,483$\}$ <br> 7, 239,88 r <br> 9, 633,822 <br> 12,866,020 <br> 17, 069, 453 <br> 23, 19I, 876 <br> $3^{1}, 443,32 \mathrm{I}\{$ <br> 38,558,37I <br> $\left.\begin{array}{l}50,155,783 \\ 62,622,250\end{array}\right\}$ <br> 62, 622,250 |  |  |
| 1800. |  | 1, 376, 269 | 35. ro |
| 18 |  | I, 931, 398 | 36. 38 |
|  |  | 2, 393, 941 | 33.07 |
|  |  | 3, $3^{2}$, 198 | 33.55 |
| 183 |  | 4, 203, 433 | 32.67 |
| 1840. |  | 4, 203,433 |  |
| 18 |  | 6, 122, 423 | 35.87 |
| 186 |  | 8, 251, 445 | 35.58 |
|  |  | 7,115,050 | 22.63 |
| 187 |  | 11, 597, 112 | 30.08 |
| 18 |  |  |  |
| 1890 |  | 12, 466, 467 | 24.86 |

The absolute increase was larger at each census than at that next preceding except in one case, that of $1860-1870$, when it fell below that of the preceding decade. This was in part the effect of the war and in part the deficient enumeration of 1870 .
The rate of increase reached a maximum in $1800-1810$, then gradually diminished, in accordance with natural laws, until $1840-1850$, when immigration set in and raised it to a second maximum, since which time it has diminished. The rates between 1860 and 1870 and between 1870 and 1880 can not be regarded as normal or truthful rates, owing to the causes above stated.
The average density of population has differed greatly at different times, owing to the increasing population and increasing area of the country. The following table shows the accessions of territory, with dates and areas, and Map 2, plate I, represents their limits:

| Accrsssions. | Area of accession <br> (Square miles.) | Total area. |
| :---: | :---: | :---: |
| Original territory | 827, 844 | 827, 844 |
| Louisiana and Oregon, 1803. | 1, 171, 93i | 1, 999, 775 |
| Florida, 1821 | 59, 268 | 2, 059, 043 |
| Texas, 1845 | 376, 163 | 2, 435,206 |
| First Mexican cession, 1848 | 545,753 | 2, 980, 959 |
| Gadsden purchase, 1853 | 44, 64 r | 3, 025, 600 |
| Alaska, 1867. | (Area u | known.) |

Urban and Total Populatton at each Cernsus: tygo to isgo.
[Millions of inhabitants.]


The following table and Diagram 3 show the mean density of the population at each census. Alaska is excluded, both as to population and density, as its area is known only approximately.

| censuses. | Area. | Density. |
| :---: | :---: | :---: |
| 1790.. | 827, 844 | 4.75 |
| 1800. | 827, 844 | 6.41 |
| 1810. | 1, 999, 775 | 3.62 |
| 1820. | 1, 999, 775 | 4.82 |
| 1830. | 2, 059, 043 | 6.25 |
| -1840. | 2, 059, 043 | 8.29 |
| 1850 | 2,980, 959 | 7.78 |
| 1860. | 3, 025,600 | 10. 39 |
| 1870. | 3, 025,600 | 12.74 |
| 1880. | 3, 225,600 | 16.58 |
| 1890. | 3, 025,600 | 20. 70 |

Thus, although the area here considered has increased between three and four times in the century, the density of population has become between four and five times as great.

## CENTER OF POPULATION

The center of population is the center of gravity of the population of the country, each individual being assumed to have the same weight and to press downward with a force proportional to his distance from that center.
In 1790 the center of population was at $39^{\circ} 16.5^{\prime}$ north latitude and $76^{\circ}$ II. $2^{\prime}$ west longitude, which is about 23 miles east of Baltimore. During the decade from 1790 to 1800 it moved almost due west to a point about 18 miles west of the same city, being in latitude $39^{\circ}$ I6.1' and longitude $76^{\circ} 56.5^{\prime}$
From 1800 to 1810 it moved westward and slightly southward to a point about 40 miles northwest by west from Washington, being in latitude $39^{\circ}$ II $55^{\prime}$ and longitude $77^{\circ}$ $37.2^{\prime}$. The southward movement during this decade appears to have been due to the annexation of the territory of Louisiana, which contained quite extensive settlements.
From 1810 to 1820 it moved westward and again slightly southward to a point about 16 miles north of Woodstock, Va., being in latitude $39^{\circ} 5.7^{\prime}$ and longitude $78^{\circ} 33^{\prime}$. This second southward movement appears to have been due to the extension of settlement in Mississippi, Alabama, and eastern Georgia.
From 1820 to 1830 it moved still farther westward and southward to a point about 19 miles southwest of Moorefield, in the present State of West Virginia, being in latitude $38^{\circ} 57.9^{\prime}$ and longitude $79^{\circ} 16.9^{\prime}$. This is the most decided southward movement that it has made during any decade. It appears to have been due in part to the addition of Florida to our territory and in part to the great extension of settlements in Louisiana, Mississippi, and Arkansas, or generally, it may be said, in the southwest.
From 1830 to 1840 it moved still farther westward, with a northward component slightly changed its direction northward, reaching a point 16 miles south of Clarksburg, W. Va., in latitude $39^{\circ} 2^{\prime}$ and longitude $80^{\circ} \mathrm{I} 8^{\prime}$. During this decade settlements had made decided advances in the prairie states and in the southern portions of Michigan and Wisconsin, which evidently overbalanced the increase of settlement in the southwest.
From 1840 to 1850 it moved westward and slightly southward again, reaching a point about 23 miles southeast of Parkersburg, W. Va., in latitude $38^{\circ} 59^{\prime}$ and longitude $8 \mathrm{I}^{\circ} 19^{\prime}$, the change of direction southward being largely due to the annexation of Texas.
From 1850 to 1860 it moved westward and slightly northward, reaching a point 20 miles south of Chillicothe, Ohio, this being in latitude $39^{\circ} 0.4^{\prime}$, longitude $82^{\circ} 48.8^{\prime}$.
From 1860 to 1870 it moved westward and sharply northward, reaching a point about 48 miles east by north of Cincinnati, Ohio, in latitude $39^{\circ} \mathrm{I} 2^{\prime}$, longitude $83^{\circ} 35 \cdot 7^{\prime}$. This northward movement was due in part to waste and destruction in the south consequent upon the civil war, and in part probably to the fact that the census of 1870 was defective in its enumeration of the southern people, especially of the newly enfranchised colored population.
In 1880 the center of population had returned southward to nearly the same latitude which it had in 1860, being in latitude $39^{\circ} 4 \cdot \mathrm{I}^{\prime}$, longitude $84^{\circ} 39 \cdot 7^{\prime}$. This southward movement was due only in part to an imperfect enumeration at the south in 1870 . During the decade between 1870 and 1880 the southern states increased greatly, both from natural growth and from southward immigration.
4. Center of Population at each Census: ifgo to 1890 .



During the past decade the center of population has moved northward into practically the same latitude which it occupied in 1870 . It has moved westward $53^{\prime} 13^{\prime \prime}$, or 48 miles, being less by io miles than its movement during the preceding decade, 6 miles greater than the movement between 1860 and 1870 , and slightly less than the average westward movement since the first census, its present position being in latitude $39^{\circ} \mathrm{II}^{\prime} 56^{\prime \prime}$ and longitude $85^{\circ}$ $32^{\prime} 53^{\prime \prime}$.
The most salient point of its progress during the past decade is the northing which has been made, which is doubtless due to the great development in the cities of the northwest and in the state of Washington, and in no small degree to the increase of population in New England.

The center of area of the United States, excluding Alaska, is in northern Kansas, in approximate latitude $39^{\circ} 55^{\prime}$ and approximate longitude $98^{\circ} 50^{\prime}$. The center of population is therefore about three-fourths of a degree south and more than 17 degrees east of the center of area.
The following table, with Map 4, shows the movement of the center of population since 1790:

| years. | $\begin{aligned} & \text { North } \\ & \text { latitude. } \end{aligned}$ | West longitude. | Approximate location by important towns. | Westward <br> during <br> preceding decade. |
| :---: | :---: | :---: | :---: | :---: |
|  | - , | - , |  |  |
| 1790.. | 3916.5 | 7611.2 | 23 miles east of Baltimore, Md. |  |
| 1800.. | 39 16. 1 | 7656.5 | 18 miles west of Baltimore, Md. | 41 miles. |
| 1810.. | 39 II. 5 | 77 37.2 | 40 miles northwest by west of Washingington, D. C. | 36 miles. |
| 1820.. | $39 \quad 5.7$ | 7833.0 | 16 miles north of Woodstock, Va. | 50 miles. |
| 1830.. | 3857.9 | 7916.9 | I9 miles west-southwest of N:oorefield, W. Va. | 39 miles. |
| 1840 | $39 \quad 2.0$ | 8018.0 | 16 miles south of Clarksburg, W.Va | 55 miles. |
| 1850.. | 3859.0 | 8119.0 | 23 miles southeast of Parkersburg, W. Va. | 55 miles. |
| 1860.. | $39 \quad 0.4$ | 8248.8 | 20 miles south of Chillicothe, Ohio. | 81 miles. |
| 1870.. | 3912.0 | 8335.7 | 48 miles east by north of Cincinnati,Ohio. | $4^{2} \text { miles. }$ |
| 1880.. | $39 \quad 4 \text {. I }$ | $8439 \cdot 7$ | 8 miles west by south of Cincinnati, Ohio. | 58 miles. |
| 1890.. | 39 11.9 | 8532.9 | 20 miles east of Columbus, Ind. | 48 miles. |

The present position of the center of population is shown by Map 5 .
The population of each state and territory is shown graphically by Diagram 6, the largest in point of population being New York, with about $6,000,000$ people, the smallest, Nevada, with but 45,76 r.
Diagram 7 shows the population of each state and territory at each census from the time of its formation to 1890. These diagrams illustrate many different phases of growth, under conditions as widely diverse as possible. At the time of the first census most of the states on the Atlantic border were settled communities. While each of these has increased greatly in population during the century, not one of them has increased at a very rapid rate. Indeed, in the case of Maine, New Hampshire, and Vermont the increase has in recent decades been but trifling, and has consisted of urban population, induced by progress in manufacturing industries. In Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania the rate of increase has been accelerated during the more recent decades because of the rapid increase in manufacturing industries in these states. The south Atlantic states, where manufactures have made but little progress, show a tolerably steady increase from first to last. The north central states show a very rapid proportional increase in the early decades, which has become reduced in more recent years. These states are in various stages of the agricultural phase of their existence. In the eastern states it is well advanced; indeed, in these manufactures are beginning to assume prominence, while
6. Population of each State and Territory : isgo.
[Hundreds of thousands.]

8. Number of Inhabitants to the Square Mile, by States and Territories: 1890 .
 TENNESSEE
NEW HAMPSHI NEW HAMPSHIRE virginta
missouri missouri
SOUTH CA south cab
michigan
vermon
Iowa NORTH georgia wisconsin west virginl alabama MLABAMA
MISSIssippi lodistana maine MAINE
ARKANSAS Kansas
MINNESOTA MinNESOTA nebrask
texas texas
CALIFORN CALIFORNI
florida Florida
WASHINGTo Washington
south dakot south dak
colorado colorad
OREGON NORTH DAKOTA UTAH. oкlahoma new mexicu ida Ho montana wroming Arizona
nevada
the western states of this section are yet in an early stage of agriculture. The case is very similar in the south central states, while the western states are in a very early stage of settlement, and the proportional increase of population in nearly all of them is still great.

Diagram 8 shows the density of population of each state and territory. Leaving out of account the District of Columbia, which is to all intents a city, and whose density of population is correspondingly great, the most densely settled state is Rhode Island, with 318 inhabitants to a square mile. Next is Massachusetts, with 278. The most densely settled states are the northeastern manufacturing states. Then follow the agricultural states of the Mississippi valley and the south, and the column ends with the sparsely settled western states.

Diagram 9, plate 2, shows the rank of the different states at each census. In 1790, 1800, and 1810 Virginia was the most populous state. Then its place was taken by New York, which started as the fourth, and this state has held the first rank continuously since. In 1790 Massachusetts was second. In 1800 she dropped to fourth place, and has since oscillated in rank, ending in 1890 in the sixth place. Thus the career of each state may be traced from the diagram from the time it appeared up to the date of the Eleventh Census.


AND TERRITORIES AT EACH CENSUS, IN MILLIONS : 1790 To 1890.


## DENSITY OF POPULATION IN DETAIL

The series of maps numbered io to 20 , on plates 3 to 6 , inclusive, represent the density of the population in detail at each census. These being the first of a considerable number of maps in this volume prepared under a uniform plan, it is desirable to explain that plan somewhat fully. The county has in general been taken as a unit. From its population has been first subtracted the number found in cities of 8,000 inhabitants or more, the remainder being assumed to be in most cases distributed uniformly over the county. This remainder is then divided by the area in square miles of the county. The counties are then grouped into those having an average density of -

Under 2 to a square mile (which are regarded as unsettled).
2 to 6 to a square mile.
6 to 18 to a square mile.
18 to 45 to a square mile.
45 to 90 to a square mile.
and over to a square.
90 and over to a square mile.
Certain large counties, for example, some of those in the west, where the density of population is known to differ considerably in different parts, have been subdivided and certain parts thrown in one group and others in other groups.
The population of cities of 8,000 inhabitants or more is represented by dots of heavy color, roughly proportional to the population.
The different density groups above enumerated bear roughly a relation to the industries of the country. The lowest group, less than 2 inhabitants to a square mile, which represents what is here regarded as unsettled area, is peopled merely by hunters, prospectors, or those engaged in pastoral pursuits. The next group, 2 to 6 to a square mile, includes a sparse agricultural population mixed with a pastoral people. Where the population ranges from 6 to 18 to a square mile, agriculture is still practically the only occupation, but it is pursued under more settled conditions. With the next group, 18 to 45 to a square mile, manufactures and commerce have commenced to make some progress among a community essentially devoted to agriculture. Farms have been greatly subdivided and the cultivation of the soil is thorough.
In the last two groups, 45 to 90 and 90 and more inhabitants to a square mile, manufactures and commerce are, relative to agriculture, of great importance, and the people are in large proportion grouped in small towns and cities.
In 1790 the settled area of the country extended along the seacoast from eastern Maine to southern Georgia and inland almost continuously to the Appalachian mountains, covering practically the whole Atlantic plain. It extended into and beyond the mountains at several points, as up the Mohawk valley into central New York; in southwestern Pennsylvania and in the Tennessee valley. In the Mississippi valley were several incipient settlements, the largest of which was in northern Kentucky.

At that time our territorial limits extended westward to the Mississippi River and southward to the thirty-first paralle1. Maine was then a district of Massachusetts; Vermont was a part of New York; West Virginia and Kentucky were parts of Virginia; Tennessee was the territory south of the river Ohio, and Georgia extended west to the Mississippi river. The present states of Ohio, Indiana, Illinois, Michigan, Wisconsin, and eastern Minnesota then were included in the territory northwest of the river Ohio.
In i8oo the settled area had extended so as to include a large part of the Appalachian mountains. Nearly all of New Hampshire and Vermont were covered, and in New York settlement had reached the shores of Lake Ontario and the St. Lawrence river. Three-fourths of Pennsylvania was a settled region, and most of Virginia and the Carolinas. The settled area in Kentucky had spread southwestward, invading Tennessee
Several changes of territory are seen on this map. Vermont, Kentucky, and Tennessee had been admitted as states. The territory northwest of the river Ohio had been divided, the western part of it having become Indiana territory, while Mississippi territory had been organized, comprising the southern part of what is now Alabama and Mississippi.

In i8io settlement had spread in great bodies across the Appalachian mountains, uniting with those areas which before were isolated. The acquisition of Louisiana had brought into the Union considerable settlements in the present states of Louisiana and Mississippi.

Among the changes of territory which had taken place during the preceding io years were the admission of Ohio and the formation of Indiana, Michigan, Illinois, and Orleans territories. The remaining part of the Louisiana purchase outside of Orleans, although not organized, was then known by the name of Louisiana territory.

In 1820 the frontier line, that is, the line which separates the settled area from the unsettled regions, had become very complex, extending from southeastern Michigan southwestward into Missouri territory, and thence making a great semicircle to the eastward, swept around the settlements of Louisiana, ending on the Gulf coast in that state. Within this, however, were many unsettled areas of considerable magnitude.

The territorial changes had been numerous during the decade. Alabama, Mississippi, Indiana, Illinois, Louisiana, and Maine had been admitted as states. Arkansas territory had been constituted.

In 1830 the frontier line extended from Lake Huron southward into Ohio, and thence westward to the present site of Kansas city, thence it turned by a southeast course to the Mississippi, and after including the settlements of Louisiana, reached the Gulf in that state. But, as before, there were several large areas yet unsettled included within this body of settlement, notably those in Georgia, Alabama, and Mississippi. On the other hand, strips of settlement extended westward up the Missouri, Red, and Arkansas rivers.

During the decade the Floridas were acquired from Spain and organized as a territory, and the state of Missouri was admitted.

In 1840 settlement had extended in Michigan and Wisconsin to the forty-third parallel, and in Louisiana, Arkansas, and Missouri to their western boundaries, leaving, however, in these three states large unsettled areas.

During the decade Michigan and Arkansas were admitted as states, and Wisconsin and Iowa territories were created.

In 1850 settlement made little progress in Michigan, but in Wisconsin it extended from the head of Green Bay southwestward across Iowa to the mouth of the Platte, thence along the west boundaries of Missouri and Arkansas southward. The admission of Texas in 1845 added a large body of population in the eastern part of that state. The first Mexican cession, which added the area which is now California, Nevada, and Utah, and parts of Colorado, New Mexico, and Arizona, was effected in 1848. This brought with it scattered bodies of population of Mexican origin. The discovery of gold in California had begun to draw population to San Francisco and the foothills of the Sierra, but as these western settlements were not of great magnitude, the map has not been extended to include them.

During the decade the states of Iowa, Wisconsin, Florida, and California were admitted, and the territories of Minnesota and Oregon created.

In 1860 there is noticed a greater progress of the frontier line northward in Michigan and westward in Minnesota and Iowa. The frontier line stepped across the Missouri river into Nebraska and Kansas, and in Texas made great westward advances. Settlements in the far west had made little advance, except in the gold regions of California.

In 1853 the Gadsden purchase from Mexico was effected, completing the main body of the United States as it now exists. During the decade Minnesota, California, and Oregon had been admitted as states, and Kansas, Nebraska, Utah, and Washington had been organized as territories.

In 1870 the frontier line had made but slight advance. It extended a few miles farther north in the lake states, a few miles farther west upon the slopes of the plains. This is the first of the series of maps which represents the entire area of the country, showing the settlements
in the Rocky mountains and Pacific states. It reveals a strip of settlement extending along the east base of the Rocky mountains from southeastern Wyoming through Colorado and New Mexico to Texas; another in central Utah at the base of the Wasatch; a large area in California, including much of the Sierra and the Pacific coast, and another in the Willamette valley in Oregon. Besides these, many small, isolated settlements were scattered over the mountains and valleys of this region.
During the decade many territorial changes were made. Alaska was purchased from Russia; West Virginia, Kansas, Nebraska, and Nevada were admitted as states, and the territories of Arizona, Colorado, Dakota, Idaho, Montana, and Wyoming were organized.

