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## MANUFACTURES.

### FLOURING AND GRIST MILL PRODUCTS.

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*Director of the Census.*

SIR: I transmit herewith, for publication in bulletin form, a report on the manufacture of flouring and grist mill products, prepared under my direction by Dr. H. W. Wiley, chief of the Bureau of Chemistry of the United States Department of Agriculture.

The manufacture has never before been made the subject of a special report of the Census Office, although for years it has held high rank. In 1900 it ranked fourth among the manufactures of the United States in value of products, and was one of the most widely distributed. An exhaustive treatment is, therefore, of much interest.

The industry is presented in 7 tables. Table 1 is a comparative summary, 1850 to 1900; Table 2 is a classification of mills, 1900, according to annual production of wheat flour; Table 3 shows the rank of states and territories, 1900, according to establishments, capital, wage-earners, total wages, and quantity of wheat used; Table 4 is a classification of mills by character of work done, 1900, by states and territories; Table 5 is a classification of mills as producers of wheat flour, by states, in order of their rank, 1900; Table 6 is a comparative summary, by states and territories, 1890 and 1900; and Table 7 is a detailed summary, by states and territories, 1900.

In drafting the schedules of inquiry for the census of 1900 care was taken to preserve the basis of comparison with prior censuses. Comparison may be made safely with respect to all the items of inquiry except those relating to capital, salaried officials, clerks, etc., and their salaries, the average number of employees,

and the total amount of wages paid. Live capital, that is, cash on hand, bills receivable, unsettled ledger accounts, raw materials, stock in process of manufacture, finished products on hand, and other sundries, was first called for at the census of 1890. No definite attempt was made, prior to the census of 1890, to secure a return of live capital invested.

Changes were made in the inquiries relating to employees and wages in order to eliminate defects found to exist on the form of inquiry adopted in 1890. At the census of 1890 the average number of persons employed during the entire year was called for, and also the average number employed at stated weekly rates of pay, and the average number was computed for the actual time the establishments were reported as being in operation. At the census of 1900 the greatest and least numbers of employees were reported, and also the average number employed during each month of the year. The average number of wage-earners (men, women, and children) employed during the entire year was ascertained by using 12, the number of calendar months, as a divisor into the total of the average numbers reported for each month. This difference in the method of ascertaining the average number of wage-earners during the entire year may have resulted in a variation in the number, and should be considered in making comparisons.

At the census of 1890 the number and salaries of proprietors and firm members actively engaged in the business or in supervision were reported, combined with clerks and other officials. In cases where proprietors and firm members were reported without salaries, the amount that would ordinarily be paid for

similar services was estimated. At the census of 1900 only the number of proprietors and firm members actively engaged in the industry or in supervision was ascertained, and no salaries were reported for this class. It is therefore impossible to compare the number and salaries of salaried officials of any character for the two censuses.

Furthermore, the schedules for 1890 included in the wage-earning class, overseers, foremen, and superintendents (not general superintendents or managers), while the census of 1900 separates from the wage-earning class such salaried employees as general superintendents, clerks, and salesmen. It is possible and probable that this change in the form of the question has resulted in eliminating from the wage-earners, as reported by the present census, many high-salaried employees included in that group for the census of 1890.

In some instances, the number of proprietors and firm members, shown in the accompanying tables, falls short of the number of establishments reported. This is accounted for by the fact that no proprietors or firm members are reported for corporations or cooperative establishments. The number of salaried officials, clerks, etc., is the greatest number reported employed at any one time during the year.

The reports show a capital of \$218,714,104 invested in the manufacture of flouring and grist mill products.

This sum represents the value of land, buildings, machinery, tools, and implements, and the live capital utilized, but does not include the capital stock of any of the manufacturing corporations. The value of products is returned at \$560,719,063, to produce which involved an outlay of \$5,404,750 for salaries of officials, clerks, etc.; \$17,703,418 for wages; \$10,325,588 for miscellaneous expenses, including rent, taxes, etc.; and \$475,826,345 for materials used, mill supplies, freight, and fuel. It is not to be assumed, however, that the difference between the aggregate of these sums and the value of the products is, in any sense, indicative of the profits in the manufacture of the products during the census year. The census schedule takes no cognizance of the cost of selling manufactured articles, or of interest on capital invested, or of the mercantile losses incurred in the business, or of depreciation in plant. The value of the product given is the value as obtained or fixed at the shop or factory. This statement is necessary in order to avoid erroneous conclusions from the figures presented.

Very respectfully,



*Chief Statistician for Manufactures.*

# FLOURING AND GRIST MILL PRODUCTS.

By Dr. H. W. WILEY, *Expert Special Agent.*

In this report on flouring and grist mill products of the United States the data presented comprise the general statistics of the milling industry, with a comparison by decennial periods from 1850 to 1900. The statistics include the number of establishments engaged in milling cereal products, capital invested, number of

salaries, number of wage-earners, and the amount of wages paid, miscellaneous expenses attending the manufacture, cost of materials used, and the value of the products, with percentages of increase for each decade. These are summarized in Table 1.

TABLE 1.—COMPARATIVE SUMMARY, 1850 TO 1900, WITH PER CENT OF INCREASE FOR EACH DECADE.

|  | DATE OF CENSUS. |               |               |               |               |               | PER CENT OF INCREASE. |                    |                    |                    |                    |
|--|-----------------|---------------|---------------|---------------|---------------|---------------|-----------------------|--------------------|--------------------|--------------------|--------------------|
|  | 1900            | 1890          | 1880          | 1870          | 1860          | 1850          | 1890<br>to<br>1900    | 1880<br>to<br>1890 | 1870<br>to<br>1880 | 1860<br>to<br>1870 | 1850<br>to<br>1860 |
| Number of establishments .....                 | 25,258          | 18,470        | 24,338        | 22,573        | 13,868        | 11,891        | 36.8                  | 124.1              | 7.8                | 62.8               | 16.6               |
| Capital .....                                  | \$218,714,104   | \$208,473,500 | \$177,361,878 | \$151,565,376 | \$84,585,004  | \$54,415,581  | 4.9                   | 17.5               | 17.0               | 79.2               | 65.4               |
| Salaried officials, clerks, etc., number ..... | 5,790           | 216,078       | (3)           | (3)           | (3)           | (3)           | 164.0                 |                    |                    |                    |                    |
| Salaries .....                                 | \$5,404,760     | \$8,897,340   | (3)           | (3)           | (3)           | (3)           | 89.3                  |                    |                    |                    |                    |
| Wage-earners, average number .....             | 37,073          | 47,403        | 58,407        | 58,448        | 27,682        | 23,310        | 121.8                 | 118.8              | 10.1               | 111.1              | 18.8               |
| Total wages .....                              | \$17,703,418    | \$18,138,402  | \$17,422,316  | \$14,577,533  | \$8,721,391   | \$5,680,164   | 12.4                  | 4.1                | 19.5               | 67.1               | 53.5               |
| Men, 16 years and over .....                   | 36,419          | 46,889        | 58,239        | 57,795        | 27,626        | 23,200        | 122.3                 | 119.5              | 0.8                | 109.2              | 18.8               |
| Wages .....                                    | \$17,540,370    | \$18,046,465  | (3)           | (3)           | (3)           | (3)           | 12.8                  |                    |                    |                    |                    |
| Women, 16 years and over .....                 | 497             | 308           | 42            | 91            | 56            | 50            | 61.4                  | 633.3              | 153.8              | 62.5               | 12.0               |
| Wages .....                                    | \$142,911       | \$70,153      | (3)           | (3)           | (3)           | (3)           | 103.7                 |                    |                    |                    |                    |
| Children, under 16 years .....                 | 157             | 206           | 126           | 562           | (3)           | (3)           | 123.8                 | 63.5               | 177.6              |                    |                    |
| Wages .....                                    | \$20,137        | \$21,784      | (3)           | (3)           | (3)           | (3)           | 17.6                  |                    |                    |                    |                    |
| Miscellaneous expenses .....                   | \$10,325,588    | \$13,162,037  | (3)           | (3)           | (3)           | (3)           | 121.6                 |                    |                    |                    |                    |
| Cost of materials used .....                   | \$475,826,345   | \$434,152,290 | \$441,545,225 | \$367,392,122 | \$208,497,309 | \$113,036,698 | 9.6                   | 11.7               | 20.2               | 76.2               | 84.5               |
| Value of products .....                        | \$560,719,063   | \$513,971,474 | \$505,185,712 | \$444,985,143 | \$248,580,305 | \$136,056,736 | 9.1                   | 1.7                | 13.5               | 79.0               | 82.7               |

<sup>1</sup>Decrease.

<sup>2</sup>Includes proprietors and firm members, with their salaries; number only reported in 1900, but not included in this table. (See Table 7.)

<sup>3</sup>Not reported separately.  
<sup>4</sup>Not reported.

The most rapid increase in the number of establishments was in the decennial period from 1860 to 1870. From 1880 to 1890 there was a very marked decrease. This decrease was due, not to any diminution in the importance of the industry, as will be seen by referring to the amount of capital invested, but rather to the tendency to combine into single establishments many of the smaller mills. The milling industry, like every other, illustrates the well-established fact that greater economy in manufacture can be secured in a small number of large mills than in a large number of small mills. Thus, while there was a decrease of 5,868 in the number of mills from 1880 to 1890, there was a large increase in the capital invested and a small increase in the value of products. It is true there was a decided fall in the prices of materials from 1880 to 1890, so that the actual cost of the materials, even if used in increased quantities, in 1890 was somewhat less than in 1880, but by improvement in the milling processes and the utilization of by-products the actual value of

products was considerably increased. In a comparison of the decennial periods from 1890 to 1900, a remarkable increase appears in the number of establishments. This was due, not only to the building of many larger mills, but also to a considerable increase in those of the smaller capacity. The capital invested in 1900 was only 4.9 per cent greater than in 1890. The number of wage-earners in 1900 diminished, owing, principally, to improved processes in handling the grain and products, which lessened the amount of manual labor required. Although the prices of cereals continued to fall from 1890 to 1900, the total amount paid for the raw materials increased 9.6 per cent, because of the increased quantity used. The value of products increased 9.1 per cent. The greatest percentage of increase, 82.7, was from 1850 to 1860, but the greatest absolute increase, \$196,404,778, was during the decade ending with 1870. The value of products includes the value of the grist of all kinds ground for customers as well as for the market. The value of materials also includes

the value of the custom grist brought to the mill. The amount received for the custom grinding in 1900 is given separately in Table 6.

Table 2 shows, by states, the number of mills, classified according to the annual production, in barrels of wheat flour,<sup>1</sup> 1900.

TABLE 2.—CLASSIFICATION OF MILLS ACCORDING TO ANNUAL PRODUCTION OF WHEAT FLOUR: 1900.

| STATES AND TERRITORIES.    | Less than 100 barrels. | 100 to 499 barrels. | 500 to 999 barrels. | 1,000 to 4,999 barrels. | 5,000 to 19,999 barrels. | 20,000 to 99,999 barrels. | 100,000 barrels or more. | Total. |
|----------------------------|------------------------|---------------------|---------------------|-------------------------|--------------------------|---------------------------|--------------------------|--------|
| United States ..           | 1,655                  | 2,554               | 1,316               | 4,310                   | 2,584                    | 634                       | 135                      | 13,188 |
| Alabama .....              | 35                     | 75                  | 34                  | 17                      | 3                        | 1                         | .....                    | 165    |
| Arizona .....              | 1                      | .....               | 1                   | 4                       | 5                        | 1                         | .....                    | 12     |
| Arkansas .....             | 16                     | 32                  | 18                  | 71                      | 84                       | 2                         | .....                    | 173    |
| California .....           | 4                      | 7                   | 8                   | 30                      | 28                       | 11                        | 6                        | 94     |
| Colorado .....             | .....                  | 2                   | 3                   | 12                      | 12                       | 17                        | 1                        | 47     |
| Connecticut .....          | 13                     | 5                   | 1                   | .....                   | .....                    | .....                     | .....                    | 19     |
| Delaware .....             | 9                      | 13                  | 5                   | 27                      | 7                        | 1                         | .....                    | 62     |
| District of Columbia ..... | .....                  | .....               | 1                   | .....                   | .....                    | 2                         | .....                    | 2      |
| Florida .....              | 1                      | .....               | 1                   | .....                   | .....                    | .....                     | .....                    | 2      |
| Georgia .....              | 57                     | 194                 | 91                  | 76                      | 9                        | 5                         | 1                        | 433    |
| Idaho .....                | .....                  | 1                   | 1                   | 11                      | 17                       | 4                         | .....                    | 34     |
| Illinois .....             | 49                     | 50                  | 22                  | 129                     | 131                      | 50                        | 12                       | 443    |
| Indiana .....              | 36                     | 41                  | 36                  | 245                     | 235                      | 44                        | 8                        | 645    |
| Indian Territory .....     | .....                  | .....               | .....               | 8                       | 12                       | 3                         | .....                    | 23     |
| Iowa .....                 | 53                     | 43                  | 24                  | 129                     | 107                      | 21                        | 2                        | 379    |
| Kansas .....               | 34                     | 17                  | 20                  | 73                      | 97                       | 48                        | 13                       | 302    |
| Kentucky .....             | 57                     | 65                  | 34                  | 170                     | 117                      | 17                        | 1                        | 461    |
| Louisiana .....            | .....                  | .....               | .....               | 1                       | .....                    | .....                     | .....                    | 1      |
| Maine .....                | 30                     | 13                  | 5                   | 7                       | .....                    | .....                     | .....                    | 56     |
| Maryland .....             | 15                     | 53                  | 40                  | 128                     | 36                       | 6                         | 2                        | 280    |
| Massachusetts .....        | 16                     | 7                   | 2                   | 2                       | .....                    | .....                     | .....                    | 27     |
| Michigan .....             | 33                     | 41                  | 46                  | 236                     | 137                      | 37                        | 4                        | 534    |
| Minnesota .....            | 15                     | 23                  | 19                  | 93                      | 151                      | 52                        | 24                       | 377    |
| Mississippi .....          | 7                      | 5                   | .....               | 2                       | .....                    | .....                     | .....                    | 14     |
| Missouri .....             | 55                     | 81                  | 53                  | 330                     | 165                      | 44                        | 9                        | 740    |
| Montana .....              | 1                      | 1                   | 2                   | 4                       | 7                        | 4                         | .....                    | 19     |
| Nebraska .....             | 8                      | 13                  | 16                  | 93                      | 110                      | 18                        | .....                    | 258    |
| Nevada .....               | .....                  | .....               | 1                   | 9                       | 1                        | .....                     | .....                    | 11     |
| New Hampshire .....        | 13                     | 8                   | 1                   | .....                   | .....                    | 1                         | .....                    | 23     |
| New Jersey .....           | 34                     | 31                  | 14                  | 59                      | 27                       | 1                         | .....                    | 166    |
| New Mexico .....           | 1                      | 4                   | 2                   | 19                      | 9                        | .....                     | .....                    | 35     |
| New York .....             | 154                    | 129                 | 44                  | 127                     | 80                       | 23                        | 14                       | 571    |
| North Carolina .....       | 175                    | 423                 | 188                 | 202                     | 36                       | 1                         | .....                    | 975    |
| North Dakota .....         | 1                      | 1                   | 2                   | 23                      | 25                       | 17                        | 1                        | 70     |
| Ohio .....                 | 40                     | 66                  | 64                  | 375                     | 232                      | 51                        | 5                        | 883    |
| Oklahoma .....             | 7                      | 2                   | 1                   | 6                       | 14                       | 13                        | 1                        | 44     |
| Oregon .....               | .....                  | 6                   | 9                   | 48                      | 52                       | 13                        | 3                        | 131    |
| Pennsylvania .....         | 264                    | 355                 | 190                 | 556                     | 185                      | 25                        | 5                        | 1,580  |
| Rhode Island .....         | 2                      | 3                   | 1                   | .....                   | .....                    | .....                     | .....                    | 6      |
| South Carolina .....       | 32                     | 75                  | 46                  | 39                      | 8                        | 1                         | .....                    | 201    |
| South Dakota .....         | 1                      | 1                   | 3                   | 27                      | 55                       | 7                         | .....                    | 94     |
| Tennessee .....            | 108                    | 197                 | 85                  | 209                     | 98                       | 16                        | 6                        | 719    |
| Texas .....                | 8                      | 8                   | 5                   | 23                      | 42                       | 25                        | 6                        | 117    |
| Utah .....                 | .....                  | .....               | 1                   | 42                      | 33                       | 3                         | .....                    | 79     |
| Vermont .....              | 25                     | 9                   | 1                   | 1                       | .....                    | .....                     | .....                    | 36     |
| Virginia .....             | 153                    | 301                 | 113                 | 281                     | 55                       | 12                        | 1                        | 922    |
| Washington .....           | .....                  | 6                   | 1                   | 12                      | 24                       | 16                        | 4                        | 63     |
| West Virginia .....        | 64                     | 103                 | 76                  | 151                     | 29                       | 5                         | .....                    | 423    |
| Wisconsin .....            | 25                     | 44                  | 30                  | 200                     | 103                      | 16                        | 6                        | 424    |
| Wyoming .....              | .....                  | .....               | .....               | 4                       | 4                        | .....                     | .....                    | 8      |

The total number of flour and grist mills grinding wheat in the United States was 13,188, of which 1,655 belonged to the extremely small class producing less than 100 barrels per annum, while 2,554 produced from 100 to 499 barrels; 1,316 from 500 to 999; 4,310 from 1,000 to 4,999; 2,584 from 5,000 to 19,999; 634 from 20,000 to 99,999; and 135 more than 100,000 barrels. No one class of these mills was limited to any one of the states or territories, and only 23 of the states and territories were represented in the largest class. The largest number of small mills was found in

<sup>1</sup> A barrel equals 196 pounds.

Pennsylvania, and of mills of the greatest capacity in Minnesota. Of mills of the second size, the largest number was found in North Carolina, of the third and fourth sizes in Pennsylvania, and of the fifth size in Ohio. Minnesota led in the number of large mills as well as in value of products. In number of establishments of all kinds Pennsylvania led, with 1,580; North Carolina was second, with 975; Virginia third, with 922; and Ohio fourth, with 883. Among the states and territories having a small number of mills were Wyoming, with 8; Rhode Island, with 6; and the District of Columbia and Florida, with 2 each. There was no state or territory without at least 1 mill of some one of the sizes mentioned. Unless a state or territory had 3 or more establishments of the kind under consideration, no detailed statement is made concerning it.

The comparative statistics of the industry for 1890 and 1900, showing kind, quantity, and value of materials and of products, are given in Table 5. Table 6 is the detailed summary for 1900. These tables present the industry in a comprehensive manner and should be studied with Table 3, which shows the rank of states and territories in 1900, according to establishments, capital, wage-earners, total wages, and quantity of wheat used.

TABLE 3.—RANK OF STATES AND TERRITORIES, BY ESTABLISHMENTS, CAPITAL, WAGE-EARNERS, WAGES PAID, AND QUANTITY OF WHEAT USED: 1900.

| STATES AND TERRITORIES.    | RANK ACCORDING TO—        |                   |                         |             |                         |
|----------------------------|---------------------------|-------------------|-------------------------|-------------|-------------------------|
|                            | Number of establishments. | Capital invested. | Number of wage-earners. | Wages paid. | Quantity of wheat used. |
| Alabama .....              | 12                        | 35                | 21                      | 33          | 56                      |
| Arizona .....              | 47                        | 46                | 48                      | 46          | 35                      |
| Arkansas .....             | 20                        | 32                | 23                      | 30          | 27                      |
| California .....           | 32                        | 11                | 16                      | 13          | 12                      |
| Colorado .....             | 41                        | 25                | 31                      | 24          | 21                      |
| Connecticut .....          | 29                        | 28                | 33                      | 31          | 46                      |
| Delaware .....             | 37                        | 36                | 39                      | 40          | 35                      |
| District of Columbia ..... | 50                        | 47                | 41                      | 43          | 39                      |
| Florida .....              | 35                        | 49                | 47                      | 50          | 48                      |
| Georgia .....              | 9                         | 23                | 12                      | 21          | 26                      |
| Idaho .....                | 45                        | 40                | 43                      | 41          | 31                      |
| Illinois .....             | 11                        | 5                 | 6                       | 4           | 4                       |
| Indiana .....              | 10                        | 7                 | 5                       | 6           | 3                       |
| Indian Territory .....     | 40                        | 42                | 40                      | 39          | 23                      |
| Iowa .....                 | 16                        | 12                | 11                      | 12          | 13                      |
| Kansas .....               | 18                        | 9                 | 8                       | 8           | 7                       |
| Kentucky .....             | 7                         | 14                | 14                      | 14          | 14                      |
| Louisiana .....            | 39                        | 50                | 44                      | 47          | 50                      |
| Maine .....                | 26                        | 31                | 35                      | 32          | 43                      |
| Maryland .....             | 21                        | 18                | 20                      | 20          | 20                      |
| Massachusetts .....        | 25                        | 26                | 27                      | 25          | 44                      |
| Michigan .....             | 13                        | 10                | 9                       | 9           | 10                      |
| Minnesota .....            | 19                        | 1                 | 1                       | 1           | 1                       |
| Mississippi .....          | 27                        | 45                | 34                      | 45          | 47                      |
| Missouri .....             | 7                         | 6                 | 7                       | 7           | 5                       |
| Montana .....              | 46                        | 38                | 45                      | 38          | 32                      |
| Nebraska .....             | 23                        | 16                | 19                      | 16          | 18                      |
| Nevada .....               | 47                        | 44                | 50                      | 49          | 42                      |
| New Hampshire .....        | 31                        | 37                | 37                      | 35          | 40                      |
| New Jersey .....           | 22                        | 20                | 25                      | 22          | 30                      |
| New Mexico .....           | 44                        | 43                | 46                      | 44          | 37                      |
| New York .....             | 5                         | 2                 | 2                       | 2           | 6                       |
| North Carolina .....       | 2                         | 21                | 15                      | 23          | 23                      |
| North Dakota .....         | 34                        | 29                | 28                      | 26          | 22                      |
| Ohio .....                 | 6                         | 4                 | 3                       | 3           | 2                       |
| Oklahoma .....             | 42                        | 34                | 32                      | 29          | 24                      |
| Oregon .....               | 30                        | 19                | 23                      | 19          | 17                      |
| Pennsylvania .....         | 1                         | 3                 | 4                       | 5           | 8                       |
| Rhode Island .....         | 43                        | 41                | 42                      | 42          | 49                      |
| South Carolina .....       | 17                        | 39                | 30                      | 37          | 34                      |



TABLE 3.—RANK OF STATES AND TERRITORIES, BY ESTABLISHMENTS, CAPITAL, WAGE-EARNERS, WAGES PAID, AND QUANTITY OF WHEAT USED: 1900—Cont'd.

| STATES AND TERRITORIES. | RANK ACCORDING TO—        |                   |                         |             |                         |
|-------------------------|---------------------------|-------------------|-------------------------|-------------|-------------------------|
|                         | Number of establishments. | Capital invested. | Number of wage-earners. | Wages paid. | Quantity of wheat used. |
| South Dakota.....       | 33                        | 27                | 29                      | 27          | 25                      |
| Tennessee.....          | 4                         | 13                | 13                      | 11          | 11                      |
| Texas.....              | 24                        | 17                | 18                      | 15          | 15                      |
| Utah.....               | 38                        | 33                | 38                      | 34          | 29                      |
| Vermont.....            | 28                        | 30                | 36                      | 36          | 45                      |
| Virginia.....           | 3                         | 15                | 17                      | 17          | 19                      |
| Washington.....         | 36                        | 22                | 22                      | 18          | 16                      |
| West Virginia.....      | 14                        | 24                | 26                      | 28          | 28                      |
| Wisconsin.....          | 15                        | 8                 | 10                      | 10          | 9                       |
| Wyoming.....            | 49                        | 48                | 49                      | 48          | 41                      |

Minnesota ranked first in everything except the number of establishments, in which it ranked eighteenth. New York ranked second in capital invested, number of wage-earners, wages paid, and value of products (see Table 5), sixth in quantity of wheat used, and fifth in number of mills. Ohio was third in number of wage-earners, wages paid, and value of products, second in quantity of wheat used, fourth in capital, and sixth in number of establishments. Indiana was third in quantity of wheat used, seventh in capital, fifth in number of wage-earners, sixth in amount of wages paid and value of products, and ninth in number of establishments. Pennsylvania was third in amount of capital, fourth in number of wage-earners and value of products, fifth in amount of wages paid, eighth in amount of wheat used, and first in number of establishments.

Minnesota's value of products was 14.1 per cent of the total; New York's 7.6 per cent, and Ohio's 6.7 per cent. This was also the order in 1890 except that Pennsylvania had third place, Ohio being fourth. The greatest increase was in Minnesota, \$23,719,621, or 39.4 per cent. New York and Ohio both showed a decrease.

Of the total value of products in 1900, wheat flour constituted 62.1 per cent, compared with 68.3 per cent in 1890, and corn meal 13.1 per cent, compared with 14.9 per cent in 1890. But in quantity, wheat flour increased 26.7 per cent and corn meal 8.5 per cent. Buckwheat and hominy increased in both quantity and value.

Erroneous impressions are likely to be created if attention be given to number of establishments alone. In many parts of the United States, where the milling industry is confined to the local demand, there are large numbers of small establishments, and this seems to be necessary for the convenience of the people. On the other hand, in those sections where milling is one of the principal industries, the establishments are on a very large scale. For this reason a just idea of the manufacture would not be secured by comparing, for instance, the number of flouring and grist mills in

Minnesota, 512, with the number in Missouri, 1,145, for Minnesota ranks first in value of products and Missouri sixth. The largest number of establishments, 2,719, in any one state was found in Pennsylvania. The capital invested was \$19,516,993, and the total average number of wage-earners 2,195, or less than 1 for each establishment. The smallest number of establishments was in the District of Columbia, where 9 mills were in operation, with a capital of \$198,065, employing 84 wage-earners.

In order to form a correct idea of the magnitude of the milling industry in any given locality, it will be sufficient to compare with the number of establishments the capital invested and the number of wage-earners employed. For instance, in the state of Minnesota there were 512 milling establishments, representing a capital of \$24,125,781, and employing 4,086 wage-earners. The average capital invested for each establishment was \$47,121, and the average number of wage-earners for each establishment was 8. Compare with this some other locality having approximately the same number of establishments, for instance, Arkansas: The total number of establishments in Arkansas was 410, representing a capital of \$1,183,052, the number of wage-earners was 443, the average capital for each establishment was \$2,885, and the average number of wage-earners for each establishment was 1. Again, in the case of South Carolina, the total number of establishments was 556, the capital invested was \$652,553, the number of wage-earners was 281, the average amount of capital invested for each establishment was \$1,174, and the average number of wage-earners was only about equal to 1 for every 2 establishments in operation.

It may also be well to briefly compare in a few instances the different quantities of materials used in the various states, as shown in detail in Table 5. The total quantity of wheat used in the flouring and grist mill industry in the United States during the census year was 489,914,004 bushels, and the cost \$317,933,257. Of Indian corn the total number of bushels used was 241,029,249, and the cost \$93,892,609. It is interesting to note that the amount of Indian corn milled was almost exactly half the quantity of wheat, but it must not be forgotten that practically all the flour produced from wheat which was milled entered into consumption as human food, while a large quantity of the Indian corn (the exact amount is not stated in the data) was used for cattle food. It is evident, therefore, that although the United States is, in proportion to its population, the greatest consumer of Indian corn for human food, the amount so consumed does not reach one-half of the quantity of wheat used for the same purpose. The quantity of other cereals is given in detail only in the case of rye, buckwheat, and barley, of which the quantities and values were, of rye, 12,720,812 bushels, costing \$6,446,705, of buckwheat, 8,317,357 bushels, costing \$4,438,480, and of barley, 12,289,036 bushels, costing \$4,460,695. Oats, and other cereals are grouped together, form-

ing a grand total of 70,873,167 bushels at a cost of \$19,103,524. Practically all the buckwheat used goes into human consumption, while the barley is doubtless largely consumed in the brewing industry. In the case of Minnesota the number of bushels of wheat used was 102,921,426, and the number of bushels of Indian corn, 4,226,426. In Arkansas the number of bushels of wheat used was 2,912,566, and of Indian corn 2,487,206 bushels. In South Carolina the number of bushels of wheat used was 1,000,964, and of Indian corn 1,861,093. Minnesota led the states in the quantity of wheat used, 102,921,426 bushels, and New York in the quantity of Indian corn, 22,469,249 bushels. Other states showing large quantities of Indian corn used are Pennsylvania, 20,587,926 bushels; Illinois, 16,413,864 bushels; Indiana, 14,297,771 bushels; Ohio, 12,609,084 bushels; Kansas, 12,427,741 bushels; Tennessee, 12,151,242 bushels, and Missouri, 11,842,365 bushels. The states which used more Indian corn than wheat are shown in the following table:

STATES GRINDING MORE INDIAN CORN THAN WHEAT:  
1900.

| STATES.                   | Indian corn<br>(bushels). | Wheat<br>(bushels). |
|---------------------------|---------------------------|---------------------|
| Alabama.....              | 4,268,639                 | 661,684             |
| Connecticut.....          | 3,003,483                 | 27,924              |
| Delaware.....             | 882,216                   | 740,123             |
| District of Columbia..... | 700,886                   | 314,502             |
| Florida.....              | 441,868                   | 5,022               |
| Georgia.....              | 7,255,621                 | 4,186,857           |
| Louisiana.....            | 742,669                   | 3,000               |
| Maine.....                | 4,589,793                 | 184,894             |
| Massachusetts.....        | 9,718,561                 | 27,340              |
| Mississippi.....          | 1,609,786                 | 16,920              |
| New Hampshire.....        | 8,608,644                 | 818,324             |
| New Jersey.....           | 5,156,897                 | 2,404,670           |
| North Carolina.....       | 6,018,505                 | 4,549,396           |
| Rhode Island.....         | 2,627,993                 | 5,802               |
| South Carolina.....       | 1,861,093                 | 1,000,964           |
| Vermont.....              | 4,749,004                 | 33,523              |
| West Virginia.....        | 3,080,190                 | 2,818,985           |

The relative proportion of Indian corn and wheat ground in the states mentioned does not indicate the relative consumption of Indian corn and wheat bread. In many of the states, especially in the South, the Indian-corn bread is an article of almost universal consumption, and is probably eaten to as large an extent as wheat bread. In others the quantity of wheat flour manufactured is small, but it is extensively used for bread, being bought from millers elsewhere.

Table 4 shows the character of work done by mills, 1900, by states and territories, whether all merchant, custom or exchange, or both.

TABLE 4.—CLASSIFICATION OF MILLS BY CHARACTER OF WORK DONE, BY STATES AND TERRITORIES: 1900.

| STATES AND TERRITORIES. | Total. | Merchant only. | Custom or exchange only. | Both custom or exchange, and merchant. |
|-------------------------|--------|----------------|--------------------------|--|
| United States.....      | 25,258 | 2,620          | 14,905                   | 7,733                                  |
| Alabama.....            | 781    | 11             | 785                      | 35                                     |
| Arizona.....            | 11     | 5              | 1                        | 5                                      |
| Arkansas.....           | 410    | 18             | 397                      | 55                                     |
| California.....         | 124    | 71             | 11                       | 42                                     |
| Colorado.....           | 60     | 38             | 10                       | 14                                     |

TABLE 4.—CLASSIFICATION OF MILLS BY CHARACTER OF WORK DONE, BY STATES AND TERRITORIES: 1900—Continued.

| STATES AND TERRITORIES.   | Total. | Merchant only. | Custom or exchange only. | Both custom or exchange, and merchant. |
|---------------------------|--------|----------------|--------------------------|--|
| Connecticut.....          | 208    | 31             | 69                       | 108                                    |
| Delaware.....             | 83     | 9              | 25                       | 49                                     |
| District of Columbia..... | 9      | 8              | 1                        | .....                                  |
| Florida.....              | 95     | 4              | 87                       | 4                                      |
| Georgia.....              | 1,123  | 22             | 997                      | 104                                    |
| Idaho.....                | 84     | 6              | 3                        | 25                                     |
| Illinois.....             | 871    | 179            | 450                      | 233                                    |
| Indiana.....              | 897    | 82             | 339                      | 476                                    |
| Indian Territory.....     | 61     | 6              | 57                       | 18                                     |
| Iowa.....                 | 702    | 32             | 380                      | 340                                    |
| Kansas.....               | 533    | 190            | 137                      | 206                                    |
| Kentucky.....             | 1,145  | 91             | 827                      | 227                                    |
| Louisiana.....            | 69     | 5              | 64                       | .....                                  |
| Maine.....                | 227    | 79             | 77                       | 71                                     |
| Maryland.....             | 407    | 34             | 208                      | 165                                    |
| Massachusetts.....        | 231    | 75             | 59                       | 97                                     |
| Michigan.....             | 765    | 111            | 324                      | 330                                    |
| Minnesota.....            | 512    | 98             | 192                      | 222                                    |
| Mississippi.....          | 225    | 9              | 210                      | 6                                      |
| Missouri.....             | 1,145  | 221            | 547                      | 377                                    |
| Montana.....              | 20     | 12             | 3                        | 5                                      |
| Nebaska.....              | 305    | 85             | 69                       | 151                                    |
| Nevada.....               | 11     | 6              | 2                        | 3                                      |
| New Hampshire.....        | 149    | 23             | 41                       | 85                                     |
| New Jersey.....           | 354    | 62             | 122                      | 170                                    |
| New Mexico.....           | 85     | 3              | 15                       | 17                                     |
| New York.....             | 1,513  | 103            | 694                      | 716                                    |
| North Carolina.....       | 1,773  | 27             | 1,546                    | 200                                    |
| North Dakota.....         | 97     | 13             | 31                       | 53                                     |
| Ohio.....                 | 1,150  | 150            | 408                      | 592                                    |
| Oklahoma.....             | 55     | 19             | 15                       | 21                                     |
| Oregon.....               | 153    | 54             | 38                       | 61                                     |
| Pennsylvania.....         | 2,719  | 186            | 1,362                    | 1,171                                  |
| Rhode Island.....         | 47     | 10             | 12                       | 25                                     |
| South Carolina.....       | 556    | 8              | 534                      | 14                                     |
| South Dakota.....         | 120    | 24             | 30                       | 66                                     |
| Tennessee.....            | 1,618  | 96             | 1,311                    | 211                                    |
| Texas.....                | 289    | 59             | 157                      | 73                                     |
| Utah.....                 | 80     | 13             | 13                       | 54                                     |
| Vermont.....              | 211    | 15             | 78                       | 118                                    |
| Virginia.....             | 1,726  | 88             | 1,370                    | 273                                    |
| Washington.....           | 85     | 32             | 18                       | 35                                     |
| West Virginia.....        | 737    | 40             | 558                      | 139                                    |
| Wisconsin.....            | 717    | 60             | 390                      | 267                                    |
| Wyoming.....              | 10     | 4              | 2                        | 4                                      |

The custom or exchange mills constituted 59 per cent of the total. In these North Carolina led with 10.4 per cent, Virginia was second with 9.2 per cent, and Pennsylvania third with 9.1 per cent. The all-merchant mills were 10.4 per cent of the total. Missouri led in these with 8.4 per cent, Kansas was second with 7.3 per cent, and Pennsylvania third with 7.1 per cent. The mills grinding on both plans comprised 30.6 per cent of the total. Pennsylvania led in these with 15.1 per cent, New York was second with 9.3 per cent, and Ohio third with 7.7 per cent.

There is a marked distinction between merchant and custom mills, but it is not always practicable to observe this statistically. Custom mills, in a broad sense, are those grinding wheat, corn, rye, and other grain furnished from farms of the neighborhood, and are usually denominated grist mills. Merchant mills, generally speaking, are large manufacturing establishments supplying the home market and exporting flour to the principal foreign countries. To avoid an arbitrary division between merchant and custom mills, and yet to show the operations of the large manufacturing establishments constituting the milling industry of the

United States, certain principal statistics of all mills producing wheat flour in 1900 have been segregated and are presented by states, ranked according to value of products, in the table following. A comparatively small number of mills grind a comparatively large percentage of the wheat ground in the United States. Accepting this statement as a basis, the statistics are,

therefore, practically those of the milling industry. The number of establishments includes all mills in which wheat flour was the product of chief value in states having a product of \$1,000,000 and over. The table gives also the number of bushels and cost of wheat used; the average bushels per barrel; and the average daily production.

TABLE 5.—CLASSIFICATION OF MERCHANT MILLS AS PRODUCERS OF WHEAT FLOUR, BY STATES, HAVING A PRODUCT OF \$1,000,000 AND OVER, IN ORDER OF THEIR RANK: 1900.

| STATES AND TERRITORIES. | Rank. | Number of establishments. | RAW MATERIAL, WHEAT. |               | PRODUCTS, FLOUR. |              | Average daily production (barrels). | Average value per barrel. | Average bushels of wheat per barrel. | Average cost per bushel (cents). |
|-------------------------|-------|---------------------------|----------------------|---------------|------------------|--------------|-------------------------------------|---------------------------|--------------------------------------|----------------------------------|
|                         |       |                           | Bushels.             | Cost.         | Barrels.         | Value.       |                                     |                           |                                      |                                  |
| Total.....              |       | 8,987                     | 481,658,179          | \$312,632,026 | 100,823,820      | \$42,119,777 | 37                                  | \$3.39                    | 4.8                                  | 65                               |
| Minnesota.....          | 1     | 324                       | 102,021,426          | 66,641,825    | 22,705,165       | 72,381,059   | 234                                 | 3.19                      | 4.5                                  | 65                               |
| Ohio.....               | 2     | 744                       | 35,033,213           | 24,370,443    | 7,366,474        | 20,000,827   | 33                                  | 3.54                      | 4.8                                  | 70                               |
| Illinois.....           | 3     | 404                       | 27,666,704           | 18,382,716    | 6,078,423        | 20,813,984   | 50                                  | 3.42                      | 4.5                                  | 67                               |
| Indiana.....            | 4     | 592                       | 29,192,680           | 19,188,538    | 5,818,392        | 20,384,714   | 33                                  | 3.50                      | 5.0                                  | 66                               |
| New York.....           | 5     | 205                       | 25,232,677           | 18,432,502    | 5,484,827        | 19,928,981   | 88                                  | 3.67                      | 4.6                                  | 78                               |
| Missouri.....           | 6     | 593                       | 25,368,689           | 16,263,077    | 5,245,421        | 17,800,204   | 28                                  | 3.30                      | 4.8                                  | 64                               |
| Pennsylvania.....       | 7     | 1,185                     | 22,923,795           | 16,179,063    | 4,775,166        | 17,059,265   | 11                                  | 3.57                      | 4.8                                  | 71                               |
| Wisconsin.....          | 8     | 313                       | 22,356,963           | 14,869,326    | 3,750,253        | 15,406,235   | 39                                  | 4.13                      | 6.0                                  | 66                               |
| Kansas.....             | 9     | 260                       | 23,459,171           | 13,157,846    | 5,034,251        | 15,069,529   | 65                                  | 3.00                      | 4.7                                  | 56                               |
| Michigan.....           | 10    | 479                       | 20,121,661           | 13,855,780    | 4,012,867        | 14,899,096   | 28                                  | 3.71                      | 5.0                                  | 69                               |
| Tennessee.....          | 11    | 337                       | 16,546,155           | 11,778,868    | 3,512,985        | 13,220,609   | 35                                  | 3.76                      | 4.7                                  | 71                               |
| Kentucky.....           | 12    | 336                       | 12,325,621           | 8,294,690     | 2,549,947        | 9,341,759    | 25                                  | 3.66                      | 4.8                                  | 67                               |
| Texas.....              | 13    | 96                        | 12,228,132           | 8,046,610     | 2,004,554        | 8,881,359    | 90                                  | 3.41                      | 4.7                                  | 66                               |
| Iowa.....               | 14    | 327                       | 12,521,953           | 7,005,972     | 2,503,390        | 8,244,050    | 26                                  | 3.20                      | 5.0                                  | 56                               |
| California.....         | 15    | 90                        | 12,786,110           | 7,649,433     | 2,660,238        | 7,952,867    | 99                                  | 2.99                      | 4.8                                  | 60                               |
| Virginia.....           | 16    | 317                       | 8,562,519            | 6,025,314     | 1,758,946        | 6,671,815    | 18                                  | 3.79                      | 4.9                                  | 70                               |
| Maryland.....           | 17    | 235                       | 7,081,937            | 4,972,231     | 1,475,416        | 5,418,734    | 21                                  | 3.67                      | 4.8                                  | 70                               |
| Nebraska.....           | 18    | 242                       | 8,687,731            | 4,546,481     | 1,821,107        | 5,319,911    | 25                                  | 2.92                      | 4.8                                  | 52                               |
| Oregon.....             | 19    | 124                       | 8,847,242            | 4,403,048     | 1,826,512        | 4,769,573    | 49                                  | 2.61                      | 4.8                                  | 50                               |
| Washington.....         | 20    | 57                        | 8,887,996            | 4,302,920     | 1,868,780        | 4,758,004    | 109                                 | 2.55                      | 4.8                                  | 48                               |
| North Carolina.....     | 21    | 551                       | 4,549,396            | 3,009,061     | 945,761          | 4,047,340    | 6                                   | 4.28                      | 4.8                                  | 79                               |
| Georgia.....            | 22    | 271                       | 4,136,857            | 2,880,435     | 789,191          | 3,431,754    | 10                                  | 4.35                      | 5.2                                  | 70                               |
| North Dakota.....       | 23    | 66                        | 4,827,477            | 2,756,484     | 1,029,070        | 3,274,958    | 52                                  | 3.18                      | 4.7                                  | 57                               |
| Colorado.....           | 24    | 46                        | 4,869,458            | 2,716,924     | 1,012,381        | 3,063,100    | 73                                  | 3.03                      | 4.8                                  | 56                               |
| West Virginia.....      | 25    | 334                       | 3,813,985            | 2,680,322     | 767,160          | 2,969,298    | 8                                   | 3.87                      | 5.0                                  | 70                               |
| Oklahoma.....           | 26    | 30                        | 4,516,858            | 2,440,518     | 975,870          | 2,855,216    | 108                                 | 2.93                      | 4.6                                  | 54                               |
| South Dakota.....       | 27    | 80                        | 4,427,426            | 2,380,818     | 915,541          | 2,695,024    | 88                                  | 2.94                      | 4.8                                  | 54                               |
| Arkansas.....           | 28    | 158                       | 2,912,566            | 1,840,529     | 605,702          | 2,005,295    | 13                                  | 3.31                      | 4.8                                  | 63                               |
| New Jersey.....         | 29    | 119                       | 2,404,670            | 1,743,080     | 466,338          | 1,871,129    | 13                                  | 4.01                      | 5.2                                  | 72                               |
| Utah.....               | 30    | 72                        | 2,546,801            | 1,217,169     | 513,692          | 1,413,428    | 24                                  | 2.75                      | 5.0                                  | 48                               |

Table 6 is a detailed summary of flour and grist milling, by states and territories, 1900.

TABLE 6.—COMPARATIVE SUMMARY, BY STATES

| 1  | STATES AND TERRITORIES. | Year.        | Number of establishments. | Capital.                     | SALARIED OFFICIALS, CLERKS, ETC |                           | AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES. |                            |                         |                            |                           |                     |                           |                    |
|----|-------------------------|--------------|---------------------------|------------------------------|---------------------------------|---------------------------|---|----------------------------|-------------------------|----------------------------|---------------------------|---------------------|---------------------------|--------------------|
|    |                         |              |                           |                              |                                 |                           | Total.  |                            | Men, 16 years and over. |                            | Women, 16 years and over. |                     | Children, under 16 years. |                    |
|    |                         |              |                           |                              | Number.                         | Salaries.                 | Average number.                                 | Wages.                     | Average number.         | Wages.                     | Average number.           | Wages.              | Average number.           | Wages.             |
| 1  | United States...        | 1900<br>1890 | 25,258<br>18,470          | \$218,714,104<br>208,478,500 | 5,790<br>116,078                | \$5,404,750<br>18,897,840 | 87,078<br>47,403                                | \$17,708,418<br>18,138,402 | 36,419<br>46,889        | \$17,540,370<br>18,046,465 | 497<br>308                | \$142,911<br>70,153 | 157<br>206                | \$20,137<br>21,784 |
| 2  | Alabama .....           | 1900<br>1890 | 781<br>702                | 1,047,961<br>1,410,780       | 89<br>399                       | 22,691<br>109,325         | 640<br>1,043                                    | 92,858<br>157,184          | 539<br>1,034            | 92,708<br>156,672          | 3<br>180                  | 150<br>282          | 1<br>6                    | 150<br>282         |
| 3  | Arizona .....           | 1900<br>1890 | 11<br>11                  | 221,112<br>221,112           | 11<br>11                        | 9,125<br>9,125            | 86<br>86  | 19,970<br>19,970           | 36<br>36                | 19,970<br>19,970           |                           |                     |                           |                    |
| 4  | Arkansas .....          | 1900<br>1890 | 410<br>376                | 1,183,052<br>975,616         | 36<br>250                       | 21,526<br>62,351          | 443<br>742                                      | 116,445<br>107,439         | 440<br>734              | 116,253<br>107,121         |                           |                     | 8<br>8                    | 192<br>318         |
| 5  | California .....        | 1900<br>1890 | 124<br>101                | 6,552,642<br>6,126,305       | 199<br>189                      | 269,866<br>258,391        | 857<br>855                                      | 525,401<br>559,300         | 825<br>842              | 516,144<br>555,318         | 27<br>7                   | 8,357<br>2,860      | 5<br>6                    | 900<br>1,122       |
| 6  | Colorado .....          | 1900<br>1890 | 60<br>38                  | 2,040,774<br>2,135,085       | 92<br>45                        | 78,445<br>50,226          | 278<br>246                                      | 169,358<br>149,564         | 277<br>245              | 168,608<br>149,242         | 1<br>1                    | 750<br>750          | 1<br>1                    | 312<br>312         |
| 7  | Connecticut .....       | 1900<br>1890 | 208<br>177                | 1,565,478<br>1,516,008       | 42<br>164                       | 26,621<br>96,903          | 233<br>286                                      | 99,309<br>123,659          | 227<br>284              | 97,554<br>128,384          | 6<br>1                    | 1,755<br>200        | 1<br>1                    | 75<br>75           |
| 8  | Delaware .....          | 1900<br>1890 | 88<br>56                  | 1,017,508<br>1,127,592       | 20<br>51                        | 17,796<br>34,401          | 185<br>150                                      | 48,928<br>55,691           | 134<br>147              | 48,728<br>55,091           |                           |                     | 1<br>3                    | 200<br>600         |
| 9  | District of Columbia... | 1900<br>1890 | 9<br>6                    | 198,065<br>698,417           | 18<br>25                        | 18,450<br>27,218          | 84<br>124                                       | 30,848<br>58,500           | 84<br>124               | 30,848<br>58,500           |                           |                     |                           |                    |
| 10 | Florida .....           | 1900<br>1890 | 95<br>60                  | 123,416<br>143,884           | 4<br>35                         | 8,600<br>9,845            | 46<br>155                                       | 7,967<br>20,598            | 45<br>154               | 7,927<br>20,543            | 1<br>1                    | 50<br>50            | 1<br>1                    | 40<br>40           |
| 11 | Georgia .....           | 1900<br>1890 | 1,123<br>719              | 2,504,033<br>2,347,835       | 88<br>816                       | 58,908<br>108,378         | 1,167<br>1,078                                  | 225,933<br>197,964         | 1,154<br>1,055          | 225,223<br>196,486         | 2<br>2                    | 156<br>156          | 13<br>21                  | 710<br>1,822       |
| 12 | Idaho .....             | 1900<br>1890 | 84<br>18                  | 569,107<br>228,405           | 20<br>11                        | 14,170<br>7,490           | 76<br>52  | 46,453<br>23,848           | 75<br>52                | 46,353<br>23,848           |                           |                     | 1<br>1                    | 100<br>100         |
| 13 | Illinois .....          | 1900<br>1890 | 871<br>647                | 12,062,626<br>18,101,860     | 367<br>885                      | 361,021<br>567,762        | 2,111<br>3,550                                  | 1,098,006<br>1,480,954     | 2,104<br>3,506          | 1,096,454<br>1,471,364     | 1<br>26                   | 800<br>7,510        | 6<br>18                   | 1,232<br>2,080     |
| 14 | Indiana .....           | 1900<br>1890 | 897<br>723                | 10,734,544<br>10,022,173     | 286<br>855                      | 276,708<br>520,678        | 2,124<br>2,785                                  | 1,010,877<br>1,086,214     | 2,102<br>2,768          | 1,005,415<br>1,082,048     | 16<br>15                  | 4,720<br>3,206      | 6<br>7                    | 742<br>900         |
| 15 | Indian Territory .....  | 1900<br>1890 | 61<br>61                  | 478,241<br>478,241           | 26<br>26                        | 17,623<br>17,623          | 119<br>119                                      | 48,988<br>48,988           | 119<br>119              | 48,988<br>48,988           |                           |                     |                           |                    |
| 16 | Iowa .....              | 1900<br>1890 | 702<br>441                | 6,421,078<br>6,696,759       | 210<br>501                      | 160,476<br>281,458        | 1,285<br>1,248                                  | 526,479<br>507,414         | 1,224<br>1,213          | 512,119<br>502,919         | 49<br>24                  | 13,570<br>3,060     | 12<br>11                  | 790<br>1,435       |
| 17 | Kansas .....            | 1900<br>1890 | 533<br>348                | 8,366,966<br>7,844,280       | 281<br>446                      | 267,787<br>319,447        | 1,451<br>1,623                                  | 749,462<br>734,058         | 1,441<br>1,614          | 741,891<br>738,039         | 8<br>3                    | 1,221<br>483        | 2<br>6                    | 350<br>536         |
| 18 | Kentucky .....          | 1900<br>1890 | 1,146<br>505              | 4,928,928<br>4,285,649       | 171<br>488                      | 125,969<br>237,941        | 1,134<br>1,328                                  | 483,594<br>395,806         | 1,131<br>1,313          | 483,032<br>394,663         | 2<br>4                    | 442<br>216          | 1<br>11                   | 120<br>928         |
| 19 | Louisiana .....         | 1900<br>1890 | 69<br>19                  | 121,281<br>33,995            | 2<br>7                          | 2,100<br>818              | 70<br>41  | 11,636<br>6,806            | 64<br>41                | 11,420<br>6,806            |                           |                     | 6<br>6                    | 116<br>116         |
| 20 | Maine .....             | 1900<br>1890 | 227<br>210                | 1,235,767<br>1,194,900       | 18<br>201                       | 11,560<br>91,076          | 192<br>262                                      | 93,820<br>95,344           | 192<br>262              | 93,820<br>95,344           |                           |                     |                           |                    |
| 21 | Maryland .....          | 1900<br>1890 | 407<br>335                | 3,423,996<br>3,007,730       | 85<br>307                       | 80,275<br>166,290         | 541<br>625                                      | 229,335<br>240,068         | 532<br>610              | 228,009<br>237,648         | 5<br>11                   | 883<br>2,275        | 4<br>4                    | 413<br>140         |
| 22 | Massachusetts .....     | 1900<br>1890 | 231<br>238                | 1,930,927<br>2,908,303       | 53<br>246                       | 33,157<br>135,229         | 304<br>524                                      | 161,486<br>250,924         | 302<br>520              | 161,264<br>249,906         | 4<br>4                    | 1,018<br>1,018      | 2<br>2                    | 222<br>222         |
| 23 | Michigan .....          | 1900<br>1890 | 765<br>544                | 7,933,587<br>8,472,852       | 205<br>573                      | 153,461<br>336,798        | 1,423<br>1,852                                  | 718,499<br>757,068         | 1,417<br>1,840          | 717,354<br>755,578         | 1<br>3                    | 255<br>658          | 5<br>9                    | 390<br>332         |
| 24 | Minnesota .....         | 1900<br>1890 | 512<br>307                | 24,125,781<br>19,518,743     | 606<br>529                      | 780,667<br>495,740        | 4,086<br>3,509                                  | 2,338,836<br>1,748,115     | 3,936<br>3,503          | 2,332,946<br>1,747,460     | 147<br>3                  | 50,440<br>555       | 3<br>3                    | 450<br>100         |
| 25 | Mississippi .....       | 1900<br>1890 | 225<br>403                | 225,335<br>652,668           | 8<br>203                        | 1,745<br>37,243           | 208<br>777                                      | 27,244<br>88,050           | 200<br>770              | 26,688<br>87,775           | 4<br>4                    | 158<br>158          | 8<br>3                    | 556<br>117         |
| 26 | Missouri .....          | 1900<br>1890 | 1,145<br>710              | 11,402,827<br>12,680,645     | 874<br>844                      | 355,125<br>562,304        | 1,654<br>3,011                                  | 851,377<br>1,249,091       | 1,611<br>2,943          | 835,168<br>1,235,277       | 34<br>52                  | 14,450<br>12,063    | 9<br>16                   | 1,750<br>1,751     |
| 27 | Montana .....           | 1900<br>1890 | 20<br>7                   | 715,189<br>277,900           | 26<br>10                        | 27,100<br>9,738           | 67<br>24  | 51,871<br>17,913           | 67<br>24                | 51,871<br>17,913           |                           |                     |                           |                    |
| 28 | Nebraska .....          | 1900<br>1890 | 305<br>185                | 4,335,934<br>3,586,090       | 138<br>232                      | 101,721<br>152,433        | 698<br>690                                      | 363,687<br>323,308         | 656<br>685              | 355,060<br>322,390         | 37<br>37                  | 7,836<br>7,836      | 5<br>5                    | 791<br>918         |
| 29 | Nevada .....            | 1900<br>1890 | 11<br>11                  | 231,247<br>231,247           | 4<br>4                          | 2,700<br>2,700            | 13<br>13  | 8,586<br>8,586             | 12<br>12                | 8,456<br>8,456             | 1<br>1                    | 130<br>130          |                           |                    |
| 30 | New Hampshire .....     | 1900<br>1890 | 149<br>121                | 1,004,990<br>905,075         | 15<br>91                        | 10,688<br>45,053          | 185<br>174                                      | 82,214<br>78,737           | 185<br>174              | 82,214<br>78,737           |                           |                     |                           |                    |
| 31 | New Jersey .....        | 1900<br>1890 | 854<br>228                | 3,004,408<br>2,816,221       | 62<br>207                       | 42,098<br>122,233         | 431<br>500                                      | 219,951<br>213,848         | 427<br>495              | 219,205<br>212,839         | 3<br>3                    | 700<br>700          | 4<br>2                    | 686<br>304         |
| 32 | New Mexico .....        | 1900<br>1890 | 35<br>18                  | 238,735<br>181,050           | 2<br>12                         | 1,500<br>6,975            | 52<br>44  | 27,458<br>15,872           | 52<br>44                | 27,458<br>15,872           |                           |                     |                           |                    |

<sup>1</sup> Includes proprietors and firm members, with their salaries; number only reported in 1900, but not included in this table. (See Table 7.)

<sup>2</sup> Included in "All other states and territories."

<sup>3</sup> No establishments reported.