In 1880 there was shown a great extension of settlement, particularly on the plains and in the Rocky Mountain region. The frontier line had made a striking advance into what was then believed to be a part of the Great American Desert, driving the buffalo and Indians before it. The areas of settlement at the east base of the Rocky mountains and in Utah, California, and Oregon had greatly increased. New areas had sprung up, as in Montana, eastern Washington, and southern Arizona.

During the decade Colorado was admitted as a state.
In 1890, which closes this series, the progress of settlement is seen to have been at least equally rapid with that of the decade before. Settlements in the Rocky mountains had increased enormously, and had joined with those moving up the plains, forming a continuous body of settlement. Those of Montana, Washington, Oregon, California, and Utah had spread until throughout this region the settled area has become the rule and the unsettled area the exception. There is no longer any frontier line.
The changes of territory during the decade were also marked. Montana, Wyoming, Idaho, Washington, North Dakota, and South Dakota were admitted as states, and the territory of Oklahoma was created.
The following table sums up the progress of settlement in this country for the century:

| censuses. | $\begin{gathered} \text { Settled area } \\ \text { (square miles). } \end{gathered}$ | $\begin{aligned} & \text { Average } \\ & \text { density. } \end{aligned}$ |
| :---: | :---: | :---: |
| 1790. | 239,935 | 16. $3^{8}$ |
| 1800 | 305,708 | 17.36 |
| 1810 | 407,945 | 17.75 |
| 1820 | 508, 717 | 18.94 |
| 1830. | $63^{2}, 717$ | 20. 33 |
| 1840. | 807, 292 | 21.14 |
| 1850. | 979, 249 | 23.68 |
| 1860. | 1, 194,754 | 26. $3^{2}$ |
| 1870. | 1, 272, 239 | 30. 3 I |
| 1880.. | 1,569,565 | 31.96 |
| 1890. | 1,947, 280 | 32.16 |

Thus the settled area in 1890 was eight times as great as in 1790 , and the density of settlement of this area twice as great, the population having become sixteen times as numerous.
The following table shows the proportion between the total area of the country and the settled area at each census:

| censuses. | Percentage which settled area bears to total area. |
| :---: | :---: |
| 1790. | 28.98 |
| 1800. | 36.93 |
| 1810............ | 20.40 |
| 1820....... | 25.44 |
| 1830. | 30.73 |
| 1840................ | 39.21 |
| 1850..... | 32.85 |
| 1860.................. | 39.49 |
| 1870... | 42.04 |
| 1880. | 51.88 |
| 1890...... | 64.36 |

In 1890 nearly two-thirds of the area of the country, excluding Alaska, was settled, under the arbitrary definition of settled area here used.




16. DISTRIBUTION IN 1850 .


19. DISTRIBUTION OF THE POPULATION OF THE UNITED STATES (EXCLUDING INDIANS NOT TAXED): 1880 .




URBAN POPULATION.
The census commonly regards as the urban element that portion of the population which lives in cities of 8,000 inhabitants or more. This element constituted in 1890 , 29.20 per cent of the entire population. The proportinn has increased greatly during the century, being in 1790 but 3.35 per cent. The following table sets forth the increase in the proportion at each succeeding census:

| censusis. | Proportion of urban to total urban to total population. |
| :---: | :---: |
| 1790 | 3.35 |
| 1800 | 3.97 |
| 1810. | 4.93 |
| 1820 | 4.93 |
| 1830 | 6.72 |
| 1840 | 8.52 |
| 1850. | 12.49 |
| 1860. | 16.13 |
| 1870 | 20.93 |
| 1880. | 22.57 |
| 189 | 29.20 |

Diagram I shows by the total length of its bars the total population of the country at each census and by the shaded portion of each bar the urban element. It is seen that while the total population has increased with great rapidity, the urban element has increased in much greater proportion.

Diagram 21 shows the distribution of urban population among the different states, representing the entire population of each state by the total length of the bar and the urban element by the shaded portion.

It is seen at once that the states having in 1890 the largest proportion of urban population are, after the District of Columbia, which is practically a city, the northeastern states. Following them are the states of the upper Mississippi valley, while the southern and certain of the western states stand lowest in the proportion of urban population.

Diagram 22 shows by the length of the bars the proportion which the urban element bore to the total population at each census in each state.
21. Total and Urban Population, by States and Territories: i890.

24. Increase of Population of the Great Cities : 1800 to 1890.



27. AVERAGE SIZE OF FAMILIES: 1890.



As is the case in the country at large, the proportion was initially small in most of these states, and has increased with more or less steadiness to the present time. In nearly every state the proportion at present is much greater, in many cases several times greater, than when the urban element first appeared. In other words, in nearly every state the urban element has increased more rapidly than the rural element, and in most cases the increase has been very decided
Diagram 23, plate 7 , exhibits the race for pre-eminence among the 50 largest cities of the country. In 1790 there were but $I_{3}$ cities of sufficient prominence to be included in this list. Certain of these are to-day among our largest cities. Certain others had their greatest relative prominence in earlier years and have long since disappeared from among our great cities, while still others have become absorbed by neighboring cities.
For a century New York has been our leading city. For go years Philadelphia was second in rank, and dropped below Chicago only in the last census. Boston was originally third, and after a somewhat varied career, it winds up at the end of the century as the sixth. Charleston, S. C., which started as the fourth, dropped rapidly in rank, and in 1890 was no longer among the 50 largest citiés, disappearing from the list in 1880 . Baltimore started fifth, and rose to be second in the list in 1830 , 1840 , and 1850 . Since then its rank has diminished, ending the century seventh in order. The above are among our oldest cities. Chief among the younger ones is Chicago. This appeared in the list only 40 years ago, in 1850 . It rose rapidly, and in 1890 was the second city in the Union. St. Louis appeared a decade earlier, and in 1870 it was the fourth city of the country. Perhaps the most startling case of growth illustrated in this diagram is that of Denver, which appeared as a city of importance in 1880, being then at the foot of the list. In 1890 it leaped above 24 competitors, reaching a rank about midway of the list.
Diagram 24 shows the progress of our great cities in population from the beginning of the century, or from their origin, up to the date of the Eleventh Census.
Subtracting from the total population of each county the number of inhabitants of its cities of 8,000 or more, there remains what may be regarded as the rural population, although the separation is by no means complete. Comparing the rural population of 1880 with that of 1890 , county by county, it is found that over large areas this part of the population has diminished in number during the decade. On Map 25, plate 8, these areas are represented by the brown color, while the areas in which the rural element has increased are shown by the yellow tint. It shows that this element has diminished over much of New England and the Atlantic plain southward as far as North Carolina, and in many of the states of the upper Mississippi valley. The mining regions of Colorado, Nevada, and California have also lost, while elsewhere, except in scattering localities, the rural element has gained during the decade.

## SIZE OF FAMILIES.

Since 1850 the number of families, as well as the number of inhabitants, has been enumerated, and the average size of the family has been computed. In 1850 this was 5.55. Since then it has steadily diminished, until it is now 4.93, a diminution of over II per cent in the past 40 years. Diagram 26 shows by states the average number of persons per family. It is seen, as a rule, that the largest families are in the southern states, and the smallest families in those of the far west, which are under somewhat unsettled conditions, and those of New England.

The size of families is shown in greater detail by Map ${ }_{27}$, plate 8. In the preparation of this map the county has been used as a unit, the average size of the family computed in each, and the counties then grouped according to the legend upon the map.

> SEX.

Since 1850 , when the population was first classified by sex, males have been continuously in excess of females. Out of every 100 persons in 1890, 51.21 were males and 48.79 were females.

Map 28, plate 9, shows the distribution of the popula tion as to sex throughout the country. In this map the county is, as in others of this series, used as the unit, the proportions of the sexes in each having been computed and the results grouped in accordance with the legend on the map, the red color indicating those regions in which females are in excess and the yellow where males are in excess, the different shades of yellow indicating different proportions of that sex.
Upon the Atlantic slope generally females are in excess, and in the District of Columbia and Massachusetts the excess is large. In the central and western parts of the country, indeed in over nine-tenths of its area, males are in excess, and that excess reaches its maximum in the far west, where population is sparse and where the stage of settlement and the industries are such as to discourage the presence of women and children.

## COLOR AND RACE.

In respect to race, the population is divided into whites negroes, Indians, and Asiatics, the term negroes including all persons of negro descent. The separation between the races has been made at each census from the beginning. The following table shows the numbers and proportions of whites and negroes at each census:

| censuses. | White. | Negro. | White. | Negro. |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Per cent. | Per cent. |
| 1790..... | 3, 172, 006 | 757, 208 | 80. 73 | 19.27 |
| 1800. | 4, 306,446 | 1, 002, O37 | 81. 12 | 18.88 |
| 1810.... | 5, 862, o73 | 1, 377,808 | 80.97 | 19.03 |
| 1820. | 7,862,166 | 1, 771, 656 | 81.61 | 18. 39 |
| 1830.... | 10, 537,378 | 2, 328,642 | 81.90 | 18. 10 |
| 1840. | 14, 195, 805 | 2, 873, 648 | 83. 16 | 16.84 |
| 1850. | 19, 553, 068 | 3, 638,808 | 84.31 | ${ }^{15} 5.69$ |
| 1860. | 26, 922,537 | 4, 441, 830 | 85.62 | 14. 13 |
| 1870..... | 33, 589, 377 | 4, 880,009 | 87. 11 | 12.66 |
| 1880. | 43, 402, 970 | 6,580, 793 | 86.54 | 13. 12 |
| 1890...... | 54,983, 890 | 7,470, 040 | 87.80 | 11. 93 |

As seen above, in 1790 the whites formed 80.73 per cent and the negroes 19.27 per cent of the population. In 1890 the corresponding percentages were 87.80 and 11.93. During the century the white element has relatively increased and the negro element has relatively diminished. In 1790 the negroes formed nearly one-fifth of the population. In 1890 it was less than one-eighth. Indeed, the present proportion of the negro element is less than one-third what it was at the time of the First Census.

The following table shows the rates of increase of the two races:


With two exceptions it appears that the rate of increase of the whites has been greater than that of the negroes, these exceptions being, first, that between 1800 and 18 ro, and second, that between 1870 and 1880, the last case being due to the faulty enumeration of 1870 .
Maps 29 and 30, plates ro and II, show the distribution of the colored, including all persons of negro descent, Chinese, Japanese, and civilized Indians. The first of these shows their absolute distribution expressed in the number to each square mile, county by county, computed in the same manner as those showing the density of population. The second of these maps shows the proportion which the colored element bears to the total population,
26. Number of Persons to a Family, by States and Territories: isgo.

31. Percentage of Whites and Negroes in Certain States at each Census: 1790 to 1890.






county by county. The habitat of the negro is the southern states, where nine-tenths of them are found. They are of little numerical importance outside of these states, whose climate and industries are well suited to them. Within these states there are, however, marked differences in their distribution. They avoid a high country, as the Appalachian mountains, and affect the lowlands, such as the coast swamps and alluvial bottoms of the Mississippi, Arkansas, and Red rivers. Relatively to the total population, they are most abundant in South Carolina, Mississippi, and Louisiana, and least abundant in the border states of Missouri, Kentucky, Tennessee, and the Virginias. The tendency of their movements is southward and westward.
Diagram 31 represents the proportions in which the population of each southern state has been made up at each census as regards the white and negro elements. Each vertical column represents ioo persons at a certain census, and the shaded part of that column is the propor tional number of negroes. The number of Chinese, Japanese, and civilized Indians in these states is too small to affect the proportions indicated from 1860 to 1890 , inclusive, and has therefore been ignored. Prior to 1860 these elements were not distinguished. In this way the history of the white and negro elements in each of the former slave states, 16 in number, has been traced from the time they became states or territories.
Thus in 1790 Delaware had in every 100 inhabitants 22 of the negro race. The proportion increased, until in 1830 and 1840 it was 25 . From that time it has steadily diminished, until in 1890 there were but 17 out of every 100 inhabitants. Maryland started in 1790 with 35 negroes out of every 100 of her population. The number increased to 38 in 1810, and since then has steadily and rapidly diminished until 1890 , when 21 out of every 100 were negroes. The District of Columbia shows greater irregularities. In 1800, when this political division first appears, 29 out of every 100 inhabitants were negroes. In 1810 it rose to 33 , thence it diminished, and in 1850 was but 27 . In 1860 it made a sudden drop to 19 , because of the abolition of slavery in the District. Between 1860 and 1870, because of the civil war and the fact that Washington afforded an asylum for the negro race, the proportion increased suddenly to 33 , and has since been practically at a standstill. The his, tory of Virginia and West Virginia is given togetherinasmuch as they were one state until i863. In 1790 , 41 out of every 100 inhabitants were negroes. The number increased slightly, and in 1810, 1820, and 1830 was 43 . Since that time it has diminished steadily, the proportion in 1890 being but 28 .
The history of Kentucky commences with 1790, when ${ }^{1} 7$ per cent, or about one-sixth of its population, were negroes. That proportion increased and reached its maximum in 1830, with 25 per cent, or one-fourth of its population. Since then it has steadily diminished, ending in 1890 with 14 per cent. Missouri started in I810 with 17 per cent of negroes, and held about this proportion until 1850, when it dropped to 13 per cent. Since then it has continued to decline, and in 1890 was but 6 per cent. The states thus far described are border states (with the exception of the District of Columbia), and their history has many features in common. For three, four, or five decades the proportion of the negroes increased, and has thence steadily diminished to the present time.
In North Carolina the proportion of negroes has increased up to 1880 , and has diminished only during the last decade. In South Carolina the history has been very similar, as the increase, though less irregular than in the case of the old North State, has been much greater. Starting with 44 per cent, the proportion increased to 6 I in 188 o , and dropped to 60 in 1890. In Georgia the proportion reached its maximum in 1820 , diminished in 1840 and 1850 , and has since increased. In Alabama there was a continuous increase up to 1870 and 1880 , while in 1890 there was a slight diminution. In Mississippi the proportion has increased from the beginning to the end, excepting that in 1850 and 1870 there was a slight temporary reduction. In Arkansas the proportion increased rapidly up to 1860, and since then it has been nearly at a stand-
still. In Tennessee the proportion increased up to 1860 , remained at a standstill for three decades, and in 1890 has become slightly reduced.

All these are cotton states and have had quite a similar history. The proportion of negroes increased from the beginning nearly or quite up to the present date. In the other 3 states of this group-namely, Florida, Louisiana, and Texas-the proportions of the race have been affected by immigration even from the north, as in the case of Florida, or from foreign lands, as in the case of Texas and Louisiana. In Florida the proportion of negroes has oscillated quite widely. Starting in 1830 with 47 per cent, it rose to 49 at the next census; then in 1860 it dropped to 45 , and in 1870 to 49 . Since then it has diminished, being in 1890 only 42 , the last depression being due to immigration from the north. Louisiana started with 55 per cent in 1810, dropped to 52 at the next census, then in 1830 rose to 59 per cent, then fell to 50 per cent, where it has since remained. This last depression is probably due to the growth of the city of New Orleans. The proportion of Texas started in 1850 with 28 per cent and rose in 1870 to 31 , and since then has diminished, closing in 1890 with 22 per cent. The depression is due to immigration from foreign lands and from Louisiana and Texas.

## NATIVITY.

Since 1850 the different censuses have classified the population as native and foreign born, and the foreign born by the principal countries of birth.

The following table shows the proportions in which the total population was composed of these two elements at each census:

| censuses. | Native born. | Foreign |
| :---: | :---: | :---: |
| 1850. | 90. 32 | 9. 68 |
| 1860. | 86.84 | $\mathrm{I}_{3}$. 16 |
| 1870. | 85. 56 | 14.44 |
| 1880. | 86.68 | 13.32 |
| 1890. | 85.23 | 14.77 |

Thus it appears that the element of foreign birth has increased in 40 years from 9.68 to 14.77 per cent. Its increase during the first of these four decades was proportionally very rapid, but since that time the proportion has little more than held its own, in spite of the enormous immigration which this country has received.

In 1890 , out of a total population of $62,622,250$, there were $9,249,547$ inhabitants of foreign birth and $53,372,703$ of native birth.

In the early decades of our history immigration was not of importance; indeed, prior to 1847 , when the succession of famines in Ireland and political troubles in Germany induced large emigration from those countries, our accessions from abroad were not of much importance. Since that date, however, the movement of peoples from Europe to this country has been enormous.
The following table sums up the immigration by decades between 1820 and 1890 :

| decades. | Immigration. |
| :---: | :---: |
| Total | 15,427, 657 |
| 1821 to 1830. | 143, 439 |
| 183 r to 1840 . | 599, 125 |
| 184 r to 1850. | 1,713,251 |
| 1851 to $1860 .$. | 2, 598, 214 |
| 1861 to 1870 . | 2,314, 824 |
| 1871 to $1880 .$. | 2,812,191 |
| 1881 to 1890. | 5, 246, 613 |

In considering this enormous number the fact must not be overlooked that a certain proportion which, while indeterminate, is by no means small, have returned to the mother country, so that the numbers here given do not represent the accessions to our population.

The following table shows by decades and countries the principal constituents of the immigration:
principal constituents of the immigration.

| country of nativity. | $\begin{gathered} \text { cis } \\ \text { to } \\ 1830 \end{gathered}$ | $\begin{gathered} \text { r831 } \\ \text { to } \\ \text { t } 84 \end{gathered}$ | $\begin{gathered} \mathrm{I} 84 \mathrm{I} \\ \text { to } \\ \mathrm{t} 8 \mathrm{O} \end{gathered}$ | $\begin{gathered} \text { c851 } \\ \text { 1 } 10 \\ 1860 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Canada | 2,277 | 7 13,624 | 41, 723 | 59,309 |
| Ireland | 50, 724 | 4 207, 381 | 780, 719 | 914, I19 |
| England and Wales (a). | 22,167 | 7 73, 143 | 263, 332 | 385, 643 |
| Scotland | 2,912 | 2 2,667 | 3,712 | 38,331 |
| Norway and Sweden. | 91 | 1 I, 201 | 13,903 | 20, $93{ }^{1}$ |
| Denmark. | 169 | 1 1,063 | 539 | 3,749 |
| Russia and Poland | 91 | $1 \quad 646$ | 656 | 1, 62 I |
| Italy | 408 | 2,253 | I, 870 | 9, 23 I |
| Germany | 6,761 | I 152,454 | 434, 626 | 951,667 |
| France. | 8,497 | 7 45,575 | 77, 262 | 76, 358 |
| Netherlands | 1, 078 | B I, 412 | 8,251 | 10, 789 |
| country of nativity. |  | 861 to 1870 | 1871 to 1880 | 1881 to 1890 |
| Canada |  | 153, 871 | 383, 269 | ${ }^{6} 392,802$ |
| Ireland. |  | 435,778 | 436,871 | 655,482 |
| England and Wales (a) |  | 568, 128 | 460, 479 | 757,488 |
| Scotland |  | 38,768 | 87, 564 | 149, 869 |
| Norway and Sweden . |  | 109,298 | 211, 245 | 568, $3^{62}$ |
| Denmark. |  | 17,094 | 31,771 | 88, 132 |
| Russia and Poland. |  | 4,536 | 52,254 | 265, 088 |
| Hungary . |  | 7,800 | 72,969 | 353, 719 |
| Italy . . |  | 11, 728 | 55,759 | 307,309 |
| Germany . |  | 787,468 | 718,182 | 1, 452,970 |
| France |  | 35,984 | 72,206 | 50, 464 |
| Netherlands |  | 9, 102 | 16,541 | 53, 701 |

$a$ Including Great Britain, not specified.
$b$ Five years only.
From this table it appears that of the total immigration two-fifths have been derived from the United Kingdom, the majority of which came from Ireland; 28.3 per cent came from Germany. The United Kingdom and Germany together have supplied over two-thirds of the entire immigration.
The character of the immigration as regards nationality has changed materially in recent years. At first it was composed largely of Irish; later the German element became of first importance, and during the past decade, while the Germans, British, and Irish remained the leading nationalities, the Scandinavians have become of great importance, and the Russians, Poles, Huns, and Italians have increased greatly.
Maps $3_{2}$ and 33 , plates 12 and 13 , illustrate the distribution of the foreign born over the face of the country. The first of these maps shows their density expressed by the number of foreign born to the square mile. It shows that the vast majority of this element of the population is in the northeastern and north central states, the number in the south being trifling, their distribution being thus complementary to that of the negroes.