## AND TERRITORIES: 1890 AND 1900.

| Miscellaneous expenses.    | MATERIALS USED.              |                            |                              |                            |                            |                          |                          |                        |                          |                         |                          |    |
|----------------------------|------------------------------|----------------------------|------------------------------|----------------------------|----------------------------|--------------------------|--------------------------|------------------------|--------------------------|-------------------------|--------------------------|----|
|                            | Total cost.                  | Wheat.                     |                              | Corn.                      |                            | Rye.                     |                          | Buckwheat.             |                          | Barley.                 |                          |    |
|                            |                              | Bushels.                   | Cost.                        | Bushels.                   | Cost.                      | Bushels.                 | Cost.                    | Bushels.               | Cost.                    | Bushels.                | Cost.                    |    |
| \$10,325,588<br>13,162,037 | \$475,826,845<br>434,152,290 | 489,914,004<br>385,749,798 | \$317,933,257<br>311,508,007 | 241,029,249<br>166,298,313 | \$93,882,609<br>71,373,341 | 12,720,812<br>12,140,396 | \$6,446,705<br>5,950,454 | 8,317,357<br>7,032,277 | \$4,438,480<br>3,454,265 | 12,289,036<br>8,696,344 | \$4,460,695<br>4,193,284 | 1  |
| 34,654<br>56,535           | 2,787,634<br>2,471,828       | 661,684<br>438,367         | 505,308<br>382,714           | 4,268,639<br>3,765,917     | 2,128,021<br>1,972,213     | 9,976<br>890             | 5,145<br>252             | 190                    | 135                      | 40                      | 28                       | 2  |
| 15,053                     | 382,055                      | 320,214                    | 228,643                      | 17,654                     | 9,740                      |                          |                          |                        |                          | 195,888                 | 87,156                   | 3  |
| 44,681<br>53,898           | 3,029,286<br>2,041,587       | 2,912,566<br>1,046,593     | 1,840,529<br>802,945         | 2,487,206<br>2,682,541     | 1,010,523<br>1,145,344     | 4,173<br>508             | 1,770<br>334             | 105<br>79              | 32<br>59                 | 10<br>670               | 5<br>375                 | 4  |
| 246,409<br>434,921         | 11,077,482<br>12,047,810     | 12,786,110<br>10,183,420   | 7,649,433<br>8,116,556       | 927,500<br>479,839         | 492,910<br>311,493         | 88,024<br>88,482         | 48,603<br>65,073         | 14,402<br>45,849       | 14,361<br>42,537         | 4,566,341<br>4,910,253  | 1,721,635<br>2,503,396   | 5  |
| 131,790<br>126,640         | 3,842,194<br>3,155,919       | 4,869,458<br>3,103,564     | 2,716,924<br>2,604,653       | 1,590,551<br>428,843       | 517,584<br>233,891         | 26,736<br>9,216          | 9,956<br>4,665           | 665<br>4,500           | 439<br>3,000             | 13,515<br>2,700         | 6,173<br>2,225           | 6  |
| 32,083<br>61,924           | 1,845,545<br>2,387,155       | 27,924<br>25,504           | 16,101<br>21,849             | 3,003,483<br>3,770,635     | 1,398,552<br>1,902,151     | 50,213<br>77,519         | 26,899<br>49,328         | 24,393<br>46,846       | 16,710<br>25,822         | 1,390<br>5,867          | 738<br>2,578             | 7  |
| 28,038<br>43,952           | 980,837<br>1,404,485         | 740,123<br>1,282,629       | 519,653<br>1,029,603         | 882,216<br>815,398         | 321,124<br>333,997         | 1,292<br>1,829           | 686<br>1,050             | 15,060<br>8,266        | 8,180<br>5,631           |                         | 25<br>10                 | 8  |
| 18,167<br>30,748           | 537,690<br>1,359,888         | 314,502<br>913,830         | 212,760<br>533,897           | 700,836<br>566,714         | 285,932<br>280,422         | 2,300<br>4,000           | 1,020<br>2,080           |                        |                          |                         |                          | 9  |
| 2,180<br>5,850             | 242,378<br>150,135           | 5,020<br>16                | 2,510<br>16                  | 441,868<br>271,314         | 218,627<br>137,816         |                          |                          |                        |                          |                         |                          | 10 |
| 73,455<br>103,985          | 7,004,065<br>4,356,700       | 4,136,857<br>1,724,422     | 2,880,435<br>1,602,845       | 7,255,621<br>4,734,301     | 3,637,455<br>2,576,393     | 9,481<br>13,504          | 6,953<br>8,544           | 1,551<br>620           | 931<br>260               |                         | 400<br>250               | 11 |
| 23,235<br>8,270            | 645,444<br>262,811           | 1,307,509<br>381,154       | 540,242<br>240,424           | 4,436<br>2,030             | 2,354<br>1,165             | 500                      | 300                      |                        |                          | 137,990<br>6,840        | 44,199<br>4,020          | 12 |
| 590,980<br>905,299         | 26,848,791<br>31,738,747     | 27,506,764<br>38,018,501   | 18,382,716<br>25,617,898     | 16,413,804<br>7,734,102    | 5,650,082<br>2,545,688     | 434,581<br>856,754       | 212,033<br>309,515       | 176,680<br>139,102     | 98,290<br>73,821         | 87,461<br>300,046       | 30,610<br>169,542        | 13 |
| 670,830<br>723,134         | 25,664,120<br>26,603,127     | 29,192,680<br>27,275,988   | 19,188,538<br>21,481,528     | 14,297,771<br>9,559,754    | 4,671,786<br>3,440,429     | 211,097<br>248,241       | 100,169<br>108,820       | 152,455<br>123,792     | 78,715<br>72,118         | 63,495<br>12,350        | 22,866<br>5,543          | 14 |
| 27,693                     | 1,002,013                    | 1,163,234                  | 690,592                      | 794,391                    | 212,541                    |                          |                          | 11,000                 | 6,600                    |                         |                          | 15 |
| 304,256<br>363,993         | 11,272,217<br>9,780,174      | 12,521,958<br>8,704,487    | 7,005,972<br>6,732,772       | 6,362,045<br>4,954,526     | 1,710,147<br>1,232,887     | 458,763<br>552,958       | 193,222<br>209,807       | 277,593<br>299,422     | 148,966<br>155,309       | 638,740<br>251,878      | 104,527<br>75,547        | 16 |
| 447,747<br>699,986         | 18,595,258<br>14,285,990     | 23,459,171<br>16,698,366   | 13,157,846<br>11,641,427     | 12,427,741<br>7,993,712    | 3,675,178<br>1,440,239     | 143,145<br>304,024       | 69,672<br>127,453        | 25,980<br>40,050       | 17,372<br>24,782         | 33,580<br>10,250        | 11,019<br>8,002          | 17 |
| 295,982<br>272,838         | 12,018,998<br>7,917,917      | 12,325,621<br>7,568,433    | 8,294,690<br>5,824,050       | 6,641,306<br>3,886,299     | 2,918,858<br>1,560,265     | 15,028<br>27,590         | 7,664<br>14,709          | 378<br>1,550           | 286<br>1,170             | 5,525<br>1,110          | 2,732<br>628             | 18 |
| 2,717<br>1,680             | 325,297<br>41,836            | 3,000                      | 2,400                        | 742,669<br>75,924          | 264,096<br>38,988          |                          |                          |                        |                          |                         |                          | 19 |
| 43,836<br>53,632           | 2,827,443<br>2,806,869       | 134,894<br>27,527          | 104,767<br>28,488            | 4,589,793<br>4,744,470     | 2,096,170<br>2,439,089     | 10,152<br>16,046         | 9,054<br>11,430          | 186,510<br>73,557      | 74,608<br>29,019         | 49,319<br>42,768        | 25,867<br>24,332         | 20 |
| 225,357<br>236,007         | 6,731,805<br>5,773,873       | 7,081,937<br>5,070,425     | 4,972,234<br>4,302,746       | 2,887,711<br>2,187,955     | 1,116,787<br>944,404       | 134,264<br>135,034       | 67,174<br>66,370         | 100,148<br>89,245      | 50,812<br>21,461         | 22,415<br>17,260        | 9,814<br>8,360           | 21 |
| 95,774<br>169,674          | 4,812,256<br>5,959,480       | 27,340<br>68,933           | 20,376<br>63,417             | 9,718,561<br>9,424,537     | 4,094,552<br>5,027,843     | 287,972<br>123,201       | 147,523<br>77,301        | 13,849<br>24,746       | 8,180<br>12,712          | 80,940<br>15,432        | 30,277<br>7,936          | 22 |
| 396,484<br>628,927         | 19,924,980<br>19,462,779     | 20,121,661<br>19,055,917   | 13,855,780<br>15,565,688     | 8,100,200<br>4,389,870     | 2,978,316<br>1,638,614     | 649,594<br>503,000       | 316,277<br>225,771       | 618,292<br>497,663     | 333,122<br>230,758       | 146,017<br>276,063      | 61,919<br>121,635        | 23 |
| 1,300,270<br>1,712,017     | 74,509,733<br>52,383,867     | 102,921,426<br>59,123,929  | 66,641,825<br>47,281,697     | 4,226,426<br>2,353,507     | 1,254,815<br>853,287       | 455,474<br>338,081       | 203,787<br>142,707       | 87,065<br>127,603      | 47,282<br>52,093         | 1,198,068<br>246,453    | 310,408<br>88,917        | 24 |
| 3,802<br>26,002            | 805,894<br>1,009,335         | 16,920<br>3,215            | 14,019<br>2,858              | 1,609,736<br>1,737,658     | 753,566<br>950,407         |                          |                          |                        |                          |                         |                          | 25 |
| 520,468<br>966,124         | 21,937,507<br>29,210,039     | 25,368,989<br>31,210,111   | 16,263,077<br>23,688,561     | 11,842,365<br>8,017,488    | 4,116,539<br>2,959,190     | 94,018<br>141,435        | 43,740<br>64,479         | 45,192<br>33,960       | 25,117<br>20,525         | 121,735<br>7,505        | 44,018<br>4,144          | 26 |
| 41,616<br>6,087            | 818,442<br>237,245           | 1,231,182<br>324,000       | 725,259<br>223,225           | 5,503<br>10                | 2,852<br>10                | 5,485                    | 3,180                    | 27                     | 14                       | 2,195                   | 867                      | 27 |
| 171,948<br>204,134         | 6,385,719<br>5,031,858       | 8,687,781<br>6,403,491     | 4,546,481<br>3,884,912       | 3,330,234<br>2,590,866     | 875,237<br>572,717         | 356,960<br>334,495       | 143,948<br>112,767       | 10,274<br>68,605       | 6,162<br>38,042          | 63,425<br>18,650        | 15,940<br>6,660          | 28 |
| 5,850                      | 122,815                      | 158,146                    | 101,927                      | 65                         | 75                         |                          |                          | 175                    | 105                      | 24,397                  | 13,400                   | 29 |
| 33,084<br>44,742           | 2,201,909<br>2,061,208       | 313,324<br>306,560         | 220,230<br>290,234           | 3,608,644<br>8,818,262     | 1,547,402<br>1,615,398     | 7,070<br>8,022           | 5,332<br>6,086           | 28,510<br>16,328       | 11,585<br>7,648          | 10,647<br>11,882        | 5,511<br>7,989           | 30 |
| 102,630<br>147,020         | 5,243,121<br>5,026,694       | 2,404,670<br>2,223,660     | 1,743,080<br>2,064,589       | 5,156,897<br>4,153,116     | 2,137,045<br>1,950,566     | 571,502<br>332,754       | 238,533<br>180,513       | 216,851<br>139,478     | 118,867<br>73,627        | 8,096<br>80,300         | 2,589<br>56,830          | 31 |
| 11,009<br>14,197           | 418,396<br>208,607           | 563,523<br>288,355         | 346,852<br>186,913           | 41,313<br>8,442            | 22,275<br>6,222            |                          |                          |                        |                          | 32,000                  | 20,185                   | 32 |

TABLE 6.—COMPARATIVE SUMMARY, BY STATES

| STATES AND TERRITORIES.                           | Year.          | Number of establishments. | Capital.                   | SALARIED OFFICIALS, CLERKS, ETC. |                      | AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES. |                          |                         |                          |                           |                   |                           |                |
|---|----------------|---------------------------|----------------------------|----------------------------------|----------------------|---|--------------------------|-------------------------|--------------------------|---------------------------|-------------------|---------------------------|----------------|
|   |                |                           |                            |                                  |                      | Total.  |                          | Men, 16 years and over. |                          | Women, 16 years and over. |                   | Children, under 16 years. |                |
|   |                |                           |                            | Number.                          | Salaries.            | Average number.                                 | Wages.                   | Average number.         | Wages.                   | Average number.           | Wages.            | Average number.           | Wages.         |
| 33 New York .....                                 | { 1900<br>1890 | 1,513<br>1,235            | \$23,884,858<br>21,128,697 | 388<br>1,218                     | \$440,929<br>831,063 | 2,489<br>3,389                                  | \$1,284,438<br>1,599,168 | 2,404<br>3,355          | \$1,267,340<br>1,590,544 | 85<br>28                  | \$17,098<br>7,604 | 6<br>6                    | \$1,020        |
| 34 North Carolina .....                           | { 1900<br>1890 | 1,773<br>1,039            | 2,905,310<br>2,334,130     | 64<br>597                        | 31,316<br>185,630    | 1,019<br>1,124                                  | 213,627<br>205,946       | 1,010<br>1,120          | 212,962<br>205,506       | 1<br>50                   | 9<br>3            | 665<br>390                |                |
| 35 North Dakota .....                             | { 1900<br>1890 | 97<br>35                  | 1,359,296<br>1,154,040     | 57<br>55                         | 47,750<br>43,602     | 298<br>220                                      | 159,335<br>108,048       | 298<br>218              | 159,335<br>107,661       |                           |                   | 2<br>2                    | 387            |
| 36 Ohio .....                                     | { 1900<br>1890 | 1,150<br>910              | 12,531,150<br>13,472,465   | 342<br>985                       | 202,791<br>618,923   | 2,438<br>3,311                                  | 1,220,398<br>1,389,707   | 2,393<br>3,213          | 1,209,466<br>1,365,293   | 41<br>93                  | 10,547<br>23,810  | 4<br>6                    | 385<br>604     |
| 37 Oklahoma .....                                 | { 1900<br>1890 | 55                        | 1,080,661                  | 84                               | 66,110               | 258   | 125,855                  | 256                     | 125,755                  |                           |                   | 2<br>2                    | 100            |
| 38 Oregon .....                                   | { 1900<br>1890 | 153<br>86                 | 3,172,997<br>2,247,389     | 83<br>118                        | 83,671<br>86,564     | 443<br>281                                      | 246,901<br>151,371       | 434<br>279              | 242,801<br>151,206       | 8<br>2                    | 4,000<br>165      | 1<br>2                    | 100<br>165     |
| 39 Pennsylvania .....                             | { 1900<br>1890 | 2,719<br>2,220            | 19,516,993<br>21,079,642   | 270<br>1,771                     | 206,001<br>832,190   | 2,195<br>3,378                                  | 1,061,869<br>1,269,991   | 2,180<br>3,349          | 1,059,307<br>1,265,619   | 9                         | 1,719             | 15<br>20                  | 2,562<br>2,653 |
| 40 Rhode Island .....                             | { 1900<br>1890 | 47<br>31                  | 532,211<br>391,102         | 20<br>37                         | 14,006<br>27,555     | 80<br>98  | 37,678<br>48,697         | 80<br>97                | 37,678<br>48,447         |                           |                   | 1<br>1                    | 250            |
| 41 South Carolina .....                           | { 1900<br>1890 | 556<br>512                | 652,553<br>981,791         | 22<br>276                        | 8,843<br>77,331      | 281<br>630                                      | 70,458<br>86,416         | 281<br>626              | 70,458<br>86,162         |                           |                   | 4<br>4                    | 254            |
| 42 South Dakota .....                             | { 1900<br>1890 | 120<br>62                 | 1,764,762<br>1,128,554     | 53<br>74                         | 47,950<br>50,634     | 295<br>251                                      | 155,742<br>116,366       | 294<br>248              | 155,342<br>115,976       | 3<br>3                    | 390               | 1<br>1                    | 400            |
| 43 Tennessee .....                                | { 1900<br>1890 | 1,618<br>918              | 5,931,037<br>4,964,437     | 219<br>633                       | 192,481<br>240,054   | 1,154<br>1,417                                  | 544,722<br>402,958       | 1,144<br>1,413          | 543,181<br>402,698       | 1<br>25                   |                   | 10<br>3                   | 1,541<br>235   |
| 44 Texas .....                                    | { 1900<br>1890 | 289<br>690                | 4,273,490<br>4,052,802     | 135<br>339                       | 145,698<br>122,940   | 705<br>1,626                                    | 398,908<br>409,000       | 705<br>1,615            | 398,908<br>408,652       | 1<br>40                   |                   | 10<br>10                  | 308            |
| 45 Utah .....                                     | { 1900<br>1890 | 80<br>49                  | 1,101,885<br>894,093       | 50<br>44                         | 32,820<br>29,043     | 167<br>133                                      | 82,979<br>65,285         | 166<br>133              | 82,666<br>65,285         |                           |                   | 1<br>1                    | 313            |
| 46 Vermont .....                                  | { 1900<br>1890 | 211<br>217                | 1,289,497<br>1,343,356     | 29<br>154                        | 20,664<br>67,281     | 190<br>251                                      | 81,363<br>95,685         | 187<br>250              | 80,818<br>95,435         | 2<br>1                    | 445<br>250        | 1<br>1                    | 100            |
| 47 Virginia .....                                 | { 1900<br>1890 | 1,726<br>1,179            | 4,682,688<br>6,498,057     | 101<br>725                       | 67,665<br>274,137    | 790<br>1,475                                    | 323,898<br>383,454       | 783<br>1,470            | 327,515<br>382,702       | 4<br>1                    | 1,000<br>96       | 3<br>4                    | 278<br>656     |
| 48 Washington .....                               | { 1900<br>1890 | 85<br>38                  | 2,693,282<br>1,140,630     | 107<br>52                        | 123,198<br>42,897    | 488<br>170                                      | 281,310<br>97,968        | 474<br>170              | 278,450<br>97,968        | 12<br>2,400               |                   | 2<br>2                    | 460            |
| 49 West Virginia .....                            | { 1900<br>1890 | 737<br>496                | 2,126,470<br>1,767,003     | 24<br>385                        | 14,481<br>136,195    | 314<br>545                                      | 154,623<br>140,959       | 308<br>544              | 153,603<br>140,907       | 1<br>52                   |                   | 6<br>6                    | 1,020          |
| 50 Wisconsin .....                                | { 1900<br>1890 | 717<br>497                | 9,611,764<br>9,804,761     | 226<br>530                       | 248,657<br>373,447   | 1,412<br>1,770                                  | 717,133<br>799,058       | 1,398<br>1,763          | 714,217<br>797,708       | 10<br>3                   | 2,312<br>710      | 4<br>4                    | 654<br>640     |
| 51 Wyoming .....                                  | { 1900<br>1890 | 10<br>6                   | 162,675<br>128,225         | 8<br>4                           | 10,240<br>2,340      | 14<br>14  | 11,360<br>9,155          | 14<br>14                | 11,360<br>9,155          |                           |                   |                           |                |
| 52 All other states and territories. <sup>2</sup> | { 1900<br>1890 | 7                         | 122,666                    | 9                                | 6,780                | 22  | 10,913                   | 21                      | 10,763                   |                           |                   | 1<br>1                    | 160            |

<sup>1</sup> No establishments reported.<sup>2</sup> Includes territories grouped, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Arizona, 5; Indian Territory, 2.

AND TERRITORIES: 1890 AND 1900—Continued.

| Miscellaneous expenses.  | MATERIALS USED.            |                          |                            |                          |                          |                        |                          |                        |                          |                      |                      |    |
|--------------------------|----------------------------|--------------------------|----------------------------|--------------------------|--------------------------|------------------------|--------------------------|------------------------|--------------------------|----------------------|----------------------|----|
|                          | Total cost.                | Wheat.                   |                            | Corn.                    |                          | Rye.                   |                          | Buckwheat.             |                          | Barley.              |                      |    |
|                          |                            | Bushels.                 | Cost.                      | Bushels.                 | Cost.                    | Bushels.               | Cost.                    | Bushels.               | Cost.                    | Bushels.             | Cost.                |    |
| \$1,014,018<br>1,410,081 | \$36,523,959<br>44,890,115 | 25,232,677<br>29,646,319 | \$18,482,502<br>28,320,218 | 22,469,249<br>17,008,585 | \$9,363,523<br>8,134,998 | 1,801,230<br>2,224,006 | \$1,033,432<br>1,305,976 | 2,581,749<br>2,603,512 | \$1,436,612<br>1,225,627 | 498,608<br>884,302   | \$228,218<br>182,947 | 33 |
| 65,395<br>67,793         | 7,218,904<br>4,379,218     | 4,549,396<br>2,290,782   | 3,609,061<br>2,105,111     | 6,018,505<br>3,680,193   | 3,226,593<br>2,052,924   | 108,573<br>94,464      | 65,733<br>58,644         | 31,358<br>6,832        | 16,127<br>3,757          | 10,102<br>4,605      | 6,403<br>2,321       | 34 |
| 65,890<br>82,509         | 3,347,067<br>2,162,006     | 4,827,477<br>2,094,230   | 2,756,484<br>1,932,500     | 219,909<br>16,200        | 79,810<br>5,189          | 19,140<br>1,700        | 7,687<br>700             | 415<br>300             | 209<br>160               | 590,564<br>89,650    | 112,844<br>88,987    | 35 |
| 626,642<br>998,517       | 31,826,750<br>33,418,856   | 35,033,213<br>33,888,137 | 24,370,443<br>28,062,966   | 12,609,084<br>6,071,281  | 4,354,850<br>2,493,161   | 222,598<br>349,929     | 118,706<br>174,855       | 186,311<br>144,373     | 102,448<br>78,262        | 76,554<br>239,526    | 27,657<br>92,989     | 36 |
| 86,925                   | 3,026,785                  | 4,516,868                | 2,440,518                  | 1,318,293                | 321,230                  | 7,550                  | 3,125                    | 100                    | 50                       | 7,650                | 1,890                | 37 |
| 178,784<br>189,421       | 5,335,838<br>3,386,917     | 8,847,242<br>4,641,533   | 4,403,048<br>2,916,038     | 64,875<br>30,497         | 32,913<br>17,980         | 15,938<br>11,202       | 9,441<br>7,518           | 14,025<br>5,295        | 8,948<br>4,288           | 788,698<br>200,971   | 296,569<br>106,653   | 38 |
| 667,372<br>865,868       | 30,566,486<br>33,238,981   | 22,923,795<br>23,591,815 | 16,179,093<br>20,986,652   | 20,587,926<br>15,684,965 | 8,195,906<br>6,741,974   | 2,262,274<br>2,096,246 | 1,198,127<br>1,118,855   | 2,526,190<br>1,755,419 | 1,277,718<br>854,146     | 118,532<br>116,510   | 45,557<br>52,540     | 39 |
| 22,292<br>24,012         | 1,628,852<br>1,168,188     | 5,802<br>11,000          | 4,081<br>10,135            | 2,627,939<br>1,895,400   | 1,112,916<br>1,007,645   | 10,795<br>13,188       | 7,020<br>9,796           | -----<br>498           | -----<br>304             | 3,560<br>1,060       | 2,201<br>690         | 40 |
| 15,742<br>31,854         | 1,958,658<br>1,726,896     | 1,000,964<br>520,299     | 891,161<br>505,003         | 1,861,093<br>1,939,135   | 988,889<br>1,164,249     | 5,140<br>1,845         | 4,030<br>1,412           | 18<br>200              | 18<br>150                | 1,450                | 1,430                | 41 |
| 75,006<br>93,283         | 2,825,781<br>2,308,721     | 4,427,426<br>2,972,445   | 2,380,818<br>2,074,345     | 890,281<br>194,020       | 101,099<br>59,637        | 34,570<br>11,100       | 13,001<br>5,624          | 4,875<br>10,300        | 2,262<br>5,680           | 219,528<br>10,650    | 64,040<br>3,300      | 42 |
| 273,851<br>184,936       | 18,491,948<br>10,592,752   | 16,546,155<br>8,861,100  | 11,778,868<br>7,835,615    | 12,151,242<br>5,030,626  | 5,253,304<br>2,201,628   | 11,514<br>10,158       | 6,082<br>6,114           | 6,130<br>1,604         | 3,103<br>904             | 2,369<br>1,858       | 1,125<br>1,858       | 43 |
| 243,390<br>260,816       | 10,372,887<br>8,294,003    | 12,228,132<br>7,500,537  | 8,046,610<br>6,058,846     | 3,565,933<br>3,820,286   | 1,267,311<br>1,789,040   | 22,703<br>44,939       | 13,872<br>31,085         | -----<br>-----         | -----<br>-----           | 2,700                | 780                  | 44 |
| 58,425<br>30,512         | 1,401,819<br>1,160,641     | 2,546,801<br>1,410,088   | 1,217,169<br>1,033,646     | 62,258<br>113,525        | 31,342<br>74,202         | 11,628<br>7,840        | 5,541<br>4,875           | 125                    | 125                      | 71,877<br>34,827     | 33,451<br>15,622     | 45 |
| 48,985<br>49,906         | 2,679,793<br>2,452,944     | 33,523<br>138,088        | 24,007<br>123,361          | 4,749,004<br>3,899,929   | 1,993,429<br>1,917,546   | 17,087<br>13,411       | 9,750<br>8,920           | 45,021<br>63,158       | 22,019<br>30,531         | 110,737<br>93,550    | 50,335<br>48,043     | 46 |
| 145,014<br>279,669       | 10,514,361<br>9,849,144    | 8,562,519<br>6,383,523   | 6,025,314<br>5,585,855     | 8,166,932<br>7,679,773   | 3,828,645<br>3,738,683   | 241,406<br>194,783     | 118,454<br>105,769       | 129,625<br>37,678      | 55,797<br>21,746         | 81,196<br>19,684     | 13,952<br>9,636      | 47 |
| 167,070<br>85,764        | 5,803,909<br>2,013,304     | 8,887,996<br>2,423,494   | 4,302,320<br>1,619,197     | 361,690<br>62,721        | 174,153<br>27,836        | 16,850<br>120          | 10,087<br>65             | 45<br>142              | 23<br>96                 | 1,243,066<br>470,806 | 545,712<br>230,435   | 48 |
| 55,972<br>64,298         | 4,555,093<br>3,228,786     | 3,818,985<br>2,464,259   | 2,680,322<br>2,127,924     | 3,030,190<br>1,851,976   | 1,409,444<br>896,645     | 117,169<br>48,267      | 59,214<br>26,361         | 233,817<br>79,952      | 118,348<br>46,553        | 1,568<br>3,550       | 767<br>1,885         | 49 |
| 607,714<br>646,648       | 22,753,056<br>20,420,677   | 22,366,963<br>19,513,549 | 14,869,326<br>15,486,331   | 6,337,488<br>2,950,515   | 2,018,065<br>977,134     | 3,756,291<br>2,810,176 | 1,849,693<br>1,205,441   | 545,208<br>691,193     | 326,802<br>291,727       | 1,101,103<br>800,854 | 394,236<br>315,849   | 50 |
| 5,243<br>6,744           | 153,735<br>125,265         | 226,937<br>167,703       | 130,283<br>113,486         | 20,090                   | 8,000                    | 3,000                  | 1,000                    | 5,000                  | 1,000                    | 2,925                | 1,205                | 51 |
| 7,095                    | 100,313                    | 109,844                  | 88,273                     | 15,661                   | 6,701                    | -----                  | -----                    | -----                  | -----                    | 2,204                | 900                  | 52 |

TABLE 6.—COMPARATIVE SUMMARY, BY STATES

| STATES AND TERRITORIES. |                            | Year.          | MATERIALS USED—continued. |                            |                          |                          |                            |                           |                                      |                          |                         |                        |                          |
|-------------------------|----------------------------|----------------|---------------------------|----------------------------|--------------------------|--------------------------|----------------------------|---------------------------|--------------------------------------|--------------------------|-------------------------|------------------------|--------------------------|
|                         |                            |                | Other grain.              |                            | Barrels purchased.       |                          | Sacks purchased.           |                           | Cooperage stock and cloth for sacks. | Fuel.                    | Rent of power and heat. | Mill supplies.         | All other materials.     |
|                         |                            |                | Bushels.                  | Cost.                      | Number.                  | Cost.                    | Number.                    | Cost.                     | Cost.                                | Cost.                    | Cost.                   | Cost.                  | Cost.                    |
| 1                       | United States....          | { 1900<br>1890 | 70,873,167<br>47,104,047  | \$19,103,524<br>14,970,089 | 16,272,590<br>27,605,081 | \$4,674,636<br>8,849,858 | 310,080,914<br>175,147,914 | \$11,664,996<br>7,208,597 | \$1,584,478                          | \$4,756,732<br>4,316,732 | \$378,790<br>275,291    | \$1,695,545<br>665,433 | \$4,805,898<br>1,886,944 |
| 2                       | Alabama .....              | { 1900<br>1890 | 44,685<br>22,095          | 16,385<br>8,635            | 24,716<br>76,817         | 6,642<br>18,990          | 1,394,097<br>658,088       | 52,657<br>42,478          | 85                                   | 27,893<br>36,230         | 305<br>877              | 15,174<br>1,593        | 29,856<br>7,846          |
| 3                       | Arizona .....              | { 1900<br>1890 | 2,921                     | 980                        |                          |                          | 281,028                    | 12,852                    |                                      | 5,035                    | 220                     | 1,809                  | 35,620                   |
| 4                       | Arkansas .....             | { 1900<br>1890 | 22,600<br>480             | 7,195<br>384               | 5,750<br>16,710          | 1,585<br>4,865           | 1,622,808<br>949,178       | 75,080<br>43,017          | 19,026                               | 47,661<br>40,679         | 454<br>160              | 12,029<br>2,210        | 13,347<br>1,215          |
| 5                       | California .....           | { 1900<br>1890 | 857,445<br>560,543        | 295,968<br>287,014         | 133,743<br>34,400        | 41,238<br>12,835         | 9,841,011<br>7,860,638     | 410,644<br>377,412        | 60,000                               | 165,955<br>218,404       | 33,772<br>5,350         | 41,193<br>60,069       | 101,770<br>47,671        |
| 6                       | Colorado .....             | { 1900<br>1890 | 623,450<br>255,300        | 168,236<br>114,557         | 40,000                   | 12,000                   | 3,000,361<br>1,513,492     | 201,784<br>115,105        |                                      | 47,629<br>33,738         |                         | 17,773<br>14,405       | 143,696<br>29,690        |
| 7                       | Connecticut .....          | { 1900<br>1890 | 882,225<br>714,664        | 279,742<br>288,486         | 7,400<br>25,390          | 1,557<br>5,750           | 319,075<br>204,050         | 14,386<br>11,064          | 20                                   | 15,514<br>13,202         | 5,525<br>2,181          | 7,518<br>2,112         | 62,283<br>67,632         |
| 8                       | Delaware .....             | { 1900<br>1890 | 33,646<br>24,307          | 9,595<br>8,744             | 65,210<br>150,090        | 19,223<br>44,853         | 841,687<br>548,170         | 20,701<br>25,235          | 182                                  | 13,189<br>11,907         | 70<br>260               | 6,552<br>2,795         | 61,682<br>400            |
| 9                       | District of Columbia ..... | { 1900<br>1890 | 700                       | 216                        | 43,000<br>147,850        | 10,360<br>40,122         | 238,750<br>161,000         | 5,315<br>12,380           | 1,000                                | 5,761<br>2,187           | 3,300<br>1,650          | 4,201<br>1,400         | 7,825<br>185,750         |
| 10                      | Florida .....              | { 1900<br>1890 | 8,350<br>10,400           | 6,480<br>8,592             | 300                      | 57                       | 50,100<br>26,400           | 2,185<br>1,766            |                                      | 2,383<br>4,998           |                         | 1,344<br>615           | 8,849<br>975             |
| 11                      | Georgia .....              | { 1900<br>1890 | 466,430<br>42,238         | 119,090<br>19,046          | 63,300<br>72,974         | 13,940<br>19,185         | 5,179,908<br>2,083,488     | 171,554<br>80,976         | 6,204                                | 47,700<br>35,595         | 1,340<br>1,900          | 26,784<br>2,193        | 91,679<br>9,513          |
| 12                      | Idaho .....                | { 1900<br>1890 | 9,798<br>14,450           | 3,432<br>7,097             |                          |                          | 638,610<br>161,392         | 27,811<br>5,459           |                                      | 16,132<br>4,336          |                         | 5,394<br>210           | 5,580<br>100             |
| 13                      | Illinois .....             | { 1900<br>1890 | 2,486,422<br>3,080,149    | 575,819<br>966,477         | 1,236,612<br>3,216,988   | 370,502<br>886,375       | 14,872,456<br>11,726,183   | 545,520<br>604,722        | 239,576                              | 293,347<br>336,676       | 9,369<br>7,040          | 96,280<br>42,196       | 344,647<br>84,797        |
| 14                      | Indiana .....              | { 1900<br>1890 | 1,200,091<br>510,241      | 296,417<br>134,559         | 1,099,456<br>1,257,249   | 245,233<br>592,723       | 16,905,668<br>13,546,051   | 505,519<br>383,675        | 38,848                               | 305,506<br>271,101       | 5,808<br>8,235          | 79,021<br>46,002       | 125,691<br>58,394        |
| 15                      | Indian Territory .....     | { 1900<br>1890 | 55,900                    | 10,374                     |                          |                          | 1,091,937                  | 43,036                    |                                      | 19,216                   |                         | 4,889                  | 14,765                   |
| 16                      | Iowa .....                 | { 1900<br>1890 | 5,859,842<br>8,624,769    | 1,269,025<br>864,637       | 37,695<br>646,172        | 20,733<br>84,487         | 10,314,574<br>5,267,806    | 349,748<br>232,715        | 15,843                               | 190,681<br>128,293       | 6,075<br>1,900          | 51,936<br>19,087       | 145,342<br>48,733        |
| 17                      | Kansas .....               | { 1900<br>1890 | 604,914<br>414,148        | 139,521<br>85,124          | 711,232<br>466,136       | 90,613<br>135,012        | 20,024,928<br>10,629,863   | 809,531<br>517,463        | 27,143                               | 239,443<br>217,961       | 17,552<br>3,650         | 68,556<br>34,795       | 271,912<br>55,082        |
| 18                      | Kentucky .....             | { 1900<br>1890 | 107,765<br>42,980         | 34,566<br>14,987           | 649,334<br>664,568       | 160,635<br>191,096       | 10,130,586<br>3,942,440    | 290,337<br>124,560        | 30,972                               | 143,834<br>133,591       | 517                     | 43,135<br>16,669       | 90,722<br>36,192         |
| 19                      | Louisiana .....            | { 1900<br>1890 | 16,000                    | 5,600                      | 20<br>40                 | 2<br>12                  | 367,745                    | 12,259                    | 4,500                                | 3,832<br>1,501           |                         | 845<br>30              | 31,163<br>1,255          |
| 20                      | Maine .....                | { 1900<br>1890 | 1,122,965<br>544,190      | 402,974<br>226,511         | 1,850<br>355             | 525<br>57                | 105,215<br>111,452         | 6,480<br>5,591            |                                      | 15,786<br>13,876         | 6,805<br>5,150          | 8,017<br>2,343         | 76,890<br>20,983         |
| 21                      | Maryland .....             | { 1900<br>1890 | 268,809<br>202,920        | 88,098<br>70,255           | 388,357<br>633,691       | 118,913<br>206,362       | 4,065,830<br>2,418,260     | 125,523<br>77,449         | 30,401                               | 65,052<br>44,825         | 2,812<br>2,495          | 22,678<br>11,527       | 61,512<br>22,619         |
| 22                      | Massachusetts .....        | { 1900<br>1890 | 1,464,429<br>1,597,641    | 414,745<br>633,167         | 3,810<br>62,025          | 736<br>17,982            | 433,230<br>436,226         | 13,370<br>25,406          | 50                                   | 24,896<br>30,601         | 10,251<br>5,446         | 9,526<br>4,869         | 37,474<br>52,750         |
| 23                      | Michigan .....             | { 1900<br>1890 | 4,890,224<br>2,351,569    | 1,312,763<br>698,750       | 915,123<br>1,621,839     | 267,739<br>482,966       | 10,179,372<br>7,606,345    | 339,015<br>219,294        | 100,809                              | 195,736<br>203,358       | 4,333<br>12,080         | 52,327<br>29,818       | 106,844<br>39,047        |
| 24                      | Minnesota .....            | { 1900<br>1890 | 3,692,772<br>1,783,906    | 843,135<br>497,478         | 4,018,103<br>5,661,732   | 1,355,550<br>1,866,378   | 47,664,716<br>17,994,281   | 2,229,989<br>883,645      | 60,871                               | 577,275<br>449,677       | 154,627<br>161,634      | 352,566<br>56,561      | 477,513<br>44,798        |
| 25                      | Mississippi .....          | { 1900<br>1890 | 24,500<br>85,700          | 8,280<br>15,371            | 17,100<br>4,750          | 2,185<br>700             | 103,630<br>124,500         | 9,241<br>5,781            |                                      | 11,163<br>28,227         |                         | 4,348<br>747           | 3,092<br>5,244           |
| 26                      | Missouri .....             | { 1900<br>1890 | 390,438<br>1,129,701      | 90,312<br>350,706          | 691,060<br>3,110,493     | 176,864<br>868,350       | 16,887,761<br>14,207,842   | 667,764<br>653,599        | 55,944                               | 303,067<br>455,995       | 835<br>160              | 65,669<br>53,632       | 85,561<br>91,298         |
| 27                      | Montana .....              | { 1900<br>1890 | 42,195                    | 14,647                     |                          |                          | 741,399<br>240,000         | 39,646<br>12,000          |                                      | 8,246<br>1,050           | 4,800                   | 10,116<br>360          | 9,365<br>600             |
| 28                      | Nebraska .....             | { 1900<br>1890 | 1,634,615<br>649,943      | 339,538<br>146,189         |                          |                          | 6,009,627<br>3,111,919     | 258,671<br>137,622        | 6,686                                | 91,099<br>78,440         | 1,850<br>650            | 33,234<br>17,752       | 66,873<br>26,607         |
| 29                      | Nevada .....               | { 1900<br>1890 |                           |                            |                          |                          | 98,493                     | 4,106                     |                                      | 1,400                    |                         | 1,485                  | 317                      |
| 30                      | New Hampshire .....        | { 1900<br>1890 | 885,508<br>284,595        | 304,977<br>109,940         | 5,250<br>2,099           | 1,075<br>516             | 1,269,815<br>17,825        | 14,844<br>2,060           | 20,068                               | 9,548<br>7,744           | 813<br>535              | 5,790<br>1,757         | 63,734<br>11,301         |
| 31                      | New Jersey .....           | { 1900<br>1890 | 2,433,868<br>1,560,819    | 736,401<br>576,298         | 158,666<br>51,450        | 35,896<br>14,968         | 2,227,069<br>1,079,243     | 69,475<br>39,168          | 750                                  | 34,296<br>24,794         | 2,200<br>3,000          | 13,937<br>5,569        | 69,802<br>36,772         |
| 32                      | New Mexico .....           | { 1900<br>1890 | 1,700                     | 700                        | 1,200                    | 418                      | 204,610<br>112,600         | 10,519<br>5,894           | 300                                  | 8,730<br>8,260           |                         | 2,457<br>770           | 1,838<br>180             |

¹Included in "All other states and territories."



## AND TERRITORIES: 1890 AND 1900—Continued.

| PRODUCTS.                         |                             |                               |                        |                          |                            |                          |                           |                          |                          |                            |
|-----------------------------------|-----------------------------|-------------------------------|------------------------|--------------------------|----------------------------|--------------------------|---------------------------|--------------------------|--------------------------|----------------------------|
| Total value.                      | Wheat flour.                |                               | Rye flour.             |                          | Buckwheat flour.           |                          | Barley meal.              |                          | Corn meal.               |                            |
|                                   | Barrels.                    | Value.                        | Barrels.               | Value.                   | Pounds.                    | Value.                   | Pounds.                   | Value.                   | Barrels.                 | Value.                     |
| \$500,719,063<br>513,971,474      | 102,524,094<br>80,948,977   | \$348,183,800<br>350,892,795  | 1,739,374<br>2,137,202 | \$4,916,001<br>6,387,704 | 213,562,952<br>180,479,108 | \$5,085,185<br>4,256,420 | 99,730,423<br>824,854,927 | \$1,113,958<br>3,856,904 | 40,035,977<br>30,897,924 | \$73,177,402<br>70,653,478 |
| 3,310,757<br>3,060,452<br>455,246 | 144,361<br>88,209<br>65,617 | 557,963<br>451,612<br>291,428 | 1,961<br>78            | 4,810<br>293             | 2,400                      | 75                       | 1,500<br>40               | 1,034,096<br>883,558     | 2,360,562<br>2,330,382   | 11,374                     |
| 3,708,709<br>2,498,168            | 605,702<br>211,553          | 2,005,295<br>949,921          | 3,070<br>83            | 6,707<br>366             | 4,100<br>2,100             | 62<br>115                | 400<br>10,560             | 8<br>475                 | 636,285<br>645,905       | 1,134,780<br>1,319,438     |
| 13,100,944<br>14,200,320          | 2,660,238<br>2,157,333      | 7,952,867<br>8,776,205        | 14,592<br>14,347       | 43,681<br>65,759         | 552,080<br>1,364,600       | 19,574<br>56,115         | 59,166,092<br>200,479,439 | 572,574<br>2,521,767     | 94,592<br>74,295         | 221,883<br>247,410         |
| 4,528,062<br>3,898,166            | 1,012,381<br>657,107        | 3,063,100<br>3,041,282        | 1,028<br>607           | 3,635<br>2,700           | 1,500<br>115,000           | 90<br>4,500              | 120,000                   | 2,600                    | 55,246<br>68,770         | 105,261<br>180,047         |
| 2,268,859<br>2,904,244            | 2,147<br>3,799              | 9,080<br>21,432               | 7,514<br>12,064        | 23,578<br>49,040         | 558,459<br>1,087,774       | 16,887<br>28,466         | 1,880<br>166,416          | 34<br>1,944              | 868,555<br>943,249       | 1,442,406<br>2,155,008     |
| 1,165,800<br>1,675,040            | 158,032<br>260,361          | 605,938<br>1,082,801          | 81<br>339              | 211<br>1,005             | 325,900<br>235,275         | 9,384<br>6,695           | 1,200                     | 12                       | 165,124<br>158,735       | 347,179<br>347,815         |
| 632,754<br>1,564,062              | 65,462<br>202,050           | 223,644<br>992,250            | 200<br>600             | 655<br>1,800             |                            |                          |                           |                          | 163,000<br>141,250       | 266,500<br>291,500         |
| 302,737<br>198,110                | 804<br>3                    | 3,022<br>25                   |                        |                          |                            |                          |                           |                          | 87,437<br>50,296         | 200,470<br>134,523         |
| 8,330,439<br>5,190,311            | 789,191<br>361,206          | 3,431,754<br>1,779,258        | 5,605<br>2,701         | 12,698<br>10,237         | 71,324<br>18,500           | 2,826<br>469             | 10,800                    | 293                      | 1,772,859<br>1,147,769   | 4,139,498<br>2,964,006     |
| 832,207<br>376,946                | 261,223<br>76,288           | 655,097<br>301,426            | 100                    | 400                      |                            |                          | 234,000                   | 1,894                    | 460<br>512               | 1,272<br>1,558             |
| 31,006,294<br>37,974,885          | 6,078,423<br>6,877,771      | 20,813,984<br>29,088,914      | 67,302<br>137,873      | 194,590<br>413,170       | 4,848,037<br>3,862,761     | 121,704<br>101,627       | 1,428,000<br>8,645,460    | 16,722<br>167,893        | 2,640,395<br>1,356,238   | 2,983,766<br>2,461,834     |
| 30,150,766<br>31,239,627          | 5,818,892<br>5,646,109      | 20,384,714<br>23,921,507      | 26,068<br>42,855       | 76,694<br>123,039        | 3,952,458<br>8,316,860     | 107,277<br>95,113        | 59,321<br>868,600         | 2,880<br>5,063           | 2,159,432<br>1,757,253   | 2,897,633<br>3,051,905     |
| 1,198,472                         | 240,014                     | 744,139                       |                        |                          | 300,000                    | 7,500                    |                           |                          | 123,024                  | 175,041                    |
| 13,823,033<br>11,833,737          | 2,508,890<br>1,782,277      | 8,244,050<br>7,715,301        | 68,964<br>91,899       | 162,511<br>234,534       | 7,400,760<br>8,123,505     | 203,604<br>206,555       | 4,290,879<br>5,795,144    | 52,511<br>44,035         | 726,470<br>985,348       | 979,290<br>1,326,272       |
| 21,926,768<br>17,420,475          | 6,034,251<br>3,495,070      | 15,089,529<br>13,709,483      | 17,490<br>62,370       | 46,131<br>143,940        | 787,019<br>1,088,649       | 23,543<br>35,299         | 10,800<br>203,800         | 134<br>2,301             | 1,225,917<br>1,276,406   | 1,713,401<br>1,646,440     |
| 14,515,161<br>9,681,259           | 2,549,947<br>1,554,011      | 9,341,759<br>6,861,585        | 2,556<br>5,413         | 5,623<br>17,810          | 15,690<br>40,000           | 470<br>1,523             | 7,880<br>52,480           | 130<br>767               | 1,552,655<br>914,956     | 3,290,275<br>1,872,819     |
| 388,326<br>57,964                 | 600                         | 3,000                         |                        |                          |                            |                          |                           |                          | 151,472<br>19,006        | 291,454<br>51,686          |
| 3,899,832<br>3,254,690            | 27,060<br>5,151             | 115,975<br>29,787             | 1,077<br>3,342         | 3,901<br>18,023          | 2,742,760<br>1,536,901     | 44,650<br>36,269         | 1,076,400<br>1,853,500    | 16,408<br>27,187         | 1,027,588<br>1,138,020   | 2,242,262<br>2,775,566     |
| 8,035,343<br>6,904,888            | 1,476,416<br>1,078,352      | 5,418,734<br>4,915,263        | 9,831<br>22,930        | 22,059<br>78,762         | 2,149,058<br>993,066       | 52,123<br>26,703         | 70,400<br>756,480         | 1,123<br>11,395          | 403,390<br>520,594       | 822,292<br>1,092,018       |
| 5,703,523<br>6,906,493            | 7,328<br>13,700             | 27,744<br>72,959              | 5,750<br>18,256        | 19,398<br>76,014         | 428,143<br>672,432         | 10,832<br>15,956         | 252,457<br>723,140        | 13,900<br>9,749          | 2,443,998<br>2,599,376   | 4,477,134<br>5,697,869     |
| 23,503,901<br>22,778,829          | 4,012,867<br>3,921,363      | 14,899,096<br>17,024,535      | 53,307<br>81,599       | 152,884<br>220,298       | 16,350,923<br>12,338,110   | 345,102<br>388,812       | 772,260<br>8,919,768      | 15,669<br>100,137        | 629,328<br>765,325       | 1,197,749<br>1,393,590     |
| 83,877,709<br>60,168,088          | 22,705,165<br>13,012,005    | 72,381,659<br>54,029,614      | 82,087<br>61,330       | 203,731<br>178,158       | 2,025,939<br>3,227,901     | 52,848<br>65,978         | 4,163,150<br>6,482,600    | 41,489<br>62,273         | 192,522<br>250,333       | 292,806<br>437,667         |
| 932,816<br>1,249,669              | 4,696<br>643                | 17,755<br>3,273               |                        |                          |                            |                          |                           |                          | 355,736<br>406,653       | 791,399<br>1,069,242       |
| 26,303,928<br>34,486,795          | 5,245,421<br>6,588,393      | 17,800,204<br>27,056,990      | 21,345<br>25,652       | 43,497<br>77,734         | 1,203,933<br>906,305       | 32,268<br>28,974         | 3,440<br>265,420          | 73<br>7,257              | 1,822,881<br>1,900,919   | 3,219,065<br>3,371,863     |
| 995,702<br>302,965                | 257,035<br>66,922           | 852,133<br>264,066            | 1,767                  | 4,308                    | 1,080                      | 20                       |                           |                          | 1,481<br>2               | 2,980<br>15                |
| 8,100,794<br>6,365,492            | 1,821,107<br>1,296,814      | 5,319,911<br>4,738,472        | 54,475<br>62,716       | 135,722<br>188,842       | 277,040<br>1,767,050       | 7,868<br>46,726          | 210,000<br>430,640        | 1,484<br>3,885           | 323,070<br>527,562       | 484,167<br>630,469         |
| 157,847                           | 31,249                      | 117,713                       |                        |                          | 8,225                      | 123                      | 92,073                    | 1,480                    | 17                       | 95                         |
| 2,505,936<br>2,358,616            | 62,644<br>65,164            | 245,439<br>306,585            | 1,713<br>1,381         | 5,149<br>6,214           | 515,501<br>434,415         | 6,746<br>9,378           | 276,632<br>496,960        | 3,887<br>8,346           | 944,545<br>853,082       | 1,654,916<br>1,840,942     |
| 6,371,997<br>5,928,352            | 406,338<br>448,613          | 1,871,129<br>2,259,793        | 53,164<br>41,394       | 160,577<br>132,341       | 5,379,300<br>2,918,460     | 122,174<br>71,261        | 44,000<br>1,224,000       | 800<br>30,200            | 632,011<br>742,739       | 1,245,001<br>1,618,799     |
| 551,103<br>307,805                | 115,960<br>59,396           | 403,072<br>270,200            |                        |                          |                            |                          | 1,000,000                 | 20,000                   | 6,612<br>2,104           | 21,752<br>7,222            |

\*No establishments reported.

TABLE 6.—COMPARATIVE SUMMARY, BY STATES

|    | STATES AND TERRITORIES.                        | Year.          | MATERIALS USED—continued. |                          |                        |                        |                          |                      |                                      |                      |                         |                    |                      |
|----|--|----------------|---------------------------|--------------------------|------------------------|------------------------|--------------------------|----------------------|--------------------------------------|----------------------|-------------------------|--------------------|----------------------|
|    |  |                | Other grain.              |                          | Barrels purchased.     |                        | Sacks purchased.         |                      | Cooperage stock and cloth for sacks. | Fuel.                | Rent of power and heat. | Mill supplies.     | All other materials. |
|    |  |                | Bushels.                  | Cost.                    | Number.                | Cost.                  | Number.                  | Cost.                | Cost.                                | Cost.                | Cost.                   | Cost.              | Cost.                |
| 33 | New York .....                                 | { 1900<br>1890 | 13,024,789<br>9,553,069   | \$4,001,625<br>3,319,769 | 1,372,359<br>3,644,959 | \$441,638<br>1,081,046 | 13,812,221<br>10,613,104 | \$359,586<br>526,339 | \$588,853                            | \$204,264<br>250,438 | \$27,393<br>20,957      | \$85,778<br>74,001 | \$260,535<br>441,799 |
| 34 | North Carolina .....                           | { 1900<br>1890 | 193,236<br>146,767        | 71,426<br>69,156         | 2,370<br>13,459        | 171<br>4,071           | 1,474,782<br>506,770     | 70,848<br>24,923     | 1,796                                | 60,270<br>36,627     | 1,300<br>25             | 27,191<br>2,053    | 62,089<br>19,606     |
| 35 | North Dakota .....                             | { 1900<br>1890 | 403,274<br>133,900        | 108,455<br>44,150        | 54,350<br>24,603       | 4,150<br>9,121         | 1,651,923<br>781,282     | 120,248<br>61,103    | 5,200                                | 84,644<br>57,090     | 45                      | 24,826<br>5,325    | 42,465<br>2,200      |
| 36 | Ohio .....                                     | { 1900<br>1890 | 4,571,896<br>3,255,069    | 1,120,315<br>956,245     | 1,330,026<br>2,511,988 | 392,177<br>715,488     | 21,598,395<br>12,724,804 | 630,815<br>396,081   | 66,232                               | 340,823<br>313,065   | 11,824<br>9,145         | 94,537<br>51,678   | 195,923<br>74,331    |
| 37 | Oklahoma .....                                 | { 1900<br>1890 | 149,525                   | 31,939                   | 16,310                 | 4,619                  | 3,380,000                | 136,685              |                                      | 59,754               | 1,500                   | 13,841             | 11,634               |
| 38 | Oregon .....                                   | { 1900<br>1890 | 521,640<br>295,206        | 186,766<br>113,300       | 180<br>25,960          | 54<br>8,345            | 6,172,847<br>2,527,131   | 268,373<br>175,355   |                                      | 26,545<br>25,367     | 20,514<br>2,500         | 13,386<br>4,703    | 64,281<br>4,870      |
| 39 | Pennsylvania .....                             | { 1900<br>1890 | 7,794,403<br>7,269,787    | 2,387,258<br>2,407,669   | 685,323<br>864,967     | 188,740<br>244,806     | 17,867,594<br>12,536,425 | 462,077<br>395,458   | 140,542                              | 212,059<br>203,052   | 7,106<br>5,474          | 92,046<br>30,788   | 180,767<br>197,667   |
| 40 | Rhode Island .....                             | { 1900<br>1890 | 546,115<br>306,950        | 172,097<br>119,945       | 1,000<br>10,000        | 250<br>2,000           | 143,953<br>35,050        | 7,533<br>5,607       |                                      | 8,230<br>5,820       | 800<br>2,712            | 4,923<br>2,084     | 308,801<br>1,450     |
| 41 | South Carolina .....                           | { 1900<br>1890 | 48,520<br>108,885         | 20,007<br>29,433         | 7,000<br>23,755        | 758<br>2,563           | 698,603<br>127,663       | 21,579<br>4,341      | 4                                    | 15,001<br>15,474     | 587                     | 7,136<br>923       | 8,058<br>3,348       |
| 42 | South Dakota .....                             | { 1900<br>1890 | 207,620<br>130,200        | 46,168<br>36,525         | 5,800<br>40,075        | 687<br>12,020          | 2,019,810<br>1,028,380   | 91,196<br>36,207     |                                      | 66,701<br>66,953     | 650                     | 20,930<br>5,150    | 38,229<br>8,870      |
| 43 | Tennessee .....                                | { 1900<br>1890 | 530,575<br>41,215         | 152,657<br>15,423        | 852,409<br>892,250     | 239,946<br>250,751     | 15,570,043<br>9,831,479  | 520,330<br>130,553   | 29,159                               | 152,261<br>113,945   | 272<br>380              | 48,890<br>6,149    | 306,001<br>29,432    |
| 44 | Texas .....                                    | { 1900<br>1890 | 270,894<br>31,780         | 66,296<br>12,722         | 109,270<br>115,825     | 33,745<br>39,406       | 11,595,655<br>4,446,990  | 499,922<br>204,882   | 24,000                               | 149,460<br>180,655   | 4,024<br>200            | 42,754<br>7,543    | 223,613<br>19,624    |
| 45 | Utah .....                                     | { 1900<br>1890 | 84,788<br>2,100           | 29,846<br>1,560          | 2,000                  | 700                    | 1,195,870<br>472,660     | 60,060<br>23,823     | 150                                  | 7,413<br>4,892       | 2,370<br>85             | 6,617<br>426       | 7,755<br>750         |
| 46 | Vermont .....                                  | { 1900<br>1890 | 1,163,378<br>792,297      | 374,584<br>301,382       | 33,120<br>3,755        | 1,776<br>434           | 201,690<br>52,965        | 9,441<br>6,119       |                                      | 9,974<br>4,780       | 1,720<br>300            | 6,854<br>2,091     | 175,844<br>8,837     |
| 47 | Virginia .....                                 | { 1900<br>1890 | 262,961<br>223,946        | 78,986<br>78,736         | 319,127<br>523,728     | 88,215<br>169,118      | 5,195,702<br>2,174,515   | 182,575<br>87,418    | 8,408                                | 42,586<br>16,053     | 6,170<br>7,230          | 31,647<br>7,193    | 33,612<br>21,707     |
| 48 | Washington .....                               | { 1900<br>1890 | 653,330<br>60,317         | 203,697<br>25,686        |                        |                        | 8,419,400<br>3,712,880   | 335,959<br>90,660    |                                      | 54,113<br>15,023     | 10,584<br>210           | 31,952<br>1,764    | 134,709<br>2,332     |
| 49 | West Virginia .....                            | { 1900<br>1890 | 469,146<br>152,358        | 149,957<br>51,016        | 69,196<br>82,991       | 14,214<br>27,171       | 2,065,031<br>676,840     | 43,747<br>13,150     | 225                                  | 48,974<br>33,416     |                         | 11,125<br>2,108    | 18,666<br>2,457      |
| 50 | Wisconsin .....                                | { 1900<br>1890 | 9,878,295<br>5,132,453    | 2,089,789<br>1,264,068   | 997,958<br>874,148     | 309,750<br>278,154     | 10,213,171<br>6,050,144  | 506,624<br>376,173   | 631                                  | 215,549<br>132,105   | 8,298<br>1,570          | 57,756<br>28,793   | 106,567<br>68,832    |
| 51 | Wyoming .....                                  | { 1900<br>1890 | 23,625<br>10,000          | 7,450<br>5,000           |                        |                        | 162,628<br>106,600       | 7,836<br>4,774       |                                      | 1,106<br>1,930       |                         | 770<br>75          | 85                   |
| 52 | All other states and territories. <sup>2</sup> | { 1900<br>1890 |                           |                          |                        |                        | 5,000                    | 195                  |                                      | 2,201                |                         |                    | 2,043                |

<sup>1</sup> No establishments reported.<sup>2</sup> Includes territories grouped, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Arizona, 5; Indian Territory, 2.

## AND TERRITORIES: 1890 AND 1900—Continued.

| PRODUCTS.                  |                        |                            |                    |                        |                          |                          |                         |                     |                        |                          |
|----------------------------|------------------------|----------------------------|--------------------|------------------------|--------------------------|--------------------------|-------------------------|---------------------|------------------------|--------------------------|
| Total value.               | Wheat flour.           |                            | Rye flour.         |                        | Buckwheat flour.         |                          | Barley meal.            |                     | Corn meal.             |                          |
|                            | Barrels.               | Value.                     | Barrels.           | Value.                 | Pounds.                  | Value.                   | Pounds.                 | Value.              | Pounds.                | Value.                   |
| \$12,796,340<br>52,550,744 | 5,434,827<br>0,370,817 | \$19,928,981<br>31,410,188 | 262,496<br>396,201 | \$908,545<br>1,341,475 | 70,122,672<br>66,066,825 | \$1,853,506<br>1,450,752 | 6,797,542<br>9,828,690  | \$89,099<br>138,351 | 3,996,409<br>3,984,214 | \$6,734,840<br>8,646,094 |
| 8,867,462<br>5,279,068     | 945,761<br>462,694     | 4,047,340<br>2,341,640     | 29,394<br>17,642   | 60,022<br>64,051       | 627,828<br>198,650       | 12,995<br>5,332          | 247,751<br>201,400      | 9,239<br>2,575      | 1,547,704<br>922,449   | 3,721,010<br>2,427,275   |
| 4,134,028<br>2,624,198     | 1,029,070<br>562,860   | 3,274,958<br>2,301,746     | 1,009<br>340       | 2,168<br>860           | 600<br>9,000             | 18<br>180                | 313,000<br>4,240,000    | 2,916<br>37,400     | 5,695<br>4,050         | 9,815<br>6,265           |
| 87,390,367<br>89,468,409   | 7,866,474<br>6,950,080 | 26,060,827<br>31,127,953   | 40,258<br>67,008   | 117,769<br>221,861     | 4,416,605<br>3,920,641   | 108,656<br>95,245        | 1,137,830<br>6,298,692  | 11,157<br>48,625    | 1,532,994<br>1,362,473 | 2,708,191<br>2,532,297   |
| 3,745,484                  | 975,870                | 2,855,216                  | 966                | 2,577                  | 3,000                    | 90                       | 8,500                   | 100                 | 176,335                | 250,237                  |
| 6,364,023<br>4,184,473     | 1,826,612<br>962,345   | 4,769,573<br>3,294,682     | 1,949<br>1,060     | 5,987<br>4,319         | 232,875<br>144,900       | 6,370<br>5,883           | 1,069,000<br>3,750,700  | 10,680<br>48,055    | 4,775<br>6,092         | 13,647<br>21,950         |
| 36,689,423<br>39,478,076   | 4,775,166<br>4,817,238 | 17,059,265<br>23,032,330   | 155,592<br>366,641 | 464,070<br>1,122,703   | 62,267,963<br>43,717,600 | 1,327,989<br>997,924     | 196,790<br>3,133,750    | 4,108<br>39,549     | 1,315,892<br>3,227,103 | 2,189,064<br>6,634,317   |
| 1,895,921<br>1,849,843     | 1,240<br>2,220         | 4,655<br>11,660            | 1,574<br>1,248     | 4,270<br>4,586         | 12,460                   | 370                      | 102,760<br>50,800       | 1,972<br>836        | 996,174<br>481,650     | 1,566,120<br>1,131,892   |
| 2,847,790<br>2,083,126     | 204,089<br>104,530     | 999,781<br>507,575         | 1,066<br>309       | 4,253<br>1,648         | 8,846<br>5,000           | 322<br>200               | 56,700                  | 1,653               | 447,299<br>441,183     | 1,079,008<br>1,262,574   |
| 3,379,843<br>2,793,701     | 915,541<br>605,812     | 2,695,024<br>2,378,228     | 3,101<br>2,040     | 7,472<br>5,920         | 27,100<br>267,700        | 1,063<br>7,002           | 347,000<br>285,200      | 4,980<br>1,901      | 16,214<br>43,545       | 26,369<br>63,646         |
| 21,798,929<br>12,474,284   | 3,512,985<br>1,863,114 | 13,220,609<br>8,734,426    | 780<br>2,009       | 2,430<br>7,127         | 147,465<br>40,975        | 2,958<br>1,093           | 44,815<br>202,980       | 633<br>2,261        | 2,963,559<br>1,261,038 | 5,887,950<br>2,694,392   |
| 12,333,730<br>9,903,455    | 2,604,554<br>1,555,891 | 8,881,359<br>6,827,647     | 4,219<br>8,468     | 14,171<br>32,792       |                          |                          |                         |                     | 728,974<br>946,527     | 1,419,561<br>2,092,610   |
| 1,829,840<br>1,468,681     | 513,692<br>284,018     | 1,413,428<br>1,192,307     | 1,007<br>560       | 2,558<br>2,165         | 6,000                    | 225                      | 500,000<br>1,562,440    | 7,277<br>17,708     | 1,830<br>28,328        | 5,100<br>88,822          |
| 3,222,347<br>2,890,174     | 5,649<br>27,337        | 21,970<br>132,715          | 1,865<br>2,542     | 4,599<br>9,748         | 752,909<br>1,570,009     | 18,187<br>35,570         | 2,364,465<br>4,227,900  | 28,274<br>54,951    | 1,017,878<br>1,000,113 | 2,102,622<br>2,250,346   |
| 12,687,267<br>11,716,356   | 1,758,946<br>1,300,864 | 6,671,815<br>6,139,217     | 25,081<br>29,691   | 62,025<br>95,651       | 3,257,250<br>960,591     | 57,340<br>25,505         | 579,106<br>356,728      | 10,820<br>4,275     | 2,064,955<br>1,926,437 | 4,428,544<br>4,419,928   |
| 6,875,672<br>2,460,809     | 1,868,780<br>507,869   | 4,758,004<br>1,859,971     | 4,119<br>24        | 12,872<br>80           | 1,300<br>3,640           | 30<br>116                | 378,200<br>7,112,400    | 14,400<br>88,000    | 10,309<br>16,656       | 29,356<br>33,099         |
| 5,541,853<br>3,902,994     | 767,160<br>497,013     | 2,969,298<br>2,384,434     | 3,247<br>9,273     | 8,081<br>29,971        | 6,630,603<br>2,045,307   | 122,115<br>55,036        | 2,300<br>170,400        | 30<br>2,200         | 680,053<br>460,555     | 1,512,513<br>1,067,658   |
| 26,327,942<br>24,262,297   | 8,750,253<br>4,100,965 | 15,496,295<br>17,232,413   | 701,104<br>552,402 | 1,898,432<br>1,461,078 | 15,158,212<br>17,470,885 | 360,576<br>349,723       | 7,321,200<br>37,323,440 | 88,466<br>360,688   | 279,032<br>608,647     | 503,942<br>965,716       |
| 215,447<br>157,251         | 45,164<br>31,512       | 164,475<br>131,336         |                    |                        |                          |                          | 14,900                  | 144                 |                        |                          |
| 157,087                    | 22,735                 | 127,887                    |                    |                        |                          |                          | 106,000                 | 1,400               | 2,449                  | 4,896                    |

TABLE 6.—COMPARATIVE SUMMARY, BY STATES AND TERRITORIES: 1890 AND 1900.

| STATES AND TERRITORIES.   | Year.          | PRODUCTS—continued.        |                          |                                |                            |                            | MACHINERY AND CAPACITY. |                   |  |
|---------------------------|----------------|----------------------------|--------------------------|--------------------------------|----------------------------|----------------------------|-------------------------|-------------------|--|
|                           |                | Horniny.                   |                          | Offal.                         |                            | All other prod-<br>ucts.   | Pairs of rolls.         | Runs of<br>stone. | Estimated<br>maximum ca-<br>pacity per day<br>of 24 hours. |
|                           |                | Pounds.                    | Value.                   | Pounds.                        | Value.                     | Value.                     | Number.                 | Number.           | Bushels.   |
| United States.....        | { 1900<br>1890 | 305,725,866<br>229,838,237 | \$2,723,443<br>2,446,868 | 6,559,835,116<br>7,001,963,412 | \$38,112,424<br>36,844,825 | \$87,428,850<br>32,632,480 | 77,989<br>53,567        | 31,218<br>31,477  | 10,019,740<br>5,731,620                                    |
| Alabama.....              | { 1900<br>1890 | 2,444,735<br>1,075,700     | 25,715<br>16,000         | 11,185,742<br>7,137,480        | 73,771<br>38,204           | 237,821<br>224,061         | 176<br>77               | 981<br>929        | 94,336<br>100,960  |
| Arizona.....              | { 1900<br>1890 | .....                      | .....                    | 3,563,775<br>.....             | 24,210<br>.....            | 63,464<br>.....            | 67<br>.....             | 7<br>.....        | 3,785<br>.....   |
| Arkansas.....             | { 1900<br>1890 | .....                      | .....                    | 34,395,937<br>17,594,100       | 215,380<br>83,847          | 346,471<br>143,357         | 609<br>173              | 430<br>493        | 93,940<br>84,410   |
| California.....           | { 1900<br>1890 | 3,097,560<br>4,023,000     | 26,835<br>61,800         | 168,551,691<br>177,043,736     | 1,157,424<br>1,334,754     | 3,096,156<br>1,146,504     | 1,188<br>937            | 161<br>126        | 135,162<br>80,374  |
| Colorado.....             | { 1900<br>1890 | .....                      | .....                    | 74,745,383<br>57,188,200       | 502,403<br>417,540         | 853,573<br>204,497         | 520<br>324              | 21<br>38          | 42,049<br>20,830   |
| Connecticut.....          | { 1900<br>1890 | 1,230,000<br>421,800       | 12,300<br>3,762          | 1,874,818<br>888,690           | 20,111<br>6,375            | 744,463<br>637,017         | 61<br>26                | 325<br>318        | 203,065<br>45,314  |
| Delaware.....             | { 1900<br>1890 | 1,972,972<br>19,800        | 37,861<br>560            | 5,818,718<br>5,554,750         | 35,067<br>46,964           | 180,160<br>189,188         | 208<br>221              | 123<br>124        | 24,300<br>21,719   |
| District of Columbia..... | { 1900<br>1890 | 3,816,000<br>1,248,000     | 57,360<br>17,160         | 3,520,000<br>9,800,000         | 25,760<br>71,201           | 58,835<br>190,161          | 64<br>118               | 20<br>8           | 7,570<br>10,090  |
| Florida.....              | { 1900<br>1890 | 1,369,768<br>89,940        | 15,185<br>1,293          | 416,000<br>.....               | 2,161<br>.....             | 81,899<br>62,269           | 4<br>2                  | 117<br>71         | 9,442<br>8,134   |
| Georgia.....              | { 1900<br>1890 | 637,638<br>8,302,210       | 14,097<br>127,021        | 28,790,218<br>29,273,980       | 278,312<br>195,299         | 451,254<br>113,128         | 261<br>250              | 1,339<br>1,240    | 165,035<br>131,425   |
| Idaho.....                | { 1900<br>1890 | .....                      | .....                    | 23,748,480<br>6,754,000        | 105,180<br>50,162          | 68,364<br>23,720           | 254<br>59               | 14<br>15          | 13,165<br>3,785  |
| Illinois.....             | { 1900<br>1890 | 34,739,326<br>22,018,000   | 271,070<br>263,548       | 406,366,404<br>626,602,607     | 2,333,321<br>3,197,841     | 4,271,137<br>2,200,058     | 4,580<br>4,214          | 831<br>1,050      | 539,626<br>335,080   |
| Indiana.....              | { 1900<br>1890 | 97,038,789<br>93,864,800   | 717,387<br>728,354       | 378,867,854<br>515,823,603     | 2,234,878<br>2,543,425     | 3,720,303<br>766,220       | 4,890<br>4,281          | 797<br>847        | 482,057<br>284,934   |
| Indian Territory.....     | { 1900<br>1890 | .....                      | .....                    | 13,520,000<br>.....            | 88,318<br>.....            | 183,474<br>.....           | 257<br>.....            | 40<br>.....       | 26,770<br>.....  |
| Iowa.....                 | { 1900<br>1890 | 4,427,260<br>2,018,620     | 29,337<br>19,107         | 151,737,058<br>167,212,682     | 789,441<br>715,224         | 3,362,339<br>1,572,709     | 2,895<br>2,252          | 815<br>772        | 306,407<br>160,922   |
| Kansas.....               | { 1900<br>1890 | 4,671,000<br>3,782,000     | 37,964<br>26,770         | 352,553,786<br>302,841,466     | 1,453,897<br>1,292,629     | 3,557,609<br>563,613       | 3,487<br>2,083          | 322<br>480        | 391,286<br>144,245   |
| Kentucky.....             | { 1900<br>1890 | 39,850<br>6,457,760        | 13,271<br>74,941         | 184,023,651<br>142,268,000     | 1,210,908<br>711,019       | 652,725<br>140,790         | 2,563<br>1,280          | 1,214<br>673      | 239,218<br>119,653   |
| Louisiana.....            | { 1900<br>1890 | 200,000<br>.....           | 2,100<br>.....           | .....                          | .....                      | 91,772<br>6,278            | 15<br>.....             | 66<br>26          | 9,333<br>2,335   |
| Maine.....                | { 1900<br>1890 | .....                      | .....                    | 20,969,118<br>383,044          | 124,322<br>2,466           | 862,314<br>369,774         | 213<br>67               | 349<br>401        | 119,321<br>112,145   |
| Maryland.....             | { 1900<br>1890 | 11,234,589<br>1,434,900    | 135,120<br>20,619        | 63,109,242<br>87,519,517       | 394,448<br>524,494         | 1,188,844<br>240,494       | 1,511<br>872            | 578<br>660        | 95,729<br>67,491   |
| Massachusetts.....        | { 1900<br>1890 | 2,564,000<br>4,444,000     | 23,134<br>57,089         | 19,267,731<br>1,665,590        | 101,888<br>11,004          | 1,080,443<br>965,863       | 81<br>68                | 348<br>422        | 166,825<br>135,994   |
| Michigan.....             | { 1900<br>1890 | 2,839,950<br>1,420,500     | 21,822<br>26,765         | 308,396,890<br>349,134,056     | 1,965,296<br>1,873,433     | 4,996,373<br>1,745,259     | 4,240<br>3,284          | 349<br>938        | 408,310<br>250,301   |
| Minnesota.....            | { 1900<br>1890 | 6,087,250<br>650           | 51,000<br>10             | 1,392,441,288<br>918,351,384   | 6,790,661<br>3,934,852     | 4,068,455<br>1,449,536     | 6,455<br>4,758          | 406<br>478        | 680,421<br>360,889   |
| Mississippi.....          | { 1900<br>1890 | 1,051,625<br>184,300       | 13,562<br>2,790          | 33,000<br>48,550               | 330<br>264                 | 109,830<br>174,100         | 22<br>59                | 264<br>464        | 35,491<br>59,697   |
| Missouri.....             | { 1900<br>1890 | 49,778,450<br>35,645,200   | 265,788<br>512,889       | 366,957,482<br>565,351,390     | 1,938,476<br>2,656,107     | 2,994,557<br>774,981       | 4,887<br>4,133          | 1,053<br>1,042    | 501,119<br>309,303   |
| Montana.....              | { 1900<br>1890 | 7,242<br>.....             | 87<br>.....              | 10,954,146<br>5,985,000        | 58,637<br>38,884           | 77,537<br>.....            | 153<br>41               | 9<br>6            | 8,540<br>2,975   |
| Nebraska.....             | { 1900<br>1890 | 5,617,000<br>9,000         | 43,061<br>125            | 141,168,626<br>119,107,765     | 733,078<br>423,846         | 1,395,508<br>378,127       | 2,225<br>1,260          | 183<br>278        | 134,515<br>80,235  |
| Nevada.....               | { 1900<br>1890 | .....                      | .....                    | 2,455,906<br>.....             | 17,516<br>.....            | 20,920<br>.....            | 59<br>.....             | 4<br>.....        | 4,835<br>.....   |
| New Hampshire.....        | { 1900<br>1890 | 1,736,600<br>12,600        | 19,582<br>162            | 1,428,800<br>5,329,200         | 13,535<br>22,705           | 556,682<br>164,284         | 47<br>23                | 230<br>276        | 122,249<br>60,877  |
| New Jersey.....           | { 1900<br>1890 | 5,264,400<br>1,081,000     | 49,520<br>10,229         | 50,097,473<br>42,118,102       | 378,573<br>235,407         | 2,644,228<br>1,570,322     | 768<br>450              | 639<br>414        | 147,516<br>53,610  |
| New Mexico.....           | { 1900<br>1890 | .....                      | .....                    | 9,550,137<br>5,372,100         | 76,304<br>26,683           | 29,980<br>8,700            | 109<br>38               | 43<br>25          | 6,409<br>3,359   |

<sup>1</sup>Included in "all other states and territories."<sup>2</sup>No establishments reported.

TABLE 6.—COMPARATIVE SUMMARY, BY STATES AND TERRITORIES: 1890 AND 1900—Continued.

| STATES AND TERRITORIES.                        | Year.          | PRODUCTS—continued.      |                    |                            |                          |                           | MACHINERY AND CAPACITY. |                |   |
|--|----------------|--------------------------|--------------------|----------------------------|--------------------------|---------------------------|-------------------------|----------------|---|
|  |                | Hominy.                  |                    | Oat.                       |                          | All other products.       | Pairs of rolls.         | Runs of stone. | Estimated maximum capacity per day of 24 hours. |
|  |                | Pounds.                  | Value.             | Pounds.                    | Value.                   | Value.                    | Number.                 | Number.        | Bushels.  |
| New York .....                                 | { 1900<br>1890 | 1,089,400<br>2,256,864   | \$13,710<br>22,562 | 232,876,079<br>510,943,808 | \$1,732,550<br>3,351,363 | \$11,535,109<br>6,189,959 | 4,080<br>2,917          | 2,722<br>2,933 | 1,005,918<br>649,029                            |
| North Carolina .....                           | { 1900<br>1890 | 4,694,987<br>1,416,150   | 54,163<br>17,931   | 56,990,593<br>45,325,110   | 465,882<br>277,042       | 496,811<br>143,222        | 1,228<br>135            | 2,564<br>1,617 | 194,100<br>100,070                              |
| North Dakota .....                             | { 1900<br>1890 | 259,200                  | 2,335              | 46,509,660<br>49,005,960   | 272,293<br>222,112       | 569,520<br>55,035         | 688<br>341              | 14<br>10       | 50,936<br>21,757                                |
| Ohio .....                                     | { 1900<br>1890 | 5,579,900<br>14,595,955  | 57,429<br>157,525  | 414,242,365<br>670,675,204 | 2,518,665<br>3,431,489   | 5,807,673<br>1,853,414    | 6,074<br>5,362          | 1,178<br>1,381 | 575,513<br>357,577                              |
| Oklahoma .....                                 | { 1900<br>1890 |                          |                    | 54,004,688                 | 296,884                  | 340,330                   | 421                     | 22             | 31,835  |
| Oregon .....                                   | { 1900<br>1890 | 24,000<br>22,000         | 480<br>440         | 96,835,948<br>79,422,302   | 562,678<br>569,831       | 994,658<br>239,863        | 1,018<br>420            | 93<br>131      | 70,812<br>35,896                                |
| Pennsylvania .....                             | { 1900<br>1890 | 17,090,080<br>11,509,450 | 173,232<br>110,505 | 355,582,188<br>451,037,157 | 2,626,874<br>2,323,101   | 12,793,921<br>4,717,647   | 6,863<br>4,932          | 4,462<br>5,220 | 1,015,704<br>480,124                            |
| Rhode Island .....                             | { 1900<br>1890 | 10,000<br>600,000        | 100<br>8,400       | 1,851,390<br>300,220       | 11,714<br>1,521          | 307,090<br>190,578        | 12<br>26                | 47<br>46       | 30,422<br>17,134                                |
| South Carolina .....                           | { 1900<br>1890 | 3,248,984<br>8,126,268   | 40,521<br>109,612  | 10,071,540<br>9,429,688    | 77,661<br>60,332         | 144,591<br>81,184         | 310<br>43               | 698<br>770     | 67,839<br>61,199                                |
| South Dakota .....                             | { 1900<br>1890 |                          |                    | 69,057,648<br>56,963,300   | 348,545<br>279,566       | 296,390<br>57,438         | 814<br>522              | 26<br>22       | 55,795<br>26,682                                |
| Tennessee .....                                | { 1900<br>1890 | 10,541,350<br>1,300      | 166,241<br>66      | 264,006,310<br>163,315,095 | 1,653,038<br>966,240     | 864,470<br>68,679         | 2,761<br>1,037          | 1,956<br>1,401 | 339,451<br>142,017                              |
| Texas .....                                    | { 1900<br>1890 | 75,000<br>349,500        | 600<br>9,305       | 166,381,189<br>138,737,585 | 1,119,892<br>776,903     | 398,147<br>164,108        | 1,257<br>1,217          | 212<br>770     | 130,833<br>152,650                              |
| Utah .....                                     | { 1900<br>1890 | 10,000                   | 150                | 31,502,836<br>28,060,560   | 190,590<br>157,269       | 210,512<br>10,420         | 555<br>125              | 88<br>89       | 23,453<br>11,652                                |
| Vermont .....                                  | { 1900<br>1890 | 350,700<br>1,140         | 5,470<br>16        | 10,268,173<br>2,887,090    | 78,950<br>16,304         | 967,325<br>390,434        | 131<br>40               | 374<br>512     | 136,106<br>84,139                               |
| Virginia .....                                 | { 1900<br>1890 | 3,092,048<br>279,030     | 35,355<br>3,131    | 139,009,008<br>130,051,370 | 852,636<br>818,068       | 573,732<br>210,531        | 2,080<br>593            | 2,449<br>2,145 | 284,715<br>183,024                              |
| Washington .....                               | { 1900<br>1890 |                          |                    | 117,144,888<br>45,026,640  | 648,947<br>256,930       | 1,412,063<br>221,413      | 758<br>160              | 40<br>29       | 85,415<br>15,109                                |
| West Virginia .....                            | { 1900<br>1890 | 193,613<br>2,800         | 5,099<br>24        | 64,277,453<br>49,923,260   | 383,108<br>280,581       | 541,109<br>74,000         | 1,108<br>456            | 929<br>886     | 133,547<br>76,671                               |
| Wisconsin .....                                | { 1900<br>1890 | 17,550,000               | 175,400            | 206,714,671<br>400,130,804 | 1,108,807<br>2,045,797   | 6,701,024<br>1,846,932    | 4,838<br>3,831          | 771<br>929     | 509,994<br>253,726                              |
| Wyoming .....                                  | { 1900<br>1890 |                          |                    | 4,198,000<br>3,027,387     | 28,998<br>20,082         | 21,330<br>5,833           | 64<br>33                | .....<br>4     | 2,890<br>1,170                                  |
| All other states and territories. <sup>2</sup> | { 1900<br>1890 |                          |                    | 2,193,520                  | 16,354                   | 6,550                     | 17                      | 18             | 2,350   |

<sup>1</sup> No establishments reported.<sup>2</sup> Includes territories grouped, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Arizona, 5; Indian Territory, 2.

## HISTORICAL AND DESCRIPTIVE.

From the earliest times the use of cereals as foods has been common among all races, especially those inhabiting the temperate zones. It is probable that before the dawn of history, while man was yet in a savage or semi-savage state, the rudiments of agriculture were practiced, and that the cultivation of cereals was among the first arts of agriculture. Previous to the establishment of agriculture, the various cereals used as foods were those growing wild. The study of physiology and of chemistry has developed the fact that cereals contain all the elements of food necessary to nourish the bodies of herbivorous and omnivorous animals. While it would be contrary to the laws of physi-

ology, hygiene, and domestic economy to confine the food of such animals exclusively to cereals, yet it is undoubtedly true that, in emergencies, if all other foods were removed, the cereals alone would be sufficient to sustain the vital processes. There is no other class of foods known which would longer sustain life.

It is evident that cereals were at first eaten raw, and without any preparation whatever, other than the removal of the outer husk. As the arts advanced, it was discovered that when cereals were subjected to the action of fire, their flavor became more agreeable and the ease of mastication increased. This step was speedily followed by a discovery that by mechanical prepara-

tion of the cereal grains, the processes of mastication were very much further facilitated, and their palatability increased.

It is evident that the first steps in the grinding of cereals consisted in simply breaking them into coarse fragments. It was soon discovered that a fine-ground meal could be prepared by triturating the cereal grains between stones, and this idea speedily developed into the mortar-and-pestle method of grinding, a species of milling which persists to the present time among primitive peoples, in drug stores, laboratories, and for experimental purposes.

In the reduction of cereal grains to a fine powder by any process of pounding, abrasion, or pressure, the various constituents of which the grains are composed behave differently toward the impact forces. The outer hulls of grain tend to break up into scales or fragments of more or less superficial area and of the thickness of the coatings themselves. The starchy remainder of the grain, and a large part of the nitrogenous or protein<sup>1</sup> matter, on the other hand, are broken by the grinding process into small fragments. In the case of starchy kernels there is a tendency to disintegration, and the protein matter breaks up into particles of regular size and of small dimensions. The germ of the cereal grains, on the other hand, always contains a large excess of oil, which has a tendency to spread out and agglutinate into particles of a regular size, in which are incorporated additional particles of starchy and protein matter.

The first steps of scientific milling, therefore, are directed toward a more or less complete separation of the three important constituents of the grain, namely, the hulls, the germ, and the matter intervening between them, consisting chiefly of starch and protein.

There are three distinct types of grinding machines used for reducing cereal grains to a powder. First, the mortar-and-pestle type, in which grinding and rubbing are the chief forces of impact employed. Second, some form of machine presenting two roughened surfaces, one or both of which may be in motion (usually only one), between which the grain is crushed or cut. These roughened surfaces may be either of stone or hardened steel. Third, the roller system of milling, illustrating the mashing process, in which the grains are disintegrated and reduced to successive stages of subdivision by passing through rolls, smooth or corrugated, in which, from one series to another, there is an increasing approximation of the surfaces. The rolls may revolve at the same peripheral rate, or the speed of rotation of the rolls may be different, thus securing a grinding or tearing process and the mashing or disintegrating impact of the rolls themselves, in the same operation.

<sup>1</sup> Constituents containing nitrogen.

These represent ascending types in the art of milling. The first represents the primitive and original method of disintegrating the grains; the second the intermediate step, which persisted until within perhaps a quarter of a century; and the third the last and final step in the evolution of the art. The third method is now almost universally employed, especially in mills of any magnitude.

The science of milling has introduced methods whereby, after the cereal grains have been reduced to a fine powder, or during the process of reduction, the different constituents of the grain may be separated. Without discussing here the hygienic and nutritive aspects of the process, it may be stated that modern taste requires a cereal flour from which the greater part of the outer hulls of the grain, as well as of the germ, has been removed. This separation is based upon the fact that these particles break up into masses of different size and shape. The starch and the greater part of the protein matter form fragments of small size usually of spherical or of spheroid dimensions, or bodies without any pronounced projecting parts. On the other hand, the hulls and the germs form particles of different size and shape, usually flattened, and thus presenting greater dimensions in one direction than in another. If a mass of particles of the sizes and shapes mentioned be thrown upon a screen of appropriate dimensions, it will be evident that the larger particles would be retained in the sifting process while the smaller ones would pass through the screen. It is by the application of the principle thus illustrated that the separation is effected. Thus by the use of bolting cloths which permit the fine starchy particles and the protein particles of similar size to pass through, the ground cereal may be separated into parts which, for descriptive purposes, may be regarded as in three types, namely, bran, or the outer hull, middlings, and flour.

In order to make high-grade flour, the first step which the modern miller takes is the purification of the cereal itself. Aside from the chemical composition, wheat may be good, bad, or indifferent, according to its freedom from dirt, husks, and other impurities. The first step therefore in the milling of wheat is to remove these foreign substances as completely as possible by friction, winnowing, and other means. It is not the purpose of this article to describe in detail the processes of milling, but it will be sufficient to say that by means of brushes and friction applied in various ways, and by blasts of air, the greater part of this matter and dust may be removed. Sand and other fragments of the size of the grain would not be removed by this process, but such substances are not often found in wheat. In the modern mill the purified wheat is then subjected to a series of operations which consist in breaking the grain into successive portions. These portions differ from each other physically, and also in

their chemical composition. A careful study of these products has been made by the Bureau of Chemistry of the United States Department of Agriculture under the personal supervision of Mr. Clifford Richardson.<sup>1</sup> A complete description of the mechanical process of milling may also be found in the report of the statistics of agriculture, census of 1880, Vol. III.

The chemical composition of the principal cereals used as food and of the products evolved by milling,

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<sup>1</sup>United States Department of Agriculture, Bureau of Chemistry, Part 9, Bulletin 13.

and of the final products formed therefrom by baking and other methods of preparation, are given in Part IX, Bulletin 13, "Cereals and Cereal Products," of the Bureau of Chemistry of the United States Department of Agriculture—and in Bulletins 45, "Analyses of Cereals Collected at the World's Columbian Exposition," and 50, "Composition of Maize," of the same Bureau and Department.

The detailed data relating to "Flouring and Grist Mill Products," arranged alphabetically, by States, are found in the following table:

TABLE 7.—FLOURING AND GRIST MILL PRODUCTS.

|   | United States. | Alabama.    | Arizona.  | Arkansas.   | California. | Colorado.   | Connecticut. |
|---|----------------|-------------|-----------|-------------|-------------|-------------|--------------|
| 1 Number of establishments.....   | 25,258         | 781         | 11        | 410         | 124         | 60          | 208          |
| 2 Character of organization:  |                |             |           |             |             |             |              |
| 3 Individual.....   | 17,803         | 626         | 3         | 291         | 57          | 14          | 152          |
| 4 Firm and limited partnership.....   | 6,517          | 142         | 4         | 104         | 20          | 13          | 41           |
| 5 Incorporated company.....   | 1,425          | 13          | 4         | 15          | 46          | 33          | 12           |
| 6 Miscellaneous.....  | 13             |             |           |             | 1           |             |              |
| 7 Capital:  |                |             |           |             |             |             |              |
| 8 Total.....  | \$218,714,104  | \$1,047,961 | \$221,112 | \$1,183,052 | \$6,552,642 | \$2,040,774 | \$1,565,478  |
| 9 Land.....   | \$24,041,170   | \$118,425   | \$10,575  | \$75,668    | \$690,081   | \$193,262   | \$201,677    |
| 10 Buildings.....   | \$47,008,592   | \$240,400   | \$41,690  | \$249,321   | \$1,124,862 | \$436,966   | \$131,477    |
| 11 Machinery, tools, and implements.....  | \$71,933,412   | \$194,533   | \$58,280  | \$620,408   | \$1,555,248 | \$618,550   | \$300,304    |
| 12 Cash and sundries.....   | \$75,735,930   | \$194,603   | \$110,567 | \$237,660   | \$3,182,461 | \$791,996   | \$625,930    |
| 13 Proprietors and firm members.....  | 30,240         | 934         | 10        | 506         | 101         | 36          | 243          |
| 14 Salaried officials, clerks, etc.:  |                |             |           |             |             |             |              |
| 15 Total number.....  | 5,790          | 39          | 11        | 36          | 199         | 92          | 42           |
| 16 Total salaries.....  | \$5,404,760    | \$22,691    | \$9,125   | \$21,526    | \$269,866   | \$78,445    | \$20,621     |
| 17 Officers of corporations—  |                |             |           |             |             |             |              |
| 18 Number.....  | 1,259          | 7           | 5         | 12          | 58          | 22          | 7            |
| 19 Salaries.....  | \$1,679,808    | \$9,100     | \$5,680   | \$8,570     | \$95,390    | \$13,610    | \$1,930      |
| 20 General superintendents, managers, clerks, etc.—   |                |             |           |             |             |             |              |
| 21 Total number.....  | 4,531          | 32          | 6         | 24          | 141         | 70          | 35           |
| 22 Total salaries.....  | \$3,724,947    | \$13,591    | \$3,545   | \$12,956    | \$174,476   | \$64,835    | \$24,691     |
| 23 Men—   |                |             |           |             |             |             |              |
| 24 Number.....  | 3,979          | 32          | 5         | 23          | 131         | 70          | 30           |
| 25 Salaries.....  | \$3,507,785    | \$13,591    | \$3,320   | \$12,356    | \$170,764   | \$64,835    | \$23,037     |
| 26 Women—   |                |             |           |             |             |             |              |
| 27 Number.....  | 552            |             | 1         | 1           | 10          |             | 5            |
| 28 Salaries.....  | \$217,162      |             | \$225     | \$600       | \$3,712     |             | \$1,691      |
| 29 Wage-earners, including pieceworkers, and total wages:                                   |                |             |           |             |             |             |              |
| 30 Greatest number employed at any one time during the year.....                            | 50,124         | 894         | 57        | 671         | 1,094       | 333         | 302          |
| 31 Least number employed at any one time during the year.....                               | 38,549         | 643         | 26        | 496         | 748         | 227         | 243          |
| 32 Average number.....  | 37,073         | 540         | 36        | 443         | 857         | 278         | 233          |
| 33 Wages.....   | \$17,703,418   | \$92,858    | \$19,970  | \$116,445   | \$525,401   | \$169,358   | \$99,390     |
| 34 Men, 16 years and over—  |                |             |           |             |             |             |              |
| 35 Average number.....  | 36,419         | 539         | 36        | 440         | 825         | 277         | 227          |
| 36 Wages.....   | \$17,540,370   | \$92,708    | \$19,970  | \$116,253   | \$516,144   | \$168,608   | \$97,654     |
| 37 Women, 16 years and over—  |                |             |           |             |             |             |              |
| 38 Average number.....  | 497            |             |           |             | 27          | 1           | 6            |
| 39 Wages.....   | \$142,911      |             |           |             | \$8,357     | \$750       | \$1,755      |
| 40 Children, under 16 years—  |                |             |           |             |             |             |              |
| 41 Average number.....  | 157            | 1           |           | 3           | 5           |             |              |
| 42 Wages.....   | \$20,137       | \$150       |           | \$192       | \$900       |             |              |
| 43 Average number of wage-earners, including pieceworkers, employed during each month:      |                |             |           |             |             |             |              |
| 44 Men, 16 years and over—  |                |             |           |             |             |             |              |
| 45 January.....   | 37,284         | 519         | 42        | 423         | 803         | 290         | 252          |
| 46 February.....  | 36,746         | 486         | 42        | 405         | 791         | 286         | 249          |
| 47 March.....   | 35,940         | 451         | 41        | 385         | 798         | 294         | 243          |
| 48 April.....   | 34,267         | 435         | 39        | 382         | 771         | 282         | 235          |
| 49 May.....   | 33,167         | 427         | 37        | 373         | 782         | 260         | 210          |
| 50 June.....  | 31,204         | 417         | 26        | 351         | 797         | 237         | 202          |
| 51 July.....  | 32,744         | 418         | 29        | 392         | 809         | 240         | 190          |
| 52 August.....  | 34,307         | 434         | 27        | 404         | 863         | 250         | 193          |
| 53 September.....   | 38,369         | 664         | 30        | 499         | 924         | 280         | 221          |
| 54 October.....   | 41,141         | 764         | 37        | 560         | 890         | 294         | 241          |
| 55 November.....  | 41,640         | 761         | 39        | 570         | 865         | 308         | 244          |
| 56 December.....  | 40,229         | 692         | 43        | 535         | 812         | 302         | 219          |
| 57 Women, 16 years and over—  |                |             |           |             |             |             |              |
| 58 January.....   | 451            |             |           |             | 31          | 1           | 7            |
| 59 February.....  | 479            |             |           |             | 31          | 1           | 6            |
| 60 March.....   | 491            |             |           |             | 28          | 1           | 6            |
| 61 April.....   | 496            |             |           |             | 29          | 1           | 6            |
| 62 May.....   | 562            |             |           |             | 23          | 1           | 6            |
| 63 June.....  | 498            |             |           |             | 23          | 1           | 6            |
| 64 July.....  | 454            |             |           |             | 23          | 1           | 6            |
| 65 August.....  | 433            |             |           |             | 23          | 1           | 6            |
| 66 September.....   | 502            |             |           |             | 23          | 1           | 6            |
| 67 October.....   | 539            |             |           |             | 29          | 1           | 6            |
| 68 November.....  | 547            |             |           |             | 28          | 1           | 6            |
| 69 December.....  | 512            |             |           |             | 28          | 1           | 6            |
| 70 Children, under 16 years—  |                |             |           |             |             |             |              |
| 71 January.....   | 149            | 1           |           | 3           | 5           |             |              |
| 72 February.....  | 156            | 1           |           | 3           | 5           |             |              |
| 73 March.....   | 165            | 1           |           | 3           | 5           |             |              |
| 74 April.....   | 146            | 1           |           | 3           | 5           |             |              |
| 75 May.....   | 135            | 1           |           | 3           | 5           |             |              |
| 76 June.....  | 127            | 1           |           | 3           | 5           |             |              |
| 77 July.....  | 147            | 1           |           | 3           | 5           |             |              |
| 78 August.....  | 145            | 1           |           | 3           | 5           |             |              |
| 79 September.....   | 173            | 1           |           | 3           | 5           |             |              |
| 80 October.....   | 186            | 1           |           | 3           | 5           |             |              |
| 81 November.....  | 192            | 1           |           | 3           | 5           |             |              |
| 82 December.....  | 173            | 1           |           | 3           | 5           |             |              |
| 83 Miscellaneous expenses:  |                |             |           |             |             |             |              |
| 84 Total.....   | \$10,325,588   | \$34,654    | \$15,053  | \$44,681    | \$246,409   | \$131,790   | \$32,080     |
| 85 Rent of works.....   | \$860,345      | \$9,783     | \$800     | \$2,207     | \$14,428    | \$7,862     | \$3,989      |
| 86 Taxes, not including internal revenue.....   | \$1,445,244    | \$9,162     | \$1,560   | \$8,929     | \$43,342    | \$24,257    | \$10,430     |
| 87 Rent of offices, insurance, interest, and all sundry expenses not hitherto included..... | \$7,977,467    | \$14,765    | \$12,693  | \$31,006    | \$188,049   | \$100,171   | \$17,330     |
| 88 Contract work.....   | \$42,532       | \$944       |           | \$2,539     | \$590       |             | \$425        |



## BY STATES AND TERRITORIES: 1900.

| Delaware.   | District of Columbia. | Florida.  | Georgia.    | Idaho.    | Illinois.    | Indiana.     | Indian Territory. | Iowa.       | Kansas.     |    |
|-------------|-----------------------|-----------|-------------|-----------|--------------|--------------|-------------------|-------------|-------------|----|
| 83          | 9                     | 95        | 1,123       | 34        | 871          | 897          | 61                | 702         | 533         | 1  |
| 64          | 4                     | 85        | 876         | 16        | 514          | 473          | 36                | 427         | 315         | 2  |
| 17          | 4                     | 9         | 222         | 9         | 258          | 348          | 17                | 219         | 157         | 3  |
| 2           | 1                     | 1         | 23          | 9         | 99           | 76           | 8                 | 55          | 61          | 4  |
|             |                       |           | 2           |           |              |              |                   | 1           |             | 5  |
| \$1,017,508 | \$198,065             | \$123,416 | \$2,504,033 | \$569,107 | \$12,062,626 | \$10,734,544 | \$478,241         | \$6,421,073 | \$8,366,966 | 6  |
| \$200,670   | \$30,700              | \$17,203  | \$289,073   | \$39,114  | \$1,016,422  | \$923,427    | \$13,700          | \$762,946   | \$625,680   | 7  |
| \$239,459   | \$37,300              | \$26,340  | \$577,812   | \$144,350 | \$2,457,192  | \$2,223,946  | \$138,938         | \$1,481,670 | \$1,915,743 | 8  |
| \$309,585   | \$58,375              | \$47,655  | \$1,025,920 | \$206,384 | \$3,887,102  | \$4,034,603  | \$196,525         | \$2,379,941 | \$2,702,193 | 9  |
| \$267,794   | \$71,690              | \$32,218  | \$611,228   | \$179,259 | \$4,701,910  | \$3,552,568  | \$129,078         | \$1,796,521 | \$3,123,350 | 10 |
| 96          | 15                    | 97        | 1,315       | 30        | 1,050        | 1,207        | 76                | 866         | 639         | 11 |
| 20          | 18                    | 4         | 88          | 20        | 367          | 286          | 26                | 210         | 281         | 12 |
| \$17,796    | \$13,450              | \$3,500   | \$58,908    | \$14,170  | \$361,021    | \$276,708    | \$17,623          | \$160,476   | \$267,737   | 13 |
| 4           | 2                     |           | 15          | 6         | 109          | 88           | 2                 | 49          | 74          | 14 |
| \$8,575     | \$2,400               |           | \$18,180    | \$4,850   | \$139,728    | \$120,792    | \$2,400           | \$53,620    | \$103,671   | 15 |
| 16          | 16                    | 4         | 73          | 14        | 258          | 198          | 24                | 161         | 207         | 16 |
| \$9,221     | \$11,050              | \$3,500   | \$40,728    | \$9,320   | \$221,298    | \$155,916    | \$15,223          | \$106,856   | \$164,066   | 17 |
| 15          | 14                    | 4         | 70          | 14        | 225          | 157          | 21                | 135         | 193         | 18 |
| \$8,805     | \$10,500              | \$3,500   | \$39,328    | \$9,320   | \$204,997    | \$138,345    | \$14,123          | \$98,987    | \$158,470   | 19 |
| 1           | 2                     |           | 3           |           | 33           | 41           | 3                 | 26          | 14          | 20 |
| \$416       | \$550                 |           | \$1,400     |           | \$16,296     | \$17,571     | \$1,100           | \$7,869     | \$5,596     | 21 |
| 171         | 92                    | 88        | 1,512       | 107       | 2,743        | 2,688        | 173               | 1,592       | 1,996       | 22 |
| 137         | 79                    | 73        | 1,202       | 74        | 2,081        | 1,988        | 121               | 1,202       | 1,458       | 23 |
| 135         | 84                    | 46        | 1,167       | 76        | 2,111        | 2,124        | 119               | 1,285       | 1,451       | 24 |
| \$48,928    | \$30,848              | \$7,967   | \$225,933   | \$46,453  | \$1,098,006  | \$1,010,877  | \$48,988          | \$526,479   | \$743,462   | 25 |
| 134         | 84                    | 45        | 1,154       | 75        | 2,104        | 2,102        | 119               | 1,224       | 1,441       | 26 |
| \$48,728    | \$30,848              | \$7,927   | \$225,223   | \$46,353  | \$1,096,454  | \$1,005,415  | \$48,988          | \$512,119   | \$741,891   | 27 |
|             |                       |           |             |           | 1            | 16           |                   | 49          | 8           | 28 |
|             |                       |           |             |           | \$300        | \$4,720      |                   | \$13,570    | \$1,221     | 29 |
| 1           |                       | 1         | 13          | 1         | 6            | 6            |                   | 12          | 2           | 30 |
| \$200       |                       | \$40      | \$710       | \$100     | \$1,252      | \$742        |                   | \$790       | \$350       | 31 |
| 139         | 81                    | 38        | 1,122       | 70        | 2,154        | 2,153        | 112               | 1,323       | 1,450       | 32 |
| 129         | 81                    | 36        | 1,113       | 70        | 2,153        | 2,117        | 107               | 1,314       | 1,423       | 33 |
| 142         | 80                    | 36        | 1,094       | 84        | 2,098        | 2,089        | 118               | 1,300       | 1,383       | 34 |
| 136         | 79                    | 34        | 1,077       | 78        | 2,081        | 2,007        | 116               | 1,205       | 1,355       | 35 |
| 134         | 80                    | 33        | 1,029       | 88        | 1,947        | 1,936        | 113               | 1,101       | 1,351       | 36 |
| 131         | 78                    | 33        | 1,032       | 69        | 1,854        | 1,869        | 86                | 1,067       | 1,270       | 37 |
| 138         | 80                    | 32        | 1,024       | 65        | 2,037        | 2,020        | 102               | 1,069       | 1,336       | 38 |
| 130         | 68                    | 33        | 1,057       | 67        | 2,069        | 2,106        | 119               | 1,125       | 1,362       | 39 |
| 133         | 90                    | 61        | 1,305       | 76        | 2,122        | 2,187        | 127               | 1,231       | 1,522       | 40 |
| 131         | 89                    | 69        | 1,361       | 80        | 2,251        | 2,239        | 142               | 1,292       | 1,600       | 41 |
| 131         | 91                    | 71        | 1,350       | 83        | 2,273        | 2,265        | 146               | 1,293       | 1,618       | 42 |
| 134         | 91                    | 66        | 1,284       | 81        | 2,257        | 2,239        | 134               | 1,308       | 1,616       | 43 |
|             |                       |           |             |           | 3            | 14           |                   | 50          | 3           | 44 |
|             |                       |           |             |           | 2            | 14           |                   | 59          | 7           | 45 |
|             |                       |           |             |           |              | 14           |                   | 50          | 3           | 46 |
|             |                       |           |             |           |              | 15           |                   | 50          | 3           | 47 |
|             |                       |           |             |           |              | 14           |                   | 59          | 2           | 48 |
|             |                       |           |             |           |              | 14           |                   | 20          | 1           | 49 |
|             |                       |           |             |           |              | 14           |                   | 20          | 1           | 50 |
|             |                       |           |             |           |              | 15           |                   | 20          | 7           | 51 |
|             |                       |           |             |           | 3            | 20           |                   | 58          | 21          | 52 |
|             |                       |           |             |           | 3            | 21           |                   | 58          | 22          | 53 |
|             |                       |           |             |           | 3            | 21           |                   | 59          | 12          | 54 |
|             |                       |           |             |           | 3            | 20           |                   | 50          | 13          | 55 |
| 1           |                       |           | 13          | 1         | 6            | 6            |                   | 12          | 3           | 56 |
| 1           |                       |           | 13          | 1         | 6            | 6            |                   | 12          | 3           | 57 |
| 1           |                       |           | 14          | 1         | 6            | 5            |                   | 12          | 3           | 58 |
| 1           |                       |           | 14          | 1         | 6            | 6            |                   | 11          | 3           | 59 |
|             |                       |           | 14          | 1         | 6            | 6            |                   | 11          | 1           | 60 |
|             |                       |           | 13          | 1         | 6            | 6            |                   | 13          | 1           | 61 |
|             |                       |           | 13          | 1         | 6            | 6            |                   | 13          | 1           | 62 |
|             |                       |           | 13          | 1         | 5            | 6            |                   | 14          | 1           | 63 |
|             |                       |           | 14          | 1         | 6            | 6            |                   | 13          | 1           | 64 |
|             |                       |           | 14          | 1         | 7            | 6            |                   | 11          | 6           | 65 |
|             |                       |           | 14          | 1         | 6            | 6            |                   | 11          | 3           | 66 |
|             |                       |           | 13          | 1         | 6            | 6            |                   | 11          | 1           | 67 |
| \$28,038    | \$18,167              | \$2,160   | \$73,465    | \$23,235  | \$560,980    | \$570,830    | \$27,593          | \$304,256   | \$447,747   | 68 |
| \$8,741     | \$5,155               | \$180     | \$8,060     | \$725     | \$48,257     | \$22,015     | \$1,220           | \$18,387    | \$26,264    | 69 |
| \$3,772     | \$676                 | \$1,303   | \$23,120    | \$5,692   | \$69,258     | \$91,209     | \$2,806           | \$45,365    | \$69,034    | 70 |
| \$15,195    | \$12,336              | \$677     | \$42,113    | \$16,318  | \$443,465    | \$457,606    | \$21,767          | \$239,832   | \$347,799   | 71 |
| \$330       |                       |           | \$172       |           |              |              | \$1,800           | \$672       | \$4,650     | 72 |

TABLE 7.—FLOURING AND GRIST MILL PRODUCTS,

|   | United States. | Alabama.    | Arizona.  | Arkansas.   | California.  | Colorado.   | Connecticut. |
|---|----------------|-------------|-----------|-------------|--------------|-------------|--------------|
| <b>Materials used:</b>  |                |             |           |             |              |             |              |
| 73 Total cost.....  | \$475,826,345  | \$2,787,684 | \$382,055 | \$3,029,236 | \$11,077,482 | \$3,842,194 | \$1,845,545  |
| 74 Wheat, bushels.....  | 489,914,004    | 661,684     | 320,214   | 2,912,566   | 12,786,110   | 4,866,458   | 27,924       |
| 75 Cost.....  | \$317,933,257  | \$505,308   | \$223,643 | \$1,840,529 | \$7,649,433  | \$2,716,924 | \$16,101     |
| 76 Corn, bushels.....   | 241,029,249    | 4,268,639   | 17,654    | 2,487,206   | 927,500      | 1,590,554   | 3,003,453    |
| 77 Cost.....  | \$93,882,609   | \$2,128,021 | \$9,740   | \$1,010,523 | \$492,910    | \$517,584   | \$1,388,532  |
| 78 Rye, bushels.....  | 12,720,832     | 9,976       |           |             | 88,024       | 26,786      | 50,213       |
| 79 Cost.....  | \$9,446,705    | \$5,145     |           | \$1,770     | \$48,603     | \$9,956     | \$26,899     |
| 80 Buckwheat, bushels.....  | 8,317,357      | 190         |           |             | 14,402       | 605         | 24,393       |
| 81 Cost.....  | \$4,438,480    | \$135       |           | \$32        | \$14,361     | \$489       | \$16,710     |
| 82 Barley, bushels.....   | 12,289,086     | \$28        | 195,888   |             | 4,556,341    | 16,515      | 1,390        |
| 83 Cost.....  | \$4,460,695    | \$87,156    | \$87,156  | \$5         | \$1,721,935  | \$6,173     | \$738        |
| 84 Oats, bushels.....   | 65,352,637     | 40,700      | 2,921     | 20,300      | 822,895      | 618,265     | 780,457      |
| 85 Cost.....  | \$17,150,744   | \$13,260    | \$980     | \$0,105     | \$275,013    | \$166,624   | \$241,643    |
| 86 Other grain, bushels.....  | 5,520,580      | 3,985       |           | 2,300       | 34,550       | 6,185       | 101,738      |
| 87 Cost.....  | \$1,952,780    | \$9,125     |           | \$1,050     | \$20,955     | \$2,712     | \$38,064     |
| 88 Barrels purchased, number.....   | 16,272,590     | 24,719      |           | 5,750       | 133,743      | 40,000      | 7,400        |
| 89 Cost.....  | \$4,674,636    | \$6,642     |           | \$1,585     | \$11,238     | \$12,000    | \$1,557      |
| 90 Sacks purchased, number.....   | 310,080,914    | 1,384,037   | 281,028   | 1,622,808   | 9,341,011    | 3,000,361   | 319,075      |
| 91 Cost.....  | \$11,664,478   | \$52,657    | \$12,852  | \$75,080    | \$410,644    | \$201,784   | \$14,288     |
| 92 Coopers stock and cloth for sacks.....   | \$1,594,478    | \$85        |           | \$19,026    | \$60,000     |             | \$20         |
| 93 Fuel.....  | \$4,756,782    | \$27,893    | \$5,035   | \$47,661    | \$165,955    | \$47,629    | \$15,514     |
| 94 Rent of power and heat.....  | \$378,790      | \$305       | \$220     | \$454       | \$53,772     |             | \$7,525      |
| 95 Mill supplies.....   | \$1,695,545    | \$16,174    | \$1,809   | \$12,029    | \$41,193     | \$17,773    | \$7,518      |
| 96 All other materials.....   | \$1,046,759    | \$11,559    | \$620     | \$6,479     | \$20,381     | \$12,870    | \$4,064      |
| 97 Freight.....   | \$3,759,139    | \$18,297    | \$35,000  | \$0,868     | \$51,389     | \$130,820   | \$58,219     |
| <b>Products:</b>  |                |             |           |             |              |             |              |
| 98 Total value.....   | \$560,719,063  | \$3,310,757 | \$455,246 | \$3,708,709 | \$13,100,944 | \$4,528,052 | \$2,268,859  |
| 99 Wheat flour, barrels.....  | 102,524,094    | 144,361     | 65,617    | 605,702     | 2,660,238    | 1,012,381   | 2,147        |
| 100 Value.....  | \$348,158,800  | \$557,963   | \$291,428 | \$2,005,295 | \$7,952,867  | \$3,063,100 | \$9,080      |
| 101 Rye flour, barrels.....   | 1,739,371      | 1,961       |           | 3,070       | 543,681      | 1,028       | 7,514        |
| 102 Value.....  | \$4,916,001    | \$4,810     |           | \$0,707     | \$53,681     | \$3,655     | \$23,578     |
| 103 Buckwheat flour, pounds.....  | 213,562,952    | 2,400       |           | 4,100       | 552,080      | 1,500       | 558,459      |
| 104 Value.....  | \$5,065,185    | \$75        |           | \$82        | \$19,574     | \$90        | \$16,887     |
| 105 Barley meal, pounds.....  | 99,730,423     | 1,500       | 5,087,000 | 400         | 59,166,092   |             | 1,880        |
| 106 Value.....  | \$1,113,958    | \$40        | \$94,770  | \$8         | \$572,574    |             | \$31         |
| 107 Corn meal, barrels.....   | 40,035,977     | 1,034,696   | 4,498     | 636,255     | 94,592       | 55,246      | 868,555      |
| 108 Value.....  | \$73,777,424   | \$2,360,562 | \$11,374  | \$1,134,780 | \$221,833    | \$105,261   | \$1,412,406  |
| 109 Hominy, pounds.....   | 305,725,866    | 2,444,735   |           |             | 3,097,560    |             | 1,239,000    |
| 110 Value.....  | \$2,723,443    | \$25,715    |           |             | \$36,835     |             | \$12,300     |
| 111 Feed, pounds.....   | 10,061,312,069 | 26,254,730  | 5,832,000 | 42,285,779  | 225,640,992  | 107,225,303 | 52,429,283   |
| 112 Value.....  | \$31,847,132   | \$50,122    | \$50,122  | \$304,048   | \$2,263,107  | \$853,573   | \$645,656    |
| 113 Offal, pounds.....  | 6,559,835,116  | 11,185,276  | 3,563,775 | 34,395,937  | 168,551,691  | 74,745,383  | 1,874,818    |
| 114 Value.....  | \$38,112,424   | \$73,771    | \$24,210  | \$215,368   | \$1,157,424  | \$502,403   | \$20,111     |
| 115 Barrels, made (not used), number.....   | 217,361        |             |           | 4,400       |              |             |              |
| 116 Value.....  | \$30,329       |             |           | \$1,270     |              |             |              |
| 117 Sacks, made (not used), number.....   | 580,171        |             |           |             |              |             |              |
| 118 Value.....  | \$37,591       |             |           |             |              |             |              |
| 119 Amount received for custom sawing.....  | \$245,513      | \$5,677     |           | \$3,318     | \$450        |             | \$19,630     |
| 120 Amount received for custom ginning.....   | \$301,622      | \$48,768    |           | \$30,078    |              |             | \$193        |
| 121 All other products.....   | \$5,431,063    | \$20,100    | \$4,342   | \$1,767     | \$832,599    |             | \$79,589     |
| 122 Amount received for custom grinding, including value of grain received as toll. <sup>1</sup>            | \$16,431,155   | \$237,138   | \$9,039   | \$212,288   | \$66,231     | \$13,488    | \$58,404     |
| <b>Machinery and capacity:</b>  |                |             |           |             |              |             |              |
| 123 Pairs of rolls, number.....   | 77,980         | 176         | 67        | 609         | 1,133        | 520         | 61           |
| 124 Runs of stone, number.....  | 31,218         | 981         | 7         | 480         | 161          | 21          | 325          |
| 125 Estimated maximum capacity per day of 24 hours, bushels.....  | 10,019,740     | 94,336      | 3,785     | 93,940      | 135,162      | 42,049      | 203,093      |
| <b>Comparison of products:</b>  |                |             |           |             |              |             |              |
| 126 Number of establishments reporting for both years.....  | 13,030         | 468         | 4         | 211         | 88           | 36          | 148          |
| 127 Value for census year.....  | \$389,293,162  | \$2,131,013 | \$84,300  | \$2,142,289 | \$10,303,976 | \$3,721,233 | \$1,561,791  |
| 128 Value for preceding business year.....  | \$371,357,354  | \$1,899,182 | \$70,592  | \$1,891,282 | \$10,269,105 | \$3,533,233 | \$1,450,864  |
| <b>Power:</b>   |                |             |           |             |              |             |              |
| 129 Number of establishments reporting.....   | 24,147         | 780         | 11        | 411         | 123          | 60          | 208          |
| 130 Total horsepower.....   | 1,016,859      | 14,436      | 604       | 10,091      | 11,058       | 4,819       | 6,930        |
| Owned—  |                |             |           |             |              |             |              |
| Engines—  |                |             |           |             |              |             |              |
| 131 Steam, number.....  | 11,946         | 219         | 6         | 287         | 89           | 49          | 54           |
| 132 Horsepower.....   | 538,755        | 4,867       | 312       | 7,538       | 7,800        | 3,741       | 1,330        |
| 133 Gas or gasoline, number.....  | 972            | 10          |           | 4           | 6            | 3           | 11           |
| 134 Horsepower.....   | 21,285         | 220         |           | 84          | 77           | 48          | 218          |
| 135 Water wheels, number.....   | 20,766         | 698         | 6         | 152         | 30           | 19          | 200          |
| 136 Horsepower.....   | 451,878        | 9,279       | 292       | 2,448       | 1,412        | 1,020       | 4,597        |
| 137 Electric motors, number.....  | 50             |             |           |             | 2            | 1           |              |
| 138 Horsepower.....   | 1,987          |             |           |             | 650          | 10          |              |
| 139 Other power, number.....  | 86             | 1           |           |             |              |             | 4            |
| 140 Horsepower.....   | 880            | 12          |           |             |              |             | 44           |
| Rented horsepower—  |                |             |           |             |              |             |              |
| 141 Electric.....   | 6,125          |             |           | 15          | 1,075        |             | 123          |
| 142 Other kind.....   | 1,448          | 58          |           | 6           | 144          |             | 113          |
| 143 Furnished to other establishments, horsepower.....  | 1,657          | 77          |           | 9           |              |             | 50           |
| <b>Establishments classified by number of persons employed, not including proprietors and firm members:</b> |                |             |           |             |              |             |              |
| 144 Total number of establishments.....   | 25,258         | 781         | 11        | 410         | 124          | 60          | 208          |
| 145 No employees.....   | 10,272         | 354         | 1         | 149         | 11           | 8           | 71           |
| 146 Under 5.....  | 12,749         | 895         | 5         | 280         | 65           | 25          | 126          |
| 147 5 to 20.....  | 1,892          | 32          | 5         | 80          | 32           | 25          | 10           |
| 148 21 to 50.....   | 64             |             |           |             | 10           | 1           | 1            |
| 149 51 to 100.....  | 14             |             |           | 1           | 5            | 1           |              |
| 150 101 to 250.....   | 2              |             |           |             | 1            |             |              |
| 151 251 to 500.....   | 3              |             |           |             |              |             |              |
| 152 501 to 1,000.....   |                |             |           |             |              |             |              |

<sup>1</sup>The amount of the custom grinding is distributed among the various items to which it properly belongs, and is not, therefore, included in the value of products as a single item.

| Delaware.     | District of Columbia. | Florida.   | Georgia.      | Idaho.      | Illinois.      | Indiana.       | Indian Territory. | Iowa.          | Kansas.        |     |
|---------------|-----------------------|------------|---------------|-------------|----------------|----------------|-------------------|----------------|----------------|-----|
| \$880, 837    | \$537, 690            | \$242, 378 | \$7, 004, 065 | \$645, 444  | \$26, 848, 791 | \$25, 664, 120 | \$1, 002, 013     | \$11, 272, 217 | \$18, 595, 258 | 73  |
| 740, 123      | 814, 502              | 5, 020     | 4, 136, 857   | 1, 307, 569 | 27, 566, 764   | 29, 192, 680   | 1, 168, 234       | 12, 521, 953   | 23, 459, 171   | 74  |
| \$519, 653    | \$212, 760            | \$2, 510   | \$2, 880, 435 | \$540, 242  | \$18, 382, 716 | \$19, 188, 538 | \$690, 692        | \$7, 005, 972  | \$13, 157, 846 | 75  |
| 882, 216      | 700, 836              | 441, 868   | 7, 255, 621   | 4, 436      | 16, 413, 864   | 14, 297, 771   | 791, 391          | 6, 352, 045    | 12, 427, 741   | 76  |
| \$321, 124    | \$285, 932            | \$218, 627 | \$3, 637, 455 | \$2, 354    | \$5, 650, 082  | \$4, 671, 786  | \$212, 541        | \$1, 710, 147  | \$3, 675, 178  | 77  |
| 1, 292        | 2, 300                |            | 9, 431        | 500         | 434, 581       | 211, 697       |                   | 458, 763       | 143, 145       | 78  |
| \$486         | \$1, 020              |            | \$6, 958      | \$300       | \$212, 033     | \$100, 169     |                   | \$193, 222     | \$69, 572      | 79  |
| 15, 060       |                       |            | 1, 551        |             | 176, 680       | 152, 455       | 11, 000           | 277, 693       | 25, 980        | 80  |
| \$8, 180      |                       |            | \$931         |             | \$98, 290      | \$78, 715      | \$6, 600          | \$148, 966     | \$17, 372      | 81  |
|               |                       |            |               | 137, 990    | 87, 461        | 63, 495        |                   | 638, 740       | 33, 580        | 82  |
|               |                       |            |               | \$44, 199   | \$30, 610      | \$22, 866      |                   | \$164, 627     | \$11, 019      | 83  |
| 33, 646       | 700                   | 3, 840     | 398, 810      | 9, 498      | 2, 429, 807    | 1, 123, 941    | 55, 800           | 6, 729, 396    | 481, 856       | 84  |
| \$9, 595      | \$216                 | \$1, 754   | \$113, 539    | \$8, 332    | \$559, 781     | \$200, 617     | \$10, 324         | \$1, 229, 870  | \$102, 043     | 85  |
|               |                       | 4, 510     | 7, 620        | 800         | 56, 615        | 76, 150        | 100               | 180, 446       | 123, 058       | 86  |
|               |                       | \$4, 725   | \$5, 551      | \$100       | \$16, 038      | \$35, 800      | \$50              | \$39, 155      | \$37, 478      | 87  |
| 65, 210       | 43, 000               |            | 63, 300       |             | 1, 286, 612    | 1, 099, 456    |                   | 87, 695        | 711, 232       | 88  |
| \$19, 223     | \$10, 360             |            | \$13, 940     |             | \$370, 502     | \$245, 233     |                   | \$20, 733      | \$90, 618      | 89  |
| \$41, 687     | 238, 750              | 50, 100    | \$5, 179, 908 | 633, 610    | 14, 872, 456   | 16, 905, 608   | 1, 091, 937       | 10, 314, 574   | 20, 024, 928   | 90  |
| \$20, 701     | \$5, 315              | \$2, 185   | \$171, 554    | \$27, 811   | \$545, 520     | \$505, 519     | \$43, 036         | \$349, 748     | \$809, 531     | 91  |
| \$182         | \$1, 000              |            | \$6, 204      |             | \$239, 576     | \$38, 848      |                   | \$15, 843      | \$27, 143      | 92  |
| \$13, 189     | \$5, 761              | \$2, 383   | \$47, 700     | \$16, 132   | \$293, 347     | \$305, 506     | \$19, 216         | \$190, 681     | \$239, 443     | 93  |
| \$70          | \$3, 300              |            | \$1, 340      |             | \$9, 369       | \$5, 808       |                   | \$6, 075       | \$17, 552      | 94  |
| \$6, 552      | \$4, 201              | \$1, 344   | \$26, 784     | \$5, 394    | \$96, 280      | \$79, 024      | \$4, 889          | \$51, 936      | \$68, 556      | 95  |
| \$2, 112      | \$50                  | \$302      | \$13, 466     | \$1, 650    | \$257, 426     | \$31, 252      | \$528             | \$22, 017      | \$20, 725      | 96  |
| \$59, 570     | \$7, 775              | \$8, 547   | \$78, 213     | \$3, 980    | \$37, 221      | \$94, 439      | \$14, 237         | \$123, 325     | \$251, 187     | 97  |
| \$1, 165, 800 | \$632, 754            | \$302, 737 | \$8, 330, 439 | \$832, 207  | \$31, 006, 294 | \$30, 150, 766 | \$1, 198, 472     | \$13, 823, 083 | \$21, 020, 768 | 98  |
| 153, 032      | 65, 462               | 804        | 789, 101      | 261, 223    | 6, 078, 423    | 5, 818, 392    | 240, 014          | 2, 503, 390    | 5, 034, 251    | 99  |
| \$605, 938    | \$223, 644            | \$3, 022   | \$8, 431, 754 | \$655, 097  | \$20, 384, 924 | \$20, 384, 714 | \$744, 139        | \$8, 244, 050  | \$15, 080, 529 | 100 |
| 81            | 200                   |            | 5, 605        | 100         | 67, 302        | 26, 088        |                   | 68, 964        | 17, 490        | 101 |
| \$211         | \$655                 |            | \$12, 698     | \$400       | \$194, 590     | \$76, 694      |                   | \$162, 511     | \$46, 131      | 102 |
| \$25, 900     |                       |            | 71, 824       |             | 4, 848, 087    | 3, 952, 458    | 300, 000          | 7, 400, 760    | 787, 019       | 103 |
| \$9, 384      |                       |            | \$2, 826      |             | \$121, 704     | \$107, 277     | \$7, 500          | \$203, 604     | \$28, 543      | 104 |
|               |                       |            |               | 234, 000    | 1, 428, 000    | 59, 321        |                   | 4, 290, 879    | 10, 805        | 105 |
|               |                       |            |               | \$1, 894    | \$16, 722      | \$2, 880       |                   | \$52, 611      | \$134          | 106 |
|               |                       |            |               | 460         | 2, 640, 395    | 2, 159, 432    | 123, 624          | 726, 470       | 1, 225, 917    | 107 |
|               |                       |            |               | \$1, 272    | \$2, 983, 766  | \$2, 897, 638  | \$176, 041        | \$979, 290     | \$1, 718, 401  | 108 |
|               |                       |            |               |             | 34, 739, 326   | 97, 038, 789   |                   | 4, 427, 260    | 4, 671, 000    | 109 |
|               |                       |            |               |             | \$271, 070     | \$717, 887     |                   | \$29, 337      | \$37, 964      | 110 |
|               |                       |            |               |             | 577, 999, 942  | 435, 699, 827  | 28, 087, 580      | 405, 736, 608  | 556, 951, 705  | 111 |
|               |                       |            |               |             | \$4, 112, 183  | \$2, 933, 037  | \$181, 553        | \$2, 708, 417  | \$3, 546, 810  | 112 |
|               |                       |            |               |             | 406, 366, 404  | 378, 867, 854  | 13, 520, 000      | 151, 737, 058  | \$52, 553, 736 | 113 |
|               |                       |            |               |             | \$2, 393, 321  | \$2, 234, 878  | \$88, 318         | \$789, 441     | \$1, 453, 397  | 114 |
|               |                       |            |               |             | \$9, 719       | 3, 650         |                   |                |                | 115 |
|               |                       |            |               |             | 2, 512         | \$1, 030       |                   |                |                | 116 |
|               |                       |            |               |             | 21, 000        | 4, 000         |                   | 50             | 22, 000        | 117 |
|               |                       |            |               |             | \$560          | \$120          |                   | \$3            | \$1, 100       | 118 |
|               |                       |            |               |             | \$1, 946       | \$5, 636       | \$522             | \$6, 333       | \$440          | 119 |
|               |                       |            |               |             | \$25, 077      |                |                   |                |                | 120 |
|               |                       |            |               |             | \$128, 854     | \$729, 480     | \$1, 339          | \$647, 586     | \$9, 319       | 121 |
|               |                       |            |               |             | \$591, 382     | \$973, 825     | \$46, 315         | \$749, 896     | \$218, 812     | 122 |
|               |                       |            |               |             |                |                |                   |                |                | 123 |
|               |                       |            |               |             |                |                |                   |                |                | 124 |
|               |                       |            |               |             |                |                |                   |                |                | 125 |
|               |                       |            |               |             |                |                |                   |                |                | 126 |
|               |                       |            |               |             |                |                |                   |                |                | 127 |
|               |                       |            |               |             |                |                |                   |                |                | 128 |
|               |                       |            |               |             |                |                |                   |                |                | 129 |
|               |                       |            |               |             |                |                |                   |                |                | 130 |
|               |                       |            |               |             |                |                |                   |                |                | 131 |
|               |                       |            |               |             |                |                |                   |                |                | 132 |
|               |                       |            |               |             |                |                |                   |                |                | 133 |
|               |                       |            |               |             |                |                |                   |                |                | 134 |
|               |                       |            |               |             |                |                |                   |                |                | 135 |
|               |                       |            |               |             |                |                |                   |                |                | 136 |
|               |                       |            |               |             |                |                |                   |                |                | 137 |
|               |                       |            |               |             |                |                |                   |                |                | 138 |
|               |                       |            |               |             |                |                |                   |                |                | 139 |
|               |                       |            |               |             |                |                |                   |                |                | 140 |
|               |                       |            |               |             |                |                |                   |                |                | 141 |
|               |                       |            |               |             |                |                |                   |                |                | 142 |
|               |                       |            |               |             |                |                |                   |                |                | 143 |
|               |                       |            |               |             |                |                |                   |                |                | 144 |
|               |                       |            |               |             |                |                |                   |                |                | 145 |
|               |                       |            |               |             |                |                |                   |                |                | 146 |
|               |                       |            |               |             |                |                |                   |                |                | 147 |
|               |                       |            |               |             |                |                |                   |                |                | 148 |
|               |                       |            |               |             |                |                |                   |                |                | 149 |
|               |                       |            |               |             |                |                |                   |                |                | 150 |
|               |                       |            |               |             |                |                |                   |                |                | 151 |
|               |                       |            |               |             |                |                |                   |                |                | 152 |