The second of these maps shows the proportion of the foreign born to the total population. In most respects, this map resembles the one above, but it develops the fact that in the western states and territories, while the number of foreign born is not large, their proportion, relative to the total population, is very heavy.

## FOREIGN PARENTAGE.

The statistics of the number of persons of foreign birth in the country depict in part only the extent to which our population is composed of foreign blood. The statistics of those of native birth but of foreign parentage supply this deficiency in great measure. These statistics were gathered in 1870, 1880, and 1890, and were tabulated and published by the first and last of these censuses. In 1880 they were tabulated and published for only a part of the states and territories. For the purpose of preparing diagrams, however, a sufficiently close approximation can be made by the use of this partial compilation.
In 1890 the total number of persons of foreign parentage was $20,676,046$, or 33.02 per cent of the entire population. Of this large number, less than one-half, or $9,249,547$, were born in foreign lands, and $11,426,499$ were born in this country, but of parents born in other countries.

The proportions of the various elements of population, so far as ascertained at each census, are approximately represented in Diagram 34, plate 14. The circles are proportional to the population as shown by the different censuses. From 1790 to 1840 , inclusive, the population was classified by the censuses as white and colored only, and these two divisions appear in the circles representing the population of these dates, the gray sector representing the proportion of the colored element and the pink portion the white element. In 1850 and 1860 a third subdivision appears, namely, the foreign born, represented by the green sector, and in 1870, 1880, and 1890 a fourth subdivision appears, representing the native born of foreign parentage by the orange sector, the yellow here representing the native born of native parents.

It is seen that the sector representing the colored element has diminished proportionally from the first. The sector representing the element of foreign birth has increased, and that representing the native born of foreign parents has also increased, while that representing the whites of native birth and parentage has diminished. In 1890 the last class constituted but little more than one-half of the total population.
The distribution of these four elements of population among the states in 1890 shows the widest possible divergence. This is represented graphically by Diagram 35, plate 14, where the number of each of these classes out of every roo inhabitants is given. The states are arranged in the order of the proportion of native white of native parentage, that state which has the smallest proportion of this element being given first, and that having the largest being given last. Thus in North Dakota out of every 100 inhabitants only about 20 are whites of native birth and native parentage. Thirty-five are of native birth of foreign parentage, and nearly 45 of foreign birth. Then follow in order Minnesota, with 24 native whites of native parentage, Wisconsin with 26, Nevada with 33 , and Utah with about the same number. The state having the largest proportion of white natives of native parentage is West Virginia, with 87 out of every 100.

Diagram 36, plate 14 , presents similar proportions in the great cities of the country. Here the proportions are arranged in the same order as in the preceding diagram, and Milwaukee is found at the head, with only $\mathrm{I}_{3}$ white natives of native parentage, while nearly half of her population are native whites of foreign parentage, practically all the rest being foreign born. New York follows with 18 native whites of native parentage out of every 100 inhabitants, Chicago, Detroit, and San Francisco with 2I, while the column ends with Kansas city, with 55 out of every Ioo of native whites of native parentage.

Diagram 37 shows by the lengths of the bars the number of the foreign born in each state and territory. The state having the greatest number of foreign born is New York, with over 1,500,000, while Pennsylvania and Illinois, which follow, have little more than half as many. On the other hand in the southern states the number is very small.

Diagram 38 presents similarly the number of white persons of foreign parentage in each state and territory, including the white persons of foreign birth. Here New York is again found in the lead of the other states, nearly $3,500,000$ being of foreign birth or parentage. Pennsylvania and Illinois have little more than half as many, while Massachusetts, Ohio, and Wisconsin have about a third as many.
Map 40, plate $I_{5}$, shows the proportion which the whites of foreign parentage bear to all whites. It shows that the distribution of foreign blood, including in that term not only those of foreign birth but the native born of foreign parentage, is distributed in a manner very similar to those of foreign birth.

## NATIVITY OF THE FOREIGN BORN.

Diagram 39, plate 14, shows by the entire areas of the circles the proportional magnitudes of the element of foreign birth at each census since 1850, and by the sectors into which each circle is divided the proportions of the
37. Foreign born Population, by States and Terrtrories: isgo.

principal nationalities. In 1850 the Irish formed nearly one-half of all foreign born, but this proportion has diminished steadily until in 1890 it formed little more than onesixth. On the other hand the Germans have increased from the beginning and now constitute about one-third of all. The British have held their own; the Canadians have increased, while the Scandinavians have increased proportionally more rapidly than any other nationality here represented.
Diagram 4I shows the number of persons of foreign birth from each of the principal contributing countries.
It appears that Germany is far in the lead, nearly 2,800,000 being credited to that country, Ireland having nearly 1,900,000, while Canada and England are credited with less than $1,000,000$ each. The United Kingdom, including England, Scotland, Wales, and Ireland, have collectively a larger representation than any other country, while Russia, Italy, Poland, Austria, and Bohemia have as yet but a small representation.

Diagrams 42 to 48 , inclusive, show the numbers of the foreign born from each of the principal contributing countries, which are found in those states in which they are numerically important. The natives of the Germanic nations, including in that term Germany, Austria, Netherlands, and Belgium, are strongest numerically in New York, next in Illinois, while in Wisconsin, Pennsylvania, and Ohio there are also large numbers of them. The Irish are found in much the greatest strength in New York; next to that in Massachusetts and Pennsylvania. The natives of Great Britain, including those from England, Scotland, and Wales, are found in the greatest strength in Pennsylvania, and in almost equal strength in New York, while Massachusetts and Illinois contain but little more than half as many. The natives of Canada and Newfoundland are found in the greatest strength in Massachusetts and Michigan. Those of the Scandinavian nations, including Norway, Sweden, and Denmark, are most strongly represented in Minnesota, next in

33. PROPORTION OF THE FOREIGN-BORN TO THE AGGREGATE POPULATION: : 890



1790 TO 1840 - WHITE COLORED 4

native of native parents $\square$ nativeof foreign parents 2

36. CONSTITUENTS OF THE POPULATION OF THE GREAT CITIES : 1890.


39. NATIONALITIES OF THE FOREIGN BORN AT EACH CENSUS: 1850 то 1890.


NATIVE WHITE OF NATIVE PARENTS $\square$
NATIVE WHITE OF FOREIGN PARENTS $\square$

$$
\begin{aligned}
& \text { FOREIGN WHITE } \\
& \text { TOTAL COLORED }
\end{aligned}
$$



40. PROPORTION OF WHITES OF FOREIGN PARENTAGE TO ALL WHITES: 1890


46. Number of natives of the Scandinavian Nations
by States and Territories: i 890

47. Number of Natives of the Slav Nations, by
States: i8go.

48. Number of Nattves of the Laytin Nations, by


Illinois and Wisconsin. The natives of the Slav nations, including Russia, Poland, Hungary, and Bohemia, are most heavily represented in New York, and next in Pennsylvania and Illinois. The Latin nations, including France, Italy, Spain, and Portugal, are most numerous by far in New York.
Diagram 49, plate 16 , shows the composition of the foreign born population of each state. The circle represents in each case the entire foreign born population of the state, and the relative strength of each nationality is indicated by the size of the different sectors. Thus, in Maine, New Hampshire, and Vermont much more than half of the element of foreign birth is made up of Canadians, next to that in importance being the British and Irish. In Ohio, Indiana, Wisconsin, and Missouri one-half or more of the foreign element is composed of Germans, and in Minnesota nearly half is made up of Scandinavians. The greatest proportion of British is found in Utah, fully one-half of the foreign element being of that nationality.
Diagram 50 represents by its entire area the population of the country in I890. This is subdivided into native and foreign born, the last constituting 14 per cent of the whole population. The rectangles representing these two elements of population are then subdivided, the smaller part of each representing the proportion of that element which was found in cities of 25,000 inhabitants or more.
It appears that of the native born only 19 per cent were found in these cities, while of the foreign born not less than 44 per cent were found in the same cities.
Analyzing these results still further, there are discovered more startling facts, which are set forth in Diagram 51. From this it appears that while only 19 per cent, that is, less than one-fifth, of the native born were found in these cities, more than half of the Irish, Italians, Poles, and Russians, and nearly one-half the Germans and Bohemians were found there, while the proportion of every one of these elements of foreign birth which was found in these cities was much larger than the proportion of those of native birth.
50. Proportion of the Native and Foreign
Born in Crties of 25,000 Inhabrtants Born in Crties of 25,000 Inhabitants or More : I Iggo.

| Foreign | Whwn mme |
| :---: | :---: |
| NATIVE BSAL |  |

only 8 per cent of the Germans and Irish have remained aliens.
The other diagram shows the proportion of aliens to the total foreign born males 21 years of age and over, in the principal cities, where the great body of them is found. Map 64, plate 22, shows by states, the proportion of aliens to foreign born males of 21 years of age and over.
Diagram 65 , plate 22 , sums up the history of the population of the country, and its elements for the century. The breadth of the diagram represents the number of inhabitants as determined by the several censuses, a line being drawn across it to represent each census. The gray tint represents the colored element, the pink tint the native whites and their descendants, and the blue tint those of
51. Percentage of each Nativity in Cities of 25,000 Inhabttants or More: : 1890 .

62. Percentage of aliens in the Total Foreign born of each Specified Nativity
[Per cent.]


The distribution of the natives of other countries is shown in greater detail upon the maps, 52 to 6 I , plates 17 to 2 I , inclusive. The first map on each page represents the number of persons of each nationality per square mile, that is, the density, and the second, the proportion which the number of persons of that nationality bears to the total population.
Diagrams 62 and 63 relate to the distribution of aliens, this term including the unnaturalized foreign born males 21 years of age and over. The first of these shows the proportion of the foreign born males, 21 years of age and over, of certain nationalities, to the total number of foreign born of those nationalities, indicating, approximately, the proportion which has refrained from acquiring citizenship. Nearly nine-tenths of the Chinese remain aliens. The Italians and Hungarians are next, but their proportion is less than half as great; while, on the other hand,
foreign birth, with their descendants. The amount of immigration in each decade is represented by the additions to the blue tint.
The method of construction of this diagram will explain its meaning more clearly. The number of colored was plotted directly from the census figures. Of the whites, there is no account taken of immigration prior to 1830 , as the number was too small to appear, but all whites were assumed as of native stock. Foreign stock appeared in appreciable number, first between 1830 and 1840 , and thereafter increased, both by natural increase and by immigration. The rate of natural increase of the native and foreign elements remains to be determined. The census of 1870 furnishes data for obtaining this, in the number of persons of foreign parentage, including the foreign born, for at this date, less than a generation after immigration became large, this class comprised practically all the


53. PROPORTION OF THE NATIVES OF CANADA AND NEWFOUNDLAND TO THE AGGREGATE POPULATION: I890.


55. PROPORTION OF THE NATIVES OF GREAT BRITAIN TO THE AGGREGATE POPULATION: 1890


57. PROPORTION OF THE NATIVES OF IRELAND TO THE AGGREGATE POPULATION: 1890.


59. PROPORTION OF THE NATIVES OF THE GERMANIC NATIONS TO THE AGGREGATE POPULATION: 1890.


61. PROPORTION OF THE NATIVES OF THE SCANDINAVIAN NATIONS TO THE AGGREGATE POPULATION: 1890 .

64. PROPORTION OF ALIENS TO FOREIGN BORN MALES 21 YEARS OF AGE AND OVER. 1890.

BRITISH.

NATIVE STOCK.
63. Percentage of aliens in the Foreign born Males 21 Years of Age and Over in Certain Cities: isgo.

foreign blood in the country. In 188o, and especially in 1890, io and 20 years later, there were, of course, large numbers of persons of foreign descent in the second generation in the country, of whom these censuses make no record. Consequently, while the element of foreign parentage, as given by the census of 1870, practically includes all the foreign blood, those given in 1880 and 1890 , are incomplete in that respect. The rates of increase of the native and foreign elements, as obtained
from these figures of 1870 , have been applied in 1880 and 1890, and an approximate separation thus made between the elements of native and foreign extraction at these censuses.

The diagram at the bottom of the plate represents the status in 1890, classifying the element of foreign extraction by the leading nationalities of origin.

## INTERSTATE MIGRATION

Of the $53,37^{2}, 703$ persons of native birth in the United States in 1890, less than $42,000,000$ were found still living in the state of birth, while 11,500,000 were found in other states. Nothing, perhaps, more forcibly illustrates the extreme mobility of the people than the fact that no less than 22 per cent, or more than one-fifth, of the native population were found in states other than those in which they were born. This, however, by no means measures the full extent of the migration, since many have moved more than once, and many others who have left their native states have subsequently returned.

Diagram 66 shows the magnitude of the native migration, the bars on the right representing emigration, those on the left immigration. Of all the states, New York has sent out the largest number, with Ohio second, Pennsylvania third, and Illinois fourth. The eastern states head the list and the western states conclude it.

The bars on the left show the converse of this, the magnitude of the native immigration. The states which have received the largest immigration are Kansas, Illinois, Iowa, and Texas. In general the great states of the Mississippi valley have attracted the largest numbers of migrants, while the eastern states have attracted but few, and those of the far west, though mainly peopled from the east, are small in population.
A comparison of the relative lengths of the two bars of each state shows the net result to the state of this movement. Thus, New York has lost heavily; about 8oo,000 more people having departed than have arrived. Ohio and Pennsylvania are also sufferers. Virginia has lost over half a million. On the other hand, Illinois has gained. Indeed, every state east of the Mississippi river has lost, except Massachusetts, New Jersey, West Virginia, Florida, Michigan, and Illinois, while every state west of that river has gained.

Diagram 67 shows the composition of the population of each state as regards natives to the state, natives of other states, and foreign born, expressed in percentages of the whole population. Furthermore, the native emigration, expressed as a percentage of the total population, is shown by the projections on the left. Thus, from the diagram, one sees that the population of Maine is composed of 84 per cent natives of the state, 4 per cent of other states, and 12 per cent of foreign born, while she has sent out to people other states a number which is 32 per cent of her present population.
Of all the states, Vermont has sent out the largest proportion, being a number greater than half her present population. Oklahoma has sent out no appreciable proportion, and Washington only a trifling proportion.
The series of maps numbered 68 to ${ }_{\text {II }} 7$, inclusive, plates 23 to 31 , show the distribution, by the number to a square mile, of those born in each state. Thus, Alabama, while retaining far the greater proportion of her sons, has sent them out in considerable numbers to the neighboring state of Mississippi, and in less number to Georgia, Florida, Louisiana, Texas, Arkansas, and Tennessee. Alabamians are still more sparsely scattered over the states farther north and east, while in the extreme northern and western states the number is trifling.
As a rule, the direction of this migration has been westward, along parallels of latitude. There has been little movement northward or southward. Comparatively few from Massachusetts have migrated south of Mason and Dixon's line; comparatively few from South Carolina have gone north of that limit.
Map ir8, plate 3r, shows by states and territories the proportion of foreign born whites who can not speak English to the total foreign born males 21 years of age and over. The largest proportions are where the Chinese and Mexicans are found. Following them are the French of Louisiana and the French Canadians.
66. Interstate Migration-Number of Native Immigrants and Native Emigrants, by States and Territories: i8go.

Native immigrants.
[Hundreds of thousands.]
Native emigrants.



AGE AND SEX.
The series of diagrams numbered 119 to 123 , inclusive, represent the distribution of the population and its elements in 1890 in age and sex by percentages of the whole number of each element. A description of one of these diagrams applies to all. In Diagram II9 the total population is divided by means of the middle vertical line into males and females. The lower horizontal bar represents by its entire length the percentage of the total population which was returned as being under 5 years of age, that portion of the bar to the left of the middle line being the proportion of females. The next horizontal bar represents the proportion between the ages 5 and io years, and so on. The total lengths of all the bars should add up to 100.

This diagram representing the total population is composed of several elements, which, in matters of age and sex, differ greatly. It is a composite.

The next diagram, I20, shows similarly the proportion of the native whites of native parentage by sexes and age. This may be regarded as representing the normal distribution in sex and age. The third diagram, I2I, shows similarly the native whites of foreign parentage. The story told by this differs decidedly from its predecessor. Here the proportion of children is much greater and that of mature persons much smaller than in the case of the native whites of native parentage. This is, of course, due to the fact that the parents of these people are not included, but will be found in the next diagram. The fact that immigration commenced on a large scale 40 to 45 years prior to the Eleventh Census is shown by the
rather sudden reduction in the proportion of people above 40 years of age.
The next diagram, 122 , shows the converse of the latter. This represents the distribution in age and sex of the persons of foreign birth. The proportion of children is very small, and of mature persons correspondingly large, since the body of our immigrants are persons of mature ageAnother feature appears prominently here, that is, the dis, parity between the sexes, the proportion of males being much greater than that of females, a fact which is due to the character of the immigration.
The last of these diagrams, 123 , relates to the colored. and this should be compared with that relating to the native whites of native parentage. Such comparison shows that the proportion of children is greater and that of mature persons less, a fact which is in accord with the greater birth and death rates of this class.
and Sex, in Percentages of each Element of the Population: 1890.

68. ALABAMA.




COLORADO

70. ARKANSAS.

73. CONNECTICUT.

$\square$ Less than ol To A SQUARE MILE
74. DELAWARE


PLATE 24.


76. FLORIDA.


80. INDIANA

83. KANSAS

PLATE 25.

81. INDIAN TERRITORY.

84. KENTUCKY.

82. IOWA.

85. LOUISIANA


INTERSTATE MIGRATION
DENSITY OF THE NATIVES OF THE SEVERAL STATES: 1890.