TABLE 7.—FLOURING AND GRIST MILL PRODUCTS.

|  | Kentucky.   | Louisiana. | Maine.      | Maryland.   | Massachu-<br>setts. | Michigan.   | Minnesota.   |
|--|-------------|------------|-------------|-------------|---------------------|-------------|--------------|
| 1 Number of establishments .....   | 1,145       | 69         | 227         | 407         | 281                 | 765         | 512          |
| 2 Character of organization:   |             |            |             |             |                     |             |              |
| 3 Individual .....   | 785         | 59         | 142         | 324         | 169                 | 459         | 273          |
| 4 Firm and limited partnership .....   | 326         | 9          | 78          | 69          | 54                  | 255         | 171          |
| 5 Incorporated company .....   | 34          | 1          | 12          | 13          | 7                   | 51          | 68           |
| 6 Miscellaneous .....  |             |            |             | 1           | 1                   |             |              |
| 7 Capital:   |             |            |             |             |                     |             |              |
| 8 Total .....  | \$4,928,928 | \$121,281  | \$1,235,767 | \$3,428,996 | \$1,930,927         | \$7,983,587 | \$24,125,781 |
| 9 Land .....   | \$440,784   | \$10,945   | \$125,492   | \$296,633   | \$203,518           | \$1,195,894 | \$1,225,635  |
| 10 Buildings .....   | \$964,408   | \$30,871   | \$265,164   | \$775,281   | \$401,901           | \$1,530,139 | \$3,091,009  |
| 11 Machinery, tools, and implements .....  | \$1,893,110 | \$47,855   | \$277,261   | \$918,016   | \$340,838           | \$2,882,239 | \$9,104,731  |
| 12 Cash and sundries .....   | \$1,630,626 | \$31,610   | \$567,850   | \$1,439,066 | \$984,670           | \$2,375,815 | \$10,704,366 |
| 13 Proprietors and firm members .....  | 1,465       | 75         | 287         | 461         | 270                 | 979         | 630          |
| 14 Salaried officials, clerks, etc.:   |             |            |             |             |                     |             |              |
| 15 Total number .....  | 171         | 2          | 18          | 85          | 53                  | 205         | 606          |
| 16 Total salaries .....  | \$125,969   | \$2,100    | \$11,560    | \$80,275    | \$33,157            | \$153,461   | \$730,667    |
| 17 Officers of corporations—   |             |            |             |             |                     |             |              |
| 18 Number .....  | 25          |            | 4           | 13          | 4                   | 27          | 101          |
| 19 Salaries .....  | \$27,720    |            | \$3,200     | \$26,473    | \$5,600             | \$31,590    | \$196,886    |
| 20 General superintendents, managers, clerks, etc.—  |             |            |             |             |                     |             |              |
| 21 Total number .....  | 146         | 2          | 14          | 72          | 49                  | 178         | 505          |
| 22 Total salaries .....  | \$98,249    | \$2,100    | \$8,360     | \$59,802    | \$27,557            | \$121,871   | \$539,791    |
| 23 Men—  |             |            |             |             |                     |             |              |
| 24 Number .....  | 128         | 2          | 12          | 66          | 38                  | 147         | 415          |
| 25 Salaries .....  | \$91,267    | \$2,100    | \$7,760     | \$52,362    | \$22,043            | \$110,314   | \$507,123    |
| 26 Women—  |             |            |             |             |                     |             |              |
| 27 Number .....  | 18          |            | 2           | 6           | 16                  | 31          | 69           |
| 28 Salaries .....  | \$6,982     |            | \$600       | \$1,440     | \$5,514             | \$11,557    | \$32,658     |
| 29 Wage-earners, including pieceworkers, and total wages:                                    |             |            |             |             |                     |             |              |
| 30 Greatest number employed at any one time during the year .....                            | 1,898       | 146        | 256         | 683         | 384                 | 1,824       | 4,711        |
| 31 Least number employed at any one time during the year .....                               | 1,359       | 137        | 224         | 610         | 311                 | 1,467       | 3,817        |
| 32 Average number .....  | 1,134       | 70         | 192         | 541         | 304                 | 1,428       | 4,086        |
| 33 Wages .....   | \$483,594   | \$11,536   | \$93,820    | \$229,335   | \$161,486           | \$718,499   | \$2,383,836  |
| 34 Men, 16 years and over—   |             |            |             |             |                     |             |              |
| 35 Average number .....  | 1,131       | 64         | 192         | 532         | 302                 | 1,417       | 3,936        |
| 36 Wages .....   | \$483,032   | \$11,420   | \$93,820    | \$228,009   | \$161,264           | \$717,354   | \$2,332,916  |
| 37 Women, 16 years and over—   |             |            |             |             |                     |             |              |
| 38 Average number .....  | 2           |            |             | 5           |                     | 1           | 147          |
| 39 Wages .....   | \$442       |            |             | \$883       |                     | \$255       | \$50,410     |
| 40 Children, under 16 years—   |             |            |             |             |                     |             |              |
| 41 Average number .....  | 1           | 6          |             | 4           | 2                   | 5           | 3            |
| 42 Wages .....   | \$120       | \$116      |             | \$443       | \$222               | \$890       | \$450        |
| 43 Average number of wage-earners, including pieceworkers, employed during each month:       |             |            |             |             |                     |             |              |
| 44 Men, 16 years and over—   |             |            |             |             |                     |             |              |
| 45 January .....   | 1,216       | 57         | 198         | 485         | 319                 | 1,464       | 3,933        |
| 46 February .....  | 1,158       | 80         | 194         | 479         | 319                 | 1,451       | 4,014        |
| 47 March .....   | 1,086       | 79         | 183         | 483         | 306                 | 1,443       | 4,063        |
| 48 April .....   | 976         | 86         | 176         | 483         | 286                 | 1,366       | 3,911        |
| 49 May .....   | 903         | 60         | 167         | 509         | 279                 | 1,307       | 3,867        |
| 50 June .....  | 779         | 45         | 161         | 522         | 270                 | 1,213       | 3,721        |
| 51 July .....  | 1,021       | 44         | 178         | 532         | 276                 | 1,268       | 3,604        |
| 52 August .....  | 1,050       | 30         | 180         | 538         | 281                 | 1,329       | 3,788        |
| 53 September .....   | 1,241       | 60         | 203         | 569         | 294                 | 1,463       | 4,020        |
| 54 October .....   | 1,385       | 80         | 213         | 592         | 320                 | 1,547       | 4,168        |
| 55 November .....  | 1,415       | 77         | 225         | 600         | 339                 | 1,582       | 4,072        |
| 56 December .....  | 1,338       | 69         | 220         | 598         | 341                 | 1,576       | 3,916        |
| 57 Women, 16 years and over—   |             |            |             |             |                     |             |              |
| 58 January .....   | 2           |            |             | 5           |                     | 1           | 156          |
| 59 February .....  | 2           |            |             | 5           |                     | 1           | 156          |
| 60 March .....   | 2           |            |             | 5           |                     | 1           | 156          |
| 61 April .....   | 2           |            |             | 5           |                     |             | 151          |
| 62 May .....   | 2           |            |             | 5           |                     |             | 149          |
| 63 June .....  | 2           |            |             | 4           |                     |             | 149          |
| 64 July .....  | 2           |            |             | 4           |                     |             | 139          |
| 65 August .....  | 2           |            |             | 4           |                     |             | 139          |
| 66 September .....   | 2           |            |             | 4           |                     |             | 139          |
| 67 October .....   | 2           |            |             | 5           |                     |             | 138          |
| 68 November .....  | 2           |            |             | 5           |                     |             | 141          |
| 69 December .....  | 2           |            |             | 5           |                     |             | 146          |
| 70 Children, under 16 years—   |             |            |             |             |                     |             |              |
| 71 January .....   | 1           | 8          |             | 4           | 2                   | 3           | 4            |
| 72 February .....  | 1           | 8          |             | 4           | 2                   | 3           | 4            |
| 73 March .....   | 1           | 9          |             | 4           | 2                   | 3           | 4            |
| 74 April .....   | 1           | 9          |             | 4           | 2                   | 3           | 4            |
| 75 May .....   | 1           | 3          |             | 4           | 1                   | 3           | 2            |
| 76 June .....  | 1           | 2          |             | 4           | 1                   | 3           | 2            |
| 77 July .....  | 2           | 2          |             | 4           | 1                   | 9           | 2            |
| 78 August .....  | 2           | 3          |             | 4           | 1                   | 9           | 2            |
| 79 September .....   | 2           | 9          |             | 4           | 1                   | 8           | 2            |
| 80 October .....   | 1           | 8          |             | 4           | 1                   | 9           | 2            |
| 81 November .....  | 1           | 8          |             | 4           | 5                   | 6           | 2            |
| 82 December .....  | 1           | 8          |             | 4           | 5                   | 5           | 2            |
| 83 Miscellaneous expenses:   |             |            |             |             |                     |             |              |
| 84 Total .....   | \$295,982   | \$2,717    | \$43,836    | \$225,357   | \$95,774            | \$396,484   | \$1,300,270  |
| 85 Rent of works .....   | 88,836      | \$50       | \$11,475    | \$30,754    | \$28,094            | \$33,673    | \$39,651     |
| 86 Taxes, not including internal revenue .....   | \$38,585    | \$1,040    | \$9,700     | \$20,252    | \$15,107            | \$67,392    | \$110,813    |
| 87 Rent of offices, insurance, interest, and all sundry expenses not hitherto included ..... | \$246,446   | \$1,602    | \$22,661    | \$173,513   | \$52,573            | \$286,380   | \$1,148,028  |
| 88 Contract work .....   | \$2,165     | \$25       |             | \$838       |                     | \$9,034     | \$2,275      |

## BY STATES AND TERRITORIES: 1900—Continued.

| Mississippi. | Missouri.    | Montana.  | Nebraska.   | Nevada.   | New Hampshire. | New Jersey. | New Mexico. | New York.    | North Carolina. |    |
|--------------|--------------|-----------|-------------|-----------|----------------|-------------|-------------|--------------|-----------------|----|
| 225          | 1,145        | 20        | 305         | 11        | 149            | 354         | 35          | 1,513        | 1,773           | 1  |
| 195          | 672          | 7         | 157         | 2         | 105            | 278         | 29          | 1,078        | 1,293           | 2  |
| 28           | 358          | 4         | 104         | 5         | 39             | 58          | 5           | 376          | 451             | 3  |
| 2            | 114          | 8         | 44          | 5         | 5              | 18          | 1           | 59           | 28              | 4  |
|              | 1            | 1         |             |           |                |             |             |              | 1               | 5  |
| \$225,335    | \$11,402,827 | \$715,189 | \$4,335,934 | \$231,247 | \$1,004,990    | \$3,004,408 | \$233,735   | \$23,384,858 | \$2,905,310     | 6  |
| \$21,026     | \$888,775    | \$25,445  | \$853,470   | \$7,820   | \$106,260      | \$370,695   | \$30,715    | \$6,275,003  | \$281,754       | 7  |
| \$51,610     | \$2,309,234  | \$127,186 | \$934,903   | \$50,500  | \$222,240      | \$775,210   | \$60,450    | \$5,563,206  | \$711,152       | 8  |
| \$126,096    | \$4,201,382  | \$160,045 | \$1,689,576 | \$63,485  | \$200,740      | \$733,574   | \$101,890   | \$4,792,699  | \$1,459,824     | 9  |
| \$25,603     | \$4,023,436  | \$402,513 | \$1,357,985 | \$109,442 | \$475,750      | \$1,124,929 | \$45,680    | \$6,753,890  | \$452,580       | 10 |
| 257          | 1,446        | 16        | 365         | 11        | 189            | 398         | 39          | 1,844        | 2,042           | 11 |
| 8            | 874          | 26        | 138         | 4         | 15             | 62          | 2           | 388          | 64              | 12 |
| \$1,745      | \$355,125    | \$27,100  | \$101,721   | \$2,700   | \$10,688       | \$42,098    | \$1,500     | \$440,929    | \$31,316        | 13 |
|              | 106          | 8         | 27          | 8         | 1              | 16          | 1           | 70           | 9               | 14 |
|              | \$139,085    | \$6,980   | \$24,156    | \$2,100   | \$2,000        | \$14,839    | \$900       | \$136,435    | \$8,080         | 15 |
| 8            | 268          | 18        | 111         | 1         | 14             | 46          | 1           | 318          | 55              | 16 |
| \$1,745      | \$216,040    | \$20,120  | \$77,565    | \$600     | \$3,688        | \$27,259    | \$600       | \$804,494    | \$23,236        | 17 |
| 8            | 230          | 16        | 103         | 1         | 13             | 38          | 1           | 262          | 54              | 18 |
| \$1,745      | \$200,655    | \$18,920  | \$74,565    | \$600     | \$3,438        | \$24,953    | \$600       | \$284,336    | \$23,136        | 19 |
|              | 38           | 2         | 8           |           | 1              | 8           |             | 55           | 1               | 20 |
|              | \$15,385     | \$1,200   | \$3,000     |           | \$250          | \$2,301     |             | \$20,158     | \$100           | 21 |
| 381          | 2,425        | 97        | 926         | 23        | 231            | 594         | 75          | 3,251        | 1,469           | 22 |
| 276          | 1,863        | 76        | 693         | 10        | 179            | 528         | 51          | 2,276        | 1,216           | 23 |
| 208          | 1,654        | 67        | 698         | 13        | 185            | 431         | 52          | 2,489        | 1,019           | 24 |
| \$27,244     | \$851,377    | \$51,871  | \$363,687   | \$8,586   | \$82,214       | \$219,951   | \$27,458    | \$1,284,438  | \$213,627       | 25 |
| 200          | 1,611        | 67        | 656         | 12        | 185            | 427         | 52          | 2,404        | 1,010           | 26 |
| \$26,688     | \$835,168    | \$51,871  | \$355,060   | \$8,456   | \$82,214       | \$219,265   | \$27,458    | \$1,267,340  | \$212,962       | 27 |
|              | 34           |           | 37          | 1         |                |             |             | 85           |                 | 28 |
|              | \$14,450     |           | \$7,836     | \$130     |                |             |             | \$17,098     |                 | 29 |
| 8            | 9            |           | 5           |           |                | 4           |             |              | 9               | 30 |
| \$556        | \$1,759      |           | \$791       |           |                | \$686       |             |              | \$665           | 31 |
| 181          | 1,679        | 81        | 690         | 12        | 193            | 459         | 49          | 2,553        | 1,058           | 32 |
| 171          | 1,655        | 85        | 665         | 9         | 194            | 449         | 48          | 2,531        | 1,028           | 33 |
| 149          | 1,626        | 86        | 638         | 9         | 201            | 446         | 50          | 2,429        | 983             | 34 |
| 141          | 1,545        | 91        | 616         | 12        | 201            | 424         | 47          | 2,357        | 929             | 35 |
| 142          | 1,443        | 82        | 611         | 13        | 197            | 371         | 43          | 2,192        | 882             | 36 |
| 140          | 1,211        | 68        | 560         | 11        | 173            | 328         | 37          | 2,032        | 843             | 37 |
| 139          | 1,406        | 42        | 593         | 8         | 167            | 349         | 49          | 2,100        | 850             | 38 |
| 151          | 1,524        | 43        | 617         | 9         | 163            | 377         | 55          | 2,174        | 884             | 39 |
| 279          | 1,691        | 48        | 681         | 14        | 174            | 434         | 63          | 2,420        | 1,035           | 40 |
| 302          | 1,894        | 56        | 733         | 15        | 185            | 480         | 65          | 2,609        | 1,226           | 41 |
| 312          | 1,869        | 67        | 735         | 18        | 193            | 501         | 63          | 2,775        | 1,237           | 42 |
| 289          | 1,794        | 49        | 729         | 19        | 183            | 509         | 57          | 2,614        | 1,164           | 43 |
|              | 25           |           | 21          |           |                |             |             | 42           |                 | 44 |
|              | 40           |           | 38          |           |                |             |             | 39           |                 | 45 |
|              | 40           |           | 38          |           |                |             |             | 54           |                 | 46 |
|              | 40           |           | 38          |           |                |             |             | 62           |                 | 47 |
|              | 40           |           | 35          | 1         |                |             |             | 147          |                 | 48 |
|              | 31           |           | 35          | 1         |                |             |             | 138          |                 | 49 |
|              | 31           |           | 38          | 1         |                |             |             | 130          |                 | 50 |
|              | 31           |           | 42          | 1         |                |             |             | 76           |                 | 51 |
|              | 31           |           | 26          |           |                |             |             | 85           |                 | 52 |
|              | 31           |           | 32          | 1         |                |             |             | 90           |                 | 53 |
|              | 31           |           | 57          | 1         |                |             |             | 87           |                 | 54 |
|              | 31           |           | 45          |           |                |             |             | 63           |                 | 55 |
| 6            | 9            |           | 8           |           |                | 1           |             |              | 8               | 56 |
| 6            | 9            |           | 8           |           |                | 5           |             |              | 8               | 57 |
| 5            | 10           |           | 4           |           |                | 5           |             |              | 8               | 58 |
| 4            | 10           |           | 1           |           |                | 5           |             |              | 9               | 59 |
| 4            | 11           |           | 1           |           |                | 2           |             |              | 7               | 60 |
| 4            | 8            |           | 1           |           |                | 2           |             |              | 7               | 61 |
| 4            | 9            |           | 3           |           |                |             |             |              | 8               | 62 |
| 3            | 8            |           | 7           |           |                | 2           |             |              | 11              | 63 |
| 15           | 9            |           | 7           |           |                | 4           |             |              | 11              | 64 |
| 16           | 8            |           | 7           |           |                | 6           |             |              | 12              | 65 |
| 17           | 9            |           | 7           |           |                | 10          |             |              | 10              | 66 |
| 10           | 8            |           | 5           |           |                | 8           |             |              | 10              | 67 |
| \$3,802      | \$520,468    | \$41,516  | \$171,948   | \$5,850   | \$33,084       | \$102,630   | \$11,009    | \$1,014,018  | \$65,395        | 68 |
| \$132        | \$26,512     | \$500     | \$14,109    | \$30      | \$3,721        | \$25,083    | \$1,560     | \$90,102     | \$6,006         | 69 |
| \$2,139      | \$63,596     | \$8,533   | \$27,221    | \$1,442   | \$3,033        | \$16,947    | \$2,732     | \$119,083    | \$20,403        | 70 |
| \$1,336      | \$430,160    | \$32,133  | \$130,102   | \$4,275   | \$16,330       | \$60,600    | \$6,655     | \$804,578    | \$38,240        | 71 |
| \$95         | \$200        | \$250     | \$516       | \$103     |                |             | \$12        | \$300        | \$737           | 72 |

TABLE 7.—FLOURING AND GRIST MILL PRODUCTS,

|   | Kentucky.    | Louisiana  | Maine.      | Maryland.   | Massachu-<br>setts. | Michigan.    | Minnesota.    |
|---|--------------|------------|-------------|-------------|---------------------|--------------|---------------|
| <b>Materials used:</b>  |              |            |             |             |                     |              |               |
| 73 Total cost.....  | \$12,018,998 | \$825,297  | \$2,827,443 | \$6,781,805 | \$4,812,256         | \$19,924,080 | \$74,509,733  |
| 74 Wheat, bushels.....  | 12,325,621   | 3,000      | 134,894     | 7,081,937   | 27,340              | 20,121,661   | 102,921,426   |
| 75 Cost.....  | \$8,294,690  | \$2,400    | \$104,767   | \$4,972,284 | \$20,376            | \$13,855,780 | \$66,641,825  |
| 76 Corn, bushels.....   | 6,641,906    | 742,669    | 4,589,793   | 2,887,711   | 9,718,561           | 8,100,200    | 4,226,426     |
| 77 Cost.....  | \$2,918,858  | \$264,696  | \$2,096,170 | \$1,116,787 | \$4,094,562         | \$2,978,816  | \$1,254,815   |
| 78 Rye, bushels.....  | 15,028       |            | 16,152      | 134,264     | 287,972             | 649,594      | 455,474       |
| 79 Cost.....  | \$7,664      |            | \$9,054     | \$87,174    | \$147,823           | \$316,277    | \$203,787     |
| 80 Buckwheat, bushels.....  | 378          |            | 186,510     | 100,148     | 13,849              | 618,292      | 87,065        |
| 81 Cost.....  | \$286        |            | \$74,608    | \$50,812    | \$8,180             | \$333,122    | \$47,282      |
| 82 Barley, bushels.....   | 5,625        |            | 49,349      | 22,415      | 80,940              | 146,017      | 1,198,068     |
| 83 Cost.....  | \$2,782      |            | \$25,867    | \$9,814     | \$30,277            | \$61,919     | \$310,468     |
| 84 Oats, bushels.....   | 63,260       | 16,000     | 841,998     | 210,740     | 1,381,703           | 4,609,253    | 3,397,575     |
| 85 Cost.....  | \$17,066     | \$5,600    | \$273,911   | \$63,877    | \$378,575           | \$1,196,278  | \$764,983     |
| 86 Other grain, bushels.....  | 44,505       |            | 280,967     | 58,069      | 82,726              | 280,971      | 295,197       |
| 87 Cost.....  | \$17,660     |            | \$129,083   | \$24,216    | \$36,170            | \$116,485    | \$78,152      |
| 88 Barrels purchased, number.....   | 649,334      | 20         | 1,850       | 388,257     | 3,810               | 915,123      | 4,018,103     |
| 89 Cost.....  | \$160,635    | \$2        | \$525       | \$118,913   | \$736               | \$207,789    | \$1,855,550   |
| 90 Sacks purchased, number.....   | 10,130,586   | 367,745    | 105,215     | 4,065,830   | 433,230             | 10,179,372   | 47,664,716    |
| 91 Cost.....  | \$200,337    | \$12,259   | \$6,480     | \$125,623   | \$13,370            | \$339,015    | \$2,229,989   |
| 92 Coopersage stock and cloth for sacks.....  | \$30,972     | \$4,500    |             | \$30,401    | \$50                | \$100,809    | \$60,871      |
| 93 Fuel.....  | \$143,834    | \$3,832    | \$15,786    | \$65,052    | \$24,896            | \$195,786    | \$577,275     |
| 94 Rent of power and heat.....  | \$43,135     | \$945      | \$8,017     | \$22,678    | \$10,251            | \$4,333      | \$154,827     |
| 95 Mill supplies.....   | \$9,575      | \$510      | \$7,977     | \$16,997    | \$8,108             | \$52,327     | \$352,566     |
| 96 All other materials.....   | \$31,147     | \$30,653   | \$63,413    | \$44,515    | \$29,366            | \$67,298     | \$385,786     |
| 97 Freight.....   |              |            |             |             |                     |              |               |
| <b>Products:</b>  |              |            |             |             |                     |              |               |
| 98 Total value.....   | \$14,515,161 | \$388,326  | \$3,399,832 | \$8,035,343 | \$5,763,523         | \$23,503,991 | \$83,877,709  |
| 99 Wheat flour, barrels.....  | 2,549,947    | 600        | 27,060      | 1,476,416   | 7,328               | 4,012,867    | 22,705,165    |
| 100 Value.....  | \$9,341,759  | \$3,000    | \$115,975   | \$5,418,734 | \$27,744            | \$14,899,096 | \$72,381,650  |
| 101 Rye flour, barrels.....   | 2,556        |            | 1,077       | 9,831       | 5,750               | 53,307       | 82,087        |
| 102 Value.....  | \$5,623      |            | \$3,901     | \$22,659    | \$19,398            | \$152,884    | \$203,731     |
| 103 Buckwheat flour, pounds.....  | 15,690       |            | 2,742,760   | 2,149,058   | 428,148             | 16,350,928   | 2,025,989     |
| 104 Value.....  | \$470        |            | \$44,650    | \$52,123    | \$10,882            | \$345,102    | \$52,848      |
| 105 Barley meal, pounds.....  | 7,880        |            | 1,076,400   | 70,400      | 252,457             | 772,260      | 4,163,150     |
| 106 Value.....  | \$130        |            | \$16,408    | \$1,123     | \$18,900            | \$15,669     | \$41,489      |
| 107 Corn meal, barrels.....   | 1,552,655    | 151,472    | 1,027,588   | 403,390     | 2,443,938           | 629,328      | 192,522       |
| 108 Value.....  | \$3,290,275  | \$291,454  | \$2,242,202 | \$822,292   | \$4,477,134         | \$1,197,749  | \$292,666     |
| 109 Hominy, pounds.....   | 39,850       | 200,000    |             | 11,231,589  | 2,564,600           | 2,889,950    | 6,087,250     |
| 110 Value.....  | \$13,271     | \$2,100    |             | \$135,120   | \$23,134            | \$21,822     | \$51,000      |
| 111 Feed, pounds.....   | 69,348,281   | 11,221,600 | 74,323,003  | 145,693,200 | 100,739,202         | 540,099,628  | 568,308,859   |
| 112 Value.....  | \$635,754    | \$89,560   | \$829,232   | \$1,164,496 | \$1,047,932         | \$4,726,347  | \$3,977,663   |
| 113 Offal, pounds.....  | 184,623,651  |            | 20,969,113  | 53,109,242  | 19,267,731          | 308,396,890  | 1,392,441,288 |
| 114 Value.....  | \$1,210,908  |            | \$124,322   | \$394,448   | \$101,888           | \$1,965,295  | \$6,790,601   |
| 115 Barrels made (not used), number.....  | 6            |            |             | 6           |                     |              | 500           |
| 116 Value.....  | \$35         |            |             | \$1,300     |                     | \$22,539     | \$130         |
| 117 Sacks made (not used), number.....  |              |            |             | 2,500       |                     | 1,090        | 516,221       |
| 118 Value.....  |              |            |             | \$60        |                     | \$50         | \$18,677      |
| 119 Amount received for custom sawing.....  | \$10,585     | \$116      | \$212       | \$2,125     | \$6,914             | \$27,142     | \$2,730       |
| 120 Amount received for custom ginning.....   | \$72         | \$1,855    |             |             |                     |              |               |
| 121 All other products.....   | \$6,279      | \$235      | \$22,870    | \$20,368    | \$34,597            | \$220,295    | \$64,325      |
| 122 Amount received for custom grinding, including value<br>of grain received as toll.....                        | \$506,535    | \$17,292   | \$130,620   | \$243,771   | \$87,208            | \$757,864    | \$806,027     |
| <b>Machinery and capacity:</b>  |              |            |             |             |                     |              |               |
| 123 Pairs of rolls, number.....   | 2,563        | 15         | 218         | 1,511       | 81                  | 4,240        | 6,455         |
| 124 Runs of stone, number.....  | 1,214        | 66         | 349         | 578         | 348                 | 849          | 406           |
| 125 Estimated maximum capacity per day of 24 hours,<br>bushels.....   | 289,218      | 9,833      | 119,321     | 95,729      | 166,825             | 408,310      | 680,421       |
| <b>Comparison of products:</b>  |              |            |             |             |                     |              |               |
| 126 Number of establishments reporting for both years.....  | 470          | 36         | 132         | 208         | 159                 | 381          | 232           |
| 127 Value for census year.....  | \$8,860,396  | \$296,031  | \$2,341,674 | \$5,832,708 | \$4,737,596         | \$14,003,627 | \$68,356,312  |
| 128 Value for preceding business year.....  | \$8,895,647  | \$243,310  | \$2,154,829 | \$5,859,950 | \$4,802,085         | \$13,293,335 | \$69,014,637  |
| <b>Power:</b>   |              |            |             |             |                     |              |               |
| 129 Number of establishments reporting.....   | 1,144        | 57         | 225         | 411         | 227                 | 765          | 511           |
| 130 Total horsepower.....   | 31,086       | 1,102      | 8,619       | 14,182      | 9,586               | 43,960       | 69,569        |
| <b>Owned—</b>   |              |            |             |             |                     |              |               |
| <b>Engines—</b>   |              |            |             |             |                     |              |               |
| 131 Steam, number.....  | 784          | 53         | 52          | 136         | 61                  | 468          | 373           |
| 132 Horsepower.....   | 22,780       | 1,047      | 1,561       | 5,765       | 2,376               | 22,797       | 44,742        |
| 133 Gas or gasoline, number.....  | 9            |            | 25          | 16          |                     | 49           | 60            |
| 134 Horsepower.....   | 152          |            | 530         | 242         | 362                 | 1,014        | 1,263         |
| 135 Water wheels, number.....   | 508          | 2          | 251         | 439         | 229                 | 621          | 265           |
| 136 Horsepower.....   | 8,103        | 25         | 6,492       | 8,035       | 6,464               | 19,780       | 23,209        |
| 137 Electric motors, number.....  |              |            |             |             |                     | 90           | 223           |
| 138 Horsepower.....   |              |            |             |             |                     | 2            | 5             |
| 139 Other power, number.....  | 1            | 2          | 2           |             |                     | 9            | 49            |
| 140 Horsepower.....   | 4            | 30         | 11          |             |                     |              |               |
| <b>Rented, horsepower—</b>  |              |            |             |             |                     |              |               |
| 141 Electric.....   | 47           |            |             | 100         | 290                 | 270          | 83            |
| 142 Other kind.....   |              |            |             | 40          | 40                  |              |               |
| 143 Furnished to other establishments, horsepower.....  | 1            |            | 333         |             |                     |              | 240           |
| <b>Establishments classified by number of persons em-<br/>ployed, not including proprietors and firm members:</b> |              |            |             |             |                     |              |               |
| 144 Total number of establishments.....   | 1,145        | 69         | 227         | 407         | 231                 | 765          | 512           |
| 145 No employees.....   | 528          | 16         | 82          | 160         | 66                  | 205          | 106           |
| 146 Under 5.....  | 522          | 50         | 189         | 219         | 147                 | 474          | 289           |
| 147 5 to 20.....  | 86           | 2          | 6           | 23          | 17                  | 74           | 80            |
| 148 21 to 50.....   | 7            | 1          |             | 4           | 1                   | 9            | 26            |
| 149 51 to 100.....  | 1            |            |             |             |                     | 8            | 7             |
| 150 101 to 250.....   | 1            |            |             |             |                     |              | 1             |
| 151 251 to 500.....   |              |            |             |             |                     |              |               |
| 152 501 to 1,000.....   |              |            |             |             |                     |              | 8             |

| Mississippi. | Missouri.    | Montana.  | Nebraska.   | Nevada.   | New Hampshire. | New Jersey. | New Mexico. | New York.    | North Carolina. |     |
|--------------|--------------|-----------|-------------|-----------|----------------|-------------|-------------|--------------|-----------------|-----|
| \$805,894    | \$21,937,507 | \$818,442 | \$6,885,719 | \$122,815 | \$2,201,909    | \$5,243,121 | \$413,396   | \$36,523,959 | \$7,218,904     | 73  |
| 10,920       | 25,368,939   | 1,231,182 | 8,687,781   | 158,146   | 313,324        | 2,404,070   | 563,523     | 25,232,077   | 4,549,396       | 74  |
| \$14,019     | \$16,263,077 | \$725,259 | \$4,546,481 | \$101,927 | \$220,230      | \$1,743,080 | \$346,852   | \$18,432,502 | \$3,609,061     | 75  |
| 1,009,736    | 11,842,365   | 5,503     | 3,330,284   | 65        | 3,608,644      | 5,156,897   | 41,313      | 22,469,249   | 6,018,505       | 76  |
| \$753,566    | \$4,116,539  | \$2,352   | \$875,237   | \$75      | \$1,547,022    | \$2,137,045 | \$22,275    | \$9,363,523  | \$3,226,539     | 77  |
|              | 94,018       | 5,485     | 356,960     |           | 7,070          | 571,502     |             | 1,801,236    | 108,573         | 78  |
|              | \$43,740     | \$3,130   | \$143,940   |           | \$5,332        | \$288,533   |             | \$1,033,432  | \$65,733        | 79  |
|              | 45,192       | 27        | 10,274      | 175       | 28,510         | 216,851     |             | 2,581,749    | 31,358          | 80  |
|              | \$25,117     | \$14      | \$6,162     | \$105     | \$11,585       | \$118,867   |             | \$1,436,612  | \$16,127        | 81  |
|              | 121,735      | 2,195     | 63,425      | 24,397    | 10,647         | 8,096       | 32,000      | 498,608      | 10,102          | 82  |
|              | \$14,018     | \$867     | \$15,940    | \$13,400  | \$5,511        | \$2,839     | \$20,165    | \$228,218    | \$6,403         | 83  |
| 24,500       | \$71,080     | 35,945    | 1,006,140   |           | 714,849        | 2,228,443   | 1,700       | 11,333,615   | 116,210         | 84  |
| \$8,280      | \$91,351     | \$13,397  | \$331,483   |           | \$223,901      | \$662,704   | \$700       | \$3,564,642  | \$42,685        | 85  |
|              | 18,758       | 6,250     | 28,475      |           | 170,659        | 205,425     |             | 1,191,124    | 77,026          | 86  |
|              | \$7,961      | \$1,250   | \$8,055     |           | \$81,076       | \$78,697    |             | \$436,983    | \$28,741        | 87  |
| 17,100       | 691,060      |           |             |           | 5,250          | 158,666     |             | 1,372,359    | 2,370           | 88  |
| \$2,185      | \$176,864    |           |             |           | \$1,075        | \$35,896    |             | \$441,638    | \$177           | 89  |
| 193,630      | 16,887,761   | 741,399   | 6,009,627   | 98,493    | 1,269,815      | 2,227,669   | 204,510     | 13,812,221   | 1,474,782       | 90  |
| \$9,241      | \$657,764    | \$39,646  | \$258,671   | \$4,106   | \$14,844       | \$69,475    | \$10,519    | \$359,686    | \$70,848        | 91  |
| \$11,163     | \$55,944     |           | \$6,686     |           | \$20,068       | \$750       | \$300       | \$588,853    | \$1,796         | 92  |
|              | \$303,067    | \$8,246   | \$91,099    | \$1,400   | \$9,548        | \$34,296    | \$8,730     | \$1,624,264  | \$60,270        | 93  |
|              | \$835        | \$4,800   | \$1,850     |           | \$813          | \$2,200     |             | \$27,393     | \$1,300         | 94  |
| \$4,348      | \$65,669     | \$10,116  | \$33,234    | \$1,485   | \$6,790        | \$13,937    | \$2,457     | \$85,778     | \$27,191        | 95  |
| \$2,092      | \$32,792     | \$1,240   | \$38,867    |           | \$3,317        | \$14,090    | \$881       | \$63,080     | \$9,559         | 96  |
| \$1,000      | \$52,769     | \$8,125   | \$28,006    | \$317     | \$50,417       | \$46,712    | \$517       | \$197,455    | \$52,480        | 97  |
| \$932,816    | \$26,393,928 | \$995,702 | \$8,100,794 | \$157,847 | \$2,505,936    | \$6,371,997 | \$551,108   | \$12,796,340 | \$8,867,462     | 98  |
| 4,696        | 5,245,421    | 257,035   | 1,821,107   | 31,249    | 62,644         | 466,338     | 115,960     | 5,434,827    | 945,761         | 99  |
| \$17,755     | \$17,800,204 | \$852,133 | \$5,319,911 | \$117,713 | \$245,439      | \$1,871,129 | \$403,072   | \$19,328,981 | \$4,047,340     | 100 |
|              | 21,345       | 1,767     | 54,475      |           | 1,713          | 53,164      |             | 262,496      | 29,394          | 101 |
|              | \$43,497     | \$4,308   | \$135,722   |           | \$5,149        | \$160,577   |             | \$908,645    | \$60,022        | 102 |
|              | 1,203,933    | 1,080     | 277,040     | 8,225     | 515,501        | 5,379,390   |             | 70,122,672   | 627,328         | 103 |
|              | \$32,268     | \$20      | \$7,803     | \$123     | \$6,746        | \$122,174   |             | \$1,853,506  | \$12,995        | 104 |
|              | 3,440        |           | 210,000     | 92,073    | 276,632        | 44,000      | 1,000,000   | 6,797,542    | 247,751         | 105 |
|              | \$73         |           | \$1,484     | \$1,480   | \$3,887        | \$800       | \$20,000    | \$89,039     | \$9,239         | 106 |

TABLE 7.—FLOURING AND GRIST MILL PRODUCTS,

|  | North Dakota. | Ohio.        | Oklahoma.   | Oregon.     | Pennsylvania. | Rhode Island. | South Carolina. |
|--|---------------|--------------|-------------|-------------|---------------|---------------|-----------------|
| 1 Number of establishments .....   | 97            | 1,150        | 55          | 153         | 2,719         | 47            | 556             |
| 2 Character of organization:   |               |              |             |             |               |               |                 |
| 3 Individual .....   | 51            | 619          | 24          | 79          | 2,145         | 40            | 462             |
| 4 Firm and limited partnership .....   | 23            | 458          | 13          | 48          | 521           | 6             | 80              |
| 5 Incorporated company .....   | 28            | 78           | 18          | 26          | 58            | 1             | 13              |
| 6 Miscellaneous .....  |               |              |             |             |               |               | 1               |
| 7 Capital:   |               |              |             |             |               |               |                 |
| 8 Total .....  | \$1,359,296   | \$12,581,150 | \$1,080,661 | \$3,172,997 | \$19,516,998  | \$532,211     | \$652,558       |
| 9 Land .....   | \$56,270      | \$863,866    | \$37,492    | \$286,760   | \$2,673,364   | \$33,152      | \$50,195        |
| 10 Buildings .....   | \$249,030     | \$2,811,132  | \$227,740   | \$523,045   | \$5,073,724   | \$112,757     | \$153,614       |
| 11 Machinery, tools, and implements .....  | \$531,242     | \$4,584,325  | \$351,007   | \$866,978   | \$5,741,177   | \$94,058      | \$383,934       |
| 12 Cash and sundries .....   | \$522,754     | \$4,271,827  | \$464,422   | \$1,496,214 | \$6,028,728   | \$292,244     | \$61,810        |
| 13 Proprietors and firm members .....  | 100           | 1,621        | 46          | 172         | 3,210         | 52            | 631             |
| 14 Salaried officials, clerks, etc.:   |               |              |             |             |               |               |                 |
| 15 Total number .....  | 57            | 342          | 84          | 83          | 270           | 20            | 22              |
| 16 Total salaries .....  | \$47,750      | \$302,791    | \$66,110    | \$83,671    | \$206,001     | \$14,006      | \$8,842         |
| 17 Officers of corporations—   |               |              |             |             |               |               |                 |
| 18 Number .....  | 23            | 71           | 22          | 18          | 49            |               | 4               |
| 19 Salaries .....  | \$17,080      | \$99,994     | \$23,320    | \$30,460    | \$57,973      |               | \$1,900         |
| 20 General superintendents, managers, clerks, etc.—  |               |              |             |             |               |               |                 |
| 21 Total number .....  | 34            | 271          | 62          | 65          | 221           | 20            | 18              |
| 22 Total salaries .....  | \$30,670      | \$202,797    | \$42,790    | \$53,211    | \$148,028     | \$14,006      | \$6,943         |
| 23 Men—  |               |              |             |             |               |               |                 |
| 24 Number .....  | 33            | 219          | 61          | 60          | 169           | 18            | 18              |
| 25 Salaries .....  | \$30,630      | \$186,023    | \$42,370    | \$50,864    | \$131,358     | \$13,122      | \$6,943         |
| 26 Women—  |               |              |             |             |               |               |                 |
| 27 Number .....  | 1             | 52           | 1           | 5           | 52            | 2             |                 |
| 28 Salaries .....  | \$40          | \$16,774     | \$420       | \$2,347     | \$16,670      | \$884         |                 |
| 29 Wage-earners, including pieceworkers, and total wages:                                    |               |              |             |             |               |               |                 |
| 30 Greatest number employed at any one time during the year .....                            | 387           | 3,019        | 330         | 685         | 2,829         | 92            | 813             |
| 31 Least number employed at any one time during the year .....                               | 253           | 2,496        | 226         | 373         | 2,475         | 78            | 637             |
| 32 Average number .....  | 298           | 2,438        | 258         | 443         | 2,195         | 80            | 231             |
| 33 Wages .....   | \$159,335     | \$1,220,398  | \$125,855   | \$246,901   | \$1,061,869   | \$37,678      | \$70,438        |
| 34 Men, 16 years and over—   |               |              |             |             |               |               |                 |
| 35 Average number .....  | 298           | 2,393        | 256         | 434         | 2,180         | 80            | 231             |
| 36 Wages .....   | \$159,335     | \$1,209,466  | \$125,755   | \$242,801   | \$1,059,307   | \$37,678      | \$70,438        |
| 37 Women, 16 years and over—   |               |              |             |             |               |               |                 |
| 38 Average number .....  |               | 41           |             | 8           |               |               |                 |
| 39 Wages .....   |               | \$10,547     |             | \$4,000     |               |               |                 |
| 40 Children, under 16 years—   |               |              |             |             |               |               |                 |
| 41 Average number .....  |               | 4            | 2           | 1           | 15            |               |                 |
| 42 Wages .....   |               | \$355        | \$100       | \$100       | \$2,562       |               |                 |
| 43 Average number of wage-earners, including pieceworkers, employed during each month:       |               |              |             |             |               |               |                 |
| 44 Men, 16 years and over—   |               |              |             |             |               |               |                 |
| 45 January .....   | 308           | 2,452        | 268         | 406         | 2,253         | 84            | 261             |
| 46 February .....  | 287           | 2,475        | 269         | 402         | 2,224         | 85            | 241             |
| 47 March .....   | 284           | 2,421        | 258         | 412         | 2,170         | 85            | 210             |
| 48 April .....   | 288           | 2,299        | 256         | 401         | 2,081         | 82            | 171             |
| 49 May .....   | 288           | 2,237        | 252         | 395         | 1,947         | 79            | 160             |
| 50 June .....  | 265           | 2,117        | 221         | 382         | 1,807         | 72            | 172             |
| 51 July .....  | 251           | 2,201        | 214         | 393         | 1,975         | 76            | 177             |
| 52 August .....  | 255           | 2,355        | 235         | 455         | 2,019         | 76            | 205             |
| 53 September .....   | 317           | 2,478        | 269         | 516         | 2,206         | 78            | 391             |
| 54 October .....   | 347           | 2,557        | 276         | 654         | 2,447         | 82            | 495             |
| 55 November .....  | 348           | 2,594        | 280         | 469         | 2,431         | 83            | 471             |
| 56 December .....  | 336           | 2,538        | 278         | 418         | 2,459         | 84            | 418             |
| 57 Women, 16 years and over—   |               |              |             |             |               |               |                 |
| 58 January .....   |               | 44           |             | 10          |               |               |                 |
| 59 February .....  |               | 47           |             | 8           |               |               |                 |
| 60 March .....   |               | 51           |             | 10          |               |               |                 |
| 61 April .....   |               | 50           |             | 9           |               |               |                 |
| 62 May .....   |               | 49           |             | 7           |               |               |                 |
| 63 June .....  |               | 46           |             | 8           |               |               |                 |
| 64 July .....  |               | 4            |             | 5           |               |               |                 |
| 65 August .....  |               | 37           |             | 5           |               |               |                 |
| 66 September .....   |               | 41           |             | 7           |               |               |                 |
| 67 October .....   |               | 43           |             | 8           |               |               |                 |
| 68 November .....  |               | 43           |             | 10          |               |               |                 |
| 69 December .....  |               | 43           |             | 10          |               |               |                 |
| 70 Children, under 16 years—   |               |              |             |             |               |               |                 |
| 71 January .....   |               | 4            | 2           |             | 15            |               |                 |
| 72 February .....  |               | 4            | 2           |             | 15            |               |                 |
| 73 March .....   |               | 4            | 2           |             | 14            |               |                 |
| 74 April .....   |               | 2            | 2           |             | 13            |               |                 |
| 75 May .....   |               | 2            | 2           |             | 15            |               |                 |
| 76 June .....  |               | 2            | 2           |             | 14            |               |                 |
| 77 July .....  |               | 2            | 1           |             | 14            |               |                 |
| 78 August .....  |               | 2            | 1           |             | 15            |               |                 |
| 79 September .....   |               | 2            | 1           | 3           | 16            |               |                 |
| 80 October .....   |               | 6            | 1           | 3           | 17            |               |                 |
| 81 November .....  |               | 9            | 1           | 3           | 18            |               |                 |
| 82 December .....  |               | 6            | 1           | 3           | 19            |               |                 |
| 83 Miscellaneous expenses:   |               |              |             |             |               |               |                 |
| 84 Total .....   | \$65,890      | \$626,642    | \$86,925    | \$178,784   | \$667,372     | \$22,292      | \$15,742        |
| 85 Rent of works .....   | \$860         | \$36,651     | \$530       | \$12,093    | \$171,092     | \$5,197       | \$2,094         |
| 86 Taxes, not including internal revenue .....   | \$12,258      | \$111,915    | \$9,186     | \$23,038    | \$95,731      | \$2,037       | \$5,427         |
| 87 Rent of offices, insurance, interest, and all sundry expenses not hitherto included ..... | \$52,772      | \$478,068    | \$77,209    | \$142,818   | \$400,199     | \$5,738       | \$3,161         |
| 88 Contract work .....   |               | \$8          |             | \$835       | \$350         | \$6,320       | \$60            |



## BY STATES AND TERRITORIES: 1900—Continued.

| South Dakota. | Tennessee.  | Texas.      | Utah.       | Vermont.    | Virginia.   | Washington. | West Virginia. | Wisconsin.  | Wyoming.  |    |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------|-------------|-----------|----|
| 120           | 1,618       | 289         | 80          | 211         | 1,726       | 85          | 737            | 717         | 10        | 1  |
| 58            | 1,180       | 176         | 23          | 155         | 1,336       | 31          | 514            | 427         | 3         | 2  |
| 38            | 392         | 74          | 21          | 50          | 357         | 22          | 212            | 228         | 2         | 3  |
| 23            | 46          | 39          | 35          | 6           | 32          | 32          | 11             | 62          | 5         | 4  |
| 1             |             |             | 1           |             | 1           |             |                |             |           | 5  |
| \$1,754,752   | \$5,931,037 | \$4,273,490 | \$1,101,885 | \$1,289,497 | \$4,682,688 | \$2,693,282 | \$2,126,470    | \$9,611,764 | \$162,675 | 6  |
| \$110,530     | \$554,033   | \$233,704   | \$141,395   | \$172,155   | \$340,139   | \$180,715   | \$173,473      | \$1,018,100 | \$8,775   | 7  |
| \$941,255     | \$1,237,592 | \$994,377   | \$244,900   | \$327,215   | \$1,815,407 | \$379,052   | \$461,406      | \$2,819,496 | \$40,800  | 8  |
| \$701,122     | \$2,254,627 | \$1,462,868 | \$450,228   | \$276,820   | \$1,893,212 | \$645,677   | \$1,012,528    | \$3,189,045 | \$65,600  | 9  |
| \$601,845     | \$1,834,885 | \$1,542,641 | \$205,302   | \$513,301   | \$1,127,870 | \$1,457,838 | \$479,003      | \$2,585,122 | \$41,500  | 10 |
| 183           | 1,938       | 329         | 59          | 251         | 1,872       | 75          | 948            | 903         | 5         | 11 |
| 53            | 219         | 135         | 50          | 29          | 101         | 107         | 24             | 226         | 8         | 12 |
| \$47,950      | \$192,431   | \$145,098   | \$32,820    | \$20,664    | \$67,665    | \$123,198   | \$14,481       | \$248,057   | \$10,240  | 13 |
| 9             | 42          | 34          | 14          | 6           | 16          | 25          | 3              | 45          | 3         | 14 |
| \$10,160      | \$58,813    | \$50,010    | \$6,635     | \$6,120     | \$12,720    | \$39,328    | \$2,520        | \$52,010    | \$2,820   | 15 |
| 44            | 177         | 101         | 36          | 23          | 85          | 82          | 21             | 181         | 5         | 16 |
| \$37,790      | \$134,118   | \$95,688    | \$26,185    | \$14,544    | \$54,945    | \$83,870    | \$11,961       | \$196,647   | \$7,420   | 17 |
| 42            | 167         | 99          | 36          | 19          | 76          | 76          | 19             | 164         | 5         | 18 |
| \$36,770      | \$129,666   | \$94,860    | \$26,185    | \$13,142    | \$51,211    | \$80,405    | \$11,326       | \$190,230   | \$7,420   | 19 |
| 2             | 10          | 2           |             | 4           | 9           | 6           | 2              | 17          |           | 20 |
| \$1,020       | \$4,452     | \$828       |             | \$1,402     | \$3,734     | \$3,465     | \$635          | \$6,417     |           | 21 |
| 362           | 1,829       | 1,003       | 209         | 261         | 1,287       | 680         | 487            | 1,942       | 22        | 22 |
| 240           | 1,413       | 656         | 146         | 212         | 1,150       | 410         | 432            | 1,447       | 14        | 23 |
| 295           | 1,154       | 705         | 107         | 190         | 790         | 488         | 314            | 1,412       | 14        | 24 |
| \$155,742     | \$544,722   | \$398,908   | \$82,979    | \$81,363    | \$328,893   | \$281,310   | \$154,623      | \$717,183   | \$11,360  | 25 |
| 294           | 1,144       | 705         | 166         | 187         | 788         | 474         | 308            | 1,398       | 14        | 26 |
| \$155,342     | \$543,181   | \$398,908   | \$82,666    | \$80,818    | \$327,515   | \$278,450   | \$153,603      | \$714,217   | \$11,360  | 27 |
|               |             |             |             | 2           | 4           | 12          |                | 10          |           | 28 |
|               |             |             |             | \$445       | \$1,000     | \$2,400     |                | \$2,312     |           | 29 |
| 1             | 10          |             | 1           | 1           | 3           | 2           | 6              | 4           |           | 30 |
| \$400         | \$1,541     |             | \$313       | \$100       | \$378       | \$460       | \$1,020        | \$654       |           | 31 |
| 307           | 1,219       | 707         | 173         | 204         | 788         | 473         | 309            | 1,397       | 17        | 32 |
| 311           | 1,150       | 706         | 170         | 197         | 740         | 468         | 293            | 1,346       | 14        | 33 |
| 302           | 1,082       | 655         | 168         | 204         | 692         | 468         | 275            | 1,310       | 13        | 34 |
| 286           | 980         | 601         | 162         | 190         | 664         | 452         | 255            | 1,205       | 15        | 35 |
| 271           | 891         | 573         | 157         | 177         | 614         | 418         | 245            | 1,424       | 16        | 36 |
| 244           | 832         | 541         | 149         | 163         | 604         | 387         | 241            | 1,302       | 12        | 37 |
| 230           | 1,025       | 675         | 181         | 160         | 629         | 417         | 285            | 1,294       | 14        | 38 |
| 267           | 1,092       | 690         | 149         | 166         | 672         | 449         | 305            | 1,383       | 14        | 39 |
| 310           | 1,238       | 787         | 179         | 175         | 855         | 527         | 340            | 1,526       | 10        | 40 |
| 338           | 1,387       | 838         | 182         | 192         | 1,014       | 548         | 377            | 1,527       | 15        | 41 |
| 335           | 1,437       | 854         | 191         | 204         | 1,084       | 553         | 399            | 1,605       | 14        | 42 |
| 332           | 1,395       | 837         | 177         | 207         | 1,038       | 529         | 375            | 1,457       | 18        | 43 |
|               |             |             |             | 2           | 4           | 12          |                | 9           |           | 44 |
|               |             |             |             | 2           | 4           | 12          |                | 5           |           | 45 |
|               |             |             |             | 2           | 4           | 12          |                | 5           |           | 46 |
|               |             |             |             | 2           | 4           | 12          |                | 5           |           | 47 |
|               |             |             |             | 2           | 4           | 12          |                | 4           |           | 48 |
|               |             |             |             | 2           | 3           | 12          |                | 2           |           | 49 |
|               |             |             |             | 2           | 13          | 12          |                | 2           |           | 50 |
|               |             |             |             | 3           |             | 12          |                | 8           |           | 51 |
|               |             |             |             | 3           | 3           | 12          |                | 16          |           | 52 |
|               |             |             |             | 2           | 4           | 12          |                | 24          |           | 53 |
|               |             |             |             | 2           | 4           | 12          |                | 18          |           | 54 |
|               |             |             |             | 2           | 4           | 12          |                | 18          |           | 55 |
| 1             | 11          |             | 1           | 1           | 2           | 1           | 2              | 4           |           | 56 |
| 1             | 10          |             | 1           | 1           | 2           | 3           | 4              | 4           |           | 57 |
| 1             | 11          |             | 1           | 1           | 3           | 3           | 5              | 4           |           | 58 |
| 1             | 10          |             | 1           | 1           | 2           | 3           | 6              | 4           |           | 59 |
| 1             | 8           |             | 1           | 1           | 3           | 3           | 9              | 4           |           | 60 |
| 1             | 9           |             | 1           | 1           | 2           | 1           | 3              | 3           |           | 61 |
| 2             | 9           |             | 1           | 1           | 12          | 1           | 8              | 3           |           | 62 |
| 2             | 7           |             | 1           | 1           | 3           | 1           | 7              | 4           |           | 63 |
| 2             | 9           |             | 1           | 1           | 3           | 1           | 7              | 4           |           | 64 |
| 2             | 11          |             | 1           | 1           | 2           | 1           | 7              | 4           |           | 65 |
| 2             | 12          |             | 1           | 1           | 1           | 1           | 6              | 4           |           | 66 |
| 2             | 14          |             | 1           | 1           | 2           | 1           | 4              | 4           |           | 67 |
| \$75,006      | \$273,851   | \$243,390   | \$58,425    | \$48,985    | \$145,014   | \$167,070   | \$55,972       | \$697,714   | \$5,243   | 68 |
| \$2,092       | \$18,426    | \$4,603     | \$7,156     | \$8,245     | \$29,277    | \$10,017    | \$3,698        | \$15,435    |           | 69 |
| \$15,661      | \$36,210    | \$32,774    | \$9,680     | \$9,790     | \$30,370    | \$16,551    | \$18,197       | \$72,636    | \$1,406   | 70 |
| \$56,017      | \$218,369   | \$205,953   | \$40,359    | \$30,950    | \$85,292    | \$137,922   | \$34,117       | \$579,343   | \$3,837   | 71 |
| \$1,236       | \$846       |             | \$1,250     |             | \$75        | \$2,580     |                | \$300       |           | 72 |

|  | North Dakota. | Ohio.        | Oklahoma.   | Oregon.     | Pennsylvania. | Rhode Island. | South Carolina. |
|--|---------------|--------------|-------------|-------------|---------------|---------------|-----------------|
| <b>Materials used:</b>                   |               |              |             |             |               |               |                 |
| Total cost.....                          | \$3,347,067   | \$31,826,750 | \$3,026,785 | \$5,335,838 | \$30,566,466  | \$1,628,852   | \$1,958,658     |
| Wheat, bushels.....                      | 4,827,477     | 36,033,213   | 4,516,858   | 8,847,242   | 22,923,795    | 5,802         | 1,000,964       |
| Cost.....                                | \$2,756,484   | \$24,370,443 | \$2,440,518 | \$4,403,048 | \$16,179,063  | \$1,081       | \$891,161       |
| Corn, bushels.....                       | 219,969       | 12,609,084   | 1,318,293   | 64,875      | 20,587,926    | 2,627,939     | 1,861,093       |
| Cost.....                                | \$79,810      | \$4,354,850  | \$321,230   | \$32,913    | \$8,195,906   | \$1,112,916   | \$988,883       |
| Rye, bushels.....                        | 19,140        | 222,598      | 7,550       | 15,938      | 2,263,274     | 10,795        | 5,140           |
| Cost.....                                | \$7,687       | \$118,706    | \$3,125     | \$9,441     | \$1,198,127   | \$7,020       | \$4,030         |
| Buckwheat, bushels.....                  | 415           | 186,311      | 100         | 14,025      | 2,526,190     | .....         | 18              |
| Cost.....                                | \$209         | \$102,448    | \$50        | \$8,948     | \$1,277,718   | .....         | \$18            |
| Barley, bushels.....                     | 590,664       | 76,554       | 7,650       | 788,698     | 118,532       | 3,560         | 1,450           |
| Cost.....                                | \$112,841     | \$27,657     | \$1,890     | \$296,569   | \$45,057      | \$2,201       | \$1,480         |
| Oats, bushels.....                       | 345,124       | 4,509,950    | 109,625     | 377,180     | 7,147,857     | 533,071       | 42,370          |
| Cost.....                                | \$93,590      | \$1,098,072  | \$21,499    | \$130,308   | \$2,138,046   | \$162,104     | \$15,985        |
| Other grain, bushels.....                | 58,150        | 61,946       | 39,900      | 144,460     | 616,546       | 13,044        | 6,150           |
| Cost.....                                | \$14,865      | \$22,243     | \$10,440    | \$56,468    | \$249,212     | \$9,993       | \$4,072         |
| Barrels purchased, number.....           | 54,350        | 1,350,026    | 16,310      | 180         | 685,328       | 1,000         | 7,000           |
| Cost.....                                | \$4,150       | \$392,177    | \$4,619     | \$51        | \$188,740     | \$250         | \$758           |
| Sacks purchased, number.....             | 1,651,923     | 21,598,395   | 3,330,000   | 6,172,847   | 17,867,594    | 148,953       | 698,603         |
| Cost.....                                | \$120,248     | \$680,815    | \$136,655   | \$268,373   | \$462,077     | \$7,533       | \$21,570        |
| Cooperage stock and cloth for sacks..... | \$5,200       | \$46,282     | .....       | .....       | \$140,542     | .....         | \$1             |
| Fuel.....                                | \$84,644      | \$340,823    | \$59,754    | \$26,545    | \$212,059     | \$8,230       | \$15,001        |
| Rent of power and heat.....              | \$45          | \$11,824     | \$1,500     | \$20,514    | \$7,106       | \$800         | \$587           |
| Mill supplies.....                       | \$24,826      | \$94,537     | \$13,841    | \$18,386    | \$92,046      | \$4,923       | \$7,180         |
| All other materials.....                 | \$3,282       | \$60,532     | \$2,802     | \$17,840    | \$34,045      | \$702         | \$1,451         |
| Freight.....                             | \$39,183      | \$135,391    | \$8,831     | \$46,441    | \$146,722     | \$308,099     | \$6,607         |
| <b>Products:</b>                         |               |              |             |             |               |               |                 |
| Total value.....                         | \$4,134,023   | \$37,390,367 | \$3,745,434 | \$6,364,023 | \$36,639,423  | \$1,895,921   | \$2,847,799     |
| Wheat flour, barrels.....                | 1,029,070     | 7,366,474    | 975,870     | 1,826,512   | 4,775,165     | 1,240         | 204,689         |
| Value.....                               | \$3,274,558   | \$26,060,827 | \$2,855,216 | \$4,769,573 | \$17,059,265  | \$4,655       | \$999,781       |
| Rye flour, barrels.....                  | 1,009         | 40,258       | 966         | 1,949       | 155,592       | 1,574         | 1,065           |
| Value.....                               | \$2,168       | \$117,769    | \$2,577     | \$5,987     | \$404,070     | \$4,253       | \$4,253         |
| Buckwheat flour, pounds.....             | 600           | 4,416,605    | 3,000       | 232,875     | 62,267,953    | .....         | 8,845           |
| Value.....                               | \$18          | \$108,656    | \$90        | \$6,370     | \$1,927,989   | .....         | \$322           |
| Barley meal, pounds.....                 | 313,000       | 1,137,830    | 8,500       | 1,069,000   | 196,790       | 102,700       | 56,700          |
| Value.....                               | \$2,916       | \$11,157     | \$100       | \$4,108     | \$1,972       | \$1,972       | \$1,653         |
| Corn meal, barrels.....                  | 5,695         | 1,532,994    | 175,335     | 4,775       | 1,315,892     | 996,171       | 447,299         |
| Value.....                               | \$9,815       | \$2,708,191  | \$250,237   | \$13,647    | \$2,189,964   | \$1,566,120   | \$1,079,003     |
| Hominy, pounds.....                      | 259,200       | 5,579,000    | 24,000      | 17,090,080  | 10,000        | 3,248,984     | 3,248,984       |
| Value.....                               | \$2,335       | \$57,429     | \$480       | \$173,232   | \$100         | \$40,621      | \$40,621        |
| Feed, pounds.....                        | 74,783,404    | 731,502,772  | 51,110,183  | 178,001,695 | 1,338,637,572 | 23,849,897    | 9,788,089       |
| Value.....                               | \$568,120     | \$5,314,187  | \$335,880   | \$763,585   | \$12,693,312  | \$248,707     | \$101,422       |
| Offal, pounds.....                       | 46,509,660    | 414,242,365  | 54,604,688  | 96,835,948  | 355,582,188   | 1,851,300     | 1               |

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Twelfth Census of the United States.

# CENSUS BULLETIN.

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## MANUFACTURES.

### AGRICULTURAL IMPLEMENTS.

Hon. WILLIAM R. MERRIAM,  
*Director of the Census.*

SIR: I transmit herewith, for publication in bulletin form, a report on the manufacture of agricultural implements, prepared under my direction by Mr. Joseph D. Lewis, of the Census Office.

The salient features of the industry, as noted by an analysis of the statistical tables accompanying the report and a careful investigation of its distinctive characteristics, are briefly summarized as follows: A comparison of the statistics at the several censuses discloses a pronounced tendency toward the centralization of operations in fewer and larger establishments. The percentages of increase from census to census furnish satisfactory evidence that the progress made in this manufacture has been, to say the least, in keeping with the improvement noted generally. The diversity of distinct mechanical trades to which the industry gives employment is possibly as great in this branch of manufacture as in any other single industry. The distribution of factories and the volume of production in the several states appear to be influenced only to a slight degree by the extent of the agricultural operations of the states, some of the most important agricultural states showing small percentages of the total value of implements manufactured.

Of the four principal classes of implements, the manufacture of implements of tillage—plows, cultivators, and harrows—is most widely distributed as to number of states and number of establishments. The largest factory organizations are to be found in the manufacture of harvesting implements of the several kinds. A

vast amount of labor saving is effected by the great increase of efficiency in certain types of implements. The statistics show a steady growth of export trade, and that the agricultural work of the United States is performed entirely with implements and machines of American manufacture. The work of presenting a report containing within itself all the data pertaining strictly to this industry, and eliminating therefrom all statistics relating to other products not within the category of agricultural implements, is extremely difficult by reason of the complex character of the industry itself, and the fact that in other industries, closely or remotely related to it, agricultural implements are to some extent manufactured, which it has been found impossible to separate.

The statistics of the industry are presented in 10 tables: Table 1, comparative figures for the industry at the several censuses; Table 2, comparative summary by states, 1890 and 1900; Table 3, principal agricultural implements manufactured, by states, 1900; Table 4, rank of leading states, 1890 and 1900; Table 5, statistics of cities of over 20,000 population for 1900; Table 6, comparative statement of the number of agricultural implements manufactured, 1870 to 1900; Table 7, statement of number of establishments manufacturing each kind of agricultural implement and number of each kind; Table 8, exports of agricultural implements; Table 9, value of implements on farms, by states; Table 10, presenting detailed statistics for the industry, by states.

In drafting the schedules of inquiry for the census of 1900 care was taken to preserve the basis of comparison with prior censuses. Comparison may be made safely

with respect to all the items of inquiry except those relating to capital, salaried officials, clerks, etc., and their salaries, the average number of employees, and the total amount of wages paid. Live capital—that is, cash on hand, bills receivable, unsettled ledger accounts, raw materials, stock in process of manufacture, finished products on hand, and other sundries—was first called for at the census of 1890. No definite attempt was made prior to the census of 1890 to secure a return of live capital invested.

Changes were made in the inquiries relating to employees and wages in order to eliminate defects found to exist on the form of inquiry adopted in 1890. At the census of 1890 the average number of persons employed during the entire year was called for and also the average number employed at stated weekly rates of pay, and the average number was computed for the actual time the establishments were reported as being in operation. At the census of 1900 the greatest and least numbers of employees were reported, and also the average number employed during each month of the year. The average number of wage-earners (men, women, and children) employed during the entire year was ascertained by using 12, the number of calendar months, as a divisor into the total of the average numbers reported for each month. This difference in the method of ascertaining the average number of wage-earners during the entire year may have resulted in a variation in the number, and should be considered in making comparisons.

At the census of 1890 the number and salaries of proprietors and firm members actively engaged in the business or in supervision were reported, combined with clerks and other officials. In cases where proprietors and firm members were reported without salaries, the amount that would ordinarily be paid for similar services was estimated. At the census of 1900 only the number of proprietors and firm members actively engaged in the industry or in supervision was ascertained, and no salaries were reported for this class. It is therefore impossible to compare the number and salaries of salaried officials of any character for the two censuses.

Furthermore, the schedules for 1890 included in the wage-earning class overseers, foremen, and superintendents (not general superintendents or managers),

while the census of 1900 separates from the wage-earning class such salaried employees as general superintendents, clerks, and salesmen. It is possible, and probable, that this change in the form of the question has resulted in eliminating from the wage-earners, as reported by the present census, many high-salaried employees included in that group for the census of 1890. With the exception of several other changes of a minor character in the special features of the schedule, the inquiry has been conducted along the lines followed at the census of 1890.

In some instances, the number of proprietors and firm members, shown in the accompanying tables, fall short of the number of establishments reported. This is accounted for by the fact that no proprietors or firm members are reported for corporations or cooperative establishments.

The reports show a capital of \$157,707,951 invested in the 715 establishments reporting for the industry. This sum represents the value of land, buildings, machinery, tools, and implements, and the live capital utilized, but does not include the capital stock of any of the corporations in the industry. The value of the products is returned at \$101,207,428, to produce which involved an outlay of \$8,363,210 for salaries of officials, clerks, etc.; \$22,450,880 for wages; \$11,394,656 for miscellaneous expenses, including rent, taxes, etc.; and \$43,944,628 for materials used, mill supplies, freight, and fuel. It is not to be assumed, however, that the difference between the aggregate of these sums and the value of the products is, in any sense, indicative of the profits in the manufacture of the products during the census year. The census schedule takes no cognizance of the cost of selling manufactured articles, or of interest on capital invested, or of the mercantile losses incurred in the business, or of depreciation in plant. The value of the product given is the value as obtained or fixed at the shop or factory. This statement is necessary in order to avoid erroneous conclusions from the figures presented.

Very respectfully,



*Chief Statistician for Manufactures.*

# AGRICULTURAL IMPLEMENTS.

By JOSEPH D. LEWIS.

The importance of the manufacture of agricultural implements and machinery regarded as an economic force, aside from the consideration of its relative importance in the capital employed, wages paid, and value of products, is sufficient to warrant giving to the industry special and detailed treatment of the most complete character possible within the necessarily narrow limits of a census report. There are few, if any, branches of manufacture in which progressive development and improvement exercise so far-reaching and fundamental an effect. It touches the life of all classes of people and has its greatest influence upon the most fundamental class of work, that of agriculture. The great diversity of its characteristics and phases, the multiplicity of its products, and the varied nature of the trades and occupations that find employment in it, make it impracticable to discuss in a census report the great industry in all its bearings. For the same reasons the difficulty of specializing the industry is considerably increased. The greater the variety of products and the more complex the processes of manufacture, the greater are the difficulties encountered in departing from the general line of treatment.

As early as 1860 the census officials felt warranted in giving the industry special treatment to the extent of publishing separately the totals for the manufacture of the several kinds of agricultural implements, as follows: Fanning mills, grain cradles and scythe snaths, grain drills, plow and other handles, hoes, mowing and reaping machines, plows, harrows and cultivators, rakes, straw cutters, thrashers, horse powers, and separators; also the totals in the manufacture of shovels, spades, forks and hoes, scythes, and cotton gins. The subject was also discussed at some length in the Agricultural Report of the Eighth Census. At the Ninth Census special tables were published showing by states the number of each of the several varieties of agricultural implements manufactured.

Previous to the census of 1880 reports of establishments engaged in the industry had been made upon the schedule used for general manufactures; at that time, however, a special schedule designed to elicit the number of each of the different kinds of implements man-

ufactured was used. In addition, in the report on manufactures at that census, the industry was comprehensively treated by Special Agent Charles H. Fitch, D. E., in connection with his report on the Manufactures of Interchangeable Mechanism.

Practically the same line was followed in 1890 and 1900 as regards the schedule used, provision being made for a detailed report of the products. Whatever differences there were consisted in certain general features of the schedule and minor variations in products specified in the schedules, some items appearing in the schedule used at the Eleventh Census for which no provision was made in the schedule used at the Tenth Census. A more detailed statement of products manufactured was required in the present census than in that of 1890.

The principle governing the classification of the schedules as agricultural implements was that the product of chief value should come within the category of an implement or machine used for tilling the soil, for sowing or planting the seed, harvesting the crop, or in the preparation of the crop for the market. Incidental to the manufacture of what may be regarded as agricultural implements in the strict sense, there are produced miscellaneous articles, such as dairy machinery, pumps of various kinds, wagons, windmills, etc., provision for which was made on the schedule, and under this miscellaneous group are included products of many kinds and of considerable aggregate value. On the other hand, many manufactured articles escape inclusion in the statistics presented, by reason of the fact that they are the output of establishments engaged principally in the manufacture of other commodities. It has been found impossible, therefore, in the nature of the case, to include in this report all manufacturing operations which should properly fall within the scope of the inquiry or to eliminate all data which, strictly speaking, have no part therein.

The varied character of the products manufactured in this industry has its correlative in the variety of the materials used and the diversity of the trades and occupations connected therewith. The diversity in the occupations necessary in this manufacture is very forcibly presented in the following excerpt, relative to a compar-

ison of the tables of occupation included in the report of the population with the labor statistics presented in the Reports on Manufactures, at the Tenth Census:

There are, in addition, certain industries respecting which peculiar difficulties arise, from the distinct nature of the several avocations pursued under one roof in the same establishment. Thus, it might be supposed that the manufacture of "agricultural implements" is sufficiently distinct to secure a reasonably close comparison between the number of "hands employed" and the number of "agricultural implement makers" borne on the tables of occupations. But this is not so. A large establishment producing agricultural implements is really divided into a number of shops or factories, where perfectly distinct trades are carried on. There is the foundry, where the iron parts of the machine are cast, and the men working therein will report their occupation as that of

foundrymen. There are carpenter shops, where the wooden parts are made and shaped by carpenters, who call themselves by this term and no other. There are also machine shops, paint shops, etc., where the artisans employed know themselves as machinists or mechanics, or as painters and varnishers, and not as makers of agricultural implements. As a result of the peculiarities of this branch of the industry, the "hands employed" in the statistics of manufactures will exceed many times over the number of persons reporting themselves as "agricultural implement makers."<sup>1</sup>

Table 1 shows the totals for the industry as returned at the censuses of 1850 to 1900, inclusive, with the percentages of increase for each decade.

<sup>1</sup> Tenth Census of the United States, Manufactures, page xxix.

TABLE 1.—COMPARATIVE SUMMARY, 1850 TO 1900, WITH PER CENT OF INCREASE FOR EACH DECADE.

|   | DATE OF CENSUS. |               |                  |                  |                  |                  | PER CENT OF INCREASE. |                  |              |              |              |
|---|-----------------|---------------|------------------|------------------|------------------|------------------|-----------------------|------------------|--------------|--------------|--------------|
|   | 1900            | 1890          | 1880             | 1870             | 1860             | 1850             | 1890 to 1900          | 1880 to 1890     | 1870 to 1880 | 1860 to 1870 | 1850 to 1860 |
| Number of establishments.....                               | 715             | 910           | 1,943            | 2,076            | 2,116            | 1,333            | 121.4                 | 153.2            | 16.4         | 11.9         | 58.7         |
| Capital.....  | \$157,707,951   | \$145,913,997 | \$62,109,668     | \$34,834,600     | \$13,866,389     | \$3,564,202      | 8.5                   | 134.0            | 78.3         | 151.2        | 289.0        |
| Salaried officials, clerks, etc., number.....               | 10,046          | 23,717        | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | 170.3                 |                  |              |              |              |
| Salaries.....   | \$8,303,210     | \$3,704,667   | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | 125.7                 |                  |              |              |              |
| Wage-earners, average number.....                           | 46,582          | 38,827        | 39,580           | 25,249           | 17,093           | 7,220            | 20.0                  | 11.9             | 56.8         | 47.7         | 186.7        |
| Total wages.....  | \$22,450,880    | \$18,107,094  | \$15,359,610     | \$12,151,504     | \$5,925,177      | \$2,167,868      | 24.0                  | 17.9             | 26.4         | 105.1        | 173.3        |
| Men, 16 years and over.....                                 | 46,174          | 38,327        | 38,313           | 24,634           | 17,086           | 7,211            | 20.5                  | ( <sup>4</sup> ) | 55.5         | 44.2         | 136.9        |
| Wages.....  | \$22,358,158    | \$17,998,650  | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | 24.2                  |                  |              |              |              |
| Women, 16 years and over.....                               | 214             | 288           | 78               | 12               | 7                | 9                | 125.7                 | 294.5            | 508.3        | 71.4         | 122.2        |
| Wages.....  | \$66,042        | \$75,558      | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | 112.6                 |                  |              |              |              |
| Children, under 16 years.....                               | 194             | 212           | 1,194            | 603              | ( <sup>2</sup> ) | ( <sup>2</sup> ) | 18.5                  | 182.2            | 98.0         |              |              |
| Wages.....  | \$26,680        | \$32,891      | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | 118.9                 |                  |              |              |              |
| Miscellaneous expenses.....                                 | \$11,394,666    | \$11,129,548  | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | 2.4                   |                  |              |              |              |
| Cost of materials used.....                                 | \$43,944,628    | \$31,603,265  | \$31,531,170     | \$21,473,925     | \$6,999,162      | \$2,445,765      | 39.1                  | 0.2              | 46.8         | 207.1        | 185.9        |
| Value of products, including custom work and repairing..... | \$101,207,428   | \$81,271,651  | \$68,640,486     | \$52,066,875     | \$20,831,904     | \$6,842,611      | 24.5                  | 18.4             | 31.8         | 149.9        | 204.4        |

<sup>1</sup> Decrease.

<sup>2</sup> Includes proprietors and firm members, with their salaries; number only reported in 1900, but not included in this table. (See Table 10.)

<sup>3</sup> Not reported separately.

<sup>4</sup> Less than one-tenth of 1 per cent.

<sup>5</sup> Not reported.

The most noteworthy fact shown by Table 1 is that a continuous decrease in the number of establishments from 1860 to the present has accompanied the steady increase in capital invested and value of the products. The average capital and value of products per establishment at the several censuses have been as follows: 1850, capital, \$2,674; products, \$5,133; 1860, capital, \$6,553; products, \$9,845; 1870, capital, \$16,780; products, \$25,080; 1880, capital, \$31,966; products, \$35,327; 1890, capital, \$159,686; products, \$89,310; 1900, capital, \$220,571; products, \$141,549. This steady increase in the average capital and value of products per establishment excellently illustrates the fact that certain important phases of the development of the factory system from manual work find abundant expression in this industry. The magnitude of the industry in 1900 is clearly indicated by the totals for capital invested, wage-earners employed and wages paid, cost of materials used, and value of products. In point of number of skilled wage-earners and in the large increase in value added to materials used, it occupies a high place among the principal manufacturing industries of the United States.

In a country whose people are wont to supply their own varied needs, the increase in the productivity of all industries, should keep pace with the increasing demands of a growing population. The increase in the value of agricultural implements manufactured from \$6,842,611 in 1850 to \$101,207,428 in 1900 indicates, apparently, that this necessity has been more than fully met. This increase is far greater in proportion than the increase in the number of persons engaged in agriculture, and is chiefly due to the greater average investment by the farmers in implements required in the various processes of farming, caused principally by a marvelous improvement in their character and consequent greater value, and to a less extent, as indicated in Table 8, by the growth of exports of farming implements and machinery.

In considering the increases shown from census to census in Table 1, the changes in the scope of the census inquiries should be constantly kept in view. The earlier enumerations were, generally speaking, less complete than the later. The disproportionate increase in capital in the decade, 1880 to 1890, may be due in part to the fact that the census of 1890 was the first in

which a definite attempt was made to secure the inclusion of all live capital. Statistics of wage-earners and wages for 1890 and 1900 are not strictly comparable, as elsewhere explained. Otherwise it is believed that the rate of growth of the industry may fairly be inferred from the figures given.

In 1900, in addition to the 715 active establishments, 18 idle establishments were reported, with a capital of \$2,160,362. There were also 7 establishments each manufacturing during the census year a product of less

than \$500 in value; they are, therefore, not included in Table 1 or subsequent tables. The capital invested in these establishments was \$26,262; the number of wage-earners was 3, receiving \$520 in wages; the cost of materials used was \$957; the sum of the miscellaneous expenses was \$452; and the total value of the products manufactured amounted to \$2,257.

Table 2 is a comparative summary, by states, of the statistics for the industry for 1890 and 1900.

TABLE 2.—COMPARATIVE SUMMARY BY STATES: 1890 AND 1900.

| STATES.         | Year. | Number of establishments. | Capital.      | SALARIED OFFICIALS, CLERKS, ETC. |             | AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES. |              |                         |              |                           |          |                           |          | Miscellaneous expenses. | Cost of materials used. | Value of products, including custom work and repairing. |
|-----------------|-------|---------------------------|---------------|----------------------------------|-------------|---|--------------|-------------------------|--------------|---------------------------|----------|---------------------------|----------|-------------------------|-------------------------|---|
|                 |       |                           |               |                                  |             | Total.  |              | Men, 16 years and over. |              | Women, 16 years and over. |          | Children, under 16 years. |          |                         |                         |   |
|                 |       |                           |               | Number.                          | Salaries.   | Average number.                                 | Wages.       | Average number.         | Wages.       | Average number.           | Wages.   | Average number.           | Wages.   |                         |                         |   |
| United States.  | 1900  | 715                       | \$157,707,951 | 10,046                           | \$8,363,210 | 46,582  | \$22,450,880 | 46,174                  | \$22,358,158 | 214                       | \$66,042 | 194                       | \$26,680 | \$11,394,656            | \$43,944,628            | \$101,207,428   |
|                 | 1890  | 910                       | 145,813,997   | 13,717                           | 13,704,667  | 88,827  | 18,107,094   | 38,327                  | 17,998,650   | 288                       | 75,553   | 212                       | 32,891   | 11,129,548              | 31,603,265              | 81,271,651  |
| Alabama.        | 1900  | 3                         | 14,476        | 2                                | 1,500       | 12  | 6,248        | 12                      | 6,248        |                           |          |                           |          | 862                     | 5,868                   | 16,218  |
|                 | 1890  | 35                        | 2,072,297     | 70                               | 86,072      | 619   | 468,944      | 619                     | 468,944      |                           |          |                           |          | 97,958                  | 575,776                 | 1,617,484   |
| California.     | 1900  | 20                        | 1,852,157     | 81                               | 74,900      | 562   | 322,272      | 562                     | 322,272      |                           |          |                           |          | 106,011                 | 538,568                 | 1,357,849   |
|                 | 1890  | 85                        | 2,072,297     | 70                               | 86,072      | 619   | 468,944      | 619                     | 468,944      |                           |          |                           |          | 97,958                  | 575,776                 | 1,617,484   |
| Connecticut.    | 1900  | 5                         | 348,221       | 19                               | 13,330      | 154   | 62,111       | 154                     | 62,111       |                           |          |                           |          | 9,961                   | 76,182                  | 194,746   |
|                 | 1890  | 9                         | 790,621       | 43                               | 27,550      | 313   | 142,771      | 313                     | 142,771      |                           |          |                           |          | 10,555                  | 194,779                 | 459,335   |
| Georgia.        | 1900  | 10                        | 454,988       | 23                               | 30,884      | 360   | 99,951       | 354                     | 99,423       |                           |          | 6                         | 528      | 33,864                  | 437,799                 | 737,652   |
|                 | 1890  | 11                        | 498,680       | 32                               | 34,442      | 435   | 140,368      | 424                     | 139,708      |                           |          | 11                        | 660      | 33,021                  | 425,985                 | 793,825   |
| Illinois.       | 1900  | 94                        | 62,202,330    | 4,444                            | 3,419,742   | 18,231  | 9,064,954    | 18,030                  | 9,021,597    | 93                        | 30,407   | 108                       | 12,950   | 5,346,224               | 18,859,517              | 42,088,796  |
|                 | 1890  | 100                       | 48,039,383    | 915                              | 849,145     | 9,502   | 4,608,571    | 9,233                   | 4,539,510    | 224                       | 68,016   | 45                        | 6,045    | 3,592,439               | 10,102,508              | 24,609,660  |
| Indiana.        | 1900  | 45                        | 8,324,564     | 518                              | 489,649     | 3,419   | 1,593,881    | 3,388                   | 1,585,611    | 29                        | 7,993    | 2                         | 277      | 596,463                 | 2,619,021               | 6,415,081   |
|                 | 1890  | 54                        | 6,842,456     | 316                              | 324,221     | 3,078   | 1,441,416    | 2,977                   | 1,424,129    | 28                        | 5,718    | 73                        | 11,569   | 629,381                 | 2,806,390               | 5,756,131   |
| Iowa.           | 1900  | 24                        | 1,878,090     | 154                              | 123,472     | 644   | 243,489      | 641                     | 242,568      | 1                         | 421      | 2                         | 500      | 96,540                  | 669,989                 | 1,508,667   |
|                 | 1890  | 34                        | 2,181,101     | 106                              | 102,996     | 787   | 316,253      | 786                     | 316,153      | 1                         | 100      |                           |          | 162,132                 | 586,713                 | 1,570,872   |
| Kansas.         | 1900  | 4                         | 19,750        | 6                                | 1,075       | 11  | 2,460        | 11                      | 2,460        |                           |          |                           |          | 856                     | 10,819                  | 18,275  |
|                 | 1890  | 7                         | 91,400        | 19                               | 11,973      | 52  | 19,775       | 48                      | 18,975       |                           |          | 4                         | 800      | 5,331                   | 47,605                  | 101,084   |
| Kentucky.       | 1900  | 9                         | 1,735,595     | 95                               | 124,720     | 680   | 300,106      | 679                     | 299,846      |                           |          | 1                         | 260      | 148,009                 | 466,193                 | 1,320,714   |
|                 | 1890  | 5                         | 1,444,685     | 61                               | 60,344      | 699   | 296,838      | 699                     | 296,838      |                           |          |                           |          | 110,449                 | 540,965                 | 1,265,799   |
| Maine.          | 1900  | 17                        | 584,247       | 27                               | 17,195      | 218   | 100,038      | 215                     | 99,277       | 2                         | 600      | 1                         | 156      | 28,430                  | 98,197                  | 290,261   |
|                 | 1890  | 17                        | 439,267       | 30                               | 20,211      | 187   | 97,837       | 186                     | 97,421       | 1                         | 416      |                           |          | 20,669                  | 108,479                 | 310,822   |
| Maryland.       | 1900  | 11                        | 322,940       | 13                               | 9,138       | 164   | 69,133       | 163                     | 69,061       |                           |          | 1                         | 72       | 58,146                  | 48,998                  | 216,467   |
|                 | 1890  | 11                        | 322,940       | 13                               | 9,138       | 164   | 69,133       | 163                     | 69,061       |                           |          | 1                         | 72       | 58,146                  | 48,998                  | 216,467   |
| Massachusetts.  | 1900  | 9                         | 706,472       | 35                               | 45,358      | 312   | 159,700      | 311                     | 159,520      |                           |          | 1                         | 180      | 44,577                  | 216,318                 | 534,789   |
|                 | 1890  | 17                        | 1,817,750     | 52                               | 66,263      | 735   | 382,664      | 733                     | 382,482      |                           |          | 2                         | 182      | 81,876                  | 664,235                 | 1,470,085   |
| Michigan.       | 1900  | 59                        | 8,932,344     | 620                              | 548,763     | 1,944   | 952,630      | 1,939                   | 951,213      | 4                         | 1,273    | 1                         | 150      | 1,323,530               | 2,482,235               | 6,339,508   |
|                 | 1890  | 65                        | 6,944,005     | 262                              | 233,368     | 1,585   | 759,340      | 1,588                   | 758,595      | 2                         | 745      |                           |          | 547,244                 | 1,647,679               | 3,955,306   |
| Minnesota.      | 1900  | 18                        | 8,730,055     | 182                              | 189,832     | 928   | 423,054      | 924                     | 421,637      | 3                         | 1,300    | 1                         | 117      | 241,388                 | 718,604                 | 1,763,780   |
|                 | 1890  | 23                        | 5,186,542     | 85                               | 108,768     | 517   | 254,312      | 517                     | 254,312      |                           |          |                           |          | 410,379                 | 418,610                 | 1,622,951   |
| Mississippi.    | 1900  | 3                         | 53,875        | 2                                | 1,350       | 19  | 4,000        | 19                      | 4,000        |                           |          |                           |          | 625                     | 15,365                  | 36,350  |
|                 | 1890  | 3                         | 38,980        | 5                                | 3,010       | 21  | 6,940        | 21                      | 6,940        |                           |          |                           |          | 706                     | 9,640                   | 26,474  |
| Missouri.       | 1900  | 26                        | 1,412,165     | 81                               | 101,977     | 498   | 242,307      | 492                     | 242,207      |                           |          | 1                         | 100      | 65,325                  | 408,977                 | 953,965   |
|                 | 1890  | 21                        | 977,828       | 64                               | 70,481      | 649   | 345,368      | 623                     | 338,867      |                           |          | 26                        | 6,501    | 88,564                  | 522,130                 | 1,309,669   |
| Nebraska.       | 1900  | 9                         | 184,081       | 11                               | 6,705       | 87  | 41,128       | 83                      | 40,728       |                           |          | 4                         | 400      | 4,646                   | 82,856                  | 176,446   |
|                 | 1890  | 6                         | 55,625        | 3                                | 712         | 27  | 6,627        | 26                      | 6,562        |                           |          | 1                         | 75       | 2,004                   | 6,610                   | 18,282  |
| New Hampshire.  | 1900  | 12                        | 112,003       | 4                                | 2,300       | 45  | 16,626       | 44                      | 16,326       | 1                         | 300      |                           |          | 3,435                   | 22,364                  | 79,891  |
|                 | 1890  | 12                        | 145,790       | 12                               | 7,829       | 96  | 37,149       | 96                      | 37,149       |                           |          |                           |          | 5,250                   | 40,939                  | 109,614   |
| New Jersey.     | 1900  | 11                        | 249,957       | 8                                | 11,289      | 147   | 60,083       | 145                     | 59,408       | 2                         | 675      |                           |          | 23,827                  | 115,697                 | 249,963   |
|                 | 1890  | 20                        | 270,512       | 17                               | 11,998      | 125   | 54,337       | 122                     | 54,057       |                           |          | 8                         | 280      | 15,281                  | 83,416                  | 200,282   |
| New York.       | 1900  | 87                        | 20,115,962    | 659                              | 675,999     | 5,551   | 2,797,269    | 5,522                   | 2,790,920    | 24                        | 6,022    | 5                         | 627      | 839,948                 | 4,824,871               | 10,587,254  |
|                 | 1890  | 116                       | 19,924,731    | 418                              | 462,973     | 5,620   | 2,726,538    | 5,613                   | 2,725,562    | 3                         | 356      | 4                         | 620      | 2,263,680               | 3,743,157               | 11,680,842  |
| North Carolina. | 1900  | 9                         | 77,537        | 7                                | 3,970       | 91  | 20,169       | 86                      | 19,719       |                           |          | 5                         | 450      | 1,971                   | 41,047                  | 99,128  |
|                 | 1890  | 14                        | 132,237       | 11                               | 6,854       | 86  | 28,481       | 85                      | 23,329       |                           |          | 1                         | 152      | 3,768                   | 42,871                  | 105,875   |
| Ohio.           | 1900  | 78                        | 23,628,442    | 1,588                            | 1,368,775   | 6,852   | 3,271,163    | 6,795                   | 3,254,063    | 44                        | 14,588   | 18                        | 2,512    | 1,488,605               | 6,059,516               | 13,975,268  |
|                 | 1890  | 106                       | 29,399,930    | 625                              | 684,237     | 7,701   | 3,868,475    | 7,632                   | 3,364,757    | 8                         | 1,900    | 11                        | 1,818    | 2,008,481               | 5,654,360               | 14,833,258  |

<sup>1</sup>Includes proprietors and firm members, with their salaries; number only reported in 1900, but not included in this table. (See Table 10.)

<sup>2</sup>Included in "all other states in 1900."



TABLE 2.—COMPARATIVE SUMMARY BY STATES: 1890 AND 1900—Continued.

| STATES.              | Year.        | Num-<br>ber of estab-<br>lish-<br>ments. | Capital.                 | SALARIED OFFI-<br>CIALS, CLERKS,<br>ETC. |                    | AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES. |                        |                            |                        |                                 |              |                           |                | Miscella-<br>neous<br>expenses. | Cost of<br>material<br>used. | Value of<br>products,<br>including<br>custom<br>work and<br>repairing. |                    |
|----------------------|--------------|--|--------------------------|--|--------------------|---|------------------------|----------------------------|------------------------|---------------------------------|--------------|---------------------------|----------------|---------------------------------|------------------------------|--|--------------------|
|                      |              |  |                          |  |                    | Total.  |                        | Men, 16 years and<br>over. |                        | Women, 16<br>years and<br>over. |              | Children, under 16 years. |                |                                 |                              |  |                    |
|                      |              |  |                          | Num-<br>ber.                             | Salaries.          | Aver-<br>age num-<br>ber.                       | Wages.                 | Aver-<br>age num-<br>ber.  | Wages.                 | Aver-<br>age num-<br>ber.       | Wages.       | Aver-<br>age num-<br>ber. | Wages.         |                                 |                              |  |                    |
| Oregon.....          | 1900<br>1890 | 8  | \$8,027                  | 2  | \$1,560            | 2   | \$1,270                | 2                          | \$1,270                |                                 |              |                           |                |                                 | \$408                        | \$2,167  | \$6,239            |
| Pennsylvania.....    | 1900<br>1890 | 50<br>94                                 | 4,102,327<br>4,467,464   | 197<br>157                               | 183,549<br>117,476 | 1,564<br>1,738                                  | 688,044<br>781,014     | 1,557<br>1,736             | 686,790<br>780,509     | 1<br>2                          | \$261<br>430 | 6<br>1                    | \$998<br>75    | 196,719<br>262,430              | 1,232,242<br>1,043,263       | 3,198,471<br>2,682,718   |                    |
| South Carolina.....  | 1900<br>1890 | 5<br>4                                   | 14,575<br>38,210         |  |                    | 10<br>37  | 2,606<br>9,626         | 10<br>37                   | 2,606<br>9,626         |                                 |              |                           |                |                                 | 931<br>385                   | 5,394<br>19,567  | 14,090<br>35,485   |
| South Dakota.....    | 1900<br>1890 | 3<br>3                                   | 24,385<br>13,050         |  |                    | 11<br>9   | 4,929<br>3,200         | 11<br>9                    | 4,929<br>3,200         |                                 |              |                           |                |                                 | 1,141<br>532                 | 6,222<br>3,045   | 19,580<br>9,400    |
| Tennessee.....       | 1900<br>1890 | 11<br>12                                 | 417,689<br>383,189       | 38<br>23                                 | 35,065<br>19,956   | 373<br>235                                      | 113,425<br>101,910     | 354<br>229                 | 110,834<br>101,190     | 3                               | 480          | 16<br>6                   | 2,111<br>720   | 12,170<br>20,740                | 201,712<br>118,626           | 463,406<br>328,356   |                    |
| Texas.....           | 1900<br>1890 | 5<br>11                                  | 57,635<br>207,987        | 5<br>9                                   | 7,950<br>5,580     | 28<br>251                                       | 10,419<br>85,258       | 28<br>251                  | 10,419<br>85,258       |                                 |              |                           |                |                                 | 23,928<br>13,159             | 66,572<br>110,844  | 117,370<br>307,795 |
| Vermont.....         | 1900<br>1890 | 17<br>19                                 | 484,277<br>645,686       | 24<br>41                                 | 18,267<br>38,584   | 211<br>311                                      | 85,846<br>141,602      | 204<br>304                 | 84,124<br>139,911      | 7<br>3                          | 1,722<br>811 |                           |                |                                 | 15,909<br>28,041             | 163,515<br>273,204   | 369,537<br>593,648 |
| Virginia.....        | 1900<br>1890 | 13<br>19                                 | 472,863<br>684,464       | 29<br>48                                 | 21,738<br>48,970   | 278<br>441                                      | 107,980<br>194,053     | 272<br>441                 | 107,080<br>194,053     |                                 |              | 6                         | 900            | 26,183<br>35,183                | 128,434<br>235,776           | 343,291<br>691,210   |                    |
| Wisconsin.....       | 1900<br>1890 | 51<br>51                                 | 15,291,554<br>10,611,185 | 1,180<br>266                             | 836,316<br>291,980 | 3,289<br>2,765                                  | 1,626,765<br>1,197,693 | 3,276<br>2,730             | 1,622,608<br>1,193,190 |                                 |              | 13<br>19                  | 8,159<br>2,442 | 699,865<br>617,242              | 3,290,690<br>1,928,182       | 7,886,363<br>5,015,512   |                    |
| All other states ... | 1900<br>1890 | 11<br>5                                  | 239,811<br>88,500        | 9<br>5                                   | 9,040<br>4,524     | 70<br>28  | 34,474<br>13,083       | 68<br>28                   | 34,164<br>13,083       |                                 |              | 2                         | 310            | 18,525<br>8,697                 | 87,168<br>25,970             | 171,937<br>50,458  |                    |

<sup>1</sup>Includes establishments distributed as follows: Alabama, 1; Colorado, 1; Delaware, 1; Maryland, 2; North Dakota, 1; Utah, 2; Washington, 2; West Virginia, 1.

<sup>2</sup>Includes establishments distributed as follows: Rhode Island, 1; Washington, 2; West Virginia, 2.

Table 2 shows a decrease of 195 establishments during the decade, or 21.4 per cent. The capital has increased from \$145,313,997 to \$157,707,951, or 8.5 per cent; the number of wage-earners from 38,827 to 46,582, or 20 per cent; the cost of materials from \$31,603,265 to \$43,944,628, or 39.1 per cent; and the value of products from \$81,271,651 to \$101,207,428, an increase of 24.5 per cent.

Illinois, in 1900, as in 1890, holds the first place in the manufacture of agricultural implements, the capital invested being 39.4 per cent of the capital for the United States, and the value of products 41.5 per cent. As additional evidence of this preeminence, it may be stated that while the total increase of capital shown for the United States was \$12,393,954, the increase in Illinois, \$13,562,947, was greater; and of the total increase in value of products, \$19,935,777, the increase in this state was \$17,424,136. The states next in importance are Ohio, New York, Wisconsin, Indiana, Michigan, and Pennsylvania, in the order named, manufacturing, respectively, 13.8, 10.4, 7.8, 6.3, 6.3, and 3.2 per cent of the value of the products manufactured in the United States.

The following is a statement of the states which show a decrease in either capital or value of products, or both, between 1890 and 1900, with the amount and the percentage of the decrease:

## DECREASE, 1890 TO 1900.

| STATES.             | Capital.  | Per cent. | Products. | Per cent. |
|---------------------|-----------|-----------|-----------|-----------|
| California.....     | \$220,140 | 10.6      | \$259,635 | 16.1      |
| Connecticut.....    | 442,400   | 56.0      | 264,589   | 57.6      |
| Georgia.....        | 43,642    | 8.8       | 56,173    | 7.1       |
| Iowa.....           | 303,011   | 13.9      | 62,205    | 4.0       |
| Kansas.....         | 71,650    | 78.4      | 82,809    | 81.9      |
| Maine.....          |           |           | 20,561    | 6.6       |
| Massachusetts.....  | 1,111,278 | 61.1      | 935,296   | 63.6      |
| Minnesota.....      | 1,406,487 | 27.4      |           |           |
| Missouri.....       |           |           | 355,704   | 27.2      |
| New Hampshire.....  | 33,787    | 23.2      | 29,723    | 27.1      |
| New Jersey.....     | 20,555    | 7.6       |           |           |
| New York.....       |           |           | 1,143,588 | 3.8       |
| North Carolina..... | 54,760    | 41.4      | 6,747     | 6.4       |
| Ohio.....           | 5,771,488 | 19.6      | 357,990   | 2.5       |
| Pennsylvania.....   | 355,137   | 8.0       |           |           |
| South Carolina..... | 23,635    | 61.9      | 21,395    | 60.8      |
| Texas.....          | 150,352   | 72.3      | 190,425   | 61.9      |
| Vermont.....        | 161,409   | 25.0      | 224,111   | 37.8      |
| Virginia.....       | 211,591   | 30.9      | 347,919   | 50.8      |

In addition to the above states, Alabama, Maryland, and Oregon show decreases both in capital and value of products. Twenty-two states of the 31 separately presented in Table 2 show decreases between 1890 and 1900 in the statistics for either capital or value of products, or both. This is an unusual condition to be shown by an industry so important, so staple in its character, and so widely distributed as that of agricultural implements.

Table 2 and the foregoing statement considered in connection with the crop statistics of the Census Office furnish strong evidence that the activity of a state in

agriculture has but slight bearing upon its relative standing in the manufacture of the requisite implements and machinery. However it may have been at earlier periods in the history of the industry, the principal causes now controlling the location of plants of this character and the volume of their output are the availability of the raw materials, a sufficient supply of skilled labor, facilities for distributing the products in the widest fields, and, above all, the excellence and acceptability to the farmer of the implements manufactured by the several establishments. Iowa, which was second in the production of corn, oats, and hay in 1900, fourth in barley, fifth in potatoes, seventh in rye, and tenth in wheat, was ninth in the value of agricultural implements manufactured, and shows a decrease both in capital and value of products. Kansas, which was twenty-sixth in this manufacture, the value of products being only \$18,275, was first in hay production, third in corn, fifth in wheat, tenth in rye and potatoes, and eleventh in oats and barley. Nebraska was only twenty-first in the manufacture of agricultural implements, the value of products being \$176,446, but in crops, was fourth in corn, fifth in oats and rye, eighth in wheat, ninth in barley and hay, and eleventh in potatoes.

So closely allied is the industry, in many instances, to foundry and machine-shop work and the manufacture of dairy machinery and appurtenances, farm wagons and trucks, windmills, incubators, etc., the manufacture of one being incidental to that of the others, and the line of demarcation being consequently difficult to define, that it may have resulted, in some cases, in a difference of classification at the two census periods. Such establishments, from time to time, according to the demands of the market or other trade conditions, vary the proportions of the products manufactured, so that a report

which may have been classified at the census of 1890 as "agricultural implements" would receive in 1900 the classification of "foundry and machine-shop products." Considered in connection with whatever differences in methods and ideas that may have existed in the classification of the schedules for this industry in 1890 and 1900, these difficulties, notwithstanding the utmost care taken to preserve the basis of comparison between the two periods, have doubtless affected the results shown in Table 2 for the United States and for the several states; but to what extent it is impossible to determine.

The preeminence of Illinois in the manufacture of agricultural implements is strikingly shown by a comparison of its output of certain selected implements and machines with the totals for the United States. There were 295,799 wheeled cultivators manufactured in the United States, of which 170,069 were manufactured in Illinois. Of the total number of harrows manufactured, disk and other kinds, 477,520, the number reported by establishments in Illinois was 194,375; plows, all kinds, United States, 1,074,999; Illinois, 283,050. The manufacture of plows is more widely distributed than that of any other agricultural implement; consequently the rank of this state is relatively less important in their manufacture than in that of the more elaborate, complicated, and valuable machines. There were manufactured in Illinois 182,782 harvesters and combined harvesters and binders, and 261,957 in the United States. To show more fully the relative importance of the several states in the manufacture of the principal implements, Table 3 is presented, showing the number of cultivators, harrows, plows, planters, harvesters and combined harvesters and binders, horse hayforks, horse hayrakes, mowers, scythes, and horsepower and steam-power thrashers.

TABLE 3.—NUMBER OF PRINCIPAL AGRICULTURAL IMPLEMENTS MANUFACTURED, BY STATES: 1900.

| STATES.                             | Cultiva-<br>tors. | Harrows. | Plows.    | Planters<br>and drills. | Harvesters<br>and com-<br>bined har-<br>vesters and<br>binders. | Horse<br>hayforks. | Horse<br>hayrakes. | Mowers. | Scythes. | Thrashers,<br>horsepower<br>and steam-<br>power. |
|-------------------------------------|-------------------|----------|-----------|-------------------------|---|--------------------|--------------------|---------|----------|--|
| United States .....                 | 504,978           | 477,520  | 1,074,999 | 397,640                 | 261,957   | 51,770             | 216,345            | 397,561 | 718,453  | 4,965  |
| California.....                     | 249               | 1,089    | 6,590     | 225                     | 180   | 2,274              | 226                |         |          |  |
| Connecticut.....                    | 11                | 1,769    | 740       | 157                     |   |                    |                    |         | 105,312  |  |
| Georgia.....                        | 950               | 509      | 67,959    | 19,758                  |   |                    |                    |         |          |  |
| Illinois.....                       | 192,060           | 194,375  | 283,050   | 91,461                  | 182,782   | 6,000              | 109,670            | 245,204 |          |  |
| Indiana.....                        | 15,829            | 2,650    | 199,354   | 29,986                  |   |                    | 5,835              |         |          |  |
| Iowa.....                           | 7,800             | 7,560    | 13,638    | 3,021                   | 681   | 529                | 5,809              | 4       | 2,760    | 50   |
| Kansas.....                         |                   |          |           |                         |   |                    |                    |         |          |  |
| Kentucky.....                       | 9,126             | 4,076    | 125,002   | 6,500                   | 47  |                    |                    |         |          |  |
| Maine.....                          | 561               | 476      | 1,997     | 671                     |   |                    |                    |         | 424,788  |  |
| Massachusetts.....                  | 1,030             | 1,340    | 17,850    | 929                     |   |                    | 1,125              | 3,700   |          |  |
| Michigan.....                       | 28,979            | 15,486   | 22,141    | 100,356                 | 1,945   |                    | 1,825              | 22      |          | 940  |
| Minnesota.....                      | 1,024             | 11,883   | 3,870     | 3,700                   |   |                    |                    |         |          |  |
| Mississippi.....                    | 1,750             | 6,000    | 3,000     | 850                     |   |                    |                    |         |          |  |
| Missouri.....                       | 12,001            | 453      | 4,820     | 3,637                   |   | 17                 | 3,855              |         |          | 20   |
| Nebraska.....                       | 1,189             | 150      |           | 834                     |   |                    | 2,000              |         |          |  |
| New Hampshire.....                  | 103               | 250      | 252       |                         |   |                    | 500                |         | 74,400   |  |
| New Jersey.....                     | 13,628            | 7,865    | 505       | 4,968                   |   | 100                |                    |         |          | 20   |
| New York.....                       | 80,911            | 90,417   | 76,068    | 23,468                  | 24,809  | 648                | 40,859             | 65,898  | 26,293   | 725  |
| North Carolina.....                 | 1,600             | 1,900    | 2,050     | 1,475                   |   |                    |                    |         |          |  |
| Ohio.....                           | 101,986           | 77,589   | 105,889   | 59,966                  | 36,405  | 34,700             | 41,187             | 61,697  |          | 543  |
| Pennsylvania.....                   | 40,058            | 6,023    | 14,278    | 3,582                   | 7   | 400                | 51                 | 30      |          | 152  |
| South Carolina.....                 | 130               |          |           | 180                     |   |                    |                    |         |          |  |
| South Dakota.....                   |                   | 75       | 400       | 50                      |   |                    |                    |         |          |  |
| Tennessee.....                      | 4,000             | 300      | 30,956    | 3,407                   |   |                    |                    |         |          |  |
| Texas.....                          | 125               | 1        | 3,450     | 24                      |   |                    |                    |         |          |  |
| Vermont.....                        | 40                |          | 1,660     |                         |   |                    |                    |         | 84,900   |  |
| Virginia.....                       | 6,000             | 4,050    | 85,660    | 800                     |   |                    |                    |         |          |  |
| Wisconsin.....                      | 33,888            | 41,014   | 53,110    | 37,720                  | 15,000  | 7,102              | 3,222              | 21,000  |          | 2,470  |
| All other states <sup>1</sup> ..... |                   | 215      | 710       | 15                      | 101   |                    | 15                 | 6       |          | 45   |

<sup>1</sup>Includes establishments in Alabama, Colorado, Delaware, Maryland, North Dakota, Utah, Washington, and West Virginia.

In Table 3, under the heads "cultivators," "harrows," and "plows," the figures shown are the totals of all styles of those implements, and under "planters and drills," as the terms imply, appear the totals of all implements specifically reported as such. Illinois occupies first place in the number of cultivators, harrows, plows, harvesters and combined harvesters and binders, horse hayrakes, and mowers manufactured; second in planters and drills; and third in horse hayforks. Ohio is first in the manufacture of horse hayforks; second in cultivators, harvesters and combined harvesters and binders, and horse hayrakes; third in harrows, planters and drills, and mowers; and fourth in the manufacture of plows. New York is second in the number of harrows; third in harvesters and combined harvesters and binders, horse hayrakes, and thrashers; fifth in cultivators, plows, and scythes; and sixth in planters and drills. Wisconsin is first in the number of thrashers manufactured; second in horse hayforks; fourth in cultivators, harrows, planters and drills, harvesters and combined harvesters and binders, and mowers; and seventh in plows and horse hayrakes. Indiana is second in the manufacture of plows; fourth in horse hayrakes; fifth in planters and drills; and seventh in cultivators. Michigan is first in the number of planters and drills manufactured; second in thrashers; fifth in harrows, and harvesters and combined harvesters and binders; sixth in cultivators; ninth in horse hayrakes; and tenth in plows. Pennsylvania is

third in the number of cultivators manufactured; ninth in harrows; and twelfth in plows.

The manufacture of agricultural implements is carried on to a considerable extent in other states than the foregoing. In the manufacture of cultivators, New Jersey is eighth; Missouri, ninth; and Kentucky, tenth. In the manufacture of harrows, Minnesota is sixth; New Jersey, seventh; and Iowa, eighth. In the manufacture of plows, Kentucky is third; Georgia, sixth; Virginia, eighth; Tennessee, ninth; and Massachusetts, eleventh. In the manufacture of planters and drills, Georgia is seventh; and Kentucky eighth. California is fourth in manufacturing horse hayforks. Iowa is fifth; Missouri, sixth; and Nebraska, eighth, in the manufacture of horse hayrakes. Massachusetts is fifth in the manufacture of mowers. The manufacture of scythes is confined almost entirely to the Eastern states; in the number manufactured, Maine, Connecticut, Vermont, and New Hampshire are first, second, third, and fourth, respectively. Scythes are also made in New York and Iowa.

Table 4 is a statement of the relative rank of the leading states in the manufacture of agricultural implements, in number of establishments, capital, average number of wage-earners and wages, cost of materials used, and value of products, for 1890 and 1900, the numbers indicating the rank of the states in each of the several items.

TABLE 4.—RANK OF LEADING STATES WITH RESPECT TO PRINCIPAL ITEMS OF INQUIRY: 1890 AND 1900.

| STATES.            | NUMBER OF ESTABLISHMENTS. |      | CAPITAL. |      | WAGE-EARNERS.   |      |              |      | COST OF MATERIALS USED. |      | VALUE OF PRODUCTS. |      |
|--------------------|---------------------------|------|----------|------|-----------------|------|--------------|------|-------------------------|------|--------------------|------|
|                    |                           |      |          |      | Average number. |      | Total wages. |      |                         |      |                    |      |
|                    | 1900                      | 1890 | 1900     | 1890 | 1900            | 1890 | 1900         | 1890 | 1900                    | 1890 | 1900               | 1890 |
| Illinois .....     | 1                         | 3    | 1        | 1    | 1               | 1    | 1            | 1    | 1                       | 1    | 1                  | 1    |
| Ohio.....          | 3                         | 2    | 2        | 2    | 2               | 2    | 2            | 2    | 2                       | 2    | 2                  | 2    |
| New York.....      | 2                         | 1    | 3        | 3    | 3               | 3    | 3            | 3    | 3                       | 3    | 3                  | 3    |
| Wisconsin.....     | 5                         | 7    | 4        | 4    | 5               | 5    | 4            | 5    | 4                       | 5    | 4                  | 5    |
| Indiana.....       | 7                         | 6    | 6        | 6    | 4               | 4    | 5            | 4    | 5                       | 4    | 5                  | 4    |
| Michigan.....      | 4                         | 5    | 5        | 5    | 6               | 7    | 6            | 7    | 6                       | 6    | 6                  | 6    |
| Pennsylvania.....  | 6                         | 4    | 7        | 8    | 7               | 6    | 7            | 6    | 7                       | 7    | 7                  | 7    |
| Minnesota.....     | 11                        | 10   | 8        | 7    | 8               | 13   | 8            | 13   | 8                       | 14   | 8                  | 8    |
| Iowa.....          | 9                         | 9    | 9        | 9    | 10              | 8    | 11           | 11   | 9                       | 9    | 9                  | 10   |
| California.....    | 10                        | 8    | 10       | 10   | 11              | 12   | 9            | 8    | 10                      | 10   | 10                 | 9    |
| Kentucky.....      | 15                        | 21   | 11       | 12   | 9               | 10   | 10           | 12   | 11                      | 11   | 11                 | 13   |
| Missouri.....      | 8                         | 11   | 12       | 13   | 12              | 11   | 12           | 10   | 13                      | 12   | 12                 | 12   |
| Massachusetts..... | 15                        | 14   | 13       | 11   | 15              | 9    | 13           | 9    | 14                      | 8    | 14                 | 11   |

<sup>1</sup> Kentucky and Massachusetts each reported 9 establishments.

There have been very few important changes in the relative positions of the leading states in the industry during the decade. Wisconsin and Indiana have, in general, reversed their positions; the former state, which in 1890 held fifth place in value of products, cost of materials, and wages, was fourth in 1900; and the latter, which was fourth for the same items in 1890, dropped to fifth place in 1900. Massachusetts has

dropped from the eleventh to the thirteenth place in capital invested, from ninth to thirteenth in wages paid, and from eleventh to fourteenth in value of products. Iowa has displaced California from ninth position in value of products, and Kentucky has advanced from thirteenth position to eleventh.

Table 5 presents statistics of the manufacture of agricultural implements in cities of over 20,000 population.

TABLE 5.—SUMMARY FOR CITIES HAVING A POPULATION OF OVER 20,000.

| CITIES.                             | Number of establishments. | Capital.     | SALARIED OFFICIALS, CLERKS, ETC. |             | WAGE-EARNERS.   |              | Miscellaneous expenses. | Cost of materials used. | Value of products, including custom work and repairing. |
|-------------------------------------|---------------------------|--------------|----------------------------------|-------------|-----------------|--------------|-------------------------|-------------------------|---|
|                                     |                           |              | Number.                          | Salaries.   | Average number. | Total wages. |                         |                         |   |
| Total .....                         | 178                       | \$90,941,833 | 7,089                            | \$5,006,902 | 26,416          | \$13,102,718 | \$7,896,539             | \$25,860,456            | \$59,130,503  |
| Albany, N. Y. ....                  | 3                         | 180,500      | 10                               | 10,190      | 54              | 26,600       | 6,032                   | 31,617                  | 75,940  |
| Auburn, N. Y. ....                  | 3                         | 6,084,941    | 111                              | 119,106     | 1,551           | 767,342      | 166,499                 | 1,188,176               | 2,338,191   |
| Canton, Ohio .....                  | 6                         | 2,473,863    | 102                              | 99,818      | 586             | 267,619      | 139,608                 | 539,262                 | 1,184,949   |
| Chicago, Ill. ....                  | 6                         | 36,025,355   | 3,609                            | 2,483,894   | 10,245          | 5,180,958    | 3,846,768               | 10,842,299              | 24,848,649  |
| Dayton, Ohio .....                  | 4                         | 2,064,429    | 77                               | 81,987      | 608             | 308,041      | 212,848                 | 594,646                 | 1,281,658   |
| Decatur, Ill. ....                  | 5                         | 624,830      | 28                               | 32,252      | 193             | 81,979       | 24,664                  | 156,946                 | 368,405   |
| Evansville, Ind. ....               | 4                         | 478,700      | 27                               | 29,100      | 164             | 72,391       | 32,886                  | 106,423                 | 312,820   |
| Indianapolis, Ind. ....             | 6                         | 256,891      | 20                               | 17,010      | 51              | 24,333       | 9,642                   | 73,409                  | 270,390   |
| Joliet, Ill. ....                   | 3                         | 137,546      | 5                                | 5,500       | 62              | 33,059       | 5,099                   | 82,999                  | 142,615   |
| Kalamazoo, Mich. ....               | 6                         | 154,567      | 35                               | 22,441      | 38              | 18,053       | 36,344                  | 82,185                  | 188,506   |
| Kansas City, Mo. ....               | 4                         | 766,903      | 36                               | 52,854      | 156             | 100,017      | 35,244                  | 162,116                 | 438,089   |
| La Crosse, Wis. ....                | 5                         | 293,061      | 24                               | 31,822      | 148             | 71,709       | 28,684                  | 219,038                 | 368,012   |
| Louisville, Ky. ....                | 4                         | 1,583,066    | 90                               | 113,420     | 634             | 282,499      | 144,785                 | 430,431                 | 1,227,288   |
| Milwaukee, Wis. ....                | 4                         | 4,109,622    | 587                              | 293,504     | 524             | 271,343      | 134,109                 | 806,086                 | 2,296,888   |
| Minneapolis, Minn. ....             | 7                         | 317,116      | 27                               | 26,780      | 151             | 64,766       | 16,404                  | 112,485                 | 302,319   |
| Norfolk, Va. ....                   | 3                         | 219,537      | 15                               | 10,422      | 100             | 46,500       | 7,994                   | 45,925                  | 126,005   |
| Omaha, Nebr. ....                   | 3                         | 52,000       | 5                                | 2,325       | 38              | 22,400       | 1,767                   | 44,494                  | 89,356  |
| Peoria, Ill. ....                   | 8                         | 3,311,512    | 92                               | 102,062     | 924             | 498,169      | 291,004                 | 1,016,314               | 2,372,329   |
| Philadelphia, Pa. ....              | 3                         | 536,731      | 49                               | 55,956      | 204             | 111,271      | 44,329                  | 177,453                 | 416,930   |
| Racine, Wis. ....                   | 9                         | 6,913,534    | 415                              | 369,836     | 1,472           | 770,041      | 369,281                 | 1,254,625               | 3,001,009   |
| Rockford, Ill. ....                 | 5                         | 727,062      | 22                               | 21,720      | 344             | 178,160      | 95,497                  | 388,589                 | 720,959   |
| South Bend, Ind. ....               | 6                         | 1,775,722    | 123                              | 131,056     | 1,382           | 669,880      | 287,817                 | 1,039,339               | 2,432,083   |
| Springfield, Ohio .....             | 7                         | 8,194,543    | 897                              | 689,616     | 2,359           | 1,174,645    | 585,962                 | 2,222,540               | 5,272,636   |
| Utica, N. Y. ....                   | 3                         | 957,898      | 34                               | 23,573      | 136             | 79,557       | 67,760                  | 163,596                 | 363,509   |
| York, Pa. ....                      | 4                         | 333,410      | 35                               | 26,278      | 314             | 112,141      | 9,721                   | 183,506                 | 407,417   |
| All other cities <sup>1</sup> ..... | 57                        | 12,368,999   | 714                              | 754,880     | 3,928           | 1,879,345    | 801,806                 | 3,896,007               | 9,283,551   |

<sup>1</sup> Includes establishments distributed as follows: Akron, Ohio, 2; Allegheny, Pa., 1; Anderson, Ind., 1; Atlanta, Ga., 1; Baltimore, Md., 1; Bay City, Mich., 1; Birmingham, N. Y., 1; Boston, Mass., 1; Buffalo, N. Y., 1; Chattanooga, Tenn., 1; Cleveland, Ohio, 1; Cohoes, N. Y., 1; Columbus, Ohio, 2; Council Bluffs, Iowa, 1; Dallas, Tex., 1; Davenport, Iowa, 1; Des Moines, Iowa, 1; Detroit, Mich., 2; Elmira, N. Y., 1; Hamilton, Ohio, 2; Jackson, Mich., 2; Jamestown, N. Y., 1; Los Angeles, Cal., 1; Macon, Ga., 1; New Haven, Conn., 1; New York, N. Y., 2; Portland, Me., 1; Poughkeepsie, N. Y., 2; Quincy, Ill., 2; Richmond, Va., 2; Saginaw, Mich., 2; St. Joseph, Mo., 1; St. Louis, Mo., 2; San Francisco, Cal., 2; Schenectady, N. Y., 1; Sioux City, Iowa, 1; Springfield, Ill., 1; Syracuse, N. Y., 2; Toledo, Ohio, 1; Topeka, Kans., 1; Trenton, N. J., 1; Worcester, Mass., 2; Zanesville, Ohio, 1.

Of the total number of establishments in the United States, Table 5 shows that 178, or 24.9 per cent, are located in cities of over 20,000 population. The capital invested in these establishments, however, is \$90,941,833, or 57.7 per cent, and the value of products \$59,130,503, or 58.4 per cent of the corresponding totals for the United States. The average capital invested and value of products per establishment for the cities included in the table are \$510,909 and \$332,194, respectively, as compared with \$124,332 and \$78,356 per establishment for all other agricultural implement works located in the smaller cities, towns, and villages, and in the rural districts.