87. MARYLAND

90. MINNESOTA



92. MISSOURI.

95. NEVADA.

PLATE 27.

93. MONTANA

96. NEW HAMPSHIRE.

94. NEBRASKA.

97. NEW JERSEY.

$\begin{array}{lll} & \text { TO A SQUARE MILE } \\ \\ \text { Less than .01 } \\ & \square \text { Less than.01 to. } 1 \quad \square\end{array}$
98. NEW MEXICO.

101. NORTH DAKOTA.

PLATE 28.


103. OKLAHOMA

104. OREGON

107. SOUTH CAROLINA.

PLATE 29.


106. RHODE ISLAND.


110. TEXAS.

113. VIRGINIA.

PLATE 30.

111. UTAH.


WASHINGTON

112. VERMONT

115. WEST VIRGINIA

116. WISCONSIN.

117. WYOMING

$\square$ Less than .ol
118.

PROPORTION OF FOREIGN-BORN WHITES, 10 YEARS OF AGE AND OVER, WHO CANNOT SPEAK ENGLISH.



The group of diagrams numbered 124 to 128 shows the distribution by age and sex of the population in 1880, classifying it as total population, white, native white, foreign white, and colored. Of these 5 groups, the first and the last two correspond to similar groups in the diagram above relating to 1890 , and may be compared directly with them. The diagrams representing the total population in these two censuses show a general similarity, but it is seen that the proportion of children under io years of age, and particularly under 5 years of age, is much smaller in 1890 than in 1880. To a certain extent this reduction in the proportion of young children is to be expected as the country becomes more fully populated, but so great a change as is here indicated is scarcely to be expected in a single decade. In all probability there have been omissions in the enumeration of these young children sufficient to produce, in part at least, this difference between the two diagrams.
A comparison of the figures showing the distribution of the foreign born by age and sex at these two censuses develops little of note beyond the fact that the proportion of males at advanced ages has increased during the decade relatively to the females.
A comparison of the two diagrams representing the distribution of the colored in 1880 and 1890 develops in a startling manner the deficiency of young children, which was referred to in connection with the diagrams showing the total population. While in 1880 the colored children between 5 and io were decidedly greater in proportion than those between io and ${ }_{5} 5$, and while the proportion of those under 5 years of age was greater, although not decidedly greater than those in the group above it, we find in 1890 that the children between 5 and io were only slightly greater in proportion than those between to and $\mathrm{I}_{5}$, while those under 5 years were fewer in number than those between 5 and 1o, indicating either a diminished birth rate or a deficient enumeration.
The diagrams numbered $I_{29}$ to 133 , inclusive, represent the composition of the population and its elements by sex and age in each state and territory. That portion of each diagram upon the left represents the males, upon the right the females, and the age groups of 5 years each are represented by the horizontal lines, the population in each case being assumed at 100 .
The first of these diagrams relates to the total population. This is in the nature of a composite of all its elements, and the features are a resultant of the features of the various elements, which are analyzed on the succeeding pages.
The north Atlantic states are quite similar to one another. The sexes are nearly equal, the advantage, if any, being on the side of the females. The diagrams are narrow, showing a small proportion of children and a comparatively large proportion of adults, together with a considerable number at advanced ages. In several of these states the effect of foreign immigration is seen in an increase in breadth at ages from 20 to 30 years, and here a feature is recognized that is seen nowhere else. It is an increase in the proportion of women at these ages, which, in all probability, represents foreign white women employed as factory operatives.

The diagrams representing the south Atlantic states show a practical equality between the sexes, but a much larger proportion of children and correspondingly fewer of advanced age. Among these states there is no indication of immigration, either from abroad or from other states, which would be shown by an increase among adult ages.
Among the south central states the same conditions are observed, excepting that they are more accentuated, particularly in a still greater proportion of children, but in both these groups there is a marked depression in the children under 5 years of age. In several states there are fewer children under 5 than there are between 5 and io years, a fact which seems to indicate a deficient enumeration of this class.

Among the north central states there is to be noted a progression from east westward, the eastern states approximating in their type to that of the north Atlantic states, while those in the western part of this group of states show an excess of males, large numbers of children, and, by the swellings at adult ages, the effect of immigration, both of foreign born and native whites.
In the western states all these features are accentuated, and in some of them in very high degree. The proportion of children, though not as great as in the Mississippi valley, is still considerable, while the fact that the greater proportion of the population is made up of immigrants, either from other states or foreign countries, is shown by the exaggeration of the breadth of the diagrams at adult ages. In all these states, too, the proportion of males is greater than of females, especially at adult ages. To this description exception must be made in the cases of Utah and New Mexico. To New Mexico there has been comparatively little immigration, and while there has been much to Utah, especially from foreign countries, it has consisted in great part of entire families, instead of being, as elsewhere, largely of adult males.

Diagram I30 illustrates the distribution by age and sex of the native whites of native parentage, the native white blood of the country. This eliminates from consideration the colored, the foreign whites, and the native whites of foreign parentage.
The diagrams representing the north Atlantic states are narrow and symmetrical, the sexes being nearly equal in number, with few children and many of advanced ages. Those representing the south Atlantic and south central states are much broader, with a much larger proportion of children and with comparatively few adults, while the sexes are about equal in number. The differences between these states and those of the north Atlantic are well illustrated by a comparison between the adjoining diagrams of Maine and Louisiana, the latter state having double the proportion of children under 5 years that the former state has, while at ages between 60 and 65 years Maine has three times as large a proportion as Louisiana.
In the north central states a progression is seen from east to west, Ohio being quite similar to Pennsylvania, while Indiana, Illinois, and Iowa show greater breadth at the earlier ages and a diminishing breadth at the more advanced ages. In Nebraska and the Dakotas the influence of native migrations upon adults is first seen
in a swelling at these ages, especially on the male side. In the western states and territories this effect becomes much more marked, where it reaches a maximum in Wyoming and Montana, which have evidently received a considerable immigration of adult natives of native parentage, and this immigration evidently consists, in the main, of males.
The native whites of foreign parentage, diagram I3r, present a series of very different diagrams. The most prominent feature, and one which runs throughout the entire series, is the enormous proportion of children and the correspondingly small proportion of adults. The parents of this class are immigrants and are not represented upon these diagrams. Moreover, since immigration commenced upon a considerable scale only 45 years ago, we should not expect to find any considerable number represented in this diagram over the age of 45 years. A study of these diagrams throws them into two groups, one that in which young children are very numerous and which presents a tolerably uniform slope from the younger to advanced ages; and another in which the number of young children is comparatively small, and which increases in breadth for $10, \mathrm{I}_{5}$, or 20 years before diminishing. As specimens of the two cases in point, there may be mentioned Maine and Louisiana. Of the first type are the diagrams representing most of the northern states and of the second type most of those representing the southern states, while many of the western states combine the two. The cause of this difference in type is probably interstate migration. The foreign whites being confined almost entirely to the north and west, their children are born there, but as they reach maturity they migrate south and west, and thus produce a notable increase in the southern states at ages above that of childhood.
The diagrams representing the foreign whites, No. 132 , are at first sight meaningless, but a little study shows their salient features and throws them into more or less system. The first feature to strike the reader is the small proportion of children. In few states do the children under 5 years of age form 2 per cent of the entire foreign born; in many cases they are less than I per cent. The greatest proportion is in nearly every case above the age of 25 and commonly ranges from 25 to 50 years. Males are greatly in excess of females in most of the states, but in the New England states, where the factory system has attracted a considerable proportion of women, that sex is slightly in excess. The proportion of males increases with the longitude, being greatest in the Rocky Mountain states and territories, particularly in Montana, Washington, and Wyoming.
Diagram I33 represents the distribution of the colored population as to age and sex. In the word "colored" is here included the Chinese, Japanese, and civilized Indians. In the southern states these diagrams are symmetrical, equally divided between males and females, and with a large proportion of children. In most of these states the children under 5 years form, manifestly, too small a proportion to be true, indicating a deficient enumeration. In the northern states, where the number of colored is not great, the diagrams are quite irregular, and in the western






MALES FEMALES


MARRIED
136. CONJUGAL CONDITION OF THE POPULATION BY AGE AND SEX,

IN PROPORTIONS OF THE TOTAL NUMBER OF EACH AGE GROUP: 1890

137. PROPORTION OF DIVORCED TO MARRIED: 1890.

138. PROPORTION OF DIVORCED TO MARRIED: PERSONS: 1890.

states, especially those on the Pacific coast, where the colored element is made up mainly of Chinese, adult males are greatly in the majority, there being few children and females.

Diagram 134 exhibits the proportion on the one hand of the native whites of native parentage, and on the other hand of the colored, who are less than I year of age. The states are arranged in the order of the proportions of the native whites of native parentage, an order which places Utah at the head of the list, in which state 4.4 per cent are less than I year of age. It is followed by Wisconsin with 3.7 per cent, North Dakota with 3.6, New Mexico with $3 \cdot 5$, etc. The states having the largest proportion are those of the west and south. The states at the foot of the list having the smallest proportion are those of New England.

Turning to the other side of the diagram, the bars which represent the proportion of colored who are less than I year of age show the utmost diversity, but an examination shows that in general the southern states, those which contain the greatest proportion of negroes and those which from their climate are presumably best adapted to the race, are those in which the proportion under I year of age is the greatest. Thus, of all these states, South Carolina stands first and Georgia second, while Tennessee, Mississippi, and Texas follow with about equal proportions.

## CONJUGAL CONDITION

The diagrams and maps on plate 32 show the conjugal condition of the population in 1890 . Diagram 135 shows by sex, race, and nativity the proportion of the people who were single, married, and widowed. Of the total males and of the white males, 62 per cent were single, 35 per cent were married, and 3 per cent widowed, while of the females the corresponding percentages were 53,37 , and 7 . Single persons were fewer, while married and widowed were more numerous.

Among the native whites the proportion of single persons was greater than among the total population and the proportion of married and widowed less. Separating this class into those of native and of foreign parentage, it appears that the proportions of the former who were single, married, and widowed are about the same as with the total population, while with the latter the proportion of single is much larger and those of married and widowed much smaller. This is explained by the fact that the native whites of foreign parentage are largely made up of children.
Of the foreign whites only a small proportion are single, while the married and widowed form a very large proportion. This is, of course, due to the fact that the greater part of our immigration consists of adults. Of the colored, a slightly larger proportion are single than is the case with the total population, while there are smaller proportions of married and widowed.
Diagram 136 , plate 32, shows for the total population the proportions of the single, married, and widowed, classified by sex and by age.
It shows that no appreciable proportion marries before the age of $\mathrm{I}_{5}$; that io per cent of women and I per cent of the men marry between 15 and 20 ; that the proportion of married and widowed women, taking the two classes together, is greater than that of men at every age, and that the proportion of widows is at every age much the greater, for the reason given above.
Diagram 137, plate $3^{2}$, shows the proportion of divorced to married persons. While among the total population it was. 54 per cent, among the native whites of native parentage, it was 6 I per cent; among the native whites of foreign parentage it was only. $\cdot 50$, and among the foreign born still less, being but 34 per cent. On the other hand, among the negroes it was the largest, being .66 per cent.
The small map on plate numbered $\mathrm{I}_{3} 8$, plate 32 , shows the distribution of divorced persons over the country, expressed in the proportion which their number bore to that of the married. In most of the Atlantic states this proportion was less than half of I per cent; over the Mississippi valley it was between one-half and one per cent, and in the far west it ranged from I to 2 per cent.
134. Percentage of the native White of Native Parentage and of the Colored, under i Year of age, by States and Native whites of native parentage.
[Per cent.]


Parentage and of
TERRITORIES : 1890.



I39. Percentage of Illiterates among the Native White, the Foreign White, and
the Colored, io Years of Age and Over: isgo.


ILLITERACY AND EDUCATION.
i4. Percentage of Illitterates in the Total Population io Years of age and Over, by States and Territories: ISgo.

i41. Precentage of llliterate White in the Total White Population to Years of age and Over, by States and Territories: isgo

## ILLITERACY

The Eleventh Census shows that out of a total population 10 years of age and over of $47,4 \mathrm{I} 3,559,6,324,702$ were illiterates, constituting 13.3 per cent of the entire number. Illiteracy is not distributed by any means uniformly among the different elements of the population, as is shown by Diagram I39. The entire area of the square represents the total number of the inhabitants ro years of age and over. This square is divided into parts representing the proportional number of native whites, of foreign whites, and of colored, and each of these rectangles is divided into two parts, the white part representing the literate of that element and the shaded part the illiterate. Of the native whites only 6 per cent are illiterate, of the foreign whites $I_{3}$ per cent, and of the colored not less than 57 per cent.

Diagrams 140 to 144 show the proportion of illiterates by states and by elements of the population. The first of these, 140, shows the proportion of illiterates in the total population to years of age and over. The largest proportion, by far, is in the southern states, and the smallest proportion in the north central and western states, while the north Atlantic states occupy a position midway of the column. The reasons for this distribution lie in the distribution of the foreign white and the colored elements, as is seen in the diagrams which follow.
Diagram I4I shows the proportion of white illiterates to white population. Here the largest proportion of illitrates is found in New Mexico, and is due to the people of Spanish blood. Then come in almost unbroken series the southern states, while the lower part of the column,
as before is occupied by the north central and western states.
Diagram 142 shows the distribution of the native white illiterates in a similar manner. Here, as before, New Mexico heads the list, followed by the southern states in almost unbroken order. But in the lower part of the column are found many of the northeastern states. Illiteracy among the native whites is very slight.
Diagram 143 shows the proportion of foreign white illiterates, and Diagram 144 that of the colored. In this last diagram the southern states, the home of the negro element, shows, with the exception of New Mexico, the greatest proportion of illiterates, while the colored of the northern states are seen to have acquired the elements of education to a much greater extent than elsewhere.
i42. Percentage of illitterate native White in the total native White Population to Years of age and Over, by States and Territories: 1890

43. Percentage of Illiterate Foreign White in the total Foreign White Population io Years of Age and Over, by States and Territories: isgo.
44. Percentage of Illitterate Colored in the total Colored Population to Years of Age and Over,
by States and Territories: i890,


## EDUCATION.

The total number of children enrolled in schools in the country in 1890 was $14,373,670$, of which 90 per cent were white and ro per cent were colored. Of the total number of pupils enrolled, 88 per cent were enrolled in public common schools, 6 per cent in private schools, and an equal proportion in parochial schools. These proportions are set forth in Diagrams I45 and I46.
The increase in enrollment at each census during the past few censuses is shown in Diagram 147, where it appears that the proportion of enrollment to population was in 1840 but 12 per cent, that it has increased at every census, and in 1890 was 23 per cent, or nearly double the proportion half a century before.
The proportion of enrollment in the various States is shown in Diagram 148, where it appears that the proportion of enrollment to population is greatest in Kansas, Mississippi, and Tennessee, where it reaches 29 per cent, and from that as a maximum it diminishes and is least in Montana, Louisiana, and Wyoming, where it is but 14 per cent.
The expenditure for schools in proportion to the number of pupils enrolled is shown by states in Diagram 149 , where it appears that Colorado spends most lavishly for this purpose, her per capita expenditure being $\$ 25$. Next are the District of Columbia with $\$ 24$ and California with $\$ 23$, Massachusetts, Arizona, and Nevada, each with $\$ 22$, and Montana with $\$ 2$ I. The northern and western states expend the most money for education and the southern the least, the column ending with Georgia, North Carolina, and South Carolina, with $\$ 2$ each, and Alabama with \$I.

147. Percentage of the total Populatton Enrolifed in Schools:

149. Expen and Territories: i8go.

151. MEMBERSHIP OF THE LEADING RELIGIOUS SECTS IN THE UNITED STATES: 1890





156. PROPORTION OF THE METHODISTS TO THE AGGREGATE POPULATION: 1890.


158. PROPORTION OF THE LUTHERANS TO THE AGGREGATE POPULATION: 1890.


160. PROPORTION OF THE CONGREGATIONALISTS TO THE AGGREGATE POPULATION: I890.


162. PROPORTION OF THE EPISCOPALIANS TO THE AGGREGATE POPULATION: 1890



The total number of church communicants in the country was $20,612,806$, which is 32.92 per cent of the total population. In other words, about one-third of the population is returned as communicants of churches. These are distributed among the leading sects, as indicated in Diagram 15I, plate 33. The 3 leading sects are Catholics, Methodists, and Baptists, which collectively comprise nearly three-fourths of all the communicants in the country. Diagram 150 shows the proportion which the number of communicants in the several states bears to the total population of those states. It appears that the 3 territories of New Mexico, Utah, and Arizona have the largest proportions. This is due in New Mexico and Arizona to the Spanish Catholic population, and in Utah to the Mormon population. Following these are South Carolina, Rhode Island, North Carolina, Massachusetts, and Connecticut. In the Carolinas this large proportion is due, in a measure, to the great proportion of negroes, nearly all of whom are Methodists or Baptists; in Rhode Island, Massachusetts, and Connecticut to the FrenchCanadian and Irish elements. The smallest proportions are in the far western states and territories.
Map 152, plate 34, shows the distribution of church communicants areally. It represents the proportion which the number of communicants of all denominations bears to the population.

Diagram 153 shows the numerical strength of the several denominations in the different states. The Catholics are the strongest in New York; next to that in Massachusetts, Pennsylvania, and Illinois. The Methodists are strongest in North Carolina and Georgia, and the Baptists in the same states. Indeed, the principal strength of this denomination is in the southern states.
Diagram 154, plate 35, shows the proportion by denominations in which the church membership of each state is composed. Thus nine-tenths of the communicants in Alabama are either Methodists or Baptists. In Arizona they are nearly all either Catholics or Mormons. In Utah nearly all are Mormons. In New Mexico nearly all are Catholics.
150. Percentage of Church Members in the Aggregate Population, by States and

ERTTORIES : 1890.


The Catholics, the largest religious body in the country, are widely dispersed, being derived from several sources and different nationalities. Their greatest strength is in New England and New York, where they are composed mainly of Irish immigrants and their descendants and of French Canadians. Again, they are quite strong in the states bordering the Great Lakes, where they are mainly made up of French Canadians. In Maryland and the District of Columbia is an element of notable magnitude, composed mainly of the descendants of early settlers. In Louisiana, where they are very strong, they are composed of the descendants of the original French and Spanish settlers, and in Texas, New Mexico, and Arizona their strength comes from the Mexican blood found in those states and territories.
The Methodists are next in numerical strength to the Catholics. While they are widely dispersed, their greatest strength is in the southern states. The Baptists are the third in number, and while well distributed over the country, their greatest strength by far is in the southern states.
The Presbyterians are found in greatest strength in New Jersey, Pennsylvania, and Ohio, and thence westward. The Lutherans are a German denomination, which follows the distribution of that nationality, being found in considerable strength in the northern states of the Mississippi valley. The Christians are widely distributed over the United States, but especially in the Mississippi valley.

The series of small maps numbered 163 to 178 , plate 40 , show by states the proportion between the membership of the 16 leading denominations, severally, and the total church membership.