The preeminence which Illinois holds in this industry is due in a large measure to the magnitude of the establishments located in Chicago, the capital invested in which is \$36,025,355, or 22.8 per cent of the total for the United States, and the value of the products, \$24,848,649, or 24.6 per cent. The average value of capital per establishment in Chicago is \$6,004,226, and the average value of products is \$4,141,441. The industry assumes considerable importance in the following cities, given in the order of their rank with respect to value of products, which exceeds \$1,000,000 in each: Chicago, Ill.; Springfield, Ohio; Racine, Wis.; South Bend, Ind.; Peoria, Ill.; Auburn, N. Y.; Milwaukee, Wis.; Dayton, Ohio; Louisville, Ky.; and Canton, Ohio. The importance of Chicago in this industry rests on its manufacture of harvesting implements. There are no seeders or planters manufactured in that city, and only a limited number of implements of tillage, such as small cultivators and harrows, or of seed separators, fanning mills, etc. Of the more complicated and costly agricultural machines, such as combined harvesters and binders and mowers, more are manufactured in that city than in the rest of the country. There is also manufactured there a large number of miscellaneous implements and attachments of a character not specified in the returns.

In Springfield, Ohio, are manufactured horse corn planters, grain drills, grain sowers, wheel cultivators, disk and other harrows, corn harvesters, combined harvesters and binders, hay carriers, hay loaders, horse hayrakes, hay tedders, mowers, reapers, power cornshellers, and other miscellaneous implements.

Racine, Wis., is important in the manufacture of horse corn planters, cotton and potato planters, grain drills and grain sowers, listers, seed sowers, small and wheel cultivators, disk and other harrows, plows of various types—shovel, sulky or wheel, and walking—stalk cutters, hand cornshellers, fanning mills, horsepower and steam-power thrashers, combined thrashers and sepa-

rators, and other miscellaneous implements. There are no harvesting implements manufactured in Racine.

The implements of chief importance manufactured in South Bend, Ind., are the various types of plows—sulky or wheel and walking plows. There were 131,852 walking plows reported for that city, which is 16.1 per cent of the total number, 819,022, manufactured in the United States. Other implements manufactured in South Bend are the following: Cotton planters, seed sowers, small and wheel cultivators, equalizers, harrows, disk and shovel plows, and stalk cutters. There were no harvesting implements or seed separators reported for that city.

In Peoria, Ill., are manufactured hand and horse corn planters, grain drills and grain sowers, listers, small and wheel cultivators, equalizers, harrows other than disk, shovel, sulky or wheel, and walking plows, stalk cutters, harvesters, horse hayrakes, hay stackers, mowers, potato diggers, combined thrashers and separators, and other miscellaneous implements.

In Auburn, N. Y., are manufactured small cultivators, disk and other harrows, harvesters, combined binders and harvesters, horse hayrakes, hay tedders, mowers, reapers, scythes, sickles, and a large number of other implements of a miscellaneous character.

The implements of chief importance manufactured in Milwaukee, Wis., are combined harvesters and binders and mowers. Hand cornshellers, fanning mills, horsepower and steam-power thrashers, and combined thrashers and separators, with other miscellaneous implements, are also manufactured to a considerable extent.

In Dayton, Ohio, are manufactured horse corn planters, corn and grain drills and grain sowers, lime spreaders, seed sowers, tobacco transplanters, small and wheel cultivators, and the various types of harrows, disk and walking plows, hay loaders, horse hayrakes, hay tedders, mowers, hand cornshellers, and other miscellaneous implements.

In Louisville, Ky., are manufactured horse corn planters, cotton planters, grain drills, tobacco transplanters, small and wheel cultivators, cotton scrapers, cotton sweeps, equalizers, harrows, all types of plows, potato coverers and hillers, rollers, stalk cutters, potato diggers, cornshellers, fanning mills, gardening tools, and other miscellaneous implements.

In Canton, Ohio, are manufactured small cultivators, disk and other harrows, walking plows, rollers, hay carriers, horse hayforks, hand hayrakes, and a large number of implements of a miscellaneous character.

Table 6 is a comparative statement of the numbers of the various kinds of agricultural implements reported at the censuses of 1900, 1890, 1880, and 1870.

TABLE 6.—NUMBER OF AGRICULTURAL IMPLEMENTS MANUFACTURED: COMPARATIVE STATEMENT, 1870 TO 1900, INCLUSIVE.

|   | 1900    | 1890      | 1880      | 1870    |
|---|---------|-----------|-----------|---------|
| <b>Seeders and planters:</b>                |         |           |           |         |
| Bean planters                               | 200     |           |           |         |
| Corn planters, hand                         | 129,515 | 77,601    | 68,691    | 21,709  |
| Corn planters, horse                        | 78,185  | 54,639    |           |         |
| Cotton planters                             | 45,575  | 56,740    | 19,288    | 2,000   |
| Potato planters                             | 25,338  |           |           |         |
| Drills, beet                                | 5,302   |           |           |         |
| Drills, corn                                | 21,940  |           |           |         |
| Drills, grain                               | 91,635  | 44,880    | 48,222    | 82,038  |
| Grain sowers                                | 86,862  | 16,728    | 15,563    |         |
| Lime spreaders                              | 474     |           |           |         |
| Listers                                     | 26,995  | 13,603    |           |         |
| Manure spreaders                            | 5,263   |           | 8,165     |         |
| Seed sowers                                 | 83,283  | 57,716    | 20,289    | 6,900   |
| Tobacco transplanters                       | 3,788   |           | 4,245     |         |
| <b>Implements of cultivation:</b>           |         |           |           |         |
| Bean cultivators                            | 189     |           |           |         |
| Beet cultivators                            | 2,008   |           |           |         |
| Celery hillers                              | 130     |           |           |         |
| Cotton scrapers                             | 15,230  |           |           |         |
| Cotton sweeps                               | 75,311  |           |           |         |
| Cultivators, small                          | 206,982 | 239,008   | 818,057   | 88,740  |
| Cultivators, wheel                          | 295,799 | 206,482   |           |         |
| Equalizers                                  | 74,168  |           |           |         |
| Harrows, disk                               | 97,261  | 53,980    |           |         |
| Harrows, other than disk                    | 380,259 | 214,985   |           | 9,150   |
| Hoes (dozens)                               | 277,173 | 254,814   | 299,338   | 135,139 |
| Markers and furrowers                       | 854     |           |           |         |
| Plows, disk                                 | 17,345  |           |           |         |
| Plows, shovel                               | 102,320 |           |           |         |
| Plows, steam                                | 207     |           |           |         |
| Plows, sulky or wheel                       | 136,105 | 67,286    |           |         |
| Plows, walking                              | 819,022 | 1,182,059 | 1,326,123 | 864,947 |
| Potato covers and hillers                   | 3,052   |           |           |         |
| Rollers                                     | 12,590  | 5,168     | 3,002     | 4,803   |
| Stalk cutters                               | 13,425  | 21,605    |           |         |
| <b>Harvesting implements:</b>               |         |           |           |         |
| Grain cradles                               | 36,163  | 84,222    | 167,492   | 103,046 |
| Harvesters, bean                            | 1,425   |           |           |         |
| Harvesters, corn                            | 20,707  |           |           |         |
| Harvesters, grain                           | 187     |           |           | 3,566   |
| Harvesters, other                           | 6,283   | 19,429    |           |         |
| Harvesters and binders combined             | 238,355 | 125,942   | 25,737    |         |
| Hay carriers                                | 64,803  | 24,351    |           |         |
| Hayforks, hand (dozens)                     | 152,840 | 264,742   | 206,727   | 108,188 |
| Hayforks, horse                             | 51,770  | 1,823     |           |         |
| Hay loaders                                 | 7,273   | 3,019     | 8,957     |         |
| Hayrakes, hand (dozens)                     | 58,013  | 64,825    | 308,732   | 207,810 |
| Hayrakes, horse                             | 216,345 | 114,790   | 95,625    | 80,619  |
| Hay and straw stackers                      | 12,316  | 1,499     |           |         |
| Hay toddlers                                | 14,510  | 12,176    | 2,334     |         |
| Mowers                                      | 397,561 | 170,893   | 72,090    | 39,486  |
| Mowers and reapers combined                 | 1,055   | 15,681    | 54,920    | 59,645  |
| Potato diggers                              | 21,033  | 4,816     | 33,453    |         |
| Potato hooks                                | 20,860  |           |           |         |
| Reapers                                     | 35,945  | 8,834     | 35,327    | 60,388  |
| Scythes                                     | 718,453 | 795,400   | 1,244,264 | 881,244 |
| Scythe snaths                               | 537,214 | 511,856   | 487,178   | 17,680  |
| Sickles                                     | 446,660 |           | 95,613    | 3,600   |
| <b>Seed separators:</b>                     |         |           |           |         |
| Bean separators                             | 40      |           |           |         |
| Clover hullers                              | 661     | 651       | 1,412     | 5,206   |
| Corn huskers                                | 10,726  |           | 44,370    |         |
| Cornshellers, hand                          | 106,381 | 85,438    | 59,167    | 12,941  |
| Cornshellers, power                         | 8,185   | 5,726     |           |         |
| Fanning mills                               | 30,369  | 21,460    | 45,412    | 19,772  |
| Separators, other than bean and cotton seed | 1,707   | 4,577     | 9,103     | 1,131   |
| Thrashers, horsepower                       | 1,314   | 2,769     | 10,424    | 22,931  |
| Thrashers, steam-power                      | 3,651   | 2,661     |           |         |
| Thrashers and separators combined           | 5,394   | 5,937     |           |         |

<sup>1</sup>Harvesters of all kinds, not reported separately.

<sup>2</sup>Hay, manure, and spading forks, not reported separately.

<sup>3</sup>Separators of all kinds, not reported separately.

It should not be assumed that Table 6 is an accurate presentation of the number of different kinds of agricultural implements manufactured at the several censuses. As before stated, very many articles which, properly speaking, are agricultural implements, are not included in these statistics, being manufactured by establishments whose principal product receives a different classification. Differences in the form of the schedule of inquiry at the several periods should also be considered. Certain apparent discrepancies may be understood after an analysis of the figures. Bean planters were not provided for on the schedules of inquiry at

the censuses prior to 1900. The absence of data relating to horse corn planters for 1880 and 1870 is due to the fact that these machines were then used to but a limited extent, and were not provided for on the schedule. Potato planters and the various types of drills were not reported separately prior to this census. With the exception of wheel cultivators, which were reported in 1890, no statistics of the several kinds of cultivators manufactured were available prior to 1900, all having been reported under one general head. The same is true of harrows and plows. The statistics relating to harvesters are, for the same reason, of little value for comparative purposes. The excess of hayforks in 1890 over 1900 may be explained by the fact that at the last census hay, manure, and spading forks were reported under this head. Horse hayforks and hay-stackers were not reported separately prior to 1890. The decrease, shown in the table, of mowers and reapers combined, from 1890 to 1900 is explained by the fact that a number may have been reported as harvesters, or combined harvesters and binders. The decrease shown in the number of grain cradles and scythes manufactured was, according to the table, progressive from 1880 to 1900, and is undoubtedly due to their displacement by the use of mowers, the number of which increased from 72,090 in 1880, to 397,561 in 1900. The rather unexpected increase in scythe snaths is in part due to the fact that many of them were made by hand in 1870, by farmers, wheelwrights, or carpenters, and hence not included in the census returns. Sickles were not reported in 1890; a large increase, however, is shown in their manufacture from 1880 to 1900. The number of horsepower thrashers and combined thrashers and separators shows a decrease from 1890 to 1900. This is doubtless explained by the greater efficiency of those manufactured in 1900 and by the increase in the number of steam-power thrashers.

The following statement is evidence that the danger of duplicating or improperly classifying certain implements in the reports, owing to the ambiguity of the terms applied to them, has been encountered at previous censuses:

A machine for thrashing and separating is in the great majority of cases reported as one separator, but sometimes as one thrasher, and in a few instances, from the identity of numbers returned, there is a strong inference that the same machine has been returned as one thrasher and one separator.

So in the return of grain drills the production does not seem to have kept pace with the increase of operative labor in the manufacture of agricultural implements, but a portion of the return is doubtless absorbed under the heads of grain sowers and seed sowers. A variety of machines (corn and cotton planters, grain drills, pulverizers, and even harrows and hayrakes) may be adapted for sowing seed and grain, and also guano, plaster, or other fertilizers. Such machines will usually be returned in accordance with the function considered most essential and important, but there is liability to duplication.

The third class of farm machinery liable to be reported ambiguously includes the following items: Harvesters, mowers, reapers and mowers, reapers. All of these are included under the title of

harvesting machinery. The term harvester would not be applied to a mower, but might be applied to a reaper, or to a reaper and mower. Gavelers, droppers, hand-chain-self and sweep-rake reapers, as well as twine and wire self-binders, are liable to come under the caption of harvesters.<sup>1</sup>

But although few of the individual items at different censuses shown in Table 6, will bear direct comparison, a general view of the figures for 1900 and for 1870 gives a striking impression of the progress of the industry during the thirty years. In 1870, 25 varieties of implements were tabulated, and in 1900 there were 66. Where, for example, 32,033 grain drills and 6,900 seed sowers were reported in 1870, there were in 1900, belonging in the same general category, 91,635 grain drills, 83,283 seed sowers, 36,862 grain sowers, 21,940 corn drills, 26,995 listers, 25,338 potato planters, and 5,302 beet drills. Of the various kinds of reapers, mowers, and harvesters 696,518 were manufactured in 1900—more than four times the output of 1870, and lacking only 21 per cent of equaling the number of scythes made in 1870. When, in addition to this great increase in number and variety of implements, the complicated and expensive character of much of the modern machinery is borne in mind, some idea is gained of the marvelous advance of the three decades.

The foregoing figures convey but a poor idea of the vastly increased efficiency brought about in the various operations of the farm by the increase in the number of implements manufactured, and more especially by the remarkable improvements wrought in their construction and productive capacity. It could be stated with precision, perhaps, how much more costly an operation it would be to harvest a 50-acre field of wheat with the scythe or grain cradle than with the modern combined harvester and binder, or how much less time would be required to plant 100 acres of corn with an improved horse corn planter than by hand; but any attempt to make an accurate statement for a state or for the United States of the measure of the increased efficiency of agricultural implements and machines in use in 1900 over those employed ten, twenty, or thirty years ago would, from the nature of the case, prove futile. The following extract describes the increased productiveness made possible in certain branches of agriculture by the improvement effected in the manufacture of implements:<sup>2</sup>

#### CORN CULTIVATION AND HARVESTING.

Between 1855 and 1894 the following changes took place in cultivation of corn. The time of human labor required to produce one bushel of corn, on an average, declined from four hours and thirty-four minutes to forty-one minutes, and the cost of the human labor to produce this bushel declined from 35½ cents to 10½ cents.

In the earlier years the plow and harrow of that period were

used; the check rows were marked with the shovel plow; the seed was dropped by hand, from a bucket or pouch carried by the farmer, and covered with a hoe; the cultivating was done with a shovel plow; knives were used for cutting the stalks from the ground by hand; husking pegs were worn on the hand in husking; the stalks, husks, and blades were cut into fodder with an old-time machine turned by hand, and the corn was shelled by hand, either on a frying-pan handle or on a shovel, or by rubbing the cob against the unshelled ears.

A radical change had taken place in 1894. The earth was loosened with a gang plow, and a disk harrow very thoroughly pulverized it. A corn planter drawn by a horse planted the corn, and the top soil was pulverized afterwards with a four-section harrow.

When it came to harvesting the corn, a self-binder drawn by horses cut the stalks and bound them, and the shocks of stalks were then hauled to a machine, which removed the husks from the ears, and in the same process cut the husks and the stalks and the blades into fodder, the power of the machine being supplied by a steam engine.

Then came the shelling of the corn, which is one of the marvels of the changes which have been wrought by machines. In this case, the machine operated by steam, shelled 1 bushel of corn per minute, while in the old way the labor of one man was required for one hundred minutes to do the same work.

#### WHEAT CULTIVATION AND HARVESTING.

The use of steam as a substitute for horsepower in plowing, in harvesting, and in thrashing wheat has not materially contributed to economy, except from a saving due to the elimination of animal power, so the more common power supplied by horses is here selected for the comparison. The years in contrast are 1830 and 1896.

It is one of the marvels of the age that the amount of human labor now required to produce a bushel of wheat from beginning to end is on an average only ten minutes, whereas in 1830 the time was three hours and three minutes. During the interval between these years the cost of the human labor required to produce this bushel of wheat declined from 17½ cents to 3½ cents.

In the contrast thus presented the heavy, clumsy plow of the day was used in 1830; the seed was sown by hand, and was harrowed into the ground by the drawing of bushes over it; the grain was cut with sickles, hauled to a barn, and at some time before the following spring was thrashed with flails; the winnowing was done with a sheet attached to rods, on which the grain was placed with a shovel and then tossed up and down by two men until the wind had blown out the chaff.

In the latter year, on the contrary, the ground was plowed and pulverized in the same operation by a disk plow; the seed was sown with a mechanical seeder drawn by horses; the reaping, thrashing, and sacking of the wheat was done with the combined reaper and thrasher drawn by horses, and then the wheat was ready to haul to the granary.

#### HAYMAKING.

Hay is the next selection for comparison, the years being 1860 and 1894. When men mowed the grass with scythes, spread it and turned it over for drying with pitchforks, when they raked it into windrows with a hand rake, cocked it with a pitchfork, and baled it with a hand press, the time of human labor required per ton was thirty-five and one-half hours; but when for this method was substituted a mower, a hay-tedder, and a hayrake and hay gatherers and stackers drawn by horses, and a press operated by a horse, the time of human labor was reduced to eleven hours and thirty-four minutes, while the cost of human labor from the earlier to the later year was reduced from \$3.06 to \$1.29.

<sup>1</sup>Tenth Census of the United States, Report on the Manufacture of Agricultural Implements, by Charles H. Fitch, D. E., special agent, page 72.

<sup>2</sup>Department of Agriculture, Yearbook, 1899, pages 331-333, Progress of Agriculture in the United States, by George K. Holmes.



The more noticeable economy in haymaking is in the mowing and curing of the grass. In these two operations the time of human labor declined per ton from eleven hours to one hour and thirty-nine minutes, while the cost of the human labor declined from 83½ cents to 16½ cents.

The comparisons might be extended throughout many of the crops produced by the farmer, with a constantly recurring illustration of the saving of human labor and of the diminution of the cost of production by the diminution of human labor. With regard to animal labor alone it often appears that an increased time is required in production, but where there is an increased cost it is principally due to the increased value of the labor of animals.

#### SAVING IN THE COST OF PRODUCING CROPS.

The potential saving in the cost of human labor on account of improved implements, machines, and processes, at the rate per bushel or ton, as the case may be, has been computed for seven of the principal crops of 1899. The comparison is between the old-time methods of production, in which hand labor was assisted only by the comparatively rude and inefficient implements of the day, and the present time, when hand labor has not only the assistance of highly efficient and perfected implements and machines, but has been considerably displaced by them. The saving in the cost of human labor in cents, per unit of product, permits a very forcible statement of its equivalent in money by means of a computation consisting of the multiplication of the saving per unit into the crop of 1899. The result expresses the potential labor saving in the production of seven crops of that year, and is not an aggregate of the saving of human labor in the cost of producing the crops for all of the years between the earlier and the later ones, during which time this economizing and displacement of human labor has taken place. In the case of the crop of corn, the money measure of the saving of human labor required to produce it in 1899, in the most available economic manner, as compared with its production in the old-time manner, was \$523,276,642; wheat, \$79,194,867; oats, \$52,866,200; rye, \$1,408,950; barley, \$7,323,480; white potatoes, \$7,366,820; hay, \$10,034,868.

The total potential saving in the cost of human labor for these seven crops of 1899, owing to the possible utilization of the implements, machines, and methods of the present time, in place of the old-time manner of production, reaches the stupendous amount of \$681,471,827 for this one year.

No adequate attempt can be made in this report to set forth in detail the values reported in the returns for all classes of implements and machines in their multifarious types and styles. The values reported are factory values, and differ widely, the degree of variance being greatest in machines distinguished by their complexity of construction and high value. The investigation into the industry was not conducted with the object of ascertaining the prices of particular products, or with any special reference thereto, and no satisfactory data can be presented as to the range of values of the several classes of implements.

For an extended discussion of this branch of the subject, the reader is referred to Bulletin No. 18 of the Department of Agriculture, entitled "The Course of Prices of Farm Implements and Machinery for a Series of Years," by George K. Holmes. In this monograph it is stated that—

Certain general conclusions can \* \* \* be arrived at. It is conspicuously the fact that from 1860 to 1895 the retail prices of agricultural machinery and implements declined to an enormous

extent, and this in spite of the fact that these implements and machines in the meantime increased in efficiency, in durability, in workability, in lightness of weight, and in strength of materials. There has been a progress from wood to iron and from iron to steel, and from large patterns to small ones; and during the same time there was an increased utilization of applied power.

From 1895 to 1900 \* \* \* in the case of many establishments there has been an increase of prices. In connection with this it should be borne in mind that the financial depression which began in May, 1893, and continued until about 1897, had a disturbing effect upon manufacturing industries, and that when the business revival began, a considerable increase in the prices of materials used in manufacturing occurred, and that this lasted for a considerable length of time. On this account the retail prices of agricultural implements and machines as reported for the midsummer of 1900 show an increase which must be regarded as abnormal. This expresses the general consensus of opinion of the manufacturers of agricultural implements and machines in this country, and is a repetition of previous industrial experiences following financial depressions.

Table 7 is a statement of the number of the several kinds of agricultural implements manufactured and the number of establishments manufacturing each kind.

TABLE 7.—NUMBER OF ESTABLISHMENTS REPORTING EACH KIND OF IMPLEMENT, WITH THE TOTAL NUMBER MANUFACTURED: 1900.

|                                       | Number of establishments reporting. | Number of implements. |
|---------------------------------------|-------------------------------------|-----------------------|
| Implements of cultivation:            |                                     |                       |
| Cultivators—                          |                                     |                       |
| Bean .....                            | 5                                   | 189                   |
| Beet .....                            | 6                                   | 2,008                 |
| Small .....                           | 88                                  | 206,982               |
| Wheeled .....                         | 95                                  | 295,799               |
| Cotton scrapers .....                 | 7                                   | 15,230                |
| Cotton sweeps .....                   | 8                                   | 75,311                |
| Celery hillers .....                  | 1                                   | 130                   |
| Equalizers .....                      | 11                                  | 74,168                |
| Harrow—                               |                                     |                       |
| Disk .....                            | 58                                  | 97,261                |
| Other than disk .....                 | 138                                 | 330,259               |
| Hoes .....                            | 21                                  | 1,277,173             |
| Markers and furrowers .....           | 10                                  | 854                   |
| Plows—                                |                                     |                       |
| Disk .....                            | 18                                  | 17,345                |
| Shovel .....                          | 70                                  | 102,320               |
| Steam .....                           | 3                                   | 207                   |
| Sulky or wheel .....                  | 48                                  | 136,105               |
| Walking .....                         | 211                                 | 819,022               |
| Potato coverers and hillers .....     | 20                                  | 3,052                 |
| Rollers .....                         | 75                                  | 12,590                |
| Stalk cutters .....                   | 30                                  | 13,425                |
| Miscellaneous .....                   | 24                                  | 2,704,623             |
| Seeders and planters:                 |                                     |                       |
| Planters—                             |                                     |                       |
| Bean .....                            | 5                                   | 200                   |
| Corn—                                 |                                     |                       |
| Hand .....                            | 14                                  | 129,515               |
| Horse .....                           | 61                                  | 78,135                |
| Cotton .....                          | 26                                  | 45,575                |
| Potato .....                          | 9                                   | 25,338                |
| Drills—                               |                                     |                       |
| Beet .....                            | 5                                   | 5,302                 |
| Corn .....                            | 22                                  | 21,940                |
| Grain .....                           | 46                                  | 91,635                |
| Grain sowers .....                    | 18                                  | 36,862                |
| Lime spreaders .....                  | 5                                   | 474                   |
| Manure spreaders .....                | 10                                  | 5,263                 |
| Listers .....                         | 21                                  | 26,995                |
| Seed sowers .....                     | 34                                  | 88,288                |
| Tobacco transplanters .....           | 8                                   | 3,788                 |
| Miscellaneous .....                   | 4                                   | 330                   |
| Harvesting implements:                |                                     |                       |
| Grain cradles .....                   | 16                                  | 36,163                |
| Harvesters—                           |                                     |                       |
| Bean .....                            | 6                                   | 1,425                 |
| Corn .....                            | 11                                  | 20,707                |
| Grain .....                           | 5                                   | 187                   |
| Other .....                           | 6                                   | 6,283                 |
| Harvesters and binders combined ..... | 11                                  | 233,355               |
| Hay carriers .....                    | 19                                  | 54,303                |
| Hayforks—                             |                                     |                       |
| Hand .....                            | 15                                  | 1152,840              |
| Horse .....                           | 16                                  | 51,770                |

<sup>1</sup> Dozens.



TABLE 7.—NUMBER OF ESTABLISHMENTS REPORTING EACH KIND OF IMPLEMENT, WITH THE TOTAL NUMBER MANUFACTURED: 1900—Continued.

|  | Number of establishments reporting. | Number of implements. |
|--|-------------------------------------|-----------------------|
| Harvesting implements—Continued.             |                                     |                       |
| Hay loaders.....                             | 18                                  | 7,278                 |
| Hayrakes—                                    |                                     |                       |
| Hand.....                                    | 28                                  | 158,018               |
| Horse.....                                   | 66                                  | 218,345               |
| Hay stackers.....                            | 19                                  | 12,066                |
| Hay tedders.....                             | 14                                  | 14,510                |
| Mowers.....                                  | 25                                  | 897,661               |
| Mowers and reapers combined.....             | 8                                   | 1,055                 |
| Potato diggers.....                          | 34                                  | 21,038                |
| Potato hooks.....                            | 8                                   | 20,860                |
| Reapers.....                                 | 18                                  | 35,945                |
| Scythes.....                                 | 11                                  | 718,453               |
| Scythe snaths.....                           | 9                                   | 587,214               |
| Sickles.....                                 | 5                                   | 446,660               |
| Stackers.....                                | 2                                   | 247                   |
| Miscellaneous.....                           | 7                                   | 41,067                |
| Seed separators:                             |                                     |                       |
| Separators—                                  |                                     |                       |
| Bean.....                                    | 1                                   | 40                    |
| Other.....                                   | 15                                  | 1,707                 |
| Clover hullers.....                          | 5                                   | 661                   |
| Corn huskers.....                            | 14                                  | 10,726                |
| Cornshellers—                                |                                     |                       |
| Hand.....                                    | 41                                  | 106,381               |
| Power.....                                   | 26                                  | 8,185                 |
| Fanning mills.....                           | 46                                  | 80,869                |
| Thrashers—                                   |                                     |                       |
| Horsepower.....                              | 18                                  | 1,314                 |
| Steam power.....                             | 15                                  | 3,651                 |
| Thrashers and separators combined.....       | 81                                  | 5,994                 |
| Miscellaneous.....                           | 256                                 | 7,578,853             |
| Miscellaneous:                               |                                     |                       |
| Animal pokes.....                            | 2                                   | 32,000                |
| Artesian-well boring tools and castings..... | 3                                   | 80                    |
| Bean pullers.....                            | 2                                   | 207                   |
| Binders.....                                 | 2                                   | 15                    |
| Cane mills.....                              | 7                                   | 2,454                 |
| Carts.....                                   | 7                                   | 7,001                 |
| Check rowers.....                            | 15                                  | 44,245                |
| Churns, butter workers, etc.....             | 6                                   | 9,506                 |
| Cider and wine mills.....                    | 18                                  | 6,167                 |
| Corn cleaners.....                           | 2                                   | 98                    |
| Corn hooks.....                              | 4                                   | 64,789                |
| Corn knives.....                             | 9                                   | 22,180                |
| Cotton gins.....                             | 2                                   | 218                   |
| Cotton presses.....                          | 1                                   | 13                    |
| Ditching machines.....                       | 5                                   | 25                    |
| Ensilage cutters.....                        | 26                                  | 11,788                |
| Engines and boilers.....                     | 5                                   | 497                   |
| Farm trucks.....                             | 6                                   | 1,376                 |
| Feed and ensilage elevators.....             | 21                                  | 2,632                 |
| Feed steamers and boilers.....               | 6                                   | 2,184                 |
| Fence machines.....                          | 2                                   | 201                   |
| Fruit graders.....                           | 4                                   | 195                   |
| Fruit presses.....                           | 6                                   | 1,411                 |
| Gardening implements.....                    | 23                                  | 1,368,099             |
| Grinding mills.....                          | 18                                  | 13,234                |
| Grubbing machines.....                       | 10                                  | 2,097                 |
| Handcarts.....                               | 20                                  | 5,245                 |
| Hay cutters.....                             | 18                                  | 13,855                |
| Hay presses.....                             | 22                                  | 2,510                 |
| Hayracks.....                                | 15                                  | 1,091                 |
| Horsepowers.....                             | 63                                  | 5,694                 |
| Incubators.....                              | 2                                   | 21                    |
| Lawn mowers.....                             | 8                                   | 17,019                |
| Pea hullers.....                             | 5                                   | 900                   |
| Portable sawmills.....                       | 15                                  | 999                   |
| Portable steam engines.....                  | 14                                  | 1,099                 |
| Pumps—                                       |                                     |                       |
| Hand.....                                    | 11                                  | 51,580                |
| Horse.....                                   | 1                                   | 20                    |
| Steam.....                                   | 2                                   | 302                   |
| Road carts.....                              | 5                                   | 804                   |
| Road graders.....                            | 2                                   | 103                   |
| Road scrapers.....                           | 10                                  | 8,509                 |
| Shovels, spades, and scoops.....             | 4                                   | 286,400               |
| Singletrees.....                             | 17                                  | 382,722               |
| Syrup evaporators.....                       | 1                                   | 131                   |
| Sorghum binders.....                         | 2                                   | 21                    |
| Sorghum evaporators.....                     | 2                                   | 2,652                 |
| Sprayers.....                                | 11                                  | 106,655               |
| Straw stackers.....                          | 24                                  | 8,230                 |
| Thresher trucks.....                         | 8                                   | 2,437                 |
| Traction engines.....                        | 26                                  | 5,470                 |
| Wagons.....                                  | 22                                  | 2,768                 |
| Wagon trucks.....                            | 4                                   | 5,370                 |
| Water trucks.....                            | 13                                  | 1,350                 |
| Weeders.....                                 | 28                                  | 63,186                |
| Wind engines.....                            | 1                                   | 85                    |
| Windmills.....                               | 4                                   | 4,295                 |

1 Dozens.

The manufacture of plows is more widely distributed and is carried on by a larger number of establishments than that of any other agricultural implement, being reported by 211 establishments. Harrows and cultiva-

tors are next in importance as regards the diffusion of their manufacture throughout the states and the number of establishments reporting. In one form or another plows, harrows, and cultivators are manufactured more or less extensively in nearly every state. Reference to Table 10 and the original schedules on file shows that plows are made in 28 states, harrows in 27 states, and cultivators in 26 states. Implements of cultivation generally are manufactured in some form in 31 states, seeders and planters in 27 states, harvesting implements in 28 states and seed separators in 23 states.

The totals shown in Tables 7 and 10 for the various implements of a miscellaneous character should not be accepted as indicating the total number of such implements or machines manufactured during the census year. A large number of these "miscellaneous" implements can not be regarded as agricultural implements, but they were made a part of the inquiry for the reason that they are frequently manufactured in connection with the manufacture of agricultural implements. A large number of the articles included under "miscellaneous" products are manufactured—and frequently in much greater volume—by establishments whose reports were classified as "foundry and machine-shop products."

The following are examples: Artesian-well-boring tools and castings, cane mills, cider and wine mills, cotton gins, cotton presses, engines and boilers, feed steamers and boilers, grinding mills, grubbing machines, horsepowers, portable sawmills, portable steam engines, steam pumps, and traction engines. Carriage and wagon establishments manufacture a larger number of carts, farm trucks, hand carts, road carts, wagons, and wagon trucks than is shown in these tables. There were 445,517 farm wagons, trucks, and carts manufactured during the census year by distinctive carriage and wagon establishments. Corn knives were no doubt manufactured by establishments whose returns are classified as "cutlery and edge tools." Table 7 shows that there were 51,600 hand and horse pumps manufactured by agricultural implement establishments. That this number by no means represents the entire number manufactured, is shown by the fact that establishments manufacturing "pumps, not including steam pumps," reported the value of their products as \$1,341,713 for the census year. Shovels, spades, and scoops are manufactured extensively by other factories than those included in this report. The same is true of churns and incubators. Windmills valued at \$4,354,312 were reported by 68 establishments whose returns were so classified. This value represents a considerably greater number than is shown in the above table.

Table 8 shows the value of the exports of agricultural implements and machines from the United States to the several countries named in the table, during each year from 1891 to 1900 inclusive, divided into "mowers and reapers," "plows and cultivators," and all other classes, together with the value of detached parts of each kind.

TABLE 8.—VALUE OF EXPORTS OF AGRICULTURAL IMPLEMENTS, 1891 TO 1900, INCLUSIVE.<sup>1</sup>

| COUNTRIES AND CLASSES.                   | 1891        | 1892        | 1893        | 1894        | 1895        | 1896        | 1897        | 1898        | 1899         | 1900         |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|
| Aggregate .....                          | \$3,219,130 | \$3,794,983 | \$4,657,333 | \$5,027,915 | \$5,413,075 | \$5,176,775 | \$5,240,686 | \$7,609,732 | \$12,432,197 | \$16,099,149 |
| Mowers, reapers, and parts of same:      |             |             |             |             |             |             |             |             |              |              |
| Total.....                               | 1,579,976   | 2,372,938   | 2,873,897   | 3,261,892   | 3,659,735   | 3,212,423   | 3,127,415   | 5,500,665   | 9,053,830    | 11,243,763   |
| France.....                              | 245,146     | 345,086     | 231,004     | 220,125     | 424,812     | 360,577     | 494,469     | 1,146,551   | 1,678,865    | 2,652,795    |
| Germany.....                             | 152,683     | 222,261     | 301,136     | 386,096     | 375,348     | 480,773     | 588,430     | 1,100,210   | 1,503,968    | 2,529,422    |
| Russia.....                              | 189,897     | 81,733      | 240,908     | 222,212     | 629,435     | 387,316     | 265,442     | 409,368     | 863,476      | 710,066      |
| United Kingdom.....                      | 251,084     | 414,677     | 379,053     | 337,455     | 447,114     | 333,791     | 360,079     | 874,296     | 1,040,059    | 982,188      |
| Canada.....                              | 47,087      | 47,404      | 81,001      | 119,123     | 90,297      | 132,945     | 248,359     | 440,878     | 934,962      | 1,192,458    |
| Argentina.....                           | 75,546      | 644,085     | 1,044,768   | 1,206,031   | 817,445     | 570,332     | 223,391     | 182,283     | 1,074,749    | 1,194,861    |
| British Australasia.....                 | 311,440     | 187,026     | 170,715     | 208,213     | 106,199     | 195,533     | 302,588     | 421,975     | 358,862      | 466,397      |
| All other countries.....                 | 307,093     | 430,666     | 475,817     | 562,637     | 769,585     | 751,156     | 689,650     | 925,104     | 1,598,889    | 1,515,476    |
| Plows, cultivators, and parts of same:   |             |             |             |             |             |             |             |             |              |              |
| Total.....                               | 596,728     | 397,735     | 644,390     | 539,721     | 513,913     | 746,604     | 590,779     | 927,250     | 1,545,410    | 2,178,098    |
| France.....                              | 1,176       | 7,760       | 10,986      | 11,782      | 39,584      | 15,048      | 7,992       | 49,330      | 59,105       | 68,197       |
| Germany.....                             | 7,416       | 2,261       | 1,056       | 8,874       | 19,418      | 6,402       | 11,205      | 15,450      | 38,888       | 227,378      |
| Russia.....                              | 7,346       | 2,793       | 70          | 2,592       | 172         | 23,777      | 3,129       | 29,566      | 14,902       | 45,993       |
| United Kingdom.....                      | 28,172      | 8,165       | 19,305      | 27,694      | 37,345      | 43,105      | 36,142      | 74,763      | 69,737       | 179,950      |
| Canada.....                              | 28,919      | 15,869      | 21,452      | 12,953      | 28,555      | 40,533      | 73,023      | 182,809     | 207,480      | 247,306      |
| Argentina.....                           | 66,945      | 80,303      | 202,961     | 116,029     | 63,481      | 161,347     | 104,072     | 151,737     | 440,996      | 388,903      |
| British Australasia.....                 | 20,624      | 23,905      | 13,167      | 21,768      | 34,003      | 32,460      | 39,527      | 108,116     | 166,035      | 162,109      |
| All other countries.....                 | 486,130     | 256,679     | 375,393     | 343,129     | 296,355     | 423,942     | 316,688     | 315,479     | 548,257      | 858,262      |
| All other implements, and parts of same: |             |             |             |             |             |             |             |             |              |              |
| Total.....                               | 1,042,426   | 1,024,310   | 1,139,046   | 1,226,302   | 1,230,427   | 1,217,748   | 1,522,492   | 1,181,817   | 1,832,957    | 2,677,288    |
| France.....                              | 118,499     | 77,523      | 68,001      | 54,695      | 66,301      | 91,359      | 121,495     | 56,286      | 43,689       | 189,593      |
| Germany.....                             | 73,682      | 67,436      | 76,543      | 134,746     | 162,148     | 94,552      | 161,182     | 118,582     | 103,845      | 129,654      |
| Russia.....                              | 23,081      | 30,309      | 50,796      | 58,027      | 78,870      | 65,236      | 253,405     | 19,653      | 59,848       | 271,671      |
| United Kingdom.....                      | 192,517     | 201,238     | 211,961     | 231,882     | 266,223     | 211,654     | 246,096     | 195,966     | 262,597      | 188,305      |
| Canada.....                              | 106,481     | 72,390      | 97,912      | 90,083      | 121,565     | 180,166     | 148,465     | 157,728     | 378,612      | 571,442      |
| Argentina.....                           | 57,557      | 57,552      | 111,610     | 192,184     | 123,625     | 122,488     | 82,849      | 48,034      | 163,274      | 221,880      |
| British Australasia.....                 | 80,252      | 118,005     | 110,547     | 128,439     | 106,728     | 57,739      | 148,872     | 167,474     | 243,775      | 269,776      |
| All other countries.....                 | 390,407     | 404,735     | 412,736     | 386,296     | 313,967     | 388,554     | 365,048     | 425,094     | 577,317      | 834,977      |

<sup>1</sup> United States Treasury Department: Report on Commerce and Navigation, 1900.

Table 8 shows a gratifying and practically constant increase in our exports of agricultural implements and machines. This is notably the case with harvesting machinery, classified in the table as "mowers and reapers, and parts of." In addition to the statistics presented in the table, the total value of exports of all classes of agricultural implements in 1870 was \$1,068,476, and in 1880, \$2,245,742. The value of agricultural implements exported during 1900 was \$16,099,149, or 15.9 per cent of the value of products manufactured during the census year. During the periods included in the above table there is no record of any imports of these products except the sum of \$108 during 1900. It is therefore gratifying to note that the various operations of the farm and field in the United States are performed exclusively with implements made in American workshops.

Nothing could more forcibly demonstrate the growing favor with which agricultural implements manufactured in the United States are being received in other countries than the figures presented in Table 8. These exports were not shown separately in the published reports of the Treasury Department previous to 1864. The increase in value from \$1,068,476 in 1870 to \$16,099,149 in 1900, such increase being, as shown by the table, almost constant from year to year, is ample evidence that manufacturers are fully alive to the advantage of extending their trade not only at home, but also abroad.

While the articles are declared for the countries named in the table at the customhouse of export, those countries should not, in all cases, be considered as their final destination. However, by far the largest proportion

find their use in the countries named, or their dependencies.

The figures are not presented in sufficient detail to indicate the value of the exports of all classes of agricultural implements separately. Of the total for 1900, \$16,099,149, the value of harvesting machinery, "mowers, reapers, and parts of," was \$11,243,763, or 69.8 per cent, and "plows, cultivators, and parts of," \$2,178,098, or 13.5 per cent. The percentages of the total value of the first class sent to each country were as follows: France, 23.6; Germany, 22.5; United Kingdom, 8.7; Canada, 10.6; Argentina, 10.6; Russia, 6.3; British Australasia, 4.2; all other countries, 13.5. The percentages of the total value of implements of tillage sent to each country were as follows: France, 3.1; Germany, 10.4; United Kingdom, 8.3; Canada, 11.4; Argentina, 17.9; Russia, 2.1; British Australasia, 7.4; all other countries, 39.4.

That the increased trade with foreign countries is primarily due to the superior efficiency of agricultural implements and machinery manufactured in the United States goes without saying. Supplementing this are the usual efforts of successful commercial enterprise in the way of establishing branch houses abroad, exhibiting wares at popular expositions, public practical tests, etc., in fact, all practicable methods of advertising known to the manufacturers. Among the most successful of the means employed in this extension of business are the numerous reports of the United States consular officers, which are eagerly read by the manufacturers, and are frequently the direct incentive to greater efforts to obtain new business and a consequent increase in shipments to foreign countries. A complete recogni-

tion of the existing climatic and physical conditions, and the local needs and peculiarities of the foreign market are essential, in order that the best advantage may be taken of the openings presented, and a full measure of success obtained. It is necessary, also, that the fullest information obtainable be had with reference to the administrative laws and tariffs of the foreign custom-houses, and the varied interpretations placed upon their different provisions.

To show the wide distribution of American agricultural implements, the different countries to which these products were exported in 1900 are shown, as follows: Europe—Austria-Hungary, Azores and Madeira Islands, Belgium, Denmark, France, Germany, Gibraltar, Greece, Italy, Netherlands, Portugal, Roumania, Russia, Spain, Sweden and Norway, Switzerland, Turkey in Europe, United Kingdom; North America—Bermuda, British Honduras, Canada; Central American States—Costa Rica, Guatemala, Honduras, Nicaragua, Salvador; Mexico; West Indies: British, and Danish, Dutch, French, Cuba, Haiti, Porto Rico, Santo Domingo; South America—Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, British Guiana, Paraguay, Peru, Uruguay, Venezuela; Asia—Aden, Chinese Empire; British East Indies; Dutch East Indies; Hongkong, Japan, Turkey in Asia; Oceania—British Australasia, Guam, Hawaii, Philippine Islands; Africa—British Africa, Canary Islands, Egypt, French Africa, Portuguese Africa.

Table 9 presents, by states, the value of farm implements on farms in the United States, as reported at the Twelfth Census.

TABLE 9.—VALUE OF IMPLEMENTS ON FARMS, BY STATES AND TERRITORIES: 1900.

| STATES AND TERRITORIES.   | Value of implements on farms. | STATES AND TERRITORIES. | Value of implements on farms. |
|---------------------------|-------------------------------|-------------------------|-------------------------------|
| United States .....       | \$749,776,660                 |                         |                               |
| Alabama.....              | 8,675,900                     | Montana.....            | \$3,671,900                   |
| Alaska.....               | 490                           | Nebraska.....           | 24,940,450                    |
| Arizona.....              | 765,200                       | Nevada.....             | 888,560                       |
| Arkansas.....             | 8,750,060                     | New Hampshire.....      | 5,163,090                     |
| California.....           | 21,311,470                    | New Jersey.....         | 9,330,030                     |
| Colorado.....             | 4,746,755                     | New Mexico.....         | 1,151,610                     |
| Connecticut.....          | 4,948,300                     | New York.....           | 56,006,000                    |
| Delaware.....             | 2,150,560                     | North Carolina.....     | 9,072,690                     |
| District of Columbia..... | 136,060                       | North Dakota.....       | 14,055,560                    |
| Florida.....              | 1,963,210                     | Ohio.....               | 36,354,150                    |
| Georgia.....              | 9,804,010                     | Oklahoma.....           | 6,573,015                     |
| Idaho.....                | 3,295,045                     | Oregon.....             | 6,606,725                     |
| Illinois.....             | 44,977,310                    | Pennsylvania.....       | 50,917,240                    |
| Indiana.....              | 27,330,370                    | Rhode Island.....       | 1,270,270                     |
| Indian Territory.....     | 3,339,480                     | South Carolina.....     | 6,629,770                     |
| Iowa.....                 | 57,960,660                    | South Dakota.....       | 12,213,680                    |
| Kansas.....               | 29,490,580                    | Tennessee.....          | 15,232,670                    |
| Kentucky.....             | 15,301,860                    | Texas.....              | 30,125,705                    |
| Louisiana.....            | 28,536,790                    | Utah.....               | 2,922,550                     |
| Maine.....                | 8,802,720                     | Vermont.....            | 7,538,490                     |
| Maryland.....             | 8,611,220                     | Virginia.....           | 9,911,040                     |
| Massachusetts.....        | 8,828,950                     | West Virginia.....      | 6,271,630                     |
| Michigan.....             | 28,795,350                    | Wisconsin.....          | 5,040,420                     |
| Minnesota.....            | 30,099,230                    | Wyoming.....            | 29,237,010                    |
| Mississippi.....          | 9,556,805                     |                         | 1,366,090                     |
| Missouri.....             | 28,602,680                    |                         |                               |

Table 9 shows the extent of the present demand in the United States for farming implements and machinery. Although the exports of agricultural implements are considerable, and constantly increasing, the home

market still furnishes the chief demand. The vast area of arable land in the United States—a large proportion of it suitable for the operations of the best and most modern types of cultivating, planting, harvesting, and separating machinery, together with a very general recognition, by an intelligent class of purchasers, of the utility of employing improved implements—offers to the manufacturers opportunities for a constantly increasing sale of their products. The value of implements on the farms of the United States in 1900, as shown by the table, was \$749,776,660, and the value of such products manufactured was \$101,207,428. Deducting from the latter amount the value of exports in 1900, \$16,099,149, leaves as the value of products manufactured for the home market \$85,108,279, or 11.4 per cent of the total value of implements on American farms.

The following tabular statement, showing the number of patents granted in the United States on agricultural implements and parts or attachments, up to December 31, 1901, furnishes abundant evidence of activity in the ranks of inventors and mechanics directed to the end of improving such implements. The classifications used in the Patent Office are five in number, as follows: Plows, harrows and diggers, seeders and planters, harvesters and thrashers. Under each of these heads are given the number of patents granted on all implements and attachments or parts of the same coming under the several classifications. Implements and machines of an allied character, such as appliances for bee culture, dairy machinery, appliances for the care of live stock, horticultural and arboricultural implements, cotton gins, etc., are not included in the statement.

#### PLOWS.

|                       |       |                               |        |
|-----------------------|-------|-------------------------------|--------|
| Attachments.....      | 82    | Fenders.....                  | 196    |
| Harrow.....           | 88    | Gauge wheels and runners..... | 49     |
| Beams.....            | 66    | Handles.....                  | 47     |
| Cleaners.....         | 82    | Landsides.....                | 46     |
| Clevises.....         | 322   | Moldboards.....               | 164    |
| Colters.....          | 204   | Revolving.....                | 72     |
| Rolling.....          | 175   | Plows.....                    | 951    |
| Corn covers.....      | 30    | Ditching.....                 | 168    |
| Cotton choppers.....  | 513   | Mole.....                     | 139    |
| Cotton scrapers.....  | 206   | Revolving.....                | 98     |
| Couplings.....        | 71    | Shovel.....                   | 496    |
| Cultivators.....      | 1,223 | Side-hill.....                | 381    |
| Hand.....             | 69    | Steam.....                    | 223    |
| Wheel.....            | 206   | Wheel.....                    | 1,423  |
| Parallel.....         | 209   | Points.....                   | 188    |
| Revolving.....        | 105   | Ridgers.....                  | 30     |
| Rolling.....          | 83    | Sod cutters.....              | 56     |
| Rotary.....           | 208   | Standards.....                | 52     |
| Horizontal.....       | 30    | Subsoilers.....               | 170    |
| Straddle-row.....     | 320   | Weed turners.....             | 72     |
| Wheel.....            | 310   |                               |        |
| Straddle-row.....     | 1,594 |                               | 11,025 |
| Cultivator teeth..... | 398   |                               |        |

#### HARROWS AND DIGGERS.

|                                    |    |                                 |     |
|------------------------------------|----|---------------------------------|-----|
| Clodcrushers.....                  | 19 | Forks.....                      | 103 |
| Barred and corrugated rollers..... | 25 | Adjustable heads.....           | 39  |
| Disks.....                         | 17 | Combined forks and shovels..... | 7   |
| Crush bars.....                    | 23 | Fodder forks.....               | 10  |
| Crush bars and harrows.....        | 97 | Potato forks and shovels.....   | 21  |
| Toothed rollers and wheels.....    | 50 | Fulcrumed.....                  | 36  |
| Geared.....                        | 10 | Harrows.....                    | 206 |
|                                    |    | Center-hinged.....              | 129 |

## HARROWS AND DIGGERS—Continued.

| Harrows—Continued.         |     | Pivoted tooth bars—Continued.      |       |
|----------------------------|-----|------------------------------------|-------|
| Changeable form.....       | 28  | Lever actuated.....                | 12    |
| Disk.....                  | 131 | Spike tooth.....                   | 96    |
| Pivoted-gang.....          | 153 | Spring tooth.....                  | 39    |
| Center-cutter.....         | 14  | Trailing tooth.....                | 6     |
| Multiple-gang.....         | 6   | Potato diggers.....                | 52    |
| Expansible.....            | 95  | Bearing wheel separators.....      | 30    |
| Flexible.....              | 59  | Beetlifters.....                   | 14    |
| Multiple.....              | 34  | Cutters.....                       | 28    |
| Revolving.....             | 88  | Endless carriers.....              | 88    |
| Geared.....                | 13  | Receptacles.....                   | 126   |
| Rotary.....                | 168 | Graspers.....                      | 5     |
| Spring tooth.....          | 111 | Plow and screen.....               | 163   |
| Tooth bars.....            | 26  | Plow clearers.....                 | 20    |
| Tooth cleaners.....        | 23  | Reels.....                         | 15    |
| Wheel.....                 | 80  | Plow vibrating screens.....        | 9     |
| Center-hinged.....         | 30  | Cam.....                           | 17    |
| Disk.....                  | 24  | Crank.....                         | 45    |
| Floating.....              | 48  | Sidewise.....                      | 46    |
| Multiple.....              | 18  | Tappet.....                        | 35    |
| Pivoted tooth bar.....     | 9   | Screen cylinders.....              | 26    |
| Riding attachments.....    | 20  | Sifting wheels, side delivery..... | 59    |
| Spring.....                | 55  | Spiral conveyors.....              | 29    |
| Pivoted tooth bar.....     | 36  | Toothed drum.....                  | 97    |
| Trailing teeth.....        | 27  | Rakes.....                         | 170   |
| Winged.....                | 26  | Heads.....                         | 38    |
| Harrow teeth:              |     | Rollers and harrows.....           | 80    |
| Spike.....                 | 20  | Shovels.....                       | 193   |
| Clamped.....               | 22  | Attachments.....                   | 15    |
| Nutted.....                | 4   | Handles.....                       | 40    |
| Wedge.....                 | 10  | Sifting.....                       | 21    |
| Spring.....                | 135 | Stalk choppers.....                | 5     |
| Sectional.....             | 24  | Draw-cut.....                      | 44    |
| Trailing and draw-cut..... | 43  | Reciprocating.....                 | 35    |
| Hoes.....                  | 61  | Revolving:                         |       |
| Adjustable.....            | 30  | Breakers.....                      | 23    |
| Blades.....                | 21  | Horizontal.....                    | 172   |
| Integral-shank.....        | 19  | Vertical.....                      | 19    |
| Integral-socket.....       | 18  | Vine cutters.....                  | 18    |
| Compound.....              | 85  | Stalk pullers:                     |       |
| Adjustable.....            | 20  | Hand.....                          | 72    |
| Handles.....               | 9   | Wheel.....                         | 47    |
| Horizontal.....            | 64  | Stone gatherers.....               | 24    |
| Adjustable.....            | 19  | Transplanters.....                 | 13    |
| Interchangeable.....       | 38  | Ballers.....                       | 17    |
| Toothed blades.....        | 13  | Dibbles.....                       | 18    |
| Weeding.....               | 16  | Pivoted jaws.....                  | 91    |
| Land rollers.....          | 48  | Post-hole diggers.....             | 57    |
| Furrowers and markers..... | 31  | Pivoted jaws.....                  | 8     |
| Pivoted.....               | 106 | Sliding jaws.....                  | 7     |
| Weighted cylinders.....    | 27  | Wheel machines.....                | 59    |
| Weighted frames.....       | 20  | Tree conveyors.....                | 12    |
| Pivoted teeth.....         | 108 | Wheel planters.....                | 27    |
| Pivoted tooth bars.....    | 208 |                                    |       |
| Frameless.....             | 55  |                                    | 5,774 |

## SEEDERS AND PLANTERS.

|                                    |     |                           |       |
|------------------------------------|-----|---------------------------|-------|
| Broadcast.....                     | 553 | Force feed.....           | 212   |
| Centrifugal scatterers.....        | 79  | Grain-drill cleaners..... | 27    |
| Hand.....                          | 47  | Land markers.....         | 220   |
| Centrifugal scatterers.....        | 71  | Liquid and powder.....    | 15    |
| Revolving hoppers.....             | 23  | Pivoted seed cups.....    | 21    |
| Walking.....                       | 11  | Planters:                 |       |
| Check row.....                     | 386 | Corn.....                 | 2,028 |
| Anchors.....                       | 73  | Cotton.....               | 404   |
| Endless belts.....                 | 17  | Foot.....                 | 10    |
| Knots.....                         | 75  | Hand.....                 | 30    |
| Reels.....                         | 63  | Oscillating.....          | 88    |
| Wire doffers.....                  | 79  | Reciprocating.....        | 294   |
| Cups on belt.....                  | 44  | Rotating.....             | 35    |
| Cups on disk.....                  | 86  | Potato.....               | 175   |
| Drills:                            |     | Walking.....              | 39    |
| Adjustable rank.....               | 74  | Walking.....              | 1,199 |
| Grain.....                         | 698 | Vibrating hoppers.....    | 78    |
| Walking.....                       | 89  | Plungers.....             | 95    |
| Drills and broadcast combined..... | 23  | Preparing seed.....       | 16    |
| Drill teeth.....                   | 242 | Rolling hoppers.....      | 212   |
| Elastic feed wheels.....           | 17  | Screw feed.....           | 48    |
| Fertilizer distributors.....       | 405 |                           |       |
| Feeding belts.....                 | 61  |                           | 8,566 |
| Hand.....                          | 29  |                           |       |
| Revolving hoppers.....             | 26  |                           |       |
| Walking.....                       | 54  |                           |       |

No. 200—8

## HARVESTERS.

|                                      |     |  |        |
|--------------------------------------|-----|--|--------|
| Bean harvesters.....                 | 38  | Horse rakes:                               |        |
| Binders:                             |     | Draft dumpers.....                         | 362    |
| Compressors.....                     | 31  | Drags.....                                 | 135    |
| Grain adjusters.....                 | 137 | Hand dumpers.....                          | 395    |
| Sheaf carriers.....                  | 165 | Hay cockers.....                           | 34     |
| Clover harvesters.....               | 61  | Rake teeth.....                            | 105    |
| Combined rakes and tedders.....      | 82  | Side delivery.....                         | 32     |
| Corn harvesters:                     |     | Lawn mowers.....                           | 383    |
| Implements.....                      | 27  | Grass catchers.....                        | 87     |
| Self-binders.....                    | 72  | Manure forks.....                          | 44     |
| Stalk cutters.....                   | 166 | Miscellaneous.....                         | 283    |
| Droppers—                            |     | Mowers:                                    |        |
| Crane.....                           | 48  | Anomalies.....                             | 32     |
| Direct tilting.....                  | 200 | Center cut.....                            | 103    |
| Ejector.....                         | 37  | Front cut, one wheel.....                  | 50     |
| Endless apron.....                   | 43  | Two wheels.....                            | 504    |
| Horizontally moving and tilting..... | 56  | Rear cut, one wheel.....                   | 60     |
| Sliding bottom.....                  | 30  | Two wheels.....                            | 259    |
| Strippers.....                       | 45  | Reciprocating gear.....                    | 178    |
| Comb.....                            | 31  | Thrust cut.....                            | 93     |
| Knife.....                           | 28  | Platform adjustments.....                  | 192    |
| Roller.....                          | 90  | Reels.....                                 | 256    |
| Corn shockers.....                   | 30  | Revolving horse rakes:                     |        |
| Cotton harvesters.....               | 131 | Flop over.....                             | 111    |
| Pneumatic.....                       | 44  | Wheel.....                                 | 147    |
| Rotating picker stems.....           | 108 | Scythes and cradles.....                   | 133    |
| Cutting apparatus:                   |     | Seats.....                                 | 60     |
| Endless.....                         | 72  | Self-binders:                              |        |
| Guard fingers and finger bars.....   | 227 | Clips and prepared bands.....              | 27     |
| Reciprocating.....                   | 395 | Cord knotters.....                         | 490    |
| Rotary.....                          | 51  | General structure.....                     | 526    |
| Vibrating.....                       | 40  | Gleaners and binders.....                  | 33     |
| Droppers:                            |     | Tension and take-up devices.....           | 72     |
| Direct tilting.....                  | 86  | Twisters and tuckers.....                  | 105    |
| Miscellaneous.....                   | 9   | Wire twisters.....                         | 193    |
| Opening and closing.....             | 37  | Self-rakes:                                |        |
| Side delivery.....                   | 91  | Endless carriers.....                      | 169    |
| Swinging and tilting.....            | 32  | Gaveling tongs.....                        | 30     |
| Fruit gatherers.....                 | 432 | Platform movement.....                     | 116    |
| Gearing.....                         | 160 | Reciprocating, horizontal curvilinear..... | 181    |
| Grain wheels and casters.....        | 36  | Reciprocating, horizontal rectilinear..... | 83     |
| Hand binders:                        |     | Rotary, horizontal axis.....               | 81     |
| Attachments.....                     | 17  | Rotary, vertical axis, switch.....         | 139    |
| Elevated delivery, rear.....         | 39  | Rotary, vertical axis, no switch.....      | 145    |
| Elevated delivery, side.....         | 102 | Traveling, horizontal irregular path.....  | 71     |
| Flat delivery.....                   | 12  | Traveling, vertical irregular path.....    | 16     |
| Manual traction.....                 | 12  | Tedders.....                               | 171    |
| Hand rakes.....                      | 100 | Thrashers.....                             | 91     |
| Hay loaders:                         |     | Track clearers and dividers.....           | 106    |
| Endless belts.....                   | 308 |  | 11,258 |
| Intermittent.....                    | 57  |  |        |
| Lifting reels.....                   | 13  |  |        |
| Walking rakes.....                   | 67  |  |        |
| Headers.....                         | 111 |  |        |
| Hedge trimmers.....                  | 82  |  |        |
| Hemp and flax harvesters.....        | 87  |  |        |

## THRASHING.

|                                     |     |                              |       |
|-------------------------------------|-----|------------------------------|-------|
| Band cutters and feeders.....       | 498 | Grain separators—Continued.  |       |
| Cane strippers.....                 | 83  | Screens and riddles.....     | 113   |
| Clover hullers.....                 | 176 | Shaking screens.....         | 797   |
| Corneribs.....                      | 11  | Straw carriers—              |       |
| Corn-husking implements.....        | 144 | Endless aprons.....          | 173   |
| Corn-husking machines.....          | 252 | Overhung rakes.....          | 50    |
| Corn shellers:                      |     | Reels.....                   | 30    |
| Breast and cylinder.....            | 225 | Shaking tables.....          | 177   |
| Disk action.....                    | 193 | Vibrators.....               | 55    |
| Ear grasping.....                   | 128 | Walking rakes.....           | 77    |
| Implements.....                     | 85  | Granaries and bins.....      | 48    |
| Peripheral action.....              | 22  | Stackers.....                | 16    |
| Fans and regulators.....            | 45  | Thrashing machines:          |       |
| Flax thrashers.....                 | 22  | Cylinder machines.....       | 499   |
| Fruit and vegetable separators..... | 136 | Dust conveyors.....          | 50    |
| Grain separators:                   |     | Flail machines.....          | 25    |
| Gravity.....                        | 236 | Vine and seed strippers..... | 181   |
| Ont, seed, and garlic.....          | 234 |                              | 4,951 |
| Rotary screens.....                 | 165 |                              |       |

The above statement is summarized as follows:

|                           |        |
|---------------------------|--------|
| Plows.....                | 11,625 |
| Harrows and diggers.....  | 5,774  |
| Seeders and planters..... | 8,566  |
| Harvesters.....           | 11,258 |
| Thrashing.....            | 4,951  |
| Total.....                | 42,174 |

The detailed statistics reported for the industry are shown in Table 10. This table presents separate totals for each state in which there were 3 or more establishments, and groups the statistics for other states so as not to disclose the operations of individual establishments. The establishments are classified according to the character of the ownership, which shows that 251 were owned by individuals, 169 by partnerships, and 295 by corporations. The employees are segregated so as to show for salaried officers and wage-earners, separately the number and salaries or wages of men, women,

and children, respectively, and also the average number of wage-earners employed during each month of the year. Separate totals of the different materials and products are shown. The numbers of the different kinds of agricultural implements and machines are shown, together with others of a miscellaneous character. The numbers of engines, water wheels, electric motors, and other power in use, with their horsepower, are presented. The 715 establishments are also grouped according to the number of employees in each.