## DEFECTIVE, DEPENDENT, AND DELINQUENT CLASSES.

## PRISONERS.

The prisoners of the United States numbered in 1890 , 82,329 , or 13 out of every 10,000 of the total population. Their distribution as regards sex is shown in Diagram ${ }^{179}$, where it appears that 92 per cent are males and only 8 per cent females. Their classification by race and nativity is shown upon Diagram 180. Twenty-seven per cent of the whole number were native whites of native parentage, 20 per cent were native whites of foreign parentage, 21 per cent foreign whites, and 32 per cent were colored. The places of confinement are shown in Diagram 181, from which it appears that 55 per cent of them were confined in penitentiaries, 24 per cent in county jails 12 per cent in workhouses, and the remainder were scattering, of which 4 per cent were confined in city prisons, 3 per cent were leased out, and I per cent each were in military prisons and in insane hospitals. Diagram 182 shows the character of the offenses for which they were confined, showing that 46 per cent of these offenses were against property, 23 per cent against society, 21 per cent against the person, and the remainder were for miscellaneous offenses.

The numbers of each race and nativity when reduced to proportions of the total population of each class, are shown in Diagram 183 , where it seems that the native white prisoners of native parentage were but 6 out of every ro,000 of the native white inhabitants of native parentage. The native white prisoners of foreign parentage were 14 , the foreign white were 17 , and the colored no less than 33 out of every 10,0оо. In other words, the native whites of foreign parentage were two and one-third times as numerous in proportion to their numbers as the native whites of native parentage, the foreign white were nearly three
times as numerous, and the colored were five and one-half times as numerous.

## JUVENILE DELINQUENTS.

This class, confined in reformatory institutions, numbered in 1890, 14,846 , of which, as appears by Diagram 184,78 per cent were males and 22 per cent females. Their distribution as to race and nativity is shown in Diagram 185, from which it appears that 22 per cent were native whites of native parentage, 33 per cent native whites of foreign parentage, 9 per cent were foreign white, and $I_{3}$ per cent were colored.

## PAUPERS IN ALMSHOUSES.

The number of paupers in almshouses in 1890 was 73,045 , or 12 out of every 10,000 inhabitants. Of these, $5^{6}$ per cent were males and 44 per cent females, as appears by Diagram 186. Their distribution as to race and nativity is shown by Diagram 187, where it appears that 30 per cent were native whites of native parentage, 23 per cent native whites of foreign parentage, 38 per cent were foreign white, and 9 per cent were colored.
Reducing the numbers in these several classes to percentages of the total number of inhabitants of each class, it appears that out of every ro,000 native whites of native parentage 8 were paupers. Similarly, 9 out of every 10,000 native whites of foreign parentage were paupers, 31 of the foreign white, and 9 of the colored. These are set forth in Diagram I88,

## INSANE.

The total number of insane in the United States in 1890 was 106,485 , or 17 out of every 10,000 inhabitants.

These were almost equally destributed between the sexes, as appears by Diagram 189. The next diagram, 190, shows their distribution as to race and nativity. Ninetyfour per cent of them were white and but 6 per cent colored; 62 per cent of the whole number were native whites and 32 per cent were foreign whites.
Reducing the numbers of these classes to proportions of the total number of inhabitants of each class, it appears that of all the white inhabitants of the country ig out of every ro,000 whites were insane and 9 out of every ro,000 colored. Of the native whites, 14 out of every 10,000 and 39 out of every ro,000 of the foreign born were insane. If these statistics are correct and complete, insanity is less prevalent among the colored and far more prevalent among the foreign born than among the native whites.
Diagram 19I illustrates the tendency toward insanity among people of different nationalities. It represents the number of insane persons in every roo,000 of those whose parents were born in certain foreign countries.
The tendency toward insanity is greatest among the Irish, and next among the Hungarians. It is comparatively small among the Germans and British, and least of all among the Canadians.

Diagram 192 shows the distribution of the insane by age and sex in percentages of the total number of the insane. It appears that insanity is about equally divided between the sexes, but that it is slightly more prevalent in the early adult ages among men than among women and later in life among women than men. The largest proportion of the insane is found among men between the ages of 30 and 40 , and among women between 40 and 45 .

Juvenile Delinguents.


Paupers in Almshouses.



19r. Number of Insane in each ioo,ooo Persons having Parents born in the
Spectified Countries : is9o.

192. Insane, by Age and Sex : isoc

95. Number of feeble Minded in each ioo,000 Persons having Parents born in the Specified Countries : ISgo


## FEEBLE-MINDED.

The number of feeble-minded or idiotic reported by the census of 1890 was 95,600 , or 15 out of every 10,000 inhabitants. Of these, 55 per cent were males and 45 per cent were females, as appears on Diagram 193. Their distribution as regards race and nativity is shown in Diagram 194, where it appears that 89 per cent were white and 14 per cent were colored, 79 per cent were native whites and ro per cent were foreign whites.
Reducing the numbers in the above classes to proportions of the total population of each class, it appears that of every ro,000 white inhabitants 16 were feeble-minded, and of every 10,000 of the colored i4 were similarly afflicted. Of the native whites, the corresponding numbers were 17 , and of the foreign whites 10 , which shows, if the figures are to be trusted, that idiocy is more common among the native whites than among the colored or foreign whites, and least of all among the foreign whites. The explanation of this is most probably to be found in the fact that idiocy was more fully reported by the native whites than by these other two classes.
Diagram 195 illustrates the tendency toward idiocy among the people of different nationalities. The number
of idiots among 100,000 persons whose parents were born in the countries represented in the diagram is indicated by the length of the black bar. It appears that the tendency toward idiocy is far greater among the Hungarians than the natives of any other of these countries, and is least among the Italians.
Diagram 196 shows the prevalence of idiocy at different ages and sexes, expressed as percentages of the total number of idiots. From this it appears it is more prevalent among males than among females, that it is more prevalent between the ages of 15 and 25 than at other ages, and that below these ages it is much less prevalent.

## DEAF AND DUMB.

The number of the deaf and dumb, as reported by the Eleventh Census, was $40,59^{2}$, or 7 out of every 1o,000 inhabitants. This number was distributed among the sexes in the proportion of 55 per cent males and 45 per cent females, as appears in Diagram 197. Their classification by race and nativity is shown in Diagram 198, where it appears that 92 per cent of them were white and 8 per cent colored, 82 per cent native white and io per cent foreign white.

Reducing the numbers of these classes to proportions of the total number of inhabitants of each class, it appears that among the whites 7 , among the native whites 7 , among the foreign whites 5 , and among the colored 4 out of every 10,000 of these classes were thus afflicted. These are set forth in Diagram 199.

Diagram 200 shows the proportion which the number of deaf and dumb of the different nationalities bears to the total number of that nationality. The diagram represents not only those born in other countries, but those whose parents were born in other countries. It shows that out of every roo,000 persons in the country whose parents were born in Hungary, 140 were deaf and dumb. This, as in the case of the feeble-minded, is a much larger proportion than of the natives of any other country. The next in rank are the Russians, while the Irish, Scandinavians, British, and Italians are but little subject to this affliction.

Diagram 201 shows the distribution of the deaf and dumb by age and sex, expressed by percentages of the total number of deaf and dumb. It appears that this imperfection is more common among males than among females, and that it is most prevalent between $I_{5}$ and 20 years of age.

199. Number of Deaf and Dumb in each to,000 Deaf and Dun
Persons: I 890

200. Number of Deaf and Dumb in each too,000 Persons having Parents Born in the Spec fied Countries: isgo.

| Parents born in- | 200 |
| :---: | :---: |
| hungary |  |
| Russia |  |
| canada |  |
| france |  |
| germany |  |
| mohemia |  |
| great britain |  |
| ireland |  |
| scandinatia |  |
| italy |  |

201. Deaf and Dumb, by Age and Sex : 1890 .


## BLIND.

The number of blind reported in 1890 was 50,568 , or 8 out of every 10,000 of the total population. Of these 55 per cent were males and 45 per cent were females, as appears on Diagram 202.
Diagram 203 shows the number of blind in 100,000 among those whose parents were born in certain foreign countries. This affliction seems to be most prevalent among those of Hungarians, Irish, and French origin, and least among those of Bohemian, Scandinavian, and Italian origin.
Diagram 204 represents the distribution of the blind by age and sex in percentages of the whole number of blind. It appears that among males blindness is more prevalent than among females, especially at the younger ages. Furthermore, the greater proportion of the blind are of advanced age, the greatest percentage being among the males at 70 to 75 years, and among the females from 70 to 80 years.
202. Blind, by SEX.

203. Number of blind in each ioo,000 Persons having Parents
Countries: $18 g o$.



MORTALITY

The census returns of mortality were in 1890 derived from two sources-the registration returns in those states and cities in which a registration of deaths is maintained and from the returns of the enumerators.

In most of the large cities of the country and in the states of Connecticut, Delaware, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont, and the District of Columbia there is a registration of deaths which is fairly accurate and complete. In these regions, which contain about $21,000,000$ people, or nearly one-third of the population, the returns can be depended upon as fairly reliable.

Throughout the rest of the country, comprising more than two-thirds of its population, where the mortality returns were obtained from the enumerators only, it is probable that more than one-half of the deaths were not reported. Moreover, these returns differ in fullness with the age, sex, race, and nativity of the people reported upon. The omissions were doubtless greater among females than among males, among children than among adults, among negroes than among whites, and among foreign whites than among native whites. Necessarily, therefore, the report of deaths from diseases incident to childhood, or those diseases to which females, negroes, or the foreign born are peculiarly subject, are affected in like manner. The result is that the conclusions derived from the returns of the enumerators in the regions not covered by the registration records are more or less unreliable, and should be accepted with caution.

The death rate derived from the registration records, that is, the annual number of deaths per 1,000 of the population, is 22.27 . This, however, is not a fair average to apply to the entire country, because the registration record includes a far larger proportion of urban population than there is in the country at large, and the urban death rate is well known to be in excess of the rural death rate. The death rate in the various registration states is shown in Diagram 205.


From this it appears that the death rate of the District of Columbia is far larger than that of any other subdivision of the country, but in explanation of this large death rate it should be said that it includes the deaths among the colored as well as among the whites, and that the death rate of the colored is about double that of the whites.
The death rates of most of the other states range from 18 to 22 per $\mathrm{r}, \mathrm{ooo}$. Vermont, however, falls considerably below this. In this state there was a comparatively small proportion of children, among whom the death rate is very high, and a small proportion of urban population.

The death rates of the various elements of the population in the registration states are shown in Diagram 206. That of the total population is 19.6 per $\mathrm{I}, \mathrm{ooo}$. The death rate of males is considerably greater than that of females. As regards race, the death rate of native whites of native parents is $I_{7}$ per $\mathrm{I}, \mathrm{ooo}$. That of the native whites of foreign parentage is greater, because this class contains so large a proportion of young children. That of the foreign white is less than the last, due doubtless to the large proportion of adults. That of the negroes is the greatest of all. The rural death rate is but $\mathrm{I}_{5}$, and is greatly exceeded by the urban death rate, which among the whites is 23 and among the colored 34.5 .
Diagram 207 shows the death rate of the white and colored in certain southern cities where the negro population is large. From this it appears that while the death rate of the whites ranges from 18 to 25 , that of the colored ranges from 30 to 42 , being in each case nearly
208. Percentage of Deaths from certain Diseases in the Registration States: isgo.

double that of the whites. It is not probable, however, that this proportion between the two holds in the rural districts, which are better suited to the development of the negro than the environment of large cities.
The proportion of deaths from each of the principal diseases to all deaths in the registration states is shown by Diagram 208. Consumption is responsible for nearly I2 per cent of all deaths; pneumonia and diarrheal diseases for 8.5 per cent each; diphtheria and croup jointly 5 per cent of all diseases; and enteric fever 3 per cent; while, on the other hand, measles, whooping cough, and scarlet fever are each to be credited with only about I per cent of all deaths.

The series of maps numbered 209 to 220 , plate 41, represent the proportions of deaths from certain selected diseases to the whole number of deaths in different parts of the country. The units of area for which these data have been computed are uniform on all the maps, and represent regions which are uniform in character within themselves, but different in climate, elevation, and in other physiographic features from one another.
Map 209 represents the distribution of deaths from consumption, showing that the greatest mortality from this disease occurs on the Pacific coast and in the eastern part of the upper Mississippi valley. Secondarily, this disease is more prevalent along the Atlantic coast from eastern Maine to Florida, and in the southern Appalachian region. The region bordering upon the Great Lakes, the entire Rocky Mountain region, and the region of the southern plains and prairies are singularly exempt.
Map 2 Io shows the prevalence of pneumonia. To some extent this map is a counterpart of the last. The greatest prevalence of this disease is in the Rocky Mountain region, in eastern Texas, and the states lying immediately north and east thereof. Secondarily, it is seen to be prevalent in the upper country of New England, on the Atlantic coast from New York to North Carolina, and to a great extent throughout the cotton region as far west as the Mississippi river. Its visitations are light on the south Atlantic and Gulf coasts and in most of Ohio, Indiana, and Kentucky.
Map 2rI, illustrating the distribution of diarrheal diseases, shows that they are mainly prevalent in the hot, moist parts of the country, and that the high, dry portions of the country are in great degree free from them.
Map 212, representing the distribution of diphtheria, shows this disease to be most prevalent in the most
sparsely settled regions, the entire Rocky Mountain region, with the plains and prairies, and the region bordering on the Great Lakes being those in which it is most prevalent.
Map 213 shows the distribution of croup. It is seen to be the most prevalent in the southern Appalachian region, in middle Texas, and the states lying north and east thereof, while, generally speaking, upon the seacoast there is little liability to this disease.
Map 214, showing the distribution of typhoid fever, develops the fact that this disease is least prevalent in the moist, thickly settled regions, and on the other hand is most prevalent in those sparsely settled.
Map 215 shows the distribution of deaths from cancer and tumor. This disease appears to increase relatively with the increasing density of population, its victims being in greater proportion in New England and the northern states of the Mississippi valley than elsewhere. This may, however, be due to the fact that in these regions there is a greater proportion of mature persons than in other parts of the country
Map 216 shows the proportion of deaths from malarial fever. The region in which this disease is most prevalent is eastern Texas, Louisiana, Arkansas, Indian territory, and the southern part of Missouri, while the states lying east of these throughout the cotton region have this disease only in slightly less intensity. It is of little importance in the mountain region of the south, while in New England, and in parts of other northern states and on the Pacific coast, it is almost unknown.
Map 217 shows the proportion of deaths from measles. The proportion of deaths from this disease seems to be greatest in the southern mountain region and the Piedmont region outside of it. Second to this region is that of central Texas, while on the other hand, in New England, the disease, though a common one, appears to be by no means as prevalent.
Map 218 shows the proportion of deaths from whooping cough. On the south Atlantic and Gulf coasts, upon the Pacific coast, and over the Rocky Mountain region, this disease does not appear to be prevalent, but in the southern Appalachian region, together with northern Georgia and Alabama, nearly all of Kentucky and Tennessee, and much of Indiana, the disease is comparatively very fatal.
Map 219 shows the distribution of deaths from scarlet fever, from which it appears that the Rocky Mountains, the plains and the prairie region are those in which the disease is most prevalent.

Map 220 shows the proportion of mortality from hear disease and dropsy. This map shows that the greates mortality is in the upland country of New England and upon the south Atlantic coast. In the former area the large proportion of deaths from this cause are doubtless due to the fact that the region contains a large proportion of mature persons.
Diagram 221 shows the proportion of deaths from certain leading diseases among whites, negroes, and Indians. It appears from this that deaths from consumption are far more numerous than from any other cause, and that the deaths from this cause among Indians are far in excess of those among the other races, being more than double that of the whites and nearly double that of the negroes. The deathis among negroes are much more numerous than among whites, although the negroes are found mainly in the southern states, where this disease has less power than in the north. From diseases of the nervous system it is seen that the whites suffer far more than the negroes or Indians, as is to be expected. From pneumonia the mortality of the three races is about equal. From diarrheal diseases the whites suffer more than the negroes, and the negroes more than the Indians. From accidents and injuries there is not much to choose among the races. From diseases of the circulatory system the whites suffer the most. From diseases of the respiratory system there is little to choose. From diphtheria the Indians suffer more than the whites, and both these races far more than the negroes. On the other hand, the negroes suffer vastly more from malarial fever than the other races.
Diagram 222 shows the death rate in cities in registration states among the children under 15 and from 15 to 45 years of age of mothers of different nationalities. The greatest mortality is apparently in the Italian blood, next to that among the Bohemians and Hungarians, while the United States stands quite low in the list. This diagram should be read in connection with Diagram 223, which represents similar facts in the rural districts of the registration states.
Diagram 224 shows that the death rate of married females is greater, as a rule, than that of single females, and that the death rate of the widowed is greater than that of either of the other classes. The first of these facts is probably due in part to the greater average age of married women over single women, and second, to risks of maternity. The latter fact is probably due to the greater average age of those widowed.


222. Comparative Death Rates per i,ooo of population under i5 and from 15 to 45 Years of Age in the Ctites in the Registration States, by Birthplaces of Mothers: ISgo.

23. Comparative Death rates per t,000 of Population under i5 nd from 5 to 45 Years of Age in the rural districts of


On the other hand, the death rate of the married males is not as great in either of the classes as that of single males, a phenomenon for which it is difficult to account.
Diagram 225 shows that the greatest mortality occurs in the late winter and in the spring months.
Diagram 226 shows that among children under 5 years of age, on the contrary, the greatest mortality occurs in the warm weather, especially in July and August, and the least mortality in the late fall and early winter.
Going to the other extreme of age, we see from Diagram 227 that the greatest mortality for aged persons is, as for the average of the population, in the late winter and spring.

Passing to specific diseases and the distribution of mortality from them throughout the year, we see from Diagram 228 that scarlet fever is most prevalent in the cities in June and least prevalent in the late summer and early fall, while in the country it is most prevalent in the late winter and in the spring months.
Diagram 229, relating to the distribution of deaths from measles throughout the year, shows that the three spring months-March, April, and May-are those in which this disease is by far the most prevalent and fatal, both in the cities and in the rural districts.
Diagram 230 shows relatively to one another the proportion of deaths from diphtheria and croup, showing that the latter disease is, in the main, confined to children under 5 years of age, while diphtheria is more prevalent at greater ages.

Diagram 231 shows the prevalence and mortality of whooping cough at different times of the year in the cities and in the rural districts. In the cities it is seen to be most prevalent in the late summer and late winter, while in the rural districts it is worse through the spring months.
Diagram 232 shows that the mortality from typhoid fever is not greatly different as between the sexes. The greatest mortality occurs at ages between 15 and 25 years, and below the age of to it is not of great importance. The distribution of this disease through the year in cities and rural districts, shown by Diagram 233, indicates that the greatest mortality is in September, while it is very prevalent from August to October.
Diarrheal diseases, illustrated by Diagram 234, are most prevalent in the late summer months.
Diagram 235 shows that the mortality from malarial fever is quite uniform in both sexes, and that the liability to it diminishes with increased age. The distribution of this disease throughout the year is illustrated by Diagram ${ }_{23} 6$, whence it appears that the late summer and early fall months are those in which it is most prevalent both in city and country.