## HISTORICAL AND DESCRIPTIVE.

No more than a brief résumé is possible in this report of the successive stages marking the great development of the industry and the improvement in its products in the United States. The fact itself is obvious on every hand. Agricultural operations, particularly in the East and the South—the older parts of the country—frequently afford, by a comparative showing, ocular evidence of the remarkable improvement effected in implements and machines designed for the various uses of the farm.

Side by side on adjoining farms, implements of comparatively primitive type may be seen in use in juxtaposition with those which show all the latest appliances for labor saving and increased efficiency.

Prior to 1850 the manufacture of agricultural implements could hardly be considered as more than a hand trade, and in no sense as a factory industry, as the term is at present understood. Ideas had been evolved, and, on a small scale, executed, which contained much that the improved processes and facilities of the latter part of the century brought to complete fruition. The industry, as such, was quite generally conducted in small shops, as the small average capital invested in 1850 proves. Reapers and thrashers were, in isolated cases, manufactured on what might be called the factory plan on a small scale, but their use was almost entirely restricted to the immediate neighborhood of their manufacture. It was impossible, in fact, to give to these and such other labor-saving machines as had been invented more than a limited distribution, owing to the lack of facilities for the transportation and manufacture of such products. These conditions, together with the inelastic and comparatively simple commercial methods of that time, while retarding development in other lines of industry as well, seemed to have exerted their full effect in this manufacture. The stimulating effects of freer intercourse between states and sections, of improved financial and commercial methods and systems, and of better industrial organization, developed later.

While the need for more effective agricultural implements was generally recognized previous to, and early in the last century, and the inventive faculties of many

were exercised to meet this want, it was not until the western movement of the population had converted the rich alluvial plains of the Western states into productive farms, and the railroad systems of the country had extended their lines for the distribution of Western farm products, that the progress and development of the industry found its full expression. The evolution of the manufacture from the small shops of the blacksmith and wheelwright to the immense establishments of the present time embodies all the phases of the development of the modern factory system. A comparison of the average capital per establishment in 1850 and 1900 graphically illustrates the measure and significance of this change. In 1850 there were 1,333 establishments in operation, reporting a capital of \$3,564,202, an average of \$2,674 per establishment; and in 1900 there were 715 establishments in operation, reporting a capital of \$157,707,951, an average of \$220,571 per establishment.

The representative establishments in this industry are quick to install machinery and equipment that experience has proved economical from the standpoint of increased production or the reduction of operating expenses, and their factory organizations generally embody such features to the fullest extent. This is pointed out in the following:

In the manufacture of agricultural implements new machinery has, in the opinion of some of the best manufacturers of such implements, displaced fully 50 per cent of the muscular labor formerly employed; as, for instance, hammers and dies have done away with the most particular labor on a plow. In one of the most extensive establishments engaged in the manufacture of agricultural implements in one of the Western states it is found that 600 men, with the use of machinery, are now doing the work that would require 2,145 men, without the aid of machinery, to perform; that is to say, there has been in this particular establishment a loss of labor to 1,545 men, the proportion of loss being as 3.57 to 1.<sup>1</sup>

*Implements of Tillage—Plows, Harrows, and Cultivators.*—From the plow of the ancients, a sharpened piece of wood or the crotched limb of a tree, to the modern gang plow drawn by steam power, is a far cry; but the period of time which has elapsed since the first

<sup>1</sup> Industrial Evolution of the United States, by Carroll D. Wright, United States Commissioner of Labor, page 326.

patent on a plow was granted in the United States is comparatively short. Letters patent were granted in 1797 to Charles Newbold, of Burlington county, N. J., for the first cast-iron plow constructed in America. The specifications contained in the application were as follows.

The plow to be (excepting the handles and beam) of solid cast iron, consisting of a bar, sheath, and mold plate. The sheath serves a double purpose of coulter and sheath, and the mold plate serves for share and moldboard, that is, to cut and turn the furrow. The forms to be varied, retaining the same general principles, to meet the various uses as well as inclinations of those who use them.<sup>1</sup>

It is evident from the latter clause that there existed at an early date a recognition of the need of a diversity in form, depth, etc., of the moldboard and plow point. While this plow seems to have worked successfully, the inventor was compelled to abandon its manufacture, as the farmers very generally rejected it, under the singular delusion that the "cast iron poisoned the land."

There is evidence extant showing that the coulter and wheels to keep the plow steady in the furrow were applied features of the implement from a very early date. Previous to 1797 no less a personage than Thomas Jefferson had exercised his talents to perfect and simplify the plow on scientific lines.

Following Newbold's invention, while many improvements of minor importance appear to have been made, none of special note was effected until 1819, when a patent was granted to Jethro Wood. His invention embodied the characteristic feature of Newbold's plow, in that the moldboard was made of cast iron, but that which chiefly distinguished it was the adjustable cast-iron point. This marked the introduction of the most useful economy in plow manufacture—the interchangeability of parts.

From that time unremitting efforts have been made to improve this implement in the directions of increased durability, efficiency, and adaptability to the varied conditions of the soil. The most noteworthy steps in the progress toward perfection, among many that contributed in no small degree to the great improvement made, have been the invention of the chilled plow, the use of steel in point and moldboard, the introduction of sulky or riding and gang plows, and the application of steam and electric power as motive forces.

The thoroughly equipped plow works of to-day are prepared to manufacture almost countless varieties of styles and types, which are considered as fully meeting the various requirements. Among the many kinds manufactured are the following: One, two, or three horse plows; walking or riding plows; plows with steel beam and wearing parts, or wood beam and steel wearing parts; right or left hand plows; two or three furrow gang-plows; timberland, vineyard or orchard, prairie,

unbroken land, and general purpose plows; plows particularly adapted to different qualities of soil and inclinations of the land; plows with hanging or rolling coulters, etc. The modern plow is manufactured with interchangeable parts, so that the moldboard, share, landside, standard, coulters, clevis, and the different bolts, braces, staples, washers, etc., may be renewed when necessary.

Activity in the invention of steam plows began in 1861, and 223 patents had been issued in that class by the end of 1901. In 1888 the first patent for an electric plow was granted, which shows the electric motor carried on the plow. Up to the present year there have been 10 patents issued in this class. In some cases the system of transverse haulage is employed, using two electrically driven drums on opposite sides of the field.

Plow manufacture, which is the most widely distributed of any branch of the industry, does not require so large a factory organization as the manufacture of the more complicated harvesting machines; the largest establishments, however, in point of size, number of employees, and all the essentials of complete factory organization, compare favorably with representative establishments in other lines of manufacture.

The progress made during the last decade in the manufacture of harrows has been chiefly in the improvement and extension of the disk and spring-tooth principles. The three general classes are the spike-tooth, disk, and spring-tooth harrows. From the primitive harrow, a tree branch, or even from the simple A frame, rigid, spike-tooth harrow, to the best type of the disk, spring-tooth, or sectional lever harrows used at the present time, is a long step marking the advancement made in the manufacture of this implement. The variety of styles of the different types placed on the market appears to be quite as great as in plows.

Steel lever sectional harrows with spike teeth are made in one, two, three, or four sections, with adjustable teeth, which by means of a lever can be set at any angle required. This type can be regarded as an improvement of the old style spike-tooth harrow, the improvement consisting in greater lightness, due to making the frame of iron or steel, the possibility of setting the teeth at different angles by means of a lever, and the sectional feature.

The spring-tooth harrow, which is an American invention, was patented in 1869 by David L. Garver, of Michigan. Several improvements on this harrow as originally manufactured were subsequently made, among which may be mentioned the adjustability of the teeth to any depth or angle required, the construction of the frame of iron or steel, the application of wheels or runners which lessen the draft, and a seat for the operator. The teeth are made of tempered spring steel, and vary in number from ten to thirty-five. In some cases they are self-sharpening. The sectional and lever features are also applied to this implement.

<sup>1</sup> American Agricultural Implements, Part I, page 9, by R. L. Ardrey, 1894.



The disk harrow, which was used in a simple form in ancient times, the earliest record of its use being by the Japanese,<sup>1</sup> has received many improving modifications. The disk feature, while it has been extensively applied to plows and cultivators during the last decade, has had its greatest application to harrows. The first United States patent, distinctively showing the use of the disk in harrows, was granted in 1877, although a patent was granted on a comparatively simple type somewhat earlier, but the great development came in 1892. The disks are made either concave, convex, or straight, of varying diameters, and are in one gang or two, each controlled by an independent lever. Among the improved features of the modern type of disk harrow are automatic scrapers for cleaning purposes, anti-friction bearings, solid or cutaway disks; one, two, three, or four horse hitch, and the seeder attachment. A hoe attachment for the purpose of leveling the furrow left between the two gangs of disks is also applied.

"The progenitor of the cultivating machine is the hoe," and as the necessity for devices to lessen the onerous work of the farm led to improvement in other implements, the cultivator, used for tending growing crops, shared in such improvement, which has been generally in the same direction as harrow improvement. Both riding and walking cultivators, with and without wheels, are in use at the present time. The successive patents granted in the United States, marking the development of this implement as recorded by the United States Patent Office, are the following: Hilling cultivator, 1830; straddle row, 1835; hilling, 1837; wheel, riding, 1846; parallel, 1851; rotary, 1858; straddle row, 1869; wheel parallel, 1879; disk, riding, 1880; spring attachment, 1883 and 1884; parallel, riding, 1884; parallel, runner, 1884; straddle row, 1884.<sup>2</sup> Later many modifications of the foregoing types have been manufactured and placed on the market. Adaptations of the disk and spring tooth have been applied to the cultivator instead of the more general shovel feature. During the last decade many patents have been granted covering improved devices in couplings, springs, and other parts, particular activity having been evinced in the large number of patents for hammock-riding attachments. The wearing and bearing parts and frame are most commonly made of steel, and the beam and handles of wood. The gangs of shovels can be regulated at the will of the operator, lowered or raised to suit the requirements of the growing crop, and by moving the wheels in or out, the implement can be accommodated to the varying widths of the row, the wearing parts being generally interchangeable.

There are several modified forms of the three imple-

ments described above—the plow, the harrow, and the cultivator—which are properly classified as implements of tillage, designed for particular purposes or crops, but the various styles are too numerous to receive description at length in this report.

*Seeders and Planters.*—Ancient monuments and remains disclose the fact that broadcast seed sowing was not the only method of planting the crops employed in early times. There is evidence tending to prove that seed was planted in drills and rows by crude mechanical means as early as 680 B. C. The sowing of seed in rows or drills, so that the growing crop could be cultivated by horse power, was advocated in 1731 by Jethro Tull, of England, who might be called the author of horse-hoeing husbandry. From the records of the United States Patent Office, so far as they are conveniently accessible, it is shown that the progress of improvement in mechanical seeders and planters proceeded as follows: Wheelbarrow planter, 1825; slide broadcast seeder, a riding implement, 1835; rotary broadcast seeder, 1856; hand planter, 1856; foot planter, 1856; broadcast seeder, attachment to cultivator, 1869; grain drill, 1874; hand planter, 1876; cotton planter, 1876; broadcast seeder, attachment to harrow, 1878; walking drill, 1881; cotton planter and check rower, 1883; riding grain drill, 1884. Subsequent to the last date, remarkable improvement has been made in drills and planters, the more recent development being the application of the disk feature to the drill, and the broadcast seeder attachment to the disk harrow. From 1799, the date of the first patent in the United States for a seeding machine, the contributions which have been made from time to time to the improvement of these implements have been in the direction of reducing the labor of sowing and planting and, at the same time, increasing the results, and have been most valuable. Like other improved field implements, seeders and planters are operated to the greatest advantage on large farms of a level or nearly level surface, with few obstructions in the shape of stumps and stones, and with a light, loamy soil, although they may be used with undoubted success under more difficult conditions.

A late style of corn-planter, embodying nearly all the approved devices, is a two-horse machine, constructed almost entirely of steel, with two seedboxes, and check rower, drill, and force-drop attachments, for which are claimed absolute accuracy in dropping the seed, regularity in the number of seeds dropped, and adaptability to different inclinations of the soil, secured by a lever which forces the runners to work at equal depth under different conditions. This machine can also be adjusted to rows varying in width. The drill seeder is most extensively used for sowing wheat, rye, oats, and barley in equidistant rows; but, by shutting off or removing some of the hoes or drills, this implement may be used interchangeably for other crops,

<sup>1</sup> American Agricultural Implements, by R. L. Ardrey, 1894, Part I, page 21.

<sup>2</sup> The Growth of Industrial Art, by Hon. Benjamin Butterworth, Commissioner of Patents, 1892, pages 9 and 10.

such as beans, peas, turnips, sugar beets, corn, grass seed, etc., and for fertilizer. Drill seeders are made with a varying number of hoes, and a certain style is manufactured which is capable of seeding 17 rows. The most acceptable and efficient machines are provided with a force feed which can be gauged to drop more or less as may be suitable to the character of different crops; a land measure that accurately measures the ground covered to fractions of an acre; and a lever for forcing the hoes into the soil and regulating their depth as required. Their angle of inclination can also be changed at the will of the operator; and chain covers after each hoe are provided to cover the seed. Disk drills containing scrapers or cleaners and other improved devices are meeting with considerable popular favor. Certain drill seeders are manufactured so as to be readily convertible into broadcast sowers by attaching scatterers to the seed feeder in place of the grain tubes. Combined cultivators and sowers are also on the market. While the styles manufactured by the different establishments vary in a considerable degree in size, efficiency, and other respects, the essential features may be said to be identical.

*Harvesting Implements.*—The development of the modern perfected harvesting machine by gradual progression from the time when the primitive reaping hook of bronze was used, or still earlier, when food seeds were gathered without any artificial assistance, is of a piece with the progress and improvement made in other branches of mechanical art, and if the growth of civilization is to be measured by material advancement, as true a gauge as any can be found in this industry. The first step forward was the adoption of the scythe; the next of the grain cradle, to assist in gathering the cut grain into windrows or swaths coincident with the mowing. From these two simple implements, or it might more correctly be said from the scythe and hand rake, have developed the numerous machines which are now found in practical operation on the farms of the United States and other countries in mowing, reaping, and harvesting the crops.

While the invention of a machine for cutting, reaping, or harvesting grain or hay more expeditiously than was possible by primitive processes had engaged the attention of many in the Eighteenth century in Great Britain and Europe, only the more prominent phases of the development of machines for such purposes in the United States will be discussed in this report. The first improvement which naturally suggested itself was in the cutting apparatus. One of the two main principles of motion of the cutting blade, the circular motion, which may be either continuous and advancing, or continuous with alternate motion, and the rectilinear motion, which may be either advancing only, or reciprocating and advancing, or sidelong and advancing, is or has been applied with modifications in nearly all reap-

ers and mowers used up to the present time—the first as embodied in the lawn mower, and the second in the mower generally used in the hay field. These two principles are applied to one or more knives. The connection of the cutting apparatus of the ordinary mowing machine with the main structure or frame of the machine is either a rigid or hinged connection of the finger-bar, through which the cutter vibrates. The methods of driving the cutting bar which have been or are in use are of simple gearing with the traction wheel, friction gearing, planetary gearing, gyrating gearing, screw gearing, changeable-speed gearing, cams, belts, compressed-air piston, or chain gearing.

The first patent in the United States covering a machine for mowing by horsepower was granted in 1812. This was succeeded by other patents covering improvements in the cutting apparatus or on the machine itself, among which may be mentioned the following: Reciprocating serrated cutter, 1831; slotted guard finger and mower, 1833; two cutters reciprocating in opposite directions, 1850; endless chain cutter, 1855; rotary cutters and vibrating cutters, 1856; spokeless wheel mower and front cut one-wheel mower, 1857; spiral cutters, 1857; front cut two-wheel mower, and rear cut one-wheel mower, 1858; front center cut mower, 1863; steam mower, 1868; differential gear gyrating motion cutter, 1870; front cut two-wheel mower, 1880 and 1884.

The invention of Obed Hussey, patented in 1833, of an improved mower and cutting apparatus, more particularly the latter, was the model from which nearly all subsequent designers of mowers and reapers copied, and upon which they made their various improvements and modifications. The principal feature of this invention, the cutting apparatus, was described as follows:

The cutting blades are of lancet-point shape, and sharp on both sides; these are fixed side by side on an iron rod, in the position of saw teeth, and receive a vibrating motion from a crank to which the iron rod is attached; these blades project forward from the front edge of the platform toward the grain, and play through a corresponding row of permanent iron guards or fingers, which also project forward from the front of the platform. As the machine progresses forward the grain or grass comes in between the stationary guards or fingers and is cut off by the vibrating blades. \* \* \* The great point in this invention is the double finger, in combination with the vibrating blades, each finger being formed of an upper and lower half, with sufficient space between for the passage of the blades through them. The straw or grass to be cut is supported both above and below the edges of the blades, and is cut off as the blades pass through the fingers by the revolution of the crank.<sup>1</sup>

With some improvements, such as those which consisted in cutting away the rearmost portion of the upper part of the guard fingers to permit the shreds of grass to escape, in beveling the cutting sections beneath, and in serrating the cutting blades for reaping machines, this cutting apparatus has been applied to nearly all mowers

<sup>1</sup> American Agricultural Implements, Part I, pages 80 and 81, by R. L. Ardrey, 1894.



and reapers subsequently manufactured. The latest and most improved type of mower is distinguished by the following features, among others: It may be drawn by one or two horses, and is a two-wheeled machine. The structure, seat, and wearing parts are entirely of iron and steel. There is a chain or gear drive with pawls; a hinged cutter-bar, which is placed in front of the machine and can be folded for transport, with a divider attached; a lever to raise or lower the cutter-bar; and a lever for shifting the gear by which the scythe may be stopped or started. The various parts of the machine are to a considerable extent interchangeable.

Aside from the mowing and cutting apparatus, just discussed, the large number of machines or devices that have been invented for the purpose of lessening the labor of reaping and harvesting grain and other crops, forbids extended reference to each kind. The end sought to be attained has been to combine in one machine all the operations of the field, so that they shall be performed mechanically and as expeditiously as inventive genius can render possible. The development seems to have been somewhat as follows: To cut the hay or grain with machines; to cut and rake or gavel; to cut and bind; to cut and thrash. One of the first reaping machines of which history furnishes record was a stripping header used by the Gauls in the First century.

The principal steps in the progress in the United States, omitting mention of mowers and cutting apparatus previously discussed, is marked by the records of the Patent Office, as follows:<sup>1</sup>

*Reapers.*—Harvester, hand-raker, 1855; harvester, self-raker, 1856; harvester dropper, 1861; adjustable switch reel rakes, 1865, 1875, 1879, and 1884.

*Harvester Binders.*—Cord knotter, 1853; wire twister, 1856; straw braid twister, 1857; gleaner and binder, 1862; self-tripping cord knotter, 1867; wire twister, 1868; automatic trip, 1870; straw looper, 1870; vibrating binder, 1875; low-down binder, 1878; compressor automatic trip, 1879; low-down oblique delivery, 1884.

*Bean and Clover Harvesters.*—Clover harvester, 1849; clover stripping drum harvester, 1854; clover head cutter and breaker, 1856; bean stalk cutter and bundler, 1859; clover spiral drum harvester, 1861; bean underground cutter, 1865; clover head stripper, 1877; bean stalk puller, 1879.

*Corn Harvesters.*—Cutter, 1844; ear stripper, 1850; ear stripper, husker, and sheller, 1850; cutter and shocker, 1852, 1854, and 1856; high and low cutter, 1859; cutter and shocker, 1866; picker and husker, 1867; picker, husker, and shocker, 1869; cutter, husker, and shocker, 1875.

*Cotton Harvesters.*—Toothed picking disks and cylinders, 1850; hand picker, 1855; brush stripper, 1859; exhaust flexible pipe, 1859; fan blower, 1868; saw and

stripper brush, 1870; electric belt, 1870; picker stem, 1872; toothed cylinder, 1874; revolving picker stems, 1878; toothed cylinder, 1883; revolving picker stems, 1901.

*Hemp and Flax Harvesters.*—Revolving pulling drum and band, 1838; revolving pulling roller, 1852; reciprocating pulling jaw, 1863; stalk puller, 1866; side delivery, 1870 and 1871; stalk cutter, 1872.

*Combined Reapers and Thrashers.*—Reaper and thrasher, 1836; thrasher, separator, and sacker, 1846; head cutter and side deliverer, 1849; harvester and thrasher, 1877; steam harvester, 1879; header, thrasher, and separator, 1883.

*Horse Rakes.*—Flopover, 1822; spring tooth, 1839; dumping sulky, 1848; draft dumping, 1850; self-dumping, 1852; spring tooth self-dumping, 1856; draft dumping, 1856, 1859, 1866, 1876, and 1884; drag dumping, 1866 and 1870.

*Hay Forks.*—Spiral horse fork, 1867; harpoon horse fork, 1867; tilting horse fork, 1870; grapple horse fork, 1880; harpoon horse fork, 1881; hand fork, 1882; harpoon horse fork, 1884.

*Hay Loaders.*—Raker and loader, 1848 and 1850; reel raker and loader, 1858; walking reel loader, 1860; endless belt loader, 1861; side delivering raker and loader, 1864; lifting drag-rake loader, 1865; raker and loader, 1867; intermittent action loader, 1868; spiral elevator, 1870; raker and loader, 1876 and 1883.

*Hay Tedders.*—Tedder, 1855, 1861, and 1862; rake and tedder, 1865, 1867, and 1870; tedder, 1883.

The perfected grain harvester or harvester and binder of to-day is a machine constructed in nearly all its parts of iron and steel. It is of the utmost lightness consistent with strength and qualities of endurance, and has wide wheels and improved axle bearings to lighten the draft, adjustable cutting apparatus, grain wheel and divider to separate the standing from the cut grain, raising and lowering mechanism for adjusting the machine, a reel perfect in its operation for depositing the grain on the platform, an elevator for conducting the grain from the platform to the automatic binder, and an automatic twine binder successful in its action in binding the grain compactly in sheaves or bundles of uniform size. The automatic self-binder, invented by John F. Appleby, seems to have been the culminating improvement made in grain-harvesting machines, and is used, in one form or another, as an attachment to the harvester to bind by far the largest part of the grain harvested in this and other countries.

Climatic conditions do not permit the use of the combined reaper and thrasher east of the Rocky Mountains, but west of them it is possible, and machines of this nature are in extensive use on the large farms of the Pacific coast. It is a combination of a header and thrasher.

The development of the corn harvester has been

<sup>1</sup>The Growth of Industrial Art, by Hon. Benjamin Butterworth, Commissioner of Patents, 1892, pages 8 to 22.

along the lines and following the same principles as that of the grain harvester, but, in the case of the former implement, it was not until after the latter had been perfected that a machine which could be pronounced an entire success was placed upon the market. The cutting apparatus naturally differs essentially from that used in the grain harvester. By the use of this machine the corn is cut, formed into bundles and bound, and deposited in the field, either horizontally or in a vertical position.

The development of the beet-sugar industry has given an impetus during the last decade to the improvement of beet harvesting machines. The first patent for a root harvester, primarily designed for beets, was issued in 1881. This implement cut off the top and the tap root. The next patent was in 1883, and since that time, each year has shown new patents for beet harvesters, the machines first cutting off the tops and the sunburnt crown of the beet and throwing it to one side, then lifting the beet from the ground, shaking off the dirt, and conveying it by an elevator into a receptacle at the rear or a wagon at the side.

Since the invention of the Whitney cotton gin, many efforts have been made to contrive a machine that would accomplish in harvesting the cotton crop what the gin did in cleaning or separating the cotton from the seed. A large number of patents have been granted along this line, and thousands of dollars have been expended in exploiting them. At many state and interstate exhibitions throughout the cotton growing states for the last twenty-five years, machines designed for the purpose of harvesting cotton have been exhibited, for which complete efficiency was claimed. The practicability of such machines, however, up to this time has not been proven. Several of them have gathered cotton, but presented serious objections in some respects. The difficulty appears to be in the fact that the cotton plant does not mature uniformly, as well as in the inability of the machines to gather the cotton free of trash. The cotton plant frequently shows at one time open cotton, bolls half matured, and blossoms. With such a difference in the degree of maturity, cotton harvesters have thus far failed to gather the open cotton and at the same time leave uninjured that which is not open or unripe. Consequently, the primitive method of harvesting has been up to this time the most general. A patent has recently been granted on a cotton harvester, however, which, it is claimed, will satisfactorily solve the difficulties which former inventions of this character have presented. So confident is the inventor of success, that it is reported he has entered into a contract, carrying a considerable forfeiture, to gather the cotton from a large acreage in the state of Mississippi during next season. The machine is of the revolving picker stem or spindle type.

Haying tools and machinery have participated in the

improvement noted in the efficiency of other agricultural implements. The use of the mowing machine was followed by a demand for a more expeditious means of raking. The precursor of the modern horse rake was the wheeled hand-rake. This was followed by the spring-tooth hayrake, the dumping sulky, the draft dumping, the self-dumping, the spring-tooth dumping, etc. These implements as made at present by the several manufacturers are substantially similar in general principles and construction. The hand-dumping and self-dumping rakes are the two classes in most general use. These machines are constructed almost entirely of steel, the dumping mechanism of the former being operated by a lever and of the latter by a foot trip, throwing into connection a ratchet in the wheel to raise the teeth and leave the hay in the windrow.

The most recent improvement effected is the side-delivery rake, which is usually used in connection with a hay loader, as it leaves at the side a continuous, straight windrow.

Where weather conditions make it necessary that hay should be turned for the purpose of curing, while lying in the field, the hay tedder, embodying much the same principles of action and structural material as the horse hayrake, is used.

The hayfork and carrier for use in the field or barn, a great improvement over the common hand hayfork, as regards efficiency, is not the least of the labor-saving implements in use.

As previously noted, the principal inventions in this line have been the spiral horse fork, the single or double harpoon fork, the tilting horse fork, and the grapple horse fork. To facilitate the removal of the hay to a distance from the wagon, various styles of hay carriers in combination with the horse hayfork have been invented.

Intermittent efforts were made for many years to invent an efficient hay loader, until success was finally achieved. There are several practicable styles in use, all of which are drawn after the wagon and have two traction wheels which operate the rake or cylinder and elevator.

The use of hay and straw baling presses on farms is a comparatively recent development. While machines for this purpose have been employed to some extent for more than half a century, it was not until a later period—about fifteen or twenty years ago—that they became available for the use of farmers generally. The hay crop in earlier times was of no other value than to supply the needs of the farmer or of the contiguous community, as it could not be prepared for long-distance shipment. There were in some localities local presses, which created a market for the surplus hay of a considerable area surrounding them, but the introduction of the mounted hay-baling machine has given a definite value to the hay crop and the straw of the small

grains which they had not previously possessed. While the custom of baling hay and straw is far from being universal on the part of the farmers, it so far obtains that it might be said that a new industry has been reated, and the baling press traveling from one farm to another is nearly as common a sight in some localities as the portable thrashing machine or power cornsheller.

A crude form of press was manufactured and placed upon the market in 1853, which proved awkward in operation and lacking in efficiency. Succeeding this, in 1872, a form of continuous press was invented, which has since come into quite general use. The demand for greater baling capacity than was possible with horsepower led to the application of steam power to these machines. A later improvement is a self-tying device. An improved two-horse baling press has a capacity of from 10 to 15 tons a day.

*Thrashers and Separators.*—The economy of using a modern steam-power thrashing machine, as compared with the simple flail, is probably greater than that of any other mechanical aid in agricultural work. The operation of separating the grain, which was formerly, and is at present on many small farms, the intermittent work of an entire winter with the flail, can be accomplished by the steam-power thrasher in a few days.

The first noteworthy thrashing or separating machine invented in the United States, which was practicable, was that of Hiram A. and John A. Pitts, of Winthrop, Me., and may be said to be the prototype of the machines in use at the present time. A patent granted to H. A. Pitts in 1830 was for an improvement on a railway or tread power, which consisted in the substitution under the movable platform, connected by an endless chain, of rollers for the leather belt. Later the idea was conceived of combining this improvement, applied

to the old-fashioned thrasher, with the common fanning mill in a portable form. This operated successfully.<sup>1</sup> By successive development this machine was gradually improved, resulting in the effective labor-saving thrasher and separator now in use on the farms of the United States. The modern steam-power thrasher and separator is used for separating all small grains, its motive power being a traction or portable engine of from 6 to 25 horsepower. The bundles are fed to the machine, which cuts the bands, thrashes, winnows, and sieves the grain, and stacks the straw. A valuable improvement to the engine has been the adaptation of the fire box to the use of straw as fuel, thus materially reducing the fuel expense.

Hand and power cornshellers are made of varying capacity, and the improvement made in their efficiency is almost beyond measure. It has been stated that by the old hand process of shelling corn it would require the services of the entire population of the United States for one hundred days to shell the annual corn crop of the United States. Cornshellers are made to be operated by either steam power or hand, and it is claimed that certain types have a capacity of as much as 700 bushels per hour. Almost equal progress has been accomplished in clover hullers, bean-separators, etc.

It seems safe to predict, in view of the development of the automobile, that within the next decade this feature of modern invention will have found an additional application as a motive force in connection with agricultural implements of tillage, planting, and harvesting. An automobile lawn mower is already meeting with considerable favor where the conditions warrant its use.

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<sup>1</sup> American Agricultural Implements, Part I, page 105, by R. L. Ardrey, 1894.

TABLE 10.—AGRICULTURAL.

|   | United States. | California. | Connecticut. | Georgia.  | Illinois.    |
|---|----------------|-------------|--------------|-----------|--------------|
| 1 Number of establishments.....   | 715            | 20          | 5            | 10        | 91           |
| 2 Character of organization:  |                |             |              |           |              |
| 3 Individual.....   | 251            | 11          | 1            | 6         | 24           |
| 4 Firm and limited partnership.....   | 169            | 2           |              | 1         | 14           |
| 5 Incorporated company.....   | 295            | 7           | 4            | 3         | 56           |
| 6 Capital:  |                |             |              |           |              |
| 7 Total.....  | \$157,707,951  | \$1,852,157 | \$348,221    | \$454,988 | \$62,202,330 |
| 8 Land.....   | \$6,826,802    | \$233,832   | \$37,000     | \$101,980 | \$2,420,418  |
| 9 Buildings.....  | \$14,717,637   | \$185,669   | \$106,850    | \$38,750  | \$5,063,463  |
| 10 Machinery, tools, and implements.....  | \$12,184,083   | \$280,360   | \$42,275     | \$70,552  | \$3,181,227  |
| 11 Cash and sundries.....   | \$123,979,429  | \$1,152,296 | \$162,096    | \$243,706 | \$51,537,222 |
| 12 Proprietors and firm members.....  | 626            | 12          | 1            | 10        | 56           |
| 13 Salaried officials, clerks, etc.:  |                |             |              |           |              |
| 14 Total number.....  | 10,046         | 81          | 19           | 23        | 4,444        |
| 15 Total salaries.....  | \$8,368,210    | \$74,900    | \$13,330     | \$30,884  | \$3,419,742  |
| 16 Officers of corporations—  |                |             |              |           |              |
| 17 Number.....  | 590            | 7           | 2            | 6         | 130          |
| 18 Salaries.....  | \$1,817,184    | \$14,500    | \$1,100      | \$16,600  | \$319,219    |
| 19 General superintendents, managers, clerks, etc.—   |                |             |              |           |              |
| 20 Total number.....  | 9,456          | 74          | 17           | 17        | 4,814        |
| 21 Total salaries.....  | \$7,046,026    | \$60,400    | \$12,230     | \$14,284  | \$3,100,523  |
| 22 Men—   |                |             |              |           |              |
| 23 Number.....  | 8,839          | 70          | 17           | 17        | 4,057        |
| 24 Salaries.....  | \$6,786,638    | \$58,993    | \$12,280     | \$14,284  | \$2,981,349  |
| 25 Women—   |                |             |              |           |              |
| 26 Number.....  | 617            | 4           |              |           | 257          |
| 27 Salaries.....  | \$259,388      | \$1,407     |              |           | \$116,131    |
| 28 Wage-earners, including pieceworkers, and total wages:   |                |             |              |           |              |
| 29 Greatest number employed at any one time during the year.....                                    | 60,888         | 854         | 188          | 565       | 22,394       |
| 30 Least number employed at any one time during the year.....                                       | 31,524         | 303         | 141          | 201       | 13,434       |
| 31 Average number.....  | 46,582         | 562         | 154          | 360       | 18,231       |
| 32 Total wages.....   | \$22,450,880   | \$322,272   | \$62,111     | \$99,951  | \$9,064,951  |
| 33 Men, 16 years and over—  |                |             |              |           |              |
| 34 Average number.....  | 46,174         | 562         | 154          | 354       | 18,030       |
| 35 Wages.....   | \$22,358,158   | \$322,272   | \$62,111     | \$99,423  | \$9,021,597  |
| 36 Women, 16 years and over—  |                |             |              |           |              |
| 37 Average number.....  | 214            |             |              |           | 93           |
| 38 Wages.....   | \$66,042       |             |              |           | \$30,407     |
| 39 Children, under 16 years—  |                |             |              |           |              |
| 40 Average number.....  | 194            |             |              | 6         | 108          |
| 41 Wages.....   | \$26,680       |             |              | \$528     | \$12,050     |
| 42 Average number of wage-earners, including pieceworkers, employed during each month: <sup>1</sup> |                |             |              |           |              |
| 43 Men, 16 years and over—  |                |             |              |           |              |
| 44 January.....   | 49,694         | 489         | 182          | 489       | 18,523       |
| 45 February.....  | 51,850         | 520         | 182          | 480       | 19,653       |
| 46 March.....   | 53,250         | 621         | 179          | 423       | 20,467       |
| 47 April.....   | 51,612         | 678         | 179          | 284       | 19,634       |
| 48 May.....   | 48,765         | 696         | 178          | 230       | 18,760       |
| 49 June.....  | 45,419         | 718         | 167          | 218       | 17,131       |
| 50 July.....  | 41,440         | 592         | 34           | 213       | 16,043       |
| 51 August.....  | 40,001         | 429         | 114          | 245       | 16,164       |
| 52 September.....   | 38,351         | 503         | 145          | 309       | 15,506       |
| 53 October.....   | 40,898         | 520         | 151          | 385       | 16,775       |
| 54 November.....  | 44,745         | 503         | 159          | 454       | 18,397       |
| 55 December.....  | 48,563         | 475         | 172          | 515       | 19,393       |
| 56 Miscellaneous expenses:  |                |             |              |           |              |
| 57 Total.....   | \$11,894,656   | \$106,011   | \$9,961      | \$33,864  | \$5,346,224  |
| 58 Rent of works.....   | \$62,404       | \$335       | \$460        | \$780     | \$9,672      |
| 59 Taxes, not including internal revenue.....   | \$535,275      | \$8,204     | \$2,519      | \$3,809   | \$158,179    |
| 60 Rent of offices, interest, insurance, and all sundry expenses not hitherto included.....         | \$10,658,681   | \$96,672    | \$6,982      | \$29,775  | \$5,176,360  |
| 61 Contract work.....   | \$138,146      | \$300       |              |           | \$2,013      |
| 62 Materials used:  |                |             |              |           |              |
| 63 Total cost.....  | \$43,944,628   | \$538,568   | \$76,132     | \$437,799 | \$18,850,517 |
| 64 Principal materials—   |                |             |              |           |              |
| 65 Purchased in raw state.....  | \$47,377       |             |              |           | \$15,377     |
| 66 Purchased in partially manufactured form.....  | \$36,075,970   | \$403,671   | \$52,920     | \$387,979 | \$15,951,148 |
| 67 Fuel.....  | \$1,312,912    | \$21,875    | \$5,492      | \$6,813   | \$592,309    |
| 68 Rent of power and heat.....  | \$30,259       | \$120       |              | \$1,890   | \$19,652     |
| 69 Mill supplies.....   | \$485,864      | \$6,683     | \$3,231      | \$1,170   | \$166,169    |
| 70 All other materials.....   | \$4,109,995    | \$52,233    | \$7,458      | \$29,239  | \$1,464,447  |
| 71 Freight.....   | \$1,882,251    | \$53,986    | \$4,031      | \$11,238  | \$650,415    |
| 72 Products:  |                |             |              |           |              |
| 73 Total value, including custom work and repairing.....  | \$101,207,428  | \$1,357,849 | \$194,746    | \$737,652 | \$42,033,790 |
| 74 Products.....  | \$98,010,506   | \$1,066,624 | \$192,706    | \$731,152 | \$41,359,006 |
| 75 Custom work and repairing.....   | \$3,196,922    | \$291,225   | \$2,040      | \$6,500   | \$674,790    |
| 76 Kinds and quantities of products:  |                |             |              |           |              |
| 77 Implements of cultivation—   |                |             |              |           |              |
| 78 Cultivators—   |                |             |              |           |              |
| 79 Bean, number.....  | 189            | 10          |              |           | 1,354        |
| 80 Beet, number.....  | 2,008          | 10          |              |           | 20,637       |
| 81 Small, number.....   | 206,982        | 205         |              | 950       | 170,069      |
| 82 Wheeled, number.....   | 295,799        | 24          | 11           |           |              |
| 83 Scrapers—  |                |             |              |           |              |
| 84 Cotton, number.....  | 15,290         |             |              | 565       |              |
| 85 Celery hillers, number.....  | 130            |             |              |           |              |
| 86 Cotton sweeps, number.....   | 75,311         |             |              | 63,000    | 5,250        |
| 87 Equalizers, number.....  | 74,168         |             |              |           | 58,683       |
| 88 Harrows—   |                |             |              |           |              |
| 89 Disk, number.....  | 97,261         | 204         | 1,753        |           | 35,372       |
| 90 Other than disk, number.....   | 330,250        | 885         | 16           | 509       | 159,003      |
| 91 Hoes, dozens.....  | 277,173        |             | 27,350       |           |              |
| 92 Markers and furrows, number.....   | 854            |             |              |           |              |
| 93 Plows—   |                |             |              |           |              |
| 94 Disk, number.....  | 17,345         | 24          | 665          | 500       | 8,173        |
| 95 Shovel, number.....  | 102,320        |             |              | 1,545     | 13,531       |
| 96 Steam, number.....   | 207            | 5           |              |           |              |
| 97 Sulky or wheel, number.....  | 136,105        | 1,072       |              |           | 89,162       |
| 98 Walking, number.....   | 819,022        | 5,489       | 75           | 65,914    | 172,184      |
| 99 Potato covers and hillers, number.....   | 3,052          |             |              |           | 100          |
| 100 Rollers, number.....  | 12,590         | 13          |              |           | 690          |
| 101 Stalk cutters, number.....  | 18,425         |             |              |           | 7,988        |
| 102 Miscellaneous, number.....  | 2,704,623      | 5           |              |           | 10,580       |

<sup>1</sup>The average number of women, 16 years and over, and children, under 16 years, employed during each month, are not included in the table, because of the small number reported.

## IMPLEMENTS, BY STATES: 1900.

| Indiana.    | Iowa.       | Kansas.  | Kentucky.   | Maine.    | Massachusetts. | Michigan.   | Minnesota.  | Mississippi. | Missouri.   |    |
|-------------|-------------|----------|-------------|-----------|----------------|-------------|-------------|--------------|-------------|----|
| 45          | 24          | 4        | 9           | 17        | 9              | 59          | 18          | 3            | 26          | 1  |
| 11          | 3           | 1        | 2           | 6         | 3              | 25          | 6           | 2            | 11          | 2  |
| 3           | 3           | 3        | 3           | 4         | 3              | 14          | 2           | 1            | 7           | 3  |
| 31          | 15          | -----    | 4           | 7         | 3              | 20          | 10          | -----        | 8           | 4  |
| \$8,324,664 | \$1,878,090 | \$19,750 | \$1,735,595 | \$584,247 | \$706,472      | \$8,932,344 | \$3,730,055 | \$53,875     | \$1,412,165 | 5  |
| \$566,712   | \$71,940    | \$400    | \$169,400   | \$56,500  | \$16,700       | \$271,764   | \$111,066   | \$6,025      | \$129,735   | 6  |
| \$1,060,832 | \$214,367   | \$1,500  | \$189,887   | \$114,916 | \$37,300       | \$627,208   | \$319,719   | \$4,800      | \$176,565   | 7  |
| \$803,077   | \$195,087   | \$3,850  | \$240,550   | \$111,827 | \$122,783      | \$604,075   | \$110,569   | \$16,500     | \$283,845   | 8  |
| \$5,863,943 | \$1,396,716 | \$14,000 | \$1,135,758 | \$301,004 | \$529,739      | \$7,429,297 | \$3,186,701 | \$26,550     | \$822,020   | 9  |
| 20          | 16          | 10       | 6           | 15        | 9              | 60          | 10          | 5            | 25          | 10 |
| 518         | 154         | 6        | 95          | 27        | 35             | 620         | 182         | 2            | 81          | 11 |
| \$489,649   | \$123,472   | \$1,075  | \$124,720   | \$17,195  | \$45,358       | \$548,763   | \$189,832   | \$1,350      | \$101,977   | 12 |
| 55          | 24          | -----    | 12          | 7         | 2              | 44          | 20          | -----        | 21          | 13 |
| \$93,700    | \$34,934    | -----    | \$34,100    | \$4,300   | \$12,000       | \$84,818    | \$45,745    | -----        | \$41,963    | 14 |
| 463         | 130         | 6        | 83          | 20        | 33             | 576         | 162         | 2            | 60          | 15 |
| \$390,949   | \$88,538    | \$1,075  | \$90,620    | \$12,395  | \$33,358       | \$464,445   | \$144,037   | \$1,350      | \$90,014    | 16 |
| 429         | 116         | 6        | 82          | 17        | 33             | 532         | 152         | 2            | 59          | 17 |
| \$379,444   | \$84,622    | \$1,075  | \$90,360    | \$11,975  | \$33,358       | \$447,060   | \$139,637   | \$1,350      | \$59,294    | 18 |
| 24          | 14          | -----    | 1           | 3         | -----          | 44          | 10          | -----        | 1           | 19 |
| \$11,505    | \$3,916     | -----    | \$260       | \$920     | -----          | \$17,385    | \$4,400     | -----        | \$720       | 20 |
| 4,258       | 992         | 30       | 975         | 294       | 878            | 2,531       | 1,193       | 37           | 741         | 21 |
| 2,661       | 394         | 20       | 376         | 181       | 266            | 1,160       | 567         | 19           | 358         | 22 |
| 3,419       | 644         | 11       | 680         | 218       | 312            | 1,944       | 928         | 19           | 403         | 23 |
| \$1,593,881 | \$243,489   | \$2,460  | \$300,106   | \$100,033 | \$159,700      | \$952,636   | \$423,054   | \$4,000      | \$242,307   | 24 |
| 3,388       | 641         | 11       | 679         | 215       | 311            | 1,939       | 924         | 19           | 492         | 25 |
| \$1,585,611 | \$242,568   | \$2,460  | \$299,346   | \$99,277  | \$159,620      | \$951,213   | \$421,637   | \$4,000      | \$242,207   | 26 |
| 29          | 1           | -----    | -----       | 2         | -----          | 4           | 3           | -----        | -----       | 27 |
| \$7,993     | \$421       | -----    | -----       | \$600     | -----          | \$1,273     | \$1,300     | -----        | -----       | 28 |
| 2           | 2           | -----    | 1           | 1         | 1              | 1           | 1           | -----        | 1           | 29 |
| \$277       | \$500       | -----    | \$260       | \$156     | \$180          | \$150       | \$117       | -----        | \$100       | 30 |
| 3,539       | 594         | 11       | 922         | 227       | 307            | 2,144       | 1,076       | 30           | 470         | 31 |
| 3,652       | 617         | 11       | 874         | 232       | 309            | 2,144       | 1,070       | 30           | 566         | 32 |
| 3,693       | 776         | 13       | 784         | 252       | 320            | 2,183       | 1,070       | 30           | 473         | 33 |
| 8,722       | 806         | 25       | 611         | 265       | 328            | 2,145       | 1,037       | 30           | 500         | 34 |
| 3,660       | 776         | 30       | 500         | 252       | 336            | 1,922       | 839         | 21           | 532         | 35 |
| 3,476       | 680         | 21       | 408         | 218       | 331            | 1,707       | 866         | 15           | 560         | 36 |
| 3,347       | 587         | 1        | 407         | 181       | 326            | 1,027       | 911         | 3            | 507         | 37 |
| 3,386       | 606         | 1        | 506         | 151       | 247            | 1,973       | 874         | 3            | 443         | 38 |
| 3,246       | 587         | 1        | 621         | 165       | 203            | 1,651       | 830         | 5            | 444         | 39 |
| 2,752       | 549         | 1        | 724         | 215       | 304            | 1,625       | 735         | 12           | 462         | 40 |
| 2,939       | 559         | 1        | 856         | 209       | 320            | 1,862       | 818         | 14           | 454         | 41 |
| 3,294       | 551         | 5        | 929         | 208       | 341            | 1,977       | 958         | 32           | 459         | 42 |
| \$596,463   | \$96,540    | \$856    | \$148,009   | \$28,430  | \$44,577       | \$1,320,530 | \$241,388   | \$625        | \$65,325    | 43 |
| \$2,380     | \$1,807     | \$138    | \$914       | \$402     | \$11,277       | \$2,603     | \$1,504     | -----        | \$3,591     | 44 |
| \$53,517    | \$7,085     | -----    | \$12,072    | \$2,699   | \$7,781        | \$32,129    | \$7,792     | \$150        | \$4,712     | 45 |
| \$528,426   | \$87,545    | \$358    | \$135,023   | \$25,329  | \$25,609       | \$1,256,627 | \$229,602   | \$475        | \$56,092    | 46 |
| \$2,140     | \$103       | \$360    | -----       | -----     | -----          | \$36,271    | \$2,490     | -----        | \$930       | 47 |
| \$2,619,621 | \$669,989   | \$10,819 | \$466,193   | \$98,197  | \$216,313      | \$2,482,235 | \$713,604   | \$15,865     | \$406,977   | 48 |
| \$3,964     | \$178       | -----    | -----       | \$67      | \$566          | \$610       | \$348       | -----        | -----       | 49 |
| \$2,087,126 | \$575,165   | \$9,760  | \$365,458   | \$57,434  | \$186,463      | \$2,237,456 | \$616,615   | \$12,295     | \$328,845   | 50 |
| \$90,467    | \$18,444    | \$229    | \$10,117    | \$12,089  | \$7,142        | \$51,673    | \$22,805    | \$410        | \$14,445    | 51 |
| \$449       | \$1,533     | -----    | \$200       | \$1,167   | \$40           | \$850       | \$526       | -----        | -----       | 52 |
| \$17,602    | \$4,752     | \$100    | \$3,595     | \$5,602   | \$1,395        | \$14,734    | \$6,544     | \$150        | \$4,200     | 53 |
| \$326,269   | \$46,409    | -----    | \$71,030    | \$10,837  | \$20,200       | \$137,080   | \$39,829    | \$1,910      | \$25,125    | 54 |
| \$143,684   | \$23,508    | \$675    | \$25,193    | \$7,951   | \$12           | \$33,932    | \$31,937    | \$600        | \$34,362    | 55 |
| \$6,415,081 | \$1,508,667 | \$18,275 | \$1,320,714 | \$290,261 | \$534,789      | \$6,339,508 | \$1,763,780 | \$36,350     | \$953,965   | 56 |
| \$6,195,750 | \$1,488,232 | \$18,200 | \$1,319,609 | \$279,387 | \$502,565      | \$6,051,656 | \$1,727,085 | \$36,325     | \$943,018   | 57 |
| \$219,331   | \$20,435    | \$75     | \$1,105     | \$10,374  | \$32,224       | \$287,852   | \$36,695    | \$25         | \$10,947    | 58 |
| -----       | -----       | -----    | 24          | -----     | -----          | 50          | -----       | -----        | -----       | 59 |
| 9,127       | 800         | -----    | 5,000       | 561       | 409            | 300         | 1,024       | 1,750        | 6,825       | 60 |
| 8,702       | 7,500       | -----    | 4,102       | -----     | 630            | 9,902       | -----       | -----        | 5,175       | 61 |
| 115         | -----       | -----    | 10,000      | -----     | -----          | 18,727      | -----       | -----        | -----       | 62 |
| -----       | -----       | -----    | 5,055       | -----     | -----          | -----       | -----       | -----        | 50          | 63 |
| 3,600       | 5,000       | 1,000    | -----       | -----     | -----          | 200         | 5,660       | -----        | 1,405       | 64 |
| 2,650       | 140         | -----    | 76          | 364       | 325            | -----       | -----       | -----        | -----       | 65 |
| 1,500       | 7,420       | -----    | 4,000       | 112       | 1,015          | 15,486      | 11,833      | 6,000        | 453         | 66 |
| -----       | 34,560      | -----    | -----       | 251       | 9,104          | 34,089      | -----       | -----        | -----       | 67 |
| 180         | -----       | -----    | 1,000       | -----     | -----          | -----       | -----       | -----        | 212         | 68 |
| 6,306       | 150         | -----    | 18,106      | 500       | 200            | 160         | -----       | 3,000        | 691         | 69 |
| -----       | -----       | -----    | 200         | -----     | -----          | -----       | -----       | -----        | -----       | 70 |
| 11,681      | 2,655       | -----    | 3,000       | 100       | 140            | 1,500       | -----       | -----        | 383         | 71 |
| 181,187     | 10,833      | -----    | 102,696     | 1,397     | 17,510         | 20,481      | 3,870       | -----        | 3,534       | 72 |
| -----       | -----       | -----    | 1,000       | 812       | 150            | -----       | -----       | -----        | -----       | 73 |
| -----       | 8           | -----    | 4           | 124       | 300            | 1,634       | -----       | -----        | 4           | 74 |
| 125         | -----       | -----    | 1,000       | 116       | 237            | 1,347       | -----       | -----        | 624         | 75 |
| 103,800     | 854         | 86       | -----       | -----     | -----          | -----       | 12,000      | -----        | -----       | 76 |

TABLE 10.—AGRICULTURAL

|  | Nebraska. | New Hamp-<br>shire. | New Jersey. | New York.    | North Caro-<br>lina. |
|--|-----------|---------------------|-------------|--------------|----------------------|
| 1 Number of establishments .....   | 9         | 12                  | 11          | 87           | 9                    |
| 2 Character of organization:   |           |                     |             |              |                      |
| 3 Individual .....   | 1         | 9                   | 8           | 23           | 4                    |
| 4 Firm and limited partnership .....   | 4         | 3                   | 2           | 23           | 4                    |
| 5 Incorporated company .....   | 4         |                     | 1           | 31           | 1                    |
| 6 Capital:   |           |                     |             |              |                      |
| 7 Total .....  | \$184,081 | \$112,003           | \$249,957   | \$20,115,962 | \$77,537             |
| 8 Land .....   | \$4,100   | \$6,370             | \$24,400    | \$634,017    | \$3,330              |
| 9 Buildings .....  | \$19,950  | \$16,600            | \$55,891    | \$2,262,183  | \$12,600             |
| 10 Machinery, tools, and implements .....  | \$79,163  | \$27,000            | \$44,935    | \$1,618,470  | \$24,600             |
| 11 Cash and sundries .....   | \$89,868  | \$61,533            | \$124,731   | \$15,600,392 | \$37,007             |
| 12 Proprietors and firm members .....  | 9         | 15                  | 13          | 80           | 14                   |
| 13 Salaried officials, clerks, etc.:   |           |                     |             |              |                      |
| 14 Total number .....  | 11        | 4                   | 8           | 659          | 7                    |
| 15 Total salaries .....  | \$6,705   | \$2,300             | \$11,289    | \$675,999    | \$3,970              |
| 16 Officers of corporations—   |           |                     |             |              |                      |
| 17 Number .....  | 4         |                     | 3           | 54           | 1                    |
| 18 Salaries .....  | \$2,700   |                     | \$6,900     | \$152,623    | \$1,500              |
| 19 General superintendents, managers, clerks, and etc.—                                      |           |                     |             |              |                      |
| 20 Total number .....  | 7         | 4                   | 5           | 605          | 6                    |
| 21 Total salaries .....  | \$4,005   | \$2,300             | \$4,389     | \$523,376    | \$2,470              |
| 22 Men—  |           |                     |             |              |                      |
| 23 Number .....  | 6         | 4                   | 5           | 516          | 6                    |
| 24 Salaries .....  | \$3,755   | \$2,300             | \$4,389     | \$489,809    | \$2,470              |
| 25 Women—  |           |                     |             |              |                      |
| 26 Number .....  | 1         |                     |             | 89           |                      |
| 27 Salaries .....  | \$250     |                     |             | \$33,567     |                      |
| 28 Wage-earners, including pieceworkers, and total wages:                                    |           |                     |             |              |                      |
| 29 Greatest number employed at any one time during the year .....                            | 170       | 74                  | 213         | 7,662        | 127                  |
| 30 Least number employed at any one time during the year .....                               | 61        | 32                  | 80          | 2,921        | 82                   |
| 31 Average number .....  | 87        | 45                  | 147         | 5,551        | 91                   |
| 32 Total wages .....   | \$41,128  | \$16,626            | \$60,033    | \$2,797,269  | \$20,169             |
| 33 Men, 16 years and over—   |           |                     |             |              |                      |
| 34 Average number .....  | 83        | 44                  | 145         | 5,522        | 86                   |
| 35 Wages .....   | \$40,728  | \$16,326            | \$59,408    | \$2,790,620  | \$19,719             |
| 36 Women, 16 years and over—   |           |                     |             |              |                      |
| 37 Average number .....  |           | 1                   | 2           | 24           |                      |
| 38 Wages .....   |           | \$300               | \$675       | \$6,022      |                      |
| 39 Children, under 16 years—   |           |                     |             |              |                      |
| 40 Average number .....  | 4         |                     |             | 5            | 5                    |
| 41 Wages .....   | \$400     |                     |             | \$627        | \$450                |
| 42 Average number of wage-earners, including pieceworkers, employed during each month:       |           |                     |             |              |                      |
| 43 Men, 16 years and over—   |           |                     |             |              |                      |
| 44 January .....   | 107       | 50                  | 170         | 6,197        | 93                   |
| 45 February .....  | 125       | 53                  | 186         | 6,460        | 93                   |
| 46 March .....   | 131       | 59                  | 200         | 6,756        | 98                   |
| 47 April .....   | 126       | 70                  | 205         | 6,830        | 92                   |
| 48 May .....   | 82        | 68                  | 179         | 6,701        | 90                   |
| 49 June .....  | 43        | 62                  | 135         | 6,138        | 83                   |
| 50 July .....  | 85        | 6                   | 86          | 4,899        | 82                   |
| 51 August .....  | 85        | 7                   | 88          | 3,929        | 78                   |
| 52 September .....   | 75        | 23                  | 93          | 3,362        | 79                   |
| 53 October .....   | 43        | 38                  | 102         | 4,083        | 78                   |
| 54 November .....  | 47        | 43                  | 146         | 5,093        | 78                   |
| 55 December .....  | 51        | 45                  | 156         | 5,707        | 85                   |
| 56 Miscellaneous expenses:   |           |                     |             |              |                      |
| 57 Total .....   | \$4,646   | \$3,485             | \$23,827    | \$833,948    | \$1,971              |
| 58 Rent of works .....   | \$817     | \$300               | \$60        | \$6,919      | \$35                 |
| 59 Taxes, not including internal revenue .....   | \$374     | \$359               | \$1,018     | \$39,652     | \$427                |
| 60 Rent of offices, interest, insurance, and all sundry expenses not hitherto included ..... | \$3,455   | \$2,776             | \$22,449    | \$760,500    | \$1,024              |
| 61 Contract work .....   |           | \$50                | \$300       | \$6,787      | \$485                |
| 62 Materials used:   |           |                     |             |              |                      |
| 63 Total cost .....  | \$82,856  | \$22,364            | \$115,697   | \$4,824,871  | \$41,017             |
| 64 Principal materials—  |           |                     |             |              |                      |
| 65 Purchased in raw state .....  |           | \$1,849             |             | \$3,921      |                      |
| 66 Purchased in partially manufactured form .....  | \$74,598  | \$14,316            | \$68,036    | \$3,835,042  | \$32,700             |
| 67 Fuel .....  | \$2,407   | \$1,780             | \$2,958     | \$165,173    | \$3,070              |
| 68 Rent of power and heat .....  |           | \$60                | \$10        | \$198        |                      |
| 69 Mill supplies .....   | \$716     | \$502               | \$1,295     | \$72,248     | \$435                |
| 70 All other materials .....   | \$620     | \$2,925             | \$37,619    | \$565,653    | \$2,400              |
| 71 Freight .....   | \$4,515   | \$382               | \$5,779     | \$181,641    | \$2,332              |
| 72 Products:   |           |                     |             |              |                      |
| 73 Total value, including custom work and repairing .....                                    | \$176,446 | \$79,891            | \$249,963   | \$10,537,254 | \$99,128             |
| 74 Products .....  | \$178,946 | \$79,116            | \$243,013   | \$10,071,310 | \$97,766             |
| 75 Custom work and repairing .....   | \$2,500   | \$775               | \$6,950     | \$465,944    | \$1,362              |
| 76 Kinds and quantities of products:   |           |                     |             |              |                      |
| 77 Implements of cultivation—  |           |                     |             |              |                      |
| 78 Cultivators—  |           |                     |             |              |                      |
| 79 Bean, number .....  |           |                     |             | 45           |                      |
| 80 Beet, number .....  |           |                     |             | 44           |                      |
| 81 Small, number .....   |           | 8                   | 11,144      | 25,686       | 1,600                |
| 82 Wheeled, number .....   | 1,189     | 100                 | 2,484       | 5,136        |                      |
| 83 Scrapers—   |           |                     |             |              |                      |
| 84 Cotton, number .....  |           |                     |             |              |                      |
| 85 Celery hillers, number .....  |           |                     |             |              |                      |
| 86 Cotton sweeps, number .....   |           |                     |             |              | 400                  |
| 87 Equalizers, number .....  |           |                     |             |              |                      |
| 88 Harrows—  |           |                     |             |              |                      |
| 89 Disk, number .....  |           | 150                 |             | 20,661       | 900                  |
| 90 Other than disk, number .....   | 150       | 190                 | 7,865       | 69,756       | 1,000                |
| 91 Hoes, dozens .....  |           | 13                  |             | 61,467       |                      |
| 92 Markers and furrowers, number .....   |           |                     | 170         | 312          |                      |
| 93 Plows—  |           |                     |             |              |                      |
| 94 Disk, number .....  |           |                     |             | 20           |                      |
| 95 Shovel, number .....  |           |                     |             | 5,103        |                      |
| 96 Steam, number .....   |           |                     |             |              |                      |
| 97 Sulky or wheel, number .....  |           |                     | 15          | 2,879        |                      |
| 98 Walking, number .....   |           | 252                 | 490         | 68,066       | 2,050                |
| 99 Potato coverers and hillers, number .....   |           |                     |             | 1,178        |                      |
| 100 Rollers, number .....  |           |                     | 11          | 1,565        |                      |
| 101 Stalk cutters, number .....  |           |                     |             |              | 25                   |
| 102 Miscellaneous, number .....  |           | 6,000               |             |              | 2,538,500            |