226．Proportion of Death Under 5 Years of age in
Each Month，in the United States：iSgo．


229．Proportion of Deaths from Measles in each Month in the Cities and in the rural Districts of the United States：i890．

 Nited States：isgo．

| AGE． | DIPHTHERIA． |  |  |  |  |  |  |  |  |  |  |  |  | CROUP． |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  | Rate． |  |  |  |  |  |  |  |  |  |  |  |  | Rate． |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 300 | ${ }^{25}$ | 50 |  | 200 | 15 | 50 | 10 | \％ |  |  |  |  |  | 5 | 10 | $\stackrel{0}{0}$ | 15 |  |  | 1 | ${ }^{2}$ | ${ }^{250}$ |  | $\stackrel{300}{ }$ |  |
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| $\frac{45+}{\text { 25 }-45}$ |  |  |  |  |  |  |  |  |  |  |  |  | － |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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Diagram 237，showing the liability of persons of differ－ ent sexes and ages to erysipelas，shows that the liability to this disease increases with age up to 75 years，and then rapidly diminishes．On the other hand，young chil－ dren below the age of 5 are also extremely subject to this disease．
Diagram 238 ，illustrating the distribution by age and sex of consumption，shows that up to the age of 15 or 20 there is little liability to this disease；that the greatest liability is between 20 and 30 years，and from that age onward the liability diminishes rapidly

The distribution of deaths from this disease throughout the year in cities and rural districts，illustrated by Dia－ gram 239，shows that in the cities the deaths are most numerous in midwinter，while in the country they are most numerous in the late winter and spring months．
Diagram 240，illustrating the prevalence among the sexes and at various ages of scrofula and tabes，shows that among young children these diseases are more common among the males，but after maturity they become slightly more common among females，and that the liability to them diminishes with increasing age．

Diagram 24I，illustrating similarly the prevalence of cancer and tumor，shows that this is a disease of old age， reaching its greatest mortality between 60 and 70 years， while the proportion of children that suffer from it is trifling．
Diabetes，also，as shown by Diagram 242，is much more common among people of advanced age than children or youths
Deaths from apoplexy and paralysis are，as appears from Diagram 243，most common at advanced ages，reaching a maximum between 70 and 75 years of age．

239．Proportion of Deathe from Consumption in each Month in the Cities and in the rural districts
 United States：i8go．


|  | MALES． |  |  |  |  |  |  |  |  |  |  |  |  |  | FEMALES． |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| AGE． | Rate |  |  |  |  |  |  |  |  |  |  |  |  |  | Rate． |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | ${ }^{120}$ | $\bigcirc$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 |  | － |  | 8 |  | 100 |  | 120 |  | 148 |
| $95+$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 90－95 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\frac{95-90}{80}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\frac{750-80}{70-75}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 二 |  |  |  |  |  |  |  |  | $\square$ |  |  |
| 年 $65-70$ |  |  |  |  |  |  |  |  | 二 |  |  | － | － |  |  |  | 三 | 二 | ＝ | 三 | 二 | ＝ | － | $=$ |  | $\square$ |  |  |
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| $\frac{50-55}{\frac{50}{45-50}}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | － |  |  |  |  |  |  |
| 年 $\frac{45-50}{40-45}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\square$ | ＋ |  | － |  |  |  |  |  |  |  |
| $\frac{35-40}{\frac{35-45}{30}}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |
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24．Proportions of Deaths of Males and of Females，at each age，from Heart Disease and Dropsy in the Untited States：1890．

United States ：I8go．



245．Proportions of Deaths of Males and of females，at each Age，from Bronchitis in the Unite States ： 1890

241．Proportions of deaths of Males and of Females，at each age，from Cancer and tumor in the United States：i890．

| AGE． | MALES． |  |  |  |  |  |  |  |  |  |  | FEMALES． |  |  |  |  |  |  |  |  |  |  |  |  |
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|  | Rate． |  |  |  |  |  |  |  |  |  |  | Rate． |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | ${ }^{30}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 820 |  | 780 |
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Heart disease and dropsy are also diseases of old age, reaching their maximum, as shown by Diagram 244, between 60 and 70 years of age.
Bronchitis, as appears from Diagram 245, is a disease of children, a large proportion of the deaths under I year of age being due to this cause. It is also a disease of old age, a second maximum of deaths being reached between 70 and 75 years.
Mortality from pneumonia, as appears from Diagram 246 , is common at all ages and to both sexes.

Diseases of the liver, as appears from Diagram 247, are
very prevalent with children under I year of age, but disappear almost entirely as age advances, increasing again as maturity is reached, and attaining a second maximum between 60 and 65 years of age.

Diagram 248 shows that the class of diseases therein treated is vastly more prevalent among mature persons than children and among men of advanced age far more than among women.

Diagram 249 shows that Bright's disease, common to both sexes, is much more prevalent among men than women.

Diagram 250 shows in the cities the greatest prevalence of this class of diseases in the late winter and early spring, while in the rural districts they are more prevalent in the spring months.
Diagram 251 shows that suicides are more prevalent among women between the ages of 15 and 25 , while among men they are much more prevalent at a more advanced age. In the cities there is no marked difference in the nnmber of suicides at the different times of the year, but in the country a marked increase is seen in the months of April and May over any other part of the year, as shown in Diagram 252.
247. Proportions of Deaths of Mades and of Females, at each Age, from diseases of the Liver in the United States : 1890

250. Proportion of Deaths from affections connected with Pregnancy, in each Month, in the cities andin the Rural Districts of the United States: 1890 .

248. Proportions of Death of Males and of Females, at each Age, from Diseases of the Urinary

25i. Proportions of Deaths of Males and of Females, at each Age, from Suicide in the United 248. Proportions of Deaths of Males and of Females, at each age, from diseases of the Urinary
System and Organs of Generation (exclusive of Rright's disease) in the Untred States : Isoo.

249. Proportions of deaths of males and or females, a mag age, from brights diseash in the NITED States: 1890


Proportion of Deaths from Suicide, in fach Month, in the Cities and in the Rural Districts of the United States : isgo.


## OCCUPATIONS.

Out of the total population of the country a trifle more than one-third was enumerated by the Eleventh Census as wage earners. Of that part of the population Io years of age and over about one-half were wage earners. Diagram 253 represents, by the entire area of the square, the population io years of age and over. The shaded portion of the square represents the wage earners classified as males and females.
253. Poputation io Years of age and
Over, CLassifind as Wage Earners and
Nor-Wage Earmers, by Sex: isgo


Diagram 254 shows similar facts in a somewhat differ ent form, the square representing the number of inhabitants io years of age and over, being divided primarily into males and females, which are about equal in numbers. The rectangle representing each sex is then divided into two parts, the shaded part representing the number of wage earners of that sex. It is seen that more than three-fourths of the males are wage earners, while less than one-fifth of the females are wage earners.


Diagram 255 also represents, by the entire area of the square, the population to years of age and over, and by the shaded portion the wage earners. In this diagram the wage earners are classified by nativity.
255. Population to Years of age and Over,
Classified as Non-Wage Earners and
Wage Earners, the Latter Subdivided

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Diagram 256 shows, as in the other cases, by the entire area of the square, the total population 10 years of age and over. This square is primarily divided into rectangles, representing the nativity of the population, and each of these rectangles is in turn divided into two parts, one representing non-wage earners, the other wage earners. This diagram shows that the smallest proportion of wage earners is found among the native whites of native parentage, and the greatest proportion among the foreign whites and colored.


Diagram 257 shows, by its entire area, the total number of wage earners. The rectangles into which it is primarily divided represent the classification of wage earners by nativity and race, and each rectangle is divided into two parts, one representing the males of that nativity or race and the other the females. From this it appears that the female wage earners are by far in the smallest proportion among the native whites of native parentage and in greatest proportion among the colored. They are apparently more numerous among native whites of foreign parentage than among the foreign whites.
257. Classification of Wage Earners by Sex, Color, and General Nativity : 18 go.

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This study of the distribution of the wage earners among the different sexes, races, and nativities is extended in the four following diagrams. The first of them, No. 258, represents, by its total area, the number of persons native born of native parents, who are io years of age and over. This is divided into two rectangles, representing males and females, which are, of course, practically equal in area. Each of these rectangles is then subdivided into two parts, the white representing non-wage earners and the shaded portions representing wage earners.

The second diagram, No. 259, classifies in a similar manner the native whites of foreign parentage.

The third diagram, No. 260, shows similarly foreign white, and the fourth diagram, No. 26I, the colored.

Comparing these diagrams with one another, we see, in the first place, that the proportion of male wage earners to all males 10 years of age and over is greatest among the foreign whites. This is, of course, to be expected, because our immigration is in the main of mature persons. Next to the foreign whites the proportion of males who are wage earners is greatest among the colored, then among the native whites of native parents, and smallest among the native whites of foreign parentage. This last

Proportion of mite tion or Wage Earners, by Sex: i8go.

is to be expected, since the proportion of adults among the native whites of foreign parentage is below the normal, owing to the fact that the parents of this class are found among the foreign born whites.

Turning, now, to the females, we find the highest proportion of female wage earners among the negroes. This is accounted for by the fact that this race is largely employed as domestic servants, and in the cotton region the women work very generally in the field. The proportion of female wage earners among the foreign whites and the native whites of foreign parentage is very nearly equal, and is much larger than among the native whites of native parentage.

The census classifies wage earners primarily into five great groups, namely, i. the professions, 2. agriculture, with fisheries and mining, 3. manufactures, 4 . trade and transportation, and 5 . personal service. The extent to which people of different races and nativities enter into these several groups of occupations differs widely. Diagram 262 illustrates this. The entire area of the square represents the wage earners, and the rectangles into which it is primarily divided represents the classification of the wage earners by race and nativity. Each of these rectangles is in turn subdivided in accordance with the number of wage earners in each of these great groups of occupations. Among the native whites of native parentage it is seen that the proportion engaged in the professions is much larger than in any other race or nativity; that those engaged in agriculture are proportionally more numerous than among the foreign whites or the native whites of foreign parents; that in manufactures they are less numerous proportionally than in the last two classes, and that in personal service there are fewer engaged proportionally than in any other nativity or race.

The foreign whites do not affect the professions or farming, but with their descendants, the native whites of foreign parentage, they form the vast body of manufacturing operatives, and, next to the negroes, they furnish proportionally the largest element engaged in personal service.

The colored furnish by far the largest proportion of farmers; in manufactures and trade and transportation they are but feebly represented, while in personal service they exceed, proportionally, all other races and nativities.
The next four diagrams, numbered 263 to 266 , inclusive, develop facts similar to those shown by the last diagram, but with the addition of a classification by sex. Each of these squares represents the total number of wage earners of that race or nativity. It is primarily divided into two rectangles, one representing males, the other females, and each of these rectangles is then further subdivided in accordance with the five great groups of occupations. In these diagrams the feature of greatest interest is the classification of the females. Among the native whites of native parentage this sex shows a large proportion in the professions, and a small proportion in agriculture, while the proportions in manufactures and in personal service are largest of all, the number engaged in trade and transportation being small.

Among the native whites of foreign parentage the proportion in the professions is much smaller than in the last, and those engaged in farming are but trifling, while the proportion engaged in the three other occupations is somewhat larger.

Among the foreign whites we find quite a different condition of affairs. Fully three-fifths of the female wage earners are engaged in personal service, and nearly all the balance are operatives in manufactures.

Among the colored, the conditions are again different. Nearly all the female wage earners, indeed, with only a trifling remainder, are engaged either in farming or in personal service.

Maps 267 and 268, plate 42, show those regions of the country which are distinctively manufacturing and agricultural, as indicated by the leading occupations of the people, the first showing the proportion which the number engaged in manufactures bears to all wage earners. In the northeastern states, with Maryland and Ohio, the proportion of those engaged in manufactures is more than

Proportion of Wage-Earners in each of the Five Occupatton Groups, by Color and General Nativtry, and by Sex: iggo.
262. Total wage-arners.



$\square$ Under to per cent $\square$ 10 to 25 per cent $\square{ }^{25}$ per cent and over
268. PROPORTION OF WAGE EARNERS IN AGRICULTURE






one-fourth of all wage earners, while in the southern states the proportion of those engaged in manufactures is very small, being less than ro per cent. The other map shows that in the southern states more than one-half the wage earners are encaged in agriculture, while in several of the northeastern states the proportion is less than onefourth.
Diagram 269 shows the proportions in which the wage earners of each state are engaged in each of these five great groups of occupations. In each case the full length of the bar represents 100 persons, and the proportion of them engaged in each of these occupation groups is represented by a proportional part of the bar. It will be seen that in the southern states agriculture is by far the predominant industry, three-fourths or more of the wage earners being devoted to it in the states of South Carolina, Mississippi, and Arkansas, while on the other hand, in Massachusetts and Rhode Island, and to a less degree in adjacent states, manufacturing is the predominant industry.
Diagram 270 shows the number of persons, classified as males and females, who are engaged in certain specified occupations. It is seen that farmers and farm laborers are far in excess of the number in all other occupations. It is seen also that in certain occupations women exceed
men in numbers, and several occupations they absorb entirely.
Diagram 271 shows the prevailing occupations among the people of different races and detailed nativities, by giving the proportion of the total number of wage earners of each nativity or race who are engaged in each of the occupations specified, thus: among the Irish, nearly 20 per cent are laborers, 16 per cent are servants, and 9.5 per cent are farmers, planters, etc.

A study of this diagram, or rather series of diagrams, brings out many interesting and important facts regarding our foreign element as contrasted with our native element and with the colored. Thus, no other people, with the exception of the negroes, affect agricultural pursuits to as great an extent as the native whites of native parentage do. Those people who most closely approach the latter in this respect are the Danes, Swedes, Norwegians, and Bohemians. The English, the Irish, the Scotch, the French Canadians, the Italians, and the Huns become farmers only to a small extent. The Irish mainly become laborers or servants. The English and Scotch are in large part divided between farming and mining. While more Germans engage in farming than in any other pursuit, still a large proportion of them are laborers, merchants, and servants. The Swedes and Norwegians apparently have little aptitude for trade, but,
passing over the farming contingent, which is largest the occupations in which they are most numerous are laborers and servants. The Danes are distributed much the same as the Swedes and Norwegians.
The cotton mills of New England are the chief attraction to the French Canadians. The Italians are mainly laborers, although they have a considerable contingent engaged in mining. The Huns are mainly laborers or miners.
Diagram 272, plate 43 , shows for each of 32 occupations the nationality and race of the wage earners engaged in it. Thus, among farmers, the total number of which is represented by the full length of the bar, the native whites of native parents constitute about twothirds, while the native whites of foreign parents are not over 7 per cent, the foreign whites about $\mathrm{I}_{5}$ per cent, and the remainder colored. The proportion of wage earners furnished by each of 9 different foreign nationalities is given. Among the cotton mill operatives we find that the native whites of native parentage constitute about 30 per cent, the native whites of foreign parentage about 25 per cent, the remainder, 45 per cent, being practically of foreign birth. Of this 45 per cent, 9 per cent are of Irish birth, ro per cent are English and Scotch, and nearly all of the remainder being Canadians.



## INDUSTRIES.

The principal industries of the country which are treated by the Eleventh Census are, in the order of their importance, manufactures, agriculture, transportation, mining, and the fisheries. Diagram 273 shows by its total area the product of these branches of industry. In manufactures only the net product is represented-that is, the difference between the value of product and the cost of material, this difference representing the increase in value due to the manufacturing processes.
The products of agriculture include the value of all agricultural products excepting meat. The addition of meat would involve considerable duplication, inasmuch as the hay and a large portion of the oats and other grains which are already included are used in its production.
The products of transportation are taken as the gross earnings of our railroads and vessels. The mining products are the spot values at the mines.

As is seen at a glance, the value of the manufacturing industry, which in 1880 was less than that of agriculture, has during the past decade reached and passed it, and is now much larger. Our mines yield but a small fraction of our annual income, while our fisheries are too small to be represented upon the diagram.

The total value of our industries is estimated at $\$ 8,535,000,000$, which is distributed in the following proportions among these different branches:

$$
\begin{aligned}
& \text { Agriculture ... } \\
& \text { Manufactures. } \\
& \text { Transportation. } \\
& \text { Mining ........ }
\end{aligned}
$$

274. Proportions of Improved and Unimproved Land in the United States: i850 to 18 go.


The proportion of land which is improved or cultivated in the different states differs widely, as is shown by Diagram 275. Of Illinois and Ohio, more than 70 per cent of the area is cultivated; of Iowa nearly 70 per cent; of Indiana, 65 per cent; of Delaware, 61 per cent; of Maryland and New York, 54 per cent. In most of the cotton states of the south the proportion runs between 20 and 30 per cent, while the smallest proportion of cultivated land is found in the sparsely settled states and territories of the west.
The small map numbered 276 shows by states the increase or a decrease in the amount of cultivated land during the 10 years between 1880 and 1890 . In all the states of the north Atlantic group, without exception, and in Illinois, there was less cultivated land in 1890 than in 1880. In the other states and territories the amount of cultivated land increased.
276. Gain or Loss in Improved Land: is8o to isgo.

273. Relative Value of the Industries of the United Śtates: i8go.


## AGRICULTURE.

This branch of industry is, in the number of persons which it employs and supports and in the amount of capital invested in it, the most important. In the value of its product it is secondary to manufactures.
Of the area of the country about one-third is included in farms. This farm land is again grouped as improved and unimproved, the improved being the cultivated portion, the unimproved being that devoted to pasturage and timber purposes. The cultivated or improved land comprised in 1890 a little more than one-sixth the area of the country. The proportion which it has borne to the total area of the country at different times since 1850 is shown by Diagram 274. In each case the area of the circle represents the area of the country, and the proportional extent of the improved land is shown by the size of the sector thus marked.
275. Percentage of Improved Land in the Motal, Area, by States and Territories: 1890 [Per cent.]


The number of farms, which was in 1850 but $1,500,000$ has increased to $4,600,000$ in 1890 . This increase has been somewhat regular, as shown by Diagram 277. The average size of farms has diminished during the past 40 years from a trifle over 200 acres to I 37 acres, as is shown by Diagram 278. During the past decade the average size has increased from I34 to I37 acres.


The average size differs widely in different states, being generally greatest in the new, sparsely settled states of the west and smallest in the northeastern states, where population is dense and where much of the farming takes on the character of market gardening. The average size of farms is shown by states by Diagram 279.

The value of farms, farm implements, and machineryin other words, farming capital-is shown by Diagram 280. It appears that in 1850 it amounted to about three and a half billions, and it has increased until in 1890 it amounted to thirteen and eight-tenths billions of dollars. In 1850 nearly one-half the wealth of the country was invested in agriculture. In 1890 only a little more than one-fifth of it was thus invested.
280. Value of Farm implements and Machinery: is50 to isgo.


The average value of farms at different times is shown by Diagram 281. It appears that this average value increased from 1850 to 1860 ; then it diminished during two decades, and during the last decade has increased again.

28I. Average Value of Farms: 1850 to
Value
I 8 go.



There are three forms of farm holdings in vogue in this country. First, ownership by the occupant. As shown by Diagram 282, somewhat more than seven-tenths of the farms of the country are owned by their occupants. Second, rented for fixed money rental. One-tenth of the farms of the country are of this class, and third, rented for a share of the crop, in which class are one-fifth of the farms. The distribution of these several forms of holdings among the states is shown by Diagram 283, where, out of every 100 farms in each state and territory, the number which are owned is shown by the white space, those which are rented for money are shown by the black space, and those which are rented for a share of the crop are shown by the shaded space.
In the far western states and territories and in the northern states, ownership by the occupant is most general, while in the southern states the renting of farms is more prevalent than elsewhere. In the cotton states generally nearly half the farms are rented either for money or on shares.
Diagram 284 shows the average value of the farm product per acre of improved land, the length of the bar indicating the value in dollars. The highest value is seen to be in the northeastern states, where market gardening is most extensively carried on. Next are certain of the cotton states, while low down in the column are the great wheat and corn states, where the farms are large and where profits are obtained, not by high cultivation, but by cultivating large areas of land by wholesale methods and with the utmost economy of labor.
282. Character of Farm Holdings: isgo.

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| :---: | :---: |
| CULTIVATED | BY OWNERS |
|  |  |
| RENTED FOR MONEY |  |
| RENTED FOR SHARE OF PRODUCT |  |



Map 285, plate 44, shows the average size of farms in different parts of the country, the county being used as the unit of computation. The great farms are found mainly in the far west, in western Texas, Montana, Wyoming, Colorado, New Mexico, Idaho, and California, and the smallest are found in the northeastern part of the country.

Map 286, plate 44, shows the proportion which the improved land bears to the total area in various parts of the country. This proportion is greatest in the upper part of the Mississippi valley, in parts of the states of Ohio, Illinois, Iowa, Kansas, and Nebraska, where more than

three-fourths of the land is under cultivation. In the greater part of these states, together with New York, Indiana, southern Michigan, and Wisconsin and southeastern Minnesota, together with areas in other northern states, more than one-half is under cultivation. Areas in which between a fourth and a half of the land is under cultivation are scattered widely over the country, but principally in the cotton states. In the far west but a small proportion is under cultivation, in most of this area the proportion being less than io per cent.
Map 287, plate 45, shows the value in dollars of the farm products per acre of land cultivated. The highest value is found in the neighborhood of the great cities, where the land is largely devoted to market gardening; in Florida and on the Gulf coast generally, where it is devoted to fruits and sugar, and in southern California and in Arizona, where fruits are largely cultivated. On the
other hand, the low values are found upon the plains, where the farms are, in the main, devoted to the cultivation of wheat and corn by wholesale methods.
Map 288, plate 45, shows the value of farm products as compared with the total area, county by county. This map differs in some respects materially from the last, owing to the fact that it takes no account of the proportion which the cultivated land bears to the total area. Here the highest values are, as before, obtained from market gardens in the neighborhood of the great cities. Next to that the highest values are obtained in the northern part of the Mississippi valley and in the Lake states, where so large a proportion of the land is under cultivation. There are high values obtained also in certain parts of the cotton states. On the other hand, low values are obtained in the far west, where but a small proportion of the land is under cultivation.

## WHEAT.

Diagram 289 shows the production of wheat in those states in which wheat is a crop of importance. It is seen that Minnesota is the greatest wheat producer, followed by California, Illinois, Indiana, and Ohio in the order named.
The average yield of wheat per acre devoted to that crop is shown by Diagram 290, where it is seen that while the average yield for the country is about $I_{5}$ bushels per acre that of Kansas exceeds 19 and New York 18, while many states show an average yield between 14 and 17 bushels.
Map 291, plate 46, shows the production of wheat as compared with the total area, county by county. This map shows the importance of various regions as wheat producers. From this we see that the upper Mississippi valley and the southern parts of the Lake states, with the Dakotas, constitute the principal wheat region of the country; that in the northeastern, the southern, and the far western states, excepting those on the Pacific coast, the wheat crop is of little importance.
Map 292, plate 46 , shows the distribution of wheat production with relation to improved land. This map expresses the relation which the cultivation of wheat bears to that of all other crops. Here the deepest tint is seen to be in the Dakotas and western Minnesota, and in the great valley of California, besides scattered patches else where. Next to this, it is of greatest importance in southeastern Pennsylvania, northern Maryland, Ohio, Indiana, southern Michigan, Wisconsin, Missouri and in certain parts of the Rocky Mountain region.
Map 293, plate 46, shows the average yield of wheat per acre cultivated in that crop. The highest yield is in certain parts of the Rocky Mountain region, where irrigation is practiced, and on the Pacific coast, in Washington and Oregon. A low yield is found in the Dakotas, where land is cheap and where wholesale methods of cultivation are employed.

Map 294, plate 46, shows the relation of the wheat product to the population, expressed in the form of bushels to the inhabitant. In this map the greatest production per inhabitant is seen to occur in the Dakotas and Minnesota, in certain parts of the Rocky Mountain region and in the great valley of California, while in the northeastern and southern states the product per inhabitant is very small, being much less than the needs of the population.

## CORN.

Diagram 295 shows the corn product of all the principal corn producing states. In this product Iowa leads, followed closely by Illinois, then Kansas, Nebraska, and Missouri.

Diagram 296 shows the average yield of corn per acre by states. Iowa not only produced the most corn, but its yield per acre was greater than that of any other state, followed by Nebraska, Illinois, Ohio, Kansas, etc., the yield per acre being high in the northern states and low in the southern states.

Map 297, plate 47, shows the yield per square mile of Indian corn by counties. It is a measure of the absolute production in various parts of the country. While corn is cultivated very generally in the United States from the Atlantic to the Pacific, and from the Gulf to the Great Lakes, its cultivation is of the greatest importance throughout a broad belt running across Indiana, Illinois, Iowa, Kansas, and Nebraska.

Map.298, plate 47, shows the production of Indian corn compared with the extent of improved land. The results presented by this map are quite similar to those preceding. The region in which corn is a crop of the greatest importance in proportion to other crops occupies the middle of the Mississippi valley, extending from West Virginia and eastern Ohio to western Kansas and Nebraska, and from northern Mississippi and Alabama to southern Michigan, Wisconsin, and Minnesota.

286. PROPORTION OF IMPROVED LAND TO TOTAL AREA: 1890


288. VALUE OF FARM PRODUCTS PER SQUARE MILE: 1890.

291. YIELD OF WHEAT PER SQuare MILE: 1890.

292. PRODUCTION OF WHEAT PER ACRE OF IMPROVED LAND: 1890 .

293. AVERAGE YELD OF WHEAT PER ACRE: 1890

294. PRODUCTION OF WHEAT PER CAPTTA: 1890

297. YIELD OF INDIAN CORN PER SQUARE MLE: 1890

298. PRODUCTION OF INDIAN CORN PER ACRE OF IMPROVED LAND: 1890 .

299. AVERAGE YELD OF INDIAN CORN PER ACRE: 1890

300. PRODUCTION OF INDIAN CORN PER CAPTA: 1890 ,


Map 299, plate 47, shows the average yield of Indian corn per acre cultivated in that crop. It develops the fact that the heaviest yield per acre cultivated is, in the main, in that region in which the crop is of the greatest absolute importance, as shown above, and that where it is of less importance, there the yield per acre is smaller.
Map 300, plate 47, shows the relation between the corn production and the population in the form of the yield per capita. The features of this map are very similar to those of the first and second maps of the groups relating to this cereal, the product per capita being highest in the states of the upper Mississippi valley.

## oats.

Diagram 30I shows the product of oats in those states in which the crop is of importance. These are almost entirely northern states, and the two states, Iowa and Illinois, produce more than double that of any other state.
Diagram 302 shows the yield of oats per acre cultivated in that crop. Besides having the largest crop of all the states, Iowa has the largest yield per acre, its yield being about 39 bushels. In this regard she is followed by Wisconsin, Illinois, and Michigan, in the order named.

Map 303, plate 48 , shows the yield of oats per square mile. This is a measure of the absolute importance of the oat crop. It is heaviest in northern Illinois and northern Iowa, while it is of great importance also in all the states of the upper Mississippi valley and of the Lakes, together with New York and Pennsylvania. It is of little importance in the south and far west.

Map 304, plate 48 , shows the production of oats per acre of improved land, being a measure of the importance of the oats crop in relation to the sum of all other crops. This is seen to be the greatest in northern Illinois, Iowa, Wisconsin, and southern Minnesota, and least in the southern and western states.
Map 305, plate 48 , shows the yield of oats per acre cultivated in that crop, and here it is seen that where it is of the greatest absolute importance, there the yield is the greatest.
Map 306, plate 48, shows the production of oats as compared with the population. This is greatest in the states bordering on the Great Lakes and those of the upper Mississippi valley, while it is of trifling importance in the south and southwest.

## RYE.

Diagram 307 shows the production of rye in those states in which it is of importance. It is raised mainly in the northern states, and of those, Wisconsin, Pennsylvania, New York, Kansas, Illinois, and Michigan are of the greatest importance, in the order named.
Diagram 308 shows the average yield of rye per acre cultivated, and it appears that Minnesota has the highest yield per acre, followed by Ohio, Illinois, Wisconsin, and Iowa.

Map 309, plate 49, shows the distribution of the production of rye as compared with the total area. It shows that the principal regions are in New York, New Jersey, Pennsylvania, southern Michigan, Wisconsin, and Minnesota.

Map 3ro, plate 49, shows the production of rye in comparison with the area of improved land; that is, it outlines the regions in which rye is of importance as compared with other crops. The presentation made by this map is quite similar to that of the last, excepting the addition of considerable areas in Kansas and Nebraska.

307. Production of RyE, by States: I890.


## BARLEY.

The production of barley is shown, by states, by Diagram 3II, where it appears that most of the barley of the country is produced in California, Wisconsin, Iowa, Minnesota, and New York.
The yield per acre is shown by Diagram 312. It is seen to range from 32 bushels down to 14.5 bushels per acre, Wisconsin leading with the highest production.
The production of barley per square mile, being a measure of its absolute importance as a crop, is shown by Map 3I3, plate 50. Being a cold weather crop, its habitat is seen to be mainly in the Lake states and in California.
Map 314, plate 50 , shows the relative importance of this cereal to other crops, which represents its range as widespread, it being of importance over the Lake states and much of the far west.

## BUCKWHEAT.

Diagram 315 shows the production of buckwheat by states. New York produced far more than any other state, Pennsylvania about two-thirds as much as New York, Wisconsin about one-third as much as Pennsylvania, and other states still less.

Diagram 316 represents the average production of buckwheat per acre by states.
Map 3I7, plate 5I, shows the production of all grains, as compared with the area of the improved land. It is a measure of the importance of grain cultivation to all other crops. The upper Mississippi valley and the Lake states are seen to be the great grain producing region of the country.

## COTTON

The total yield of cotton in 1890 was $7,472,5$ II bales. The production of the various cotton states is shown by Diagram 318, Texas, owing largely to its immense area having the greatest production, Georgia and Mississipp being second and third in the list, and Alabama fourth.
Diagram 319 shows, by states, the yield of cotton per acre cultivated in that crop. It appears that in the state of Louisiana the average yield per acre was more than half a bale, in Arkansas more than four-tenths of a bale and in Mississippi just four-tenths of a bale.
Map 32I, plate 52 , shows the production of cotton pe square mile of total area by counties. It is seen that the heaviest production is in the alluvial regions of the Mississippi valley. Following that in point of magnitude is the middle region of the south Atlantic and Gulf states. Cotton production extends into Virginia, Kentucky, and Missouri, to only a trifling extent.
Map 322, plate 52 , shows the average yield of cotton per acre cultivated in that crop. Here again the heaviest yield is found in the alluvial regions of the Mississippi, Red, and Arkansas rivers, while all over the south Atlantic and the Gulf states the yield is fairly good. Toward the margin of the cotton region, both on the north and on the south, the yield per acre is light.


3i2. Average Yield of Barley per acre, by States: isgo. [Bushels.]


316. Average yield of Buckwheat Per Acre, by States: i8go.
[Bnshels.]

318. Production of Cotton, by States: i890 [Millions of bales.

(
[Bales,]

303. YIELD OF OATS PER SQUARE MLE: 1890.

304. PRODUCTION OF OATS PER ACRE OF IMPROVED LAND: 1890


306. PRODUCTION OF OATS PER CAPITA: 1890 .


310. PRODUCTION OF RYE PER ACRE OF IMPROVED LAND: 1890


314. PRODUCTION OF BARLEY PER ACRE OF IMPROVED LAND: 1890


320. PRODUCTION OF TOBACCO IN RELATION TO THE ENTIRE AREA OF TOBACCO-PRODUCING COUNTIES 1890


322. AVERAGE YIELD OF COTTON PER ACRE: 1890.


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326. Number of Horses on Farms, by States and
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Territories : 1890.


The hay product is one of the most valuable of the country. In 1890 the crop amounted to $66,831,480$ tons. Map 324, plate 53 , shows the production of hay compared with the total area, county by county. The heaviest production is seen to be in the northern states, especially those bordering upon the Great Lakes. The crop in the south and west was of comparatively little importance.

329. Number of Sheep on Farms, by States and Territories: isgo


The number of sheep on farms was $35,935,364$. Diagram 329 shows the distribution among the various states, Ohio containing the greatest number, Texas next, followed by California and Michigan.

## IRRIGATION.

In that portion of the United States lying west of the one hundredth meridian, excluding certain portions of Idaho, Washington, Oregon, and California, the rainfall is insufficient for agricultural requirements. In this region, comprising about two-fifths of the area of the country, irrigation is a necessity, and, the supply of water for irrigation being much less than sufficient to irrigate all the land, water has become the valuable article, while land which is inaccessible to water has but a trifling value.
Map 330 , plate 54 , shows the extent to which this region has been irrigated, the irrigation areas being expressed by the green patches.

The total production of tobacco in the United States in 1890 was $488,256,646$ pounds. The production in the different states is shown in Diagram 323, from which it appears that Kentucky produced many times as much tobacco as any other state. Indeed, its product is nearly half that of the entire country.
Map 320, plate 51, shows the distribution of tobacco production over the United States. It is produced, not only in the border states of Kentucky, Tennessee, the Virginias, and North Carolina, but is found as far north as Wisconsin, New York, Massachusetts, and New Hampshire, and as far south as Florida. Still, the great bulk of the product comes from the border states.
323. Production of Tobacco, by States: isod
[Hundreds of millions of pounds.]



## MANUFACTURES.

The capital invested in manufactures in 1890 was $\$ 6,139,000,000$. Diagram 331 shows the amount of capital invested in this branch of industry at the time of each census since 1850 , when the statistics concerning it were first obtained. From this it seems that the development of manufactures, as measured by the amount of capital invested, has been far greater, both absolutely and relatively, during the past decade than in any previous one. Indeed, the capital is more than double that in 1880, its absolute increase in io years having been about \$3,500,000,000.
The gross value of the product of the manufactures in 1890 was in excess of $\$ 9,000,000,000$. In this is included the value of all raw material and partly manufactured material, which goes into the factory as "materials used." These had a value of little over $\$ 5,000,000,000$. Subtracting this from the gross value of the product, it leaves as the net product of manufactures in 1890 about $\$ 4,000,000,000$. The net product at each census is shown by Diagram 332. The increase from census to census was quite uniform, except between 1880 and 1890 , when, as in the case of the capital, the net product more than doubled during the decade.

The number of manufacturing establishments has increased continuously, but not by any means as rapidly as the capital has increased. Consequently, the average capital per establishment has become greater. Diagram 333 shows this increase. In 1850 the average capital was but $\$ 4,000$. It increased in 1860 , diminished slightly in 1870, and has increased since, reaching, in $1890, \$ 15,000$. This increase is in accord with the increase in the use of machinery.

The number of hands employed in manufactures has increased continuously since 1850, as shown in Diagram 334, but the increase has not been as rapid as that in capital or in product. In other words, owing to the increased use of machinery, each hand employed makes a greater output. In 1850 the net product per hand was about $\$ 500$. In 1890 it had increased to nearly double this amount.
In the meantime a portion of this increased productiveness of the laborer has gone to his benefit. As is shown by Diagram 335, wages per hand have increased from about $\$ 250$ to $\$ 440$. Thus, while his efficiency is doubled, his pay has been increased 75 per cent; the remaining 25 per cent of his increased efficiency going to capital, which has created this increased efficiency through the introduction of machinery.
The principal manufactures of the country are shown by the value of their products. They are represented by Diagram 336 , lumber being the leading product, with a value of nearly $\$ 600,000,000$, followed by flouring and grist mill products and clothing, each with a product exceeding half a billion. Iron and steel were fourth, which, with foundry and machine shop products, had a value of over $\$ 400,000,000$. The cotton industry had a product valued at $\$ 270,000,000$; the woolen industry at $\$ 220,000,000$. These are gross, not net, values of products.
Map 337, plate 55 , shows the center of manufactures, corresponding to the center of population, at each census since 1850 . Like the center of population, the movement of this center has been generally westward. In 1850 it was found in latitude $40^{\circ} 42^{\prime}$ and longitude $77^{\circ} 25^{\prime}$. In 1890, 40 years later, it was found in practically the same latitude and in longitude $8 \mathrm{r}^{\circ} 33^{\prime}$. It had moved westward $4^{\circ} 8^{\prime}$, and was then situated in northeastern Ohio. Its position was a degree and a half north of the center of population and 4 degrees east of it. This difference in position between the center of population and the center of manufactures indicates the portion of the country in which manufactures are of the greatest importance.
331. Captral Invested in Manufactures: 1850 to 1890 .
[Billions of dollars.]

332. Value of Net Product of Manufactures: 1850 to 1890 .

333. Average Capttal per establithment: 1850 to 1890

334. Number of Persons Employed in Manufactures: i850 to i890.

335. Average Wages per Employé: 1850 to 1890

336. Value of Princtral Manufactures: 1890 ,
[Hundreds of millions of dollars.]


325. YIELD OF HAY PER ACRE: 1890.


337. CENTER OF MANUFACTURES FOR THE $7 \mathrm{TH}, 8 \mathrm{TH}, 9 \mathrm{TH}, 10 \mathrm{TH}$, AND IITH CENSUSES.

340. CHEMICALS PRODUCTS

PLATE 55.

338. BRICK AND TILE

341. CLAY AND POTTERY PRODUCTS.

339. CARRIAGES AND WAGONS

342. COKE.

343. COTTON.



349. REFINING OF PETROLEUM.


350. SHIPBUILDING

353. WOOLEN GOODS.




The series of maps numbered 338 to 354 , plates 55 to 57 , show by the depth of tint the relative importance of the various industries represented upon them in different parts of the country, as expressed by the number of dollars in value of manufactured products per capita of population. Thus, in the manufacture of wagons and carriages, Ohio is the most important state, and after this the other northern states.
In the manufacture of chemicals New Jersey and Delaware are the most important; secondarily, New York and Pennsylvania, while of third importance are numerous states scattered widely over the country.
In the manufacture of clay and pottery products New Jersey and Ohio are the most prominent.

In the manufacture of coke Pennsylvania, West Virginia, Alabama, Colorado, and Montana are of importance, the leading state in this industry being Pennsylvania.
In slaughtering and meat packing the leading states are Illinois, Nebraska, and Kansas. The next in importance are New York, New Jersey, Rhode Island, Indiana, and Iowa, while in most of the other northern states this industry is of no little consequence.
In forest products the leading places belong to Michigan, Wisconsin, and Washington. Of secondary importance in this regard are Maine, New Hampshire, Vermont, Florida, Minnesota, and Oregon. This industry is, however, widespread over the country, there being few states in which it is not prosecuted to some extent.
Brick and tile manufactures are of the greatest importance in Colorado, and of lesser importance in nearly all of the northern states.

Cotton manufactures are of the first importance in New Hampshire, Massachusetts, and Rhode Island, and of secondary importance in Maine and Connecticut. They are found also to a notable extent in Maryland, the Carolinas, and Georgia.

Glass manufacture is of some importance in New Jersey and Maryland and the states lying west thereof to the Mississippi river, together with North Carolina.
The manufacture of hosiery and knit goods is of prominence in New Hampshire, Rhode Island, and Connecticut, as well as in other of the north Atlantic states, and in Wisconsin.
The manufacture of leather is carried on throughout the northeastern part of the country, together with California. Paper manufacture, also, is carried on throughout the northeastern states and westward as far as Wisconsin.
The refining of petroleum is confined mainly to New Jersey, Pennsylvania, and adjoining states.

The industry of shipbuilding is confined to the northern states bordering on the Atlantic ocean, the Lake states, and those of the Pacific coast.

The manufacture of silk is confined to southern New England, New York, New Jersey, and Pennsylvania.
The manufacture of woolen goods is carried on mainly in the north Atlantic states, the New Englan 1 states being the particular seat of this manufacture, as is also the case with worsted goods.

Diagram 355 shows the value of the products of manufactures in the great cities. A comparison of this diagram with that showing the population of the great cities will develop the differences which exist between them. The great seaports do not, as a rule, hold as high rank in manufactures as in population, since a considerable part of their population is attracted to them by reason of their commerce rather than manufactures. Thus, Baltimore does not hold as high a rank in manufactures as in population, while if the cities were ranked in proportion to the extent. of their commerce, it is probable that she would take a higher rank in such a list. Washington stands low in comparison with her population, and Cincinnati very high.

Diagram 356 shows the value of manufactured products by states. From this it appears that the populous northern states are those which have most extensive manufactures, the southern states, in spite of their large population, standing low in the scale.

356. Value of Product of Manufactures, by States and Territories: i890,
[Hundreds of millions of dollars.]


## MINING.

The total value of the mineral products of the United States in the census year was $\$ 587,230,662$. The values of the principal metals and minerals mined are expressed by Diagram 357 .
From this it appears that the most valuable mineral product of the country is coal, of which, in the census year, an amount valued at over $\$ 160,000,000$ was mined. Next to that was pig iron, with $\$ 120,000,000$; then silver, with a coinage value of nearly $\$ 70,000,000$. Gold is sixth in the list, with a little over $\$ 32,000,000$, and is exceeded by both building stone and lime. The value of petroleum and copper are about equal.
Diagram $35^{8}$ shows the value of the mineral products of the different states. That of Pennsylvania is more than double that of any other state, being $\$ 150,000,000$. Michigan is second, with $\$ 71,000,000$; Colorado third, with $\$ 42,000,000$; and Montana fourth, $\$ 33,000,000$.
Diagrams 359 to 365 show the production of different mineral and metallic products in the principal states producing them. In each case the total product is represented by the entire area of the square, and the proportional part produced by each is represented by its proportional part of the square. Of coal, Pennsylvania produces 57 per cent of all that produced in the country; Illinois, ro per cent, and other states in less proportion. Of iron ore, Michigan produces 45 per cent; Alabama, 12 per cent; and Pennsylvania, io per cent. Of silver, Colorado produces 34 per cent; Montana, nearly 30 per cent; Utah, ${ }^{1} 5$ per cent; and Nevada, io per cent. Of copper, Montana and Michigan produce nearly equal amounts, the two producing over four-fifths of that produced in the country, most of the remainder being produced by Wisconsin. Of gold, California produced 38 per cent; Colorado and Nevada each about 12 per cent; Montana, io per cent; and South Dakota (Black Hills), 8 per cent. Of lead, Colorado produced not less than 44 per cent; Idaho is next, with 16; then Missouri, with 13 ; Utah, with 1o; and Montana, with 7 per cent. As is seen, most of the lead of the country is produced in the western states and territories where it is a by-product in silver mining.

Of the zinc product, two-fifths comes from Missouri, and one-sixth from Kansas, a small amount from Wiscon$\sin$, and most of the remainder from the eastern states, Pennsylvania, and New Jersey.
Map 366 , plate 58 , shows the production of coal in the United States. This has been computed by using the county as a unit, dividing the coal product by the number of square miles of area in a manner similar to the preparation of the maps showing the density of population. Thus it shows, not the extent of country underlaid by coal, but the regions which are producing coal, and the importance of their product is shown by the depth of color.
Map 367 , plate 58 , shows the localities in which iron ore is produced. They show not only the locality, but the character of the ore by the different colors used, but without reference to the amount of ore raised.
359. Production of Coal, by States

357. Value of Principal Mineral. Products in 1889.
[Millions of dollars.]

360. Production of Iron Ore, by States.


36t. Production of Gold, by States.

| CALIFORNIA |
| :--- |
| COLORADO |
| NEVADA |
| MONTANA |
| SOUTH DAKOTA |
| IDAHO |
| OTHER STATES |

365. Production of Zinc, by States.

| MISSOURI |
| :---: |
| EASTERN STATES |
| KANSAS |
| WISCONSIN |
| OTHER STATES |


367. LOCALITIES PRODUCING IRON ORE IN 1889 AND THE VARIETIES OF ORE PRODUCED.




## SHIPPING.

The shipping of the United States in 1890 amounted to $7,633,676$ tons. Of this, however, only 12 per cent was engaged in foreign trade, the rest being engaged in domestic trade. The tonnage engaged in domestic traffic may be divided as follows: 3 I per cent engaged in coastwise traffic, 12 per cent in traffic upon the Great Lakes, and 45 per cent, or not much less than one-half, engaged in traffic upon our navigable rivers. This subdivision of our traffic is illustrated by Diagram 368.

Our merchant marine may again be subdivided as follows: 24 per cent consists of steam vessels, an equal proportion of sailing vessels, and 52 per cent, or a little more than one-half, of unrigged craft. This last item may require some explanation. The great bulk of the traffic upon our rivers, and no small part of that upon the Great Lakes, is carried in scows towed by steamers. Most of these scows are of large dimensions, the average tonnage of the unrigged craft being not less than 500 tons, and scows of $\mathrm{I}, 000$ tons are not uncommon. This distribution of the merchant marine is shown by Diagram 369 .

Map 370, plate 59, shows the routes of most of our domestic traffic by water, including the routes of coastwise and lakewise navigation and the navigable rivers. Concerning the last, it must be said that the extent of navigable streams differs with the draft of the vessel which is adopted as the criterion and with the stage of water. The criterion is here assumed to be steamers of as small draft as are commonly used, and the navigability at high water is that indicated.

## RAIL WAYS.

The railway system of the United States comprised in 1890, 163,597 miles. This railway system has cost in capital and funded debt nearly $\$ 10,000,000,000$, an average of nearly $\$ 60,000$ per mile. Its gross earnings during the year exceeded $\$ 1,000,000,000$, and its net income a little over \$100,000,000. Nearly $12,000,000,000$ passengers, and over $76,000,000,000$ tons of freight were carried I mile during the year.

This enormous railway system has been constructed within the past half century. Its growth is shown by Diagram 371, the length of each bar indicating the mileage in operation at the end of that year.

Map 372, plate 60, shows the railway lines as they existed in 1890. It is seen that the northern states are very fully supplied with this means of transportation; that, comparatively speaking, the south is insufficiently supplied, while in most parts of the west railroads are few.

TRANSPORTATION.
368. Shipping-Tonnage of Vesseis.

| IN FOREIGN TRADE |
| :---: |
| IN COAST TRADE |
| IN LAKE TRADE |
| IN RIVER TRADE |


| 369. Shipping-Number of Vesseis. |
| :---: |
| StEAM |
| SAIL |
| UnRIGGED |

37L. Ratlway Mileige of the United States: i830 to 1890 .


## WEALTH AND DEBT.

## WEALTH

The wealth of the United States is the total value of the property of the people and the government, which has been estimated by each census since 1850 . The early estimates are naturally less complete and correct than those of later dates. The following table shows the results of these estimates and the wealth per capita of the population:

TOTAL AND PER CAPITA WEALTH, BY DECADES.

| decades. | Total wealth. | Wealth per capita. |
| :---: | :---: | :---: |
| 1850. | \$7, i36, ooo, ooo | \$308 |
| 1860. | 16, 160, 000, 000 | 514 |
| 1870. | 30, 069, 000, 000 | 780 |
| 1880. | 43, 642, 000, 000 | 870 |
| 1890 | 65, 037, 091, 197 | 1, 036 |

These figures are graphically given in Diagrams 373 and 374 . The following table shows the rate of increase in wealth, by decades:

RATE OF INCREASE OF WEALTH, BY DECADES.

| decades. | Rate of increase. |
| :---: | :---: |
| 1850 to 1860. | 126.5 |
| 1860 to $1870 .$. | 85.5 |
| 1870 to $1880 .$. | 45.0 |
| 1880 to 1890. | 49.02 |

The wealth in 1890 is made up of the following items:
Real estate and improvements................... $\$ 39,544,544,333$ Live stock, farm implements, and machinery ..... 2, 703, 015,040 Mines and quarries, including product on hand... 1, 291, 291, 579 -ld and silver coin and bullion. nd bullion Railroads and equipment 3, 058,593,44
 Miscellaneous..................................... 7,893,708,821
These are shown graphically by Diagram 375



376. True valuation of Real and Personal Property Combined and Assessed Valuation of

378. Value of Real Estate and Improvements Thereon, by States and Territories: i8go.

assessed to their true valuation are shown, by states, by Diagram 378 , in which the states are arranged in very much the same order as in the diagram last cited.
Diagram 379 shows the true valuation of real estate with improvements per capita of the population. In this diagram a very different order of the states is observed, the western states and territories being at the head of the list and the southern states at the foot
The assessed valuation of all taxed property, including real estate and personal property, is shown by Diagram 376 by the black portions of the bars. Here New York and Pennsylvania head the list, with Massachusetts third and Ohio fourth. Illinois, which stands third in true value of property, is comparatively low in respect to assessed valuation. This is due simply to the fact that its property is rated low by the assessors. The same is the case in Iowa, Kansas, Nebraska, and other states Thus it is seen that the relation between the length of the black and the shaded bars expresses the ratio between the assessed and the true value of property. In the northeastern states the ratio is not far from one-half while in many of the northern central states it is less than a fourth. The highest ratio is in New Hampshire, where it approaches quite nearly to unity.
Diagram 380 shows the assessed valuation of taxed property, distinguishing between real estate and personal property. Taking the country over, personal property has a valuation not very different from that of real estate. Indeed, speaking roundly, it may be said that they are about equal, and the deficiencies which are illustrated in this diagram mean simply that far the largest proportion of personal property escapes taxation ; in other words, is not returned to the assessors. This proportion differs in different states with the degree of stringency of the laws and the care exercised by assessors in carrying out the laws. As is seen, there is scarcely a state in which the returns of personal property are not deficient.
Maps 381, plate 61, and 382, plate 62, represent the true value of real estate with improvements, in the first compared with area, and in the second with population. The



## TAXATION

The rate of taxation per $\$ 100$ on assessed valuation of property is shown by Diagram 384. This does not express the burden on property, inasmuch as the assessed valuation of the different states bears different relations to the true valuation.
Map 385, plate 63 , shows the taxation compared with population; that is, the burden on each individual. This is seen to be greatest in the west and least of all in the southern states.
first shows a low valuation in the sparsely settled west and, though in less degree, in the south, and a high valuation in many of the northeastern states; and secondarily, the upper Mississippi valley and the parts of the Lake states adjoining. The second map shows a high valuation per capita in certain parts of the west, including especially Washington, California, Colorado, and west Texas. Indeed, most of the west is rich ir real estate values, while, on the other hand, the south is poor.
Map 383, plate 62, presents the distribution of assessed values of property per capita of the population.


381. TRUE VALUATION OF REAL ESTATE AND IMPROVEMENTS THEREON PER ACRE: 1890


383. ASSESSED VALUATION ON REAL AND PERSONAL PROPERTY PER CAPITA: 1890.



393. Outstanding Principal of the Public Debi Less Cash in Treasury, January i, 1880.

392. Outstanding Principal, of the Public Debt, Less Cash in Treasury, January i, i8go.

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## DEBT.

In 1890 the debt of the United States, the states, counties, school districts, and the municipalities was, together, a trifle over $\$ 2,000,000,000$. In 1880 , io years earlier, it was a trifle over $\$ 3,000,000,000$, having diminished in Io years by one-third its amount.
Diagrams 386 and 387 show these debts in 1890 and i880 side by side. The total area of each diagram represents the entire governmental debts and is subdivided into the parts appertaining to each group of governments. At each date the national and the municipal debts are the large items, the state and county debts being small, and school district debts trifling in amount. During the decade the national debt has been reduced one-half, state debts have diminished decidedly, county debts have slightly increased, those of school districts have doubled, and those of municipalities have increased slightly.
Diagram 388 illustrates the history of the national debt since 1856 . At that time it was trifling. During the war it increased with gigantic strides, reaching a maximum in 1865 of nearly $\$ 2,700,000,000$. Since then it has diminished year by year, and commonly with great rapidity, until in 1891 it was but little more than a third as great as at the maximum at 1865 .

Diagram 389 shows the history of the national debt since 1856 per capita of the population. At the maximum in 1865 the debt was about $\$ 75$ per head of population. The decrease in the debt since then has been accompanied by an increase in the population, so that in 189 r it was but $\$ 13$ per head, or about one-sixth of what it was in 1865.

Diagram 390 shows in similar form the annual interest charge on the national debt for the same year. The interest charged has, since the war, diminished not only as the principal has diminished, but at a more rapid rate, as loans were replaced by others at less rates of interest. The annual interest charge per capita has diminished, but at a still more rapid rate, on account of the increase in population. This is shown by Diagram 391
Diagram 392 classifies the outstanding principal of the public debt, less the cash in the treasury, separating the interest bearing debt from the non-interest bearing debt and classifying the interest bearing debt according to the interest paid. Thus it is seen that the great body of the interest bearing debt is at 4 per cent.
Diagram 393 presents the status similarly in 1880 for comparison.

## INDEBTEDNESS OF STATES

The indebtedness of states, which in 1890 amounted to $\$ 229,000,000$, was distributed among the various states as shown by Diagram 394. The largest state debts were as a rule, those of the southern states. In Virginia the debt was vastly greater than that of any other state.
Diagram 395 shows similarly the amount of state debt per capita of the population. Here we find Virginia with its large reconstruction debt far in the lead, Louisiana following it, and then alternately southern and far western states

Diagram 396 shows by the lengths of the bars the indebtedness of states, including in that term not only the state debt, but the debts of counties and municipalities. Here New York is far in the lead, having a debt nearly three times as great as its next competitor, Massachusetts, a fact which is in a great part due to the enormous debt of the city of New York. Massachusetts follows it, and then Ohio and Pennsylvania, the column being ended by the newer states and territories of the far west.

Diagram 397 shows the combined debt, that is, the debt of states, counties, and municipalities, per capita of the population. From this diagram it is seen that the District of Columbia had, per head of the population, a much larger debt than any other division of the country. This, however, is misleading unless qualified.


estate amounted to about five-sixths of its value, the remaining sixth being still owing. The indebtedness per capita of total population was $\$ 96$.
Diagram 400 illustrates the number and the amount of real estate mortgages made during 1889, classified by the amounts of money involved in each. The length of the bar in each pair represents the number of mortgages in 100 in that class. The second bar in each pair represents the amount of indebtedness in that class. It appears that two-thirds of all mortgages were for less than $\$ 1,000$, but they involved only one-sixth of the indebtedness; 30 per cent of them were between $\$ 1,000$ and $\$ 5,000$. The amount of money in this class was nearly 39 per cent.
Diagram 40 illustrates the movement in the rate of interest on real estate mortgages in the ro years between 1880 and 1889 for all real estate mortgage debts and for those on acres and those on lots.
Diagram 402 shows the amount of real estate mortgage debts contracted during the 10 years between 1880 and 1889, inclusive, giving the total for acres and lots, and for lots and acres separately.

Diagram 403 shows by percentages the number and the amount of real estate mortgages made during 1889, bearing specified rates of interest, from which it appears that while the rate per cent ranged in different parts of the country from 6 per cent up to more than 12 per cent, more were contracted at 6 per cent, both as to number and amount, than at any other rate. This is true not only for all mortgage indebtedness, but for indebtedness secured by acres and lots separately. This diagram is summarized in simpler form in Diagram 404.

Diagram 405 shows the total amount of real estate mortgage debt in force January I, 1890, by states and territories. From this it appears that the mortgage debt of New York was more than three times as great as that of any other state, Pennsylvania being next, followed by Illinois and Massachusetts, the column being ended by the states and territories of the Rocky Mountain region.



405. Real, Estate Mortage Debt in Force Jantary i, i890, by States and Territories,


Diagram 406 shows the real estate mortgage debt in force July r, 1890, per capita of the population by states and territories. Here again New York heads the list, followed by the District of Columbia and by certain northwestern states, while at the end of the list are the southern states.
Diagram 407 shows the proportion of all taxed acres which were under mortgage January I , 1890 . Here Kansas and Nebraska head the list, 60 per cent of the area of Kansas being under mortgage, and 55 per cent of the area of Nebraska. More than half of South Dakota and of the District of Columbia were mortgaged.

Diagram 408 shows by the lengths of its bars the proportion which the real estate mortgage debt in existence on January I, 1890 , bore to the true value of all taxed real estate in each state and territory. From this it appears that New York state was the most heavily in debt. Next to that was the state of Kansas, then follow New Jersey, Vermont, District of Columbia, South Dakota, Minnesota,
and Nebraska. In short, an examination of the list shows that the mortgage indebtedness of the southern states is, as a rule, comparatively light; that the mortgage indebtedness of the states and territories of the far west was the lightest of all, while those states which were most heavily in debt are those in which speculation was at that time, or shortly before, most active, or in which the business activities were the most intense.


Diagram 409 shows the average rate of interest, by states and territories. The rates of Arizona, Montana, Idaho, and Wyoming were more than io per cent, and in other of the western states and the states upon the Great Plains, together with several southern states, the rate exceeded 8 per cent. In most of the eastern states the rate was less than 6 per cent.
408. Percentage which the Real Estate Mortgage Debt in force Jantary i, iggo, bears to the

409. Average Rate of Interest on the read, Estate Mortgage Debt in Force January i, i8go: y States and Territories.