## IMPLEMENTS, BY STATES, 1900—Continued.

| Ohio.        | Pennsylvania. | South Carolina. | South Dakota. | Tennessee. | Texas.    | Vermont.  | Virginia. | Wisconsin.   | All other states. <sup>1</sup> |    |
|--------------|---------------|-----------------|---------------|------------|-----------|-----------|-----------|--------------|--------------------------------|----|
| 78           | 50            | 5               | 3             | 11         | 5         | 17        | 13        | 51           | 11                             | 1  |
| 15           | 26            | 2               | 2             | 5          | 2         | 6         | 6         | 19           | 1                              | 2  |
| 21           | 15            | 2               | 1             | 2          | 1         | 8         | 5         | 9            | 6                              | 3  |
| 42           | 9             | 1               |               | 4          | 2         | 3         | 2         | 23           | 4                              | 4  |
| \$26,628,442 | \$4,102,327   | \$14,575        | \$24,385      | \$417,689  | \$57,685  | \$484,277 | \$472,868 | \$15,291,554 | \$289,811                      | 5  |
| \$1,031,012  | \$184,407     | \$450           | \$2,100       | \$27,465   | \$1,225   | \$20,500  | \$40,231  | \$600,163    | \$13,160                       | 6  |
| \$2,199,037  | \$554,284     | \$1,750         | \$2,000       | \$30,850   | \$10,650  | \$64,700  | \$68,945  | \$1,222,771  | \$32,600                       | 7  |
| \$1,898,782  | \$440,382     | \$2,975         | \$8,500       | \$65,538   | \$12,353  | \$37,778  | \$86,820  | \$1,716,253  | \$24,529                       | 8  |
| \$18,499,611 | \$2,923,254   | \$9,400         | \$11,785      | \$263,836  | \$33,407  | \$331,301 | \$268,867 | \$11,752,867 | \$169,522                      | 9  |
| 58           | 64            | 7               | 4             | 11         | 4         | 19        | 20        | 42           | 11                             | 10 |
| 1,588        | 197           |                 |               | 38         | 5         | 24        | 29        | 1,180        | 9                              | 11 |
| \$1,308,775  | \$183,549     |                 |               | \$35,065   | \$7,950   | \$18,267  | \$21,738  | \$336,316    | \$9,040                        | 12 |
| 109          | 13            |                 |               | 8          | 4         | 1         | 2         | 50           | 2                              | 13 |
| \$283,027    | \$14,270      |                 |               | \$16,500   | \$7,700   | \$2,000   | \$2,720   | \$116,165    | \$3,600                        | 14 |
| 1,479        | 184           |                 |               | 30         | 1         | 23        | 27        | 1,121        | 7                              | 15 |
| \$1,086,748  | \$169,279     |                 |               | \$18,565   | \$250     | \$16,267  | \$19,018  | \$720,151    | \$5,440                        | 16 |
| 1,401        | 167           |                 |               | 25         | 1         | 23        | 25        | 1,065        | 6                              | 17 |
| \$1,061,095  | \$164,040     |                 |               | \$17,164   | \$250     | \$16,267  | \$17,852  | \$694,076    | \$5,050                        | 18 |
| 78           | 17            |                 |               | 5          |           |           | 2         | 56           | 1                              | 19 |
| \$34,653     | \$5,239       |                 |               | \$1,401    |           |           | \$1,166   | \$26,075     | \$390                          | 20 |
| 9,021        | 1,932         | 22              | 15            | 524        | 42        | 262       | 477       | 4,296        | 121                            | 21 |
| 4,072        | 1,415         | 12              | 9             | 246        | 21        | 207       | 197       | 2,079        | 59                             | 22 |
| 6,852        | 1,664         | 10              | 11            | 373        | 28        | 211       | 278       | 3,289        | 70                             | 23 |
| \$3,271,163  | \$688,044     | \$2,006         | \$4,929       | \$113,425  | \$10,419  | \$85,846  | \$107,980 | \$1,625,765  | \$34,474                       | 24 |
| 6,795        | 1,557         | 10              | 11            | 354        | 28        | 204       | 272       | 3,276        | 68                             | 25 |
| \$3,254,063  | \$686,790     | \$2,606         | \$4,929       | \$110,834  | \$10,419  | \$84,124  | \$107,080 | \$1,622,606  | \$34,164                       | 26 |
| 44           | 1             |                 |               | 3          |           | 7         |           |              |                                | 27 |
| \$14,588     | \$261         |                 |               | \$480      |           | \$1,722   |           |              |                                | 28 |
| 13           | 6             |                 |               | 16         |           |           | 6         | 13           | 2                              | 29 |
| \$2,512      | \$993         |                 |               | \$2,111    |           |           | \$900     | \$3,159      | \$310                          | 30 |
| 7,612        | 1,718         | 16              | 10            | 432        | 40        | 202       | 256       | 3,733        | 55                             | 31 |
| 7,922        | 1,726         | 16              | 12            | 438        | 40        | 211       | 273       | 3,870        | 56                             | 32 |
| 8,187        | 1,716         | 11              | 12            | 425        | 31        | 219       | 271       | 3,781        | 59                             | 33 |
| 7,946        | 1,719         | 12              | 13            | 313        | 22        | 236       | 278       | 3,426        | 79                             | 34 |
| 7,158        | 1,633         | 12              | 14            | 279        | 22        | 234       | 272       | 3,215        | 74                             | 35 |
| 6,674        | 1,590         | 10              | 10            | 184        | 21        | 234       | 268       | 3,303        | 79                             | 36 |
| 5,649        | 1,441         | 10              | 10            | 233        | 22        | 193       | 266       | 3,192        | 87                             | 37 |
| 5,494        | 1,438         | 10              | 10            | 329        | 22        | 155       | 269       | 2,907        | 88                             | 38 |
| 5,334        | 1,447         | 8               | 10            | 354        | 22        | 169       | 265       | 2,753        | 77                             | 39 |
| 5,968        | 1,395         | 8               | 10            | 397        | 22        | 196       | 277       | 2,612        | 57                             | 40 |
| 6,356        | 1,404         | 8               | 9             | 424        | 30        | 204       | 268       | 3,107        | 48                             | 41 |
| 7,246        | 1,457         | 10              | 8             | 444        | 40        | 201       | 296       | 3,430        | 48                             | 42 |
| \$1,483,605  | \$196,719     | \$981           | \$1,141       | \$12,170   | \$23,928  | \$15,909  | \$26,183  | \$699,865    | \$18,525                       | 43 |
| \$2,423      | \$3,173       | \$300           | \$120         | \$245      | \$120     | \$169     | \$3,500   | \$7,410      | \$550                          | 44 |
| \$106,929    | \$11,948      | \$31            | \$221         | \$1,669    | \$418     | \$2,303   | \$2,672   | \$35,911     | \$1,185                        | 45 |
| \$1,346,122  | \$153,028     | \$600           | \$300         | \$10,196   | \$3,190   | \$13,487  | \$20,011  | \$647,588    | \$16,790                       | 46 |
| \$28,131     | \$28,570      |                 |               | \$60       | \$20,200  |           |           | \$8,956      |                                | 47 |
| \$6,059,515  | \$1,232,242   | \$5,394         | \$6,222       | \$201,712  | \$66,572  | \$163,515 | \$128,434 | \$3,200,690  | \$87,168                       | 48 |
| \$6,480      | \$12,767      |                 |               | \$123,905  | \$61,937  | \$240     | \$310     | \$500        |                                | 49 |
| \$4,994,124  | \$948,507     | \$4,759         | \$3,601       | \$8,478    | \$1,555   | \$117,542 | \$102,015 | \$2,401,560  | \$79,998                       | 50 |
| \$132,978    | \$36,896      | \$171           | \$515         | \$100      |           | \$9,345   | \$7,843   | \$31,081     | \$1,902                        | 51 |
| \$946        | \$40          |                 |               | \$11,100   |           | \$110     | \$325     | \$628        | \$1,450                        | 52 |
| \$121,232    | \$15,245      | \$60            | \$106         | \$2,956    |           | \$2,956   | \$1,302   | \$18,945     | \$509                          | 53 |
| \$392,918    | \$163,461     | \$224           | \$1,400       | \$47,888   | \$1,745   | \$27,480  | \$14,378  | \$625,000    | \$2,558                        | 54 |
| \$410,841    | \$65,326      | \$180           | \$600         | \$10,181   | \$1,020   | \$6,542   | \$2,051   | \$162,976    | \$751                          | 55 |
| \$13,975,268 | \$3,198,471   | \$14,090        | \$19,580      | \$463,406  | \$117,370 | \$369,537 | \$343,291 | \$7,886,363  | \$171,937                      | 56 |
| \$13,053,868 | \$3,136,576   | \$13,990        | \$9,580       | \$461,786  | \$117,270 | \$355,094 | \$333,791 | \$7,794,137  | \$157,943                      | 57 |
| \$921,400    | \$61,895      | \$100           | \$10,000      | \$1,620    | \$100     | \$14,443  | \$9,500   | \$92,226     | \$13,989                       | 58 |
|              | 60            |                 |               |            |           |           |           |              |                                | 59 |
| 59,029       | 36,854        |                 |               | 4,000      | 125       | 40        | 6,000     | 6,119        |                                | 60 |
| 42,957       | 3,144         | 130             |               |            |           |           |           | 27,769       |                                | 61 |
|              |               |                 |               | 4,500      |           |           |           |              |                                | 62 |
|              |               |                 |               |            |           |           |           |              |                                | 63 |
| 200          | 130           |                 | 25            |            |           |           |           |              |                                | 64 |
|              |               |                 |               |            |           |           |           |              |                                | 65 |
|              |               |                 |               |            |           |           |           |              |                                | 66 |
| 27,551       | 1,375         |                 |               |            |           |           | 1,700     | 6,690        |                                | 67 |
| 50,033       | 4,653         |                 | 75            | 300        | 1         |           | 2,350     | 34,324       | 215                            | 68 |
| 58,283       | 8,400         |                 |               | 35,000     |           | 6,952     |           |              |                                | 69 |
|              | 292           |                 |               |            |           |           |           |              |                                | 70 |
| 2,031        | 549           |                 |               | 1,090      | 3,400     |           | 3,550     | 625          |                                | 71 |
| 48,311       | 2             |                 |               | 4,993      |           |           |           |              |                                | 72 |
|              |               |                 |               |            |           |           |           |              |                                | 73 |
| 25           | 13,727        |                 | 400           | 24,373     | 50        | 1,660     | 32,110    | 23,243       | 250                            | 74 |
| 60,472       | 12            |                 |               |            |           |           |           | 29,242       | 460                            | 75 |
|              | 3,749         |                 |               |            |           |           | 500       | 300          |                                | 76 |
| 3,973        | 100           |                 |               |            |           |           |           | 10           |                                | 77 |
| 1,376        |               |                 |               |            |           |           |           | 492          |                                | 78 |
| 32,623       |               | 100             |               |            | 25        |           |           |              | 50                             | 79 |

<sup>1</sup> Includes establishments distributed as follows: Alabama, 1; Colorado, 1; Delaware, 1; Maryland, 2; North Dakota, 1; Utah, 2; Washington, 2; West Virginia, 1.

TABLE 10.—AGRICULTURAL

|  | United States. | California. | Connecticut. | Georgia. | Illinois. |
|--|----------------|-------------|--------------|----------|-----------|
| Kinds and quantities of products—Continued.              |                |             |              |          |           |
| Seeders and planters—                                    |                |             |              |          |           |
| Planters—  |                |             |              |          |           |
| 50 Bean, number.....                                     | 200            |             |              |          |           |
| Corn—  |                |             |              |          |           |
| 81 Hand, number.....                                     | 129,515        |             |              |          | 7,958     |
| 82 Horse, number.....                                    | 78,185         |             |              |          | 51,800    |
| 83 Cotton, number.....                                   | 45,675         |             |              | 19,674   | 12,737    |
| 84 Potato, number.....                                   | 25,838         |             |              |          | 40        |
| Drills—  |                |             |              |          |           |
| 85 Beet, number.....                                     | 5,302          |             |              |          | 352       |
| 86 Corn, number.....                                     | 21,940         |             |              |          | 7,195     |
| 87 Grain, number.....                                    | 91,635         | 225         | 157          | 84       | 11,879    |
| 88 Grain sowers, number.....                             | 36,862         | 224         |              |          | 10,817    |
| 89 Lime spreaders, number.....                           | 474            |             |              |          |           |
| 90 Manure spreaders, number.....                         | 5,263          |             |              | 3,000    |           |
| 91 Listers, number.....                                  | 26,995         |             |              |          | 19,759    |
| 92 Seed sowers, number.....                              | 83,283         | 763         |              |          | 3,297     |
| 93 Tobacco transplanters, number.....                    | 3,788          |             |              |          |           |
| 94 Miscellaneous, number.....                            | 330            |             |              |          | 200       |
| Harvesting implements—                                   |                |             |              |          |           |
| 95 Grain cradles, number.....                            | 36,163         |             |              |          |           |
| Harvesters—  |                |             |              |          |           |
| 96 Bean, number.....                                     | 1,425          |             |              |          |           |
| 97 Corn, number.....                                     | 20,707         |             |              |          | 18,098    |
| 98 Grain, number.....                                    | 187            | 180         |              |          |           |
| 99 Other, number.....                                    | 6,283          |             |              |          | 4,217     |
| 100 Harvesters and binders combined, number.....         | 233,355        |             |              |          | 160,467   |
| 101 Hay carriers, number.....                            | 54,303         |             |              |          | 20,700    |
| Hayforks—  |                |             |              |          |           |
| 102 Hand, dozens.....                                    | 152,840        |             |              |          |           |
| 103 Horse, number.....                                   | 51,770         | 2,274       |              |          | 6,000     |
| 104 Hay loaders, number.....                             | 7,273          |             |              |          | 4,517     |
| Hayrakes—  |                |             |              |          |           |
| 105 Hand, dozens.....                                    | 58,013         |             | 2,753        |          |           |
| 106 Horse, number.....                                   | 216,345        | 226         |              |          | 109,670   |
| 107 Hay stackers, number.....                            | 12,069         | 50          |              |          | 8,004     |
| 108 Hay tedders, number.....                             | 14,510         |             |              |          | 258       |
| 109 Mowers, number.....                                  | 397,561        |             |              |          | 245,204   |
| 110 Mowers and reapers combined, number.....             | 1,055          |             |              |          |           |
| 111 Potato diggers, number.....                          | 21,033         |             |              |          | 1,832     |
| 112 Potato hooks, number.....                            | 20,860         |             |              |          | 100       |
| 113 Reapers, number.....                                 | 35,945         |             |              |          | 16,387    |
| 114 Scythes, number.....                                 | 718,453        |             | 105,812      |          |           |
| 115 Scythe snaths, number.....                           | 537,214        |             |              |          |           |
| 116 Sickles, number.....                                 | 446,650        |             |              |          | 395,239   |
| 117 Stacks, number.....                                  | 247            |             |              |          |           |
| 118 Miscellaneous, number.....                           | 41,067         |             |              |          | 4,489     |
| Seed separators—   |                |             |              |          |           |
| Separators—  |                |             |              |          |           |
| 119 Bean, number.....                                    | 40             |             |              |          |           |
| 120 Other, number.....                                   | 1,707          |             |              |          | 863       |
| 121 Clover hullers, number.....                          | 661            |             |              |          | 117       |
| 122 Corn huskers, number.....                            | 10,726         |             |              |          | 1,086     |
| Corn shellers—   |                |             |              |          |           |
| 123 Hand, number.....                                    | 106,381        |             |              |          | 26,707    |
| 124 Power, number.....                                   | 3,185          |             |              |          | 3,620     |
| 125 Fanning mills, number.....                           | 30,369         | 100         |              |          | 1,244     |
| Thrashers—   |                |             |              |          |           |
| 126 Horsepower, number.....                              | 1,814          |             |              |          |           |
| 127 Steam power, number.....                             | 3,651          |             |              |          |           |
| 128 Thrashers and separators combined, number.....       | 5,394          | 80          |              |          |           |
| 129 Miscellaneous, number.....                           | 7,578,853      | 41,042      | 900,853      |          | 2,121,101 |
| Miscellaneous—   |                |             |              |          |           |
| 130 Animal pokes, number.....                            | 32,000         |             |              |          |           |
| 131 Artesian-well boring tools and castings, number..... | 80             | 50          |              |          | 30        |
| 132 Bean pullers, number.....                            | 207            |             |              |          |           |
| 133 Binders, number.....                                 | 16             |             |              |          |           |
| 134 Cane mills, number.....                              | 2,454          |             |              |          | 4         |
| 135 Carts, number.....                                   | 7,001          | 5           |              |          | 6,546     |
| 136 Check rollers, number.....                           | 44,245         |             |              |          | 39,653    |
| 137 Churns, butter workers, etc., number.....            | 9,506          |             |              |          |           |
| 138 Cider and wine mills, number.....                    | 6,167          |             |              |          | 1,118     |
| 139 Corn cleaners, number.....                           | 93             |             | 33           |          | 85        |
| 140 Corn hooks, number.....                              | 64,789         |             |              |          |           |
| 141 Corn knives, number.....                             | 22,130         |             |              |          |           |
| 142 Cotton gins, number.....                             | 213            |             | 7,848        |          | 376       |
| 143 Cotton presses, number.....                          | 18             |             |              | 200      |           |
| 144 Ensilage cutters, number.....                        | 11,738         |             |              |          | 440       |
| 145 Hay cutters, number.....                             | 13,885         |             |              |          |           |
| 146 Ditching machines, number.....                       | 25             |             |              |          |           |
| 147 Engines and boilers, number.....                     | 497            | 10          |              |          | 75        |
| 148 Farm trucks, number.....                             | 1,376          | 2           |              |          | 773       |
| 149 Feed and ensilage elevators, number.....             | 2,632          |             |              |          | 242       |
| 150 Feed steamers and boilers, number.....               | 2,184          |             |              |          | 114       |
| 151 Fence machines, number.....                          | 201            |             |              |          | 200       |
| 152 Fruit graders, number.....                           | 195            | 15          |              |          |           |
| 153 Fruit presses, number.....                           | 1,411          | 50          |              |          |           |
| 154 Gardening implements, number.....                    | 1,868,099      |             |              |          | 21,269    |
| 155 Grinding mills, number.....                          | 13,234         |             |              |          | 2,843     |
| 156 Grubbing machines, number.....                       | 2,097          | 35          |              |          |           |
| 157 Handcarts, number.....                               | 5,245          |             |              |          | 2,335     |
| 158 Hay presses, number.....                             | 2,510          | 5           |              | 75       | 427       |
| 159 Hayracks, number.....                                | 1,031          | 25          |              |          |           |
| 160 Horsepowers, number.....                             | 5,694          | 42          |              |          | 2,218     |
| 161 Incubators, number.....                              | 21             |             |              |          | 1         |
| 162 Lawn mowers, number.....                             | 17,019         |             |              | 1        | 10,000    |
| 163 Pea hullers, number.....                             | 900            |             |              | 200      |           |
| 164 Portable sawmills, number.....                       | 999            |             |              | 25       | 40        |
| 165 Portable steam engines, number.....                  | 1,090          | 5           |              |          | 2         |
| Pumps:   |                |             |              |          |           |
| 166 Hand, number.....                                    | 51,580         |             |              |          | 1,206     |
| 167 Horse, number.....                                   | 20             |             |              |          |           |
| 168 Steam, number.....                                   | 302            | 300         |              |          |           |



[illegible]

## IMPLEMENTS, BY STATES: 1900—Continued.

| Ohio.        | Pennsylvania. | South Carolina. | South Dakota. | Tennessee. | Texas.   | Vermont.  | Virginia. | Wisconsin.  | All other states. <sup>1</sup> |
|--------------|---------------|-----------------|---------------|------------|----------|-----------|-----------|-------------|--------------------------------|
| 100          |               |                 |               |            |          |           |           |             | 189                            |
|              | 325           |                 |               |            |          |           |           |             | 170                            |
|              | 230,400       |                 |               |            |          |           |           |             | 171                            |
| 5,000        | 300           |                 |               |            | 10       | 6,000     |           |             | 172                            |
| 6            |               |                 |               |            |          |           |           |             | 173                            |
|              |               |                 |               |            |          |           |           |             | 174                            |
| 11,600       |               |                 |               | 762        |          |           |           |             | 175                            |
| 598          | 224           |                 |               |            |          |           |           | 20          | 176                            |
| 304          | 57            |                 |               |            |          |           |           | 2,217       | 177                            |
| 778          | 200           |                 |               |            |          | 18        |           |             | 178                            |
| 54           |               |                 |               |            |          |           |           | 914         | 179                            |
| 5,044        |               |                 |               |            |          |           |           | 10          | 180                            |
| 310          | 200           |                 |               |            |          |           |           |             | 181                            |
| 27,633       | 1,400         |                 |               |            |          | 175       |           | 31          | 182                            |
|              |               |                 |               |            |          |           |           |             | 183                            |
|              |               |                 |               |            |          |           |           | 85          | 184                            |
|              |               |                 |               |            |          |           |           | 813         | 185                            |
|              |               |                 |               |            |          |           |           |             | 186                            |
| 63           | 31            | 3               | 2             | 8          | 3        | 12        | 8         | 37          | 9                              |
| \$12,645,760 | \$2,756,452   | \$11,640        | \$18,280      | \$460,211  | \$45,160 | \$338,790 | \$229,454 | \$6,724,496 | \$165,812                      |
| \$11,094,051 | \$2,645,982   | \$11,400        | \$10,750      | \$387,533  | \$25,925 | \$324,139 | \$217,464 | \$4,884,852 | \$140,471                      |
|              |               |                 |               |            |          |           |           |             |                                |
| 66           | 41            | 4               | 2             | 7          | 2        | 16        | 11        | 37          | 8                              |
| 8,498        | 2,240         | 76              | 18            | 568        | 67       | 980       | 443       | 3,509       | 158                            |
|              |               |                 |               |            |          |           |           |             |                                |
| 95           | 45            | 4               | 1             | 9          | 2        | 8         | 10        | 42          | 8                              |
| 7,666        | 2,067         | 76              | 10            | 565        | 65       | 370       | 377       | 2,682       | 87                             |
| 8            | 2             |                 | 1             |            | 1        | 1         |           | 5           | 1                              |
| 96           | 53            |                 | 8             |            | 2        | 22        |           | 50          | 6                              |
| 4            | 10            |                 |               |            |          | 16        |           | 5           | 1                              |
| 126          | 112           |                 |               |            |          | 578       | 56        | 160         | 35                             |
| 29           |               |                 |               |            |          | 1         |           | 26          |                                |
| 662          |               |                 |               |            |          | 8         |           | 615         |                                |
|              |               |                 |               |            |          |           |           |             |                                |
|              |               |                 |               |            |          |           |           |             |                                |
| 8            |               |                 |               | 3          |          | 2         |           | 2           | 30                             |
|              | 8             |                 |               |            |          |           | 10        |             |                                |
|              |               |                 |               |            |          |           |           | 54          | 4                              |
|              |               |                 |               |            |          |           |           |             |                                |
| 78           | 50            | 5               | 3             | 11         | 5        | 17        | 13        | 51          | 11                             |
| 2            | 4             |                 |               |            |          | 2         |           | 8           |                                |
| 17           | 14            | 2               | 1             | 4          | 4        | 4         | 1         | 14          | 3                              |
| 17           | 12            | 3               | 2             | 2          |          | 6         | 6         | 16          | 7                              |
| 12           | 9             |                 |               | 3          | 1        | 3         | 2         | 4           |                                |
| 8            | 4             |                 |               |            |          | 2         | 2         | 1           | 1                              |
| 12           | 6             |                 |               | 1          |          |           | 2         | 7           |                                |
| 5            |               |                 |               | 1          |          |           |           | 3           |                                |
| 4            | 1             |                 |               |            |          |           |           | 1           |                                |
| 1            |               |                 |               |            |          |           |           | 2           |                                |

<sup>1</sup> Includes establishments distributed as follows: Alabama, 1; Colorado, 1; Delaware, 1; Maryland, 2; North Dakota, 1; Utah, 2; Washington, 2; West Virginia, 1.

## IMPLEMENTS, BY STATES: 1900—Continued.

| Ohio.   | Pennsylvania. | South Carolina. | South Dakota. | Tennessee. | Texas. | Vermont. | Virginia. | Wisconsin. | All other states. <sup>1</sup> |     |
|---------|---------------|-----------------|---------------|------------|--------|----------|-----------|------------|--------------------------------|-----|
|         | 20            |                 |               |            |        |          |           |            |                                | 80  |
| 24,000  |               |                 |               |            |        |          |           | 20,000     |                                | 81  |
| 9,036   | 1,650         |                 |               | 262        | 24     |          | 725       | 3,501      |                                | 82  |
| 692     | 800           | 180             | 50            | 3,045      |        |          | 75        | 1,875      |                                | 83  |
|         |               |                 |               |            |        |          |           | 5,829      |                                | 84  |
| 5,752   |               |                 |               | 100        |        |          |           |            |                                | 85  |
| 20,486  | 1,112         |                 |               |            |        |          |           | 6,515      | 15                             | 86  |
| 3,042   |               |                 |               |            |        |          |           | 3,087      |                                | 87  |
| 40      | 306           |                 |               |            |        |          |           |            |                                | 88  |
| 221     |               | 1,450           |               |            |        |          |           |            |                                | 89  |
| 573     | 9,850         |                 |               |            |        |          |           | 2,024      |                                | 90  |
| 1,288   |               |                 |               | 800        |        |          |           | 18,980     |                                | 91  |
|         |               |                 |               |            |        |          |           | 900        |                                | 92  |
| 3,048   | 10,355        | 600             |               |            |        |          | 300       |            | 8,100                          | 93  |
| 785     |               |                 |               |            |        |          |           |            |                                | 94  |
|         | 7             |                 |               |            |        |          |           |            | 100                            | 95  |
|         |               |                 |               |            |        |          |           |            | 1                              | 96  |
| 35,670  |               |                 |               |            |        |          |           | 15,000     |                                | 97  |
| 20,160  | 2             |                 |               |            |        |          |           | 8,672      |                                | 98  |
| 19,257  | 24,881        |                 |               | 2,000      |        | 31,595   |           |            |                                | 99  |
| 34,700  | 400           |                 |               |            |        |          |           | 7,102      |                                | 100 |
| 2,498   | 75            |                 |               |            |        |          |           | 80         |                                | 101 |
| 14,547  | 515           |                 |               | 1,400      |        | 10,209   |           |            |                                | 102 |
| 41,187  | 51            |                 |               |            |        |          |           | 3,222      | 15                             | 103 |
|         |               |                 |               |            |        |          |           |            | 809                            | 104 |
| 5,052   | 111           |                 |               |            |        |          |           | 25         |                                | 105 |
| 61,697  | 80            |                 |               |            |        |          |           | 21,000     | 6                              | 106 |
| 25      | 30            |                 |               |            |        |          |           |            |                                | 107 |
| 16,693  | 647           |                 |               | 57         |        |          |           | 585        | 1                              | 108 |
| 2,695   |               |                 |               |            |        | 20,760   |           |            |                                | 109 |
|         |               |                 |               |            |        |          |           | 25         |                                | 110 |
| 120,504 | 4,500         |                 |               |            |        | 84,900   |           |            |                                | 111 |
|         |               |                 |               |            |        | 204,024  |           |            |                                | 112 |
|         |               |                 |               |            |        | 24,000   |           |            |                                | 113 |
|         |               |                 |               |            |        |          |           | 60         |                                | 114 |
|         |               |                 |               |            |        |          |           |            |                                | 115 |
| 300     |               |                 |               |            |        | 25       |           |            | 100                            | 116 |
| 519     | 25            |                 |               |            |        |          |           |            |                                | 117 |
| 5,040   |               |                 |               |            |        |          |           | 520        |                                | 118 |
| 16,661  | 10,089        |                 |               | 81,500     |        |          | 1,800     | 13,709     |                                | 119 |
| 658     | 3,320         |                 |               |            |        |          | 350       |            |                                | 120 |
| 175     | 125           |                 |               |            |        |          |           | 6,261      |                                | 121 |
| 123     | 128           |                 |               |            |        |          |           |            | 45                             | 122 |
| 420     | 24            |                 |               |            |        |          |           | 842        |                                | 123 |
| 704     | 1,501         |                 |               |            |        | 119      |           | 1,628      |                                | 124 |
| 589,945 | 39,127        |                 | 40            | 3,602      |        | 30,021   | 2,333,575 | 78,850     | 1,255                          | 125 |
| 32,000  |               |                 |               |            |        |          |           |            |                                | 126 |
| 50      | 10            |                 |               |            |        |          |           |            |                                | 127 |
|         |               |                 |               | 1,598      |        |          | 62        |            | 4                              | 128 |
|         |               |                 |               |            |        |          |           | 200        |                                | 129 |
| 560     |               |                 |               | 50         |        | 176      |           | 1,800      |                                | 130 |
| 2,515   | 600           |                 |               |            |        |          | 365       |            |                                | 131 |
|         |               |                 |               |            |        |          |           |            |                                | 132 |
|         |               |                 |               |            |        |          |           | 10,000     |                                | 133 |
|         |               |                 |               |            |        | 3        |           | 1,800      |                                | 134 |
| 6,109   | 845           |                 |               |            |        |          |           |            |                                | 135 |
| 4,560   | 4,468         |                 |               |            |        |          |           | 1,422      |                                | 136 |
| 5       |               |                 |               |            |        |          |           | 169        |                                | 137 |
| 80      | 820           |                 |               |            |        |          |           |            |                                | 138 |
| 500     |               |                 |               |            |        |          |           |            |                                | 139 |
| 1,050   | 101           |                 |               |            |        |          | 750       | 184        |                                | 140 |
| 1,010   |               |                 |               |            |        |          |           | 500        |                                | 141 |
| 180     |               |                 |               |            |        |          |           |            |                                | 142 |
| 430,826 | 669,600       |                 |               |            |        |          |           |            |                                | 143 |
| 1,879   | 6             |                 |               |            |        |          |           | 229        | 20                             | 144 |
| 50      | 580           |                 |               |            |        |          |           | 340        |                                | 145 |
| 249     | 200           |                 |               |            |        |          |           | 627        |                                | 146 |
|         |               |                 |               |            |        |          |           |            |                                | 147 |
|         | 325           |                 | 10            |            |        |          | 20        |            | 5                              | 148 |
| 301     | 643           |                 |               |            |        |          |           | 1,679      | 2                              | 149 |
| 7,000   |               |                 |               |            |        | 317      |           |            |                                | 150 |
|         |               | 350             |               |            |        |          |           |            |                                | 151 |
| 87      | 550           |                 |               |            |        |          |           |            |                                | 152 |
| 839     | 48            |                 |               |            |        |          |           | 1          |                                | 153 |
|         |               |                 |               |            |        |          |           | 76         |                                | 154 |
| 50,125  | 47            |                 |               |            |        |          |           | 50         |                                | 155 |
| 20      |               |                 |               |            |        |          |           |            |                                | 156 |
|         |               |                 |               |            |        |          |           |            |                                | 157 |
|         |               |                 |               |            |        |          |           |            |                                | 158 |
|         |               |                 |               |            |        |          |           |            |                                | 159 |
|         |               |                 |               |            |        |          |           |            |                                | 160 |
|         |               |                 |               |            |        |          |           |            |                                | 161 |
|         |               |                 |               |            |        |          |           |            |                                | 162 |
|         |               |                 |               |            |        |          |           |            |                                | 163 |
|         |               |                 |               |            |        |          |           |            |                                | 164 |
|         |               |                 |               |            |        |          |           |            |                                | 165 |
|         |               |                 |               |            |        |          |           |            |                                | 166 |
|         |               |                 |               |            |        |          |           |            |                                | 167 |
|         |               |                 |               |            |        |          |           |            |                                | 168 |

<sup>1</sup>Includes establishments distributed as follows: Alabama, 1; Colorado, 1; Delaware, 1; Maryland, 2; North Dakota, 1; Utah, 2; Washington, 2; West Virginia, 1.

TABLE 10.—AGRICULTURAL

|  | United States. | California. | Connecticut. | Georgia.  | Illinois.    |
|--|----------------|-------------|--------------|-----------|--------------|
| Kinds and quantities of products—Continued.  |                |             |              |           |              |
| Miscellaneous—Continued.   |                |             |              |           |              |
| 169 Road carts, number.....  | 804            | 697         | 7            |           |              |
| 170 Road graders, number.....  | 103            |             |              |           |              |
| 171 Road scrapers, number.....   | 3,509          | 550         |              |           | 20           |
| 172 Shovels, spades, and scoops, number.....   | 236,400        |             |              |           |              |
| 173 Singletrees, number.....   | 382,722        | 456         |              | 960       | 153,834      |
| 174 Sirup evaporators, number.....   | 181            |             |              | 131       |              |
| 175 Sorghum binders, number.....   | 21             |             |              |           | 15           |
| 176 Sorghum evaporators, number.....   | 2,652          |             |              |           |              |
| 177 Sprayers, number.....  | 106,655        | 5           |              |           |              |
| 178 Straw stackers, number.....  | 8,230          |             |              |           | 1,003        |
| 179 Thrasher trucks, number.....   | 2,437          |             |              |           |              |
| 180 Traction engines, number.....  | 5,470          | 20          |              |           | 329          |
| 181 Wagons, number.....  | 2,768          | 531         |              |           | 1,031        |
| 182 Wagon trucks, number.....  | 6,370          | 310         |              |           |              |
| 183 Water trucks, number.....  | 1,350          |             |              |           |              |
| 184 Weeders, number.....   | 63,186         |             |              |           | 890          |
| 185 Wind engines, number.....  | 35             |             |              |           |              |
| 186 Windmills, number.....   | 4,295          |             |              |           | 3,184        |
| Comparison of products:  |                |             |              |           |              |
| 187 Number of establishments reporting for both years.....   | 518            | 17          | 5            | 8         | 70           |
| 188 Value for census year.....   | \$92,772,476   | \$1,249,524 | \$194,746    | \$681,152 | \$33,386,447 |
| 189 Value for preceding business year.....   | \$77,202,840   | \$1,044,555 | \$197,767    | \$686,818 | \$31,098,762 |
| Power:   |                |             |              |           |              |
| 190 Number of establishments reporting.....  | 595            | 17          | 4            | 5         | 85           |
| 191 Total horsepower.....  | 77,189         | 736         | 630          | 409       | 34,918       |
| Owned—   |                |             |              |           |              |
| Engines—   |                |             |              |           |              |
| 192 Steam, number.....   | 678            | 13          | 3            | 8         | 145          |
| 193 Horsepower.....  | 61,147         | 570         | 145          | 334       | 28,104       |
| 194 Gas or gasoline, number.....   | 75             | 10          |              |           | 6            |
| 195 Horsepower.....  | 1,055          | 108         |              |           | 84           |
| 196 Water wheels, number.....  | 159            | 1           | 14           |           | 11           |
| 197 Horsepower.....  | 6,758          | 6           | 485          |           | 731          |
| 198 Electric motors, number.....   | 193            | 3           |              |           | 104          |
| 199 Horsepower.....  | 6,543          | 47          |              |           | 4,757        |
| 200 Other power, number.....   | 2              |             |              |           | 1            |
| 201 Horsepower.....  | 320            |             |              |           | 300          |
| Rented—  |                |             |              |           |              |
| 202 Electric, horsepower.....  | 1,100          | 5           |              |           | 932          |
| 203 Other kind, horsepower.....  | 265            |             |              | 75        | 10           |
| 204 Furnished to other establishments, horsepower.....   | 338            | 35          | 50           |           | 20           |
| Establishments classified by number of persons employed, not including proprietors and firm members: |                |             |              |           |              |
| 205 Total number of establishments.....  | 715            | 20          | 5            | 10        | 94           |
| 206 No employees.....  | 29             | 1           |              |           | 2            |
| 207 Under 5.....   | 154            | 2           | 1            | 1         | 13           |
| 208 5 to 20.....   | 223            | 8           |              | 5         | 22           |
| 209 21 to 50.....  | 109            | 3           | 3            | 1         | 12           |
| 210 51 to 100.....   | 65             | 2           |              | 1         | 11           |
| 211 101 to 250.....  | 80             | 4           | 1            | 1         | 16           |
| 212 251 to 500.....  | 24             |             |              | 1         | 7            |
| 213 501 to 1,000.....  | 20             |             |              |           | 6            |
| 214 Over 1,000.....  | 11             |             |              |           | 6            |

[illegible]

TABLE 10.—AGRICULTURAL

|   | Nebraska. | New Hamp-<br>shire. | New Jersey. | New York.    | North Caro-<br>lina. |
|---|-----------|---------------------|-------------|--------------|----------------------|
| Kinds and quantities of products—Continued.   |           |                     |             |              |                      |
| Miscellaneous—Continued.  |           |                     |             |              |                      |
| 169 Road carts, number.....   |           |                     |             |              |                      |
| 170 Road graders, number.....   |           |                     |             |              |                      |
| 171 Road scrapers, number.....  |           |                     |             | 2,615        |                      |
| 172 Shovels, spades, and scoops, number.....  |           |                     |             |              |                      |
| 173 Singletrees, number.....  |           | 600                 |             | 50           | 2,000                |
| 174 Sirup evaporators, number.....  |           |                     |             |              |                      |
| 175 Sorghum binders, number.....  |           |                     |             |              |                      |
| 176 Sorghum evaporators, number.....  |           |                     |             |              |                      |
| 177 Sprayers, number.....   |           |                     | 102         | 7,202        |                      |
| 178 Straw stackers, number.....   |           |                     |             | 88           |                      |
| 179 Thrasher trucks, number.....  |           |                     |             | 18           |                      |
| 180 Traction engines, number.....   |           |                     |             | 503          |                      |
| 181 Wagons, number.....   |           |                     |             | 3            | 34                   |
| 182 Wagon trucks, number.....   |           |                     |             | 16           |                      |
| 183 Water trucks, number.....   |           |                     | 312         | 228          |                      |
| 184 Weeders, number.....  |           | 17,150              |             | 1,372        |                      |
| 185 Wind engines, number.....   |           |                     |             |              |                      |
| 186 Windmills, number.....  |           |                     |             |              |                      |
| Comparison of products:   |           |                     |             |              |                      |
| 187 Number of establishments reporting for both years.....  | 3         | 8                   | 8           | 59           | 6                    |
| 188 Value for census year.....  | \$91,415  | \$74,611            | \$224,018   | \$10,020,653 | \$76,875             |
| 189 Value for preceding business year.....  | \$68,480  | \$75,035            | \$168,184   | \$8,048,567  | \$80,650             |
| Power:  |           |                     |             |              |                      |
| 190 Number of establishments reporting.....   | 7         | 11                  | 10          | 79           | 7                    |
| 191 Total horsepower.....   | 215       | 533                 | 280         | 8,247        | 178                  |
| Owned—  |           |                     |             |              |                      |
| Engines—  |           |                     |             |              |                      |
| 192 Steam, number.....  | 6         | 1                   | 7           | 86           | 6                    |
| 193 Horsepower.....   | 207       | 6                   | 106         | 6,489        | 89                   |
| 194 Gas or gasoline, number.....  | 2         |                     | 2           | 5            |                      |
| 195 Horsepower.....   | 8         |                     | 20          | 79           |                      |
| 196 Water wheels, number.....   |           | 18                  | 7           | 34           | 5                    |
| 197 Horsepower.....   |           | 482                 | 154         | 1,691        | 89                   |
| 198 Electric motors, number.....  |           |                     |             | 4            |                      |
| 199 Horsepower.....   |           |                     |             | 19           |                      |
| 200 Other power, number.....  |           |                     |             |              |                      |
| 201 Horsepower.....   |           |                     |             |              |                      |
| Rented—   |           |                     |             |              |                      |
| 202 Electric, horsepower.....   |           |                     |             | 4            |                      |
| 203 Other kind, horsepower.....   |           | 45                  |             | 15           |                      |
| 204 Furnished to other establishments, horsepower.....  |           |                     |             | 25           |                      |
| Establishments classified by number of persons employed, not including pro-<br>prietors and firm members: |           |                     |             |              |                      |
| 205 Total number of establishments.....   | 9         | 12                  | 11          | 87           | 9                    |
| 206 No employees.....   | 1         |                     | 2           | 3            |                      |
| 207 Under 5.....  | 1         | 8                   | 2           | 23           | 1                    |
| 208 5 to 20.....  | 3         | 3                   | 5           | 23           | 7                    |
| 209 21 to 50.....   | 3         | 1                   | 1           | 16           |                      |
| 210 51 to 100.....  | 1         |                     |             | 9            | 1                    |
| 211 101 to 250.....   |           |                     | 1           | 7            |                      |
| 212 251 to 500.....   |           |                     |             | 1            |                      |
| 213 501 to 1,000.....   |           |                     |             | 3            |                      |
| 214 Over 1,000.....   |           |                     |             | 2            |                      |

## IMPLEMENTS, BY STATES: 1900—Continued.

| Ohio.        | Pennsylvania. | South Carolina. | South Dakota. | Tennessee. | Texas.   | Vermont.  | Virginia. | Wisconsin.  | All other states. <sup>1</sup> |
|--------------|---------------|-----------------|---------------|------------|----------|-----------|-----------|-------------|--------------------------------|
| 100          |               |                 |               |            |          |           |           |             | 189                            |
|              | 325           |                 |               |            |          |           |           |             | 170                            |
|              | 230,400       |                 |               |            |          |           |           |             | 171                            |
| 5,000        | 300           |                 |               |            | 10       | 6,000     |           |             | 172                            |
| 6            |               |                 |               |            |          |           |           |             | 173                            |
|              |               |                 |               |            |          |           |           |             | 174                            |
| 11,600       |               |                 |               | 762        |          |           |           |             | 175                            |
| 598          | 224           |                 |               |            |          |           |           | 20          | 176                            |
| 304          | 57            |                 |               |            |          |           |           | 2,217       | 177                            |
| 778          | 200           |                 |               |            |          | 18        |           |             | 178                            |
| 54           |               |                 |               |            |          |           |           | 914         | 179                            |
| 5,044        |               |                 |               |            |          |           |           | 10          | 180                            |
| 310          | 200           |                 |               |            |          |           |           |             | 181                            |
| 27,633       | 1,400         |                 |               |            |          | 175       |           | 31          | 182                            |
|              |               |                 |               |            |          |           |           |             | 183                            |
|              |               |                 |               |            |          |           |           | 85          | 184                            |
|              |               |                 |               |            |          |           |           | 813         | 185                            |
|              |               |                 |               |            |          |           |           |             | 186                            |
| 63           | 31            | 3               | 2             | 8          | 3        | 12        | 8         | 37          | 9                              |
| \$12,645,760 | \$2,756,452   | \$11,640        | \$18,280      | \$460,211  | \$45,160 | \$338,790 | \$229,454 | \$6,724,496 | \$165,812                      |
| \$11,094,051 | \$2,645,982   | \$11,400        | \$10,750      | \$387,533  | \$25,925 | \$324,139 | \$217,464 | \$4,884,852 | \$140,471                      |
|              |               |                 |               |            |          |           |           |             |                                |
| 66           | 41            | 4               | 2             | 7          | 2        | 16        | 11        | 37          | 8                              |
| 8,498        | 2,240         | 76              | 18            | 568        | 67       | 980       | 443       | 3,509       | 158                            |
|              |               |                 |               |            |          |           |           |             |                                |
| 95           | 45            | 4               | 1             | 9          | 2        | 8         | 10        | 42          | 8                              |
| 7,666        | 2,067         | 76              | 10            | 565        | 65       | 370       | 377       | 2,682       | 87                             |
| 8            | 2             |                 | 1             |            | 1        | 1         |           | 5           | 1                              |
| 96           | 53            |                 | 8             |            | 2        | 22        |           | 50          | 6                              |
| 4            | 10            |                 |               |            |          | 16        | 2         | 5           | 1                              |
| 126          | 112           |                 |               |            |          | 578       | 56        | 160         | 35                             |
| 29           |               |                 |               |            |          | 1         |           | 26          |                                |
| 662          |               |                 |               |            |          | 8         |           | 615         |                                |
|              |               |                 |               |            |          |           |           |             |                                |
|              |               |                 |               |            |          |           |           |             |                                |
| 8            |               |                 |               | 3          |          | 2         |           | 2           | 30                             |
|              | 8             |                 |               |            |          |           | 10        |             |                                |
|              |               |                 |               |            |          |           |           | 54          | 4                              |
|              |               |                 |               |            |          |           |           |             |                                |
| 78           | 50            | 5               | 3             | 11         | 5        | 17        | 13        | 51          | 11                             |
| 2            | 4             |                 |               |            |          | 2         |           | 8           |                                |
| 17           | 14            | 2               | 1             | 4          | 4        | 4         | 1         | 14          | 3                              |
| 17           | 12            | 3               | 2             | 2          |          | 6         | 6         | 16          | 7                              |
| 12           | 9             |                 |               | 3          | 1        | 3         | 2         | 4           |                                |
| 8            | 4             |                 |               |            |          | 2         | 2         | 1           | 1                              |
| 12           | 6             |                 |               | 1          |          |           | 2         | 7           |                                |
| 5            |               |                 |               | 1          |          |           |           | 3           |                                |
| 4            | 1             |                 |               |            |          |           |           | 1           |                                |
| 1            |               |                 |               |            |          |           |           | 2           |                                |

<sup>1</sup> Includes establishments distributed as follows: Alabama, 1; Colorado, 1; Delaware, 1; Maryland, 2; North Dakota, 1; Utah, 2; Washington, 2; West Virginia, 1.

Twelfth Census of the United States.

# CENSUS BULLETIN.

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## MANUFACTURES.

### RICE, CLEANING AND POLISHING.

Hon. WILLIAM R. MERRIAM,  
*Director of the Census.*

SIR: I transmit herewith, for publication in bulletin form, a report on rice, cleaning and polishing, in the United States and the Hawaiian Islands during the census year, prepared under my direction by Mr. Daniel C. Roper, of South Carolina, expert special agent.

In view of the comparatively recent development of rice, cleaning and polishing, as an industry of commercial importance, and its remarkable growth during the last decade, it has been decided that the industry deserves more detailed treatment than is given to manufacturing industries in general, or than it has heretofore received.

The statistics show satisfactory increase throughout the rice-growing belt and especially in Louisiana, whose mills handled 72.8 per cent of the total rice milled in the United States during the census year.

The most important features of the products in rice, cleaning and polishing, as indicated by the statistics and more fully explained in the text of the report, are briefly summarized as follows: The productive capacity of plants has been increased by the general introduction of improved processes and machinery, which also enable the manufacturers to turn out greater quantities of product, and in conformity with commercial requirements. The decade has been marked by the opening up of extensive territory suitable to rice culture and capable of such irrigation and drainage as offsets the effects of drought and permits the employment of modern harvesting machines, thus materially lessening fluctuations in the annual crop and greatly reducing the cost of production. This culture has also been encour-

aged by the erection of large commercial mills, which purchase from the farmer his entire crop as soon as it is gathered.

The increase in the industry in Louisiana and Texas is very marked, their production having advanced from 75,753,856 pounds in 1890 to 179,919,293 pounds in 1900, an increase of 137.5 per cent. The statistics show that this industry is being transferred from the South Atlantic states to Louisiana and Texas.

The statistics of this industry are presented in 13 tables; Table 1, comparative figures for the industry at the several censuses; Table 2, statistics of the industry, by states; Table 3, detailed statement of products, with the relation of each to the total product; Table 4, statistics of rice production from 1840 to 1900, by decades; Table 5, statistics of the industry for Hawaii; Table 6, comparative statement of the consumption of foreign and domestic rice for each year from 1890 to 1899; Tables 7, 8, 9, 10, 11, and 12 present statistics of exports and imports of rice and its by-products; Table 13 presents detailed statistics for the industry, by states.

In drafting the schedules of inquiry for the census of 1900 care was taken to preserve the basis of comparison with prior censuses. Comparison may be made safely with respect to all the general heads of the inquiry except those relating to capital, salaried officials, clerks, etc., and their salaries, the average number of employees, and the total amount of wages paid. Live capital, that is, cash on hand, bills receivable, unsettled ledger accounts, raw materials, stock in process of manufacture, finished products on hand, and other sundries, was first called for at the census of 1890.



No definite attempt was made, prior to the census of 1890, to secure a return of live capital invested.

Changes were made in the inquiries relating to employees and wages, in order to eliminate defects found to exist on the form of inquiry adopted in 1890. At the census of 1890 the average number of persons employed during the entire year was called for, and also the average number employed at stated weekly rates of pay, and the average number was computed for the actual time the establishments were reported as being in operation. At the census of 1900 the greatest and least number of employees were reported, and also the average number employed during each month of the year. The average number of wage-earners (men, women, and children) employed during the entire year was ascertained by using 12, the number of calendar months, as a divisor into the total of the average numbers reported for each month. This difference in the method of ascertaining the average number of wage-earners during the entire year may have resulted in a variation in the number, and should be considered in making comparisons.

At the census of 1890 the number and salaries of proprietors and firm members actively engaged in the business or in supervision were reported, combined with clerks and other officials. In cases where proprietors and firm members were reported without salaries, the amount that would ordinarily be paid for similar services was estimated. At the census of 1900 only the number of proprietors and firm members actively engaged in the industry or in supervision was ascertained, and no salaries were reported for this class. It is therefore impossible to compare the number and salaries of salaried officials of any character for the two censuses.

Furthermore, the schedules for 1890 included in the wage-earning class, overseers, foremen, and superintendents (not general superintendents or managers), while the census of 1900 separates from the wage-earning class such salaried employees as general superintendents, clerks, and salesmen. It is possible and probable that this change in the form of the question

has resulted in eliminating from the wage-earners, as reported by the present census, many high-salaried employees included in that group for the census of 1890. With the exception of several other changes of a minor character in the special features of the schedule, the investigation has been conducted along the lines followed at the census of 1890.

In some instances the number of proprietors and firm members, shown in the accompanying tables, falls short of the number of establishments reported. This is accounted for by the fact that no proprietors or firm members are reported for corporations. The reports show a capital of \$2,601,352 invested in the 80 establishments reporting for the industry. This sum represents the value of land, buildings, machinery, tools, and implements, and the live capital utilized, but does not include the capital stock of any of the corporations. The value of the products is returned at \$8,723,726, to produce which involved an outlay of \$182,033 for salaries of officials, clerks, etc.; \$265,585 for wages; \$230,203 for miscellaneous expenses, including rent, taxes, etc.; and \$7,575,522 for materials used, mill supplies, freight, and fuel. It is not to be assumed, however, that the difference between the aggregate of these sums and the value of the products is, in any sense, indicative of the profits in the manufacture of the products during the census year. The census schedule takes no cognizance of the cost of selling manufactured articles, or of interest on capital invested, or of mercantile losses incurred in the business, or of depreciation in plant. The value of the product given is the value as obtained or fixed at the factory. This statement is necessary in order to avoid erroneous conclusions from the figures presented.

Very respectfully,



*Chief Statistician for Manufactures.*

# RICE, CLEANING AND POLISHING.

By DANIEL C. ROPER, *Expert Special Agent.*

Reports have been received from 80 establishments engaged in rice, cleaning and polishing, in the United States, during the census year ending May 31, 1900. These establishments were located in 12 states, but it is impossible to publish separate totals for 6 of these states without disclosing the operations of individual establishments. The statistics of these 6 states are therefore grouped under the head of "all other states," and include establishments distributed as follows: California, 1; Mississippi, 2; New York, 2; Oregon, 1; Texas, 1; and Washington, 2. The statistics for Hawaii are not included in the general tables of this report, but are given separately in Table 5.

Table 1 is a comparative summary of the statistics of rice, cleaning and polishing, as returned at the censuses of 1880, 1890, and 1900.

Rice, cleaning and polishing, being of comparatively recent commercial development, was not reported at any census prior to 1880. Since that time the growth of this industry has been noteworthy, the number of establishments having increased from 22 in 1880 to 80 in 1900, a gain of 263.6 per cent; the capital from \$562,200 in 1880 to \$2,601,352 in 1900, a gain of 362.7 per cent; and the value of products from \$3,133,324

in 1880 to \$8,723,726 in 1900, a gain of 178.4 per cent.

TABLE 1.—COMPARATIVE SUMMARY OF RICE, CLEANING AND POLISHING, IN THE UNITED STATES, 1880 TO 1900, WITH PER CENT OF INCREASE FOR EACH DECADE.

|                                | DATE OF CENSUS.  |             |                  | PER CENT OF INCREASE. |              |
|--------------------------------|------------------|-------------|------------------|-----------------------|--------------|
|                                | 1900             | 1890        | 1880             | 1890 to 1900          | 1880 to 1890 |
| Number of establishments ..... | 80               | 32          | 22               | 150.0                 | 45.5         |
| Capital .....                  | \$2,601,352      | \$2,073,884 | \$562,200        | 25.4                  | 268.9        |
| Salaried employees .....       | 109              | 96          | ( <sup>1</sup> ) | 76.0                  | .....        |
| Salaries .....                 | \$182,033        | \$96,100    | ( <sup>1</sup> ) | 89.3                  | .....        |
| Wage earners, average number.  | 651              | 617         | 516              | 0.6                   | 25.4         |
| Total wages .....              | \$265,585        | \$223,433   | \$110,467        | 18.9                  | 102.3        |
| Men, 16 years and over .....   | 639              | 630         | 376              | 1.4                   | 67.6         |
| Wages .....                    | \$262,042        | \$221,360   | ( <sup>1</sup> ) | 18.4                  | .....        |
| Women, 16 years and over ..... | ( <sup>2</sup> ) | 9           | 94               | .....                 | \$90.4       |
| Wages .....                    | ( <sup>2</sup> ) | \$1,323     | ( <sup>1</sup> ) | .....                 | \$90.4       |
| Children .....                 | 12               | 8           | 46               | 50.0                  | \$82.6       |
| Wages .....                    | \$3,543          | \$750       | ( <sup>1</sup> ) | 372.4                 | .....        |
| Miscellaneous expenses .....   | \$230,203        | \$147,992   | ( <sup>4</sup> ) | 55.6                  | .....        |
| Cost of materials used .....   | \$7,575,522      | \$3,601,206 | \$2,666,497      | 35.2                  | 110.1        |
| Value of products .....        | \$8,723,726      | \$6,693,196 | \$3,133,324      | 30.3                  | 118.6        |

<sup>1</sup> Not separately reported.

<sup>2</sup> None.

<sup>3</sup> Decrease.

<sup>4</sup> Not reported.

Table 2 presents, by states, the quantity and cost of rough rice milled, the quantity and value of products, the per cent of total rice milled by each state, and the average quantity of rice milled per establishment.

TABLE 2.—QUANTITY AND COST OF ROUGH RICE MILLED, QUANTITY AND VALUE OF PRODUCTS, PER CENT OF TOTAL RICE MILLED BY EACH STATE, AND AVERAGE QUANTITY OF RICE MILLED PER ESTABLISHMENT, BY STATES: 1900.

| STATES.                             | Number of establishments. | ROUGH RICE MILLED. |             | PRODUCTS.    |                      |                                    | Per cent of total rice milled. | Average quantity of rice milled per establishment (pounds). |
|-------------------------------------|---------------------------|--------------------|-------------|--------------|----------------------|------------------------------------|--------------------------------|---|
|                                     |                           | Pounds.            | Cost.       | Total value. | Clean rice (pounds). | By-products <sup>1</sup> (pounds). |                                |   |
| United States .....                 | 80                        | 398,602,018        | \$7,184,208 | \$8,723,726  | 243,031,200          | 155,570,818                        | 100.0                          | 4,982,525   |
| Alabama .....                       | 4                         | 193,500            | 8,485       | 4,816        | 116,660              | 76,840                             | ( <sup>2</sup> )               | 48,876  |
| Florida .....                       | 4                         | 575,640            | 8,850       | 13,995       | 350,466              | 225,174                            | 0.1                            | 143,910   |
| Georgia .....                       | 4                         | 14,444,541         | 154,438     | 184,804      | 8,622,510            | 5,822,081                          | 8.6                            | 8,611,185   |
| Louisiana .....                     | 87                        | 290,165,708        | 4,764,867   | 5,738,451    | 178,632,724          | 116,532,984                        | 72.8                           | 7,842,317   |
| North Carolina .....                | 4                         | 9,929,250          | 168,400     | 238,520      | 5,959,710            | 3,969,540                          | 2.5                            | 2,482,318   |
| South Carolina .....                | 18                        | 42,405,795         | 821,838     | 973,132      | 24,864,112           | 17,541,683                         | 10.7                           | 2,356,878   |
| All other states <sup>3</sup> ..... | 9                         | 40,887,584         | 1,262,885   | 1,572,008    | 29,485,018           | 11,402,566                         | 10.3                           | 4,548,005   |

<sup>1</sup> Includes hulls and waste.

<sup>2</sup> Less than one-tenth of 1 per cent.

<sup>3</sup> Includes states having less than 3 establishments, distributed as follows: California, 1; Mississippi, 2; New York, 2; Oregon, 1; Texas, 1; and Washington, 2.

The 80 establishments engaged in rice, cleaning and polishing in the United States during the census year, cleaned 398,602,018 pounds of rough rice, valued at \$7,184,208. From this were obtained 243,031,200 pounds of clean rice, and 155,570,818 pounds of by-prod-

ucts. The total value of all products was \$8,723,726. Included in the quantity of rice milled are 39,414,459 pounds of foreign rice, received principally from China and Japan, and handled by mills on the Pacific coast, in New York city, and in New Orleans. The products of

many rice mills do not reach commercial channels, and it is, therefore, impossible to itemize the value of products. The average consumption per establishment during the census year was 4,982,525 pounds, ranging from 48,375 pounds in Alabama to 7,842,317 in Louisiana.

The Louisiana mills handled 72.8 per cent of the total quantity milled.

Table 3 presents the quantity of products and the per cent which each formed of the total product.

TABLE 3.—QUANTITY OF PRODUCTS AND THE PER CENT WHICH EACH FORMED OF THE TOTAL: 1900.

| STATES.                             | Total pounds. | CLEAN RICE. |                    | POLISH.    |                    | BRAN.      |                    | HULLS AND WASTE. |                    |
|-------------------------------------|---------------|-------------|--------------------|------------|--------------------|------------|--------------------|------------------|--------------------|
|                                     |               | Pounds.     | Per cent of total. | Pounds.    | Per cent of total. | Pounds.    | Per cent of total. | Pounds.          | Per cent of total. |
| United States.....                  | 398,602,018   | 248,081,200 | 61.0               | 15,184,648 | 3.8                | 69,265,012 | 17.3               | 71,171,158       | 17.9               |
| Alabama.....                        | 193,500       | 116,660     | 60.3               | 7,758      | 4.0                | 38,573     | 19.9               | 30,509           | 15.8               |
| Florida.....                        | 575,640       | 350,466     | 60.9               | 22,975     | 4.0                | 109,328    | 19.0               | 92,871           | 16.1               |
| Georgia.....                        | 14,444,541    | 8,622,510   | 59.7               | 435,528    | 3.0                | 2,604,964  | 18.0               | 2,781,539        | 19.3               |
| Louisiana.....                      | 290,165,708   | 173,632,724 | 59.8               | 11,491,319 | 4.0                | 50,248,288 | 17.3               | 54,798,377       | 18.9               |
| North Carolina.....                 | 9,929,250     | 5,959,710   | 60.0               | 368,010    | 3.7                | 1,934,780  | 19.5               | 1,606,800        | 16.8               |
| South Carolina.....                 | 42,405,795    | 24,864,112  | 58.6               | 1,648,211  | 3.9                | 8,640,421  | 20.4               | 7,253,051        | 17.1               |
| All other states <sup>1</sup> ..... | 40,887,584    | 29,485,018  | 72.1               | 1,160,847  | 2.9                | 5,693,708  | 13.9               | 4,548,011        | 11.1               |

<sup>1</sup> Includes states having less than 3 establishments, distributed as follows: California, 1; Mississippi, 2; New York, 2; Oregon, 1; Texas, 1; and Washington, 2.

The by-products obtained in milling rice are polish (or flour), bran, and hulls. Polish is the fine dust taken from the grain in the final polishing process, bran is the product obtained from the grinding of the inner cuticle of the grain with the finer particles of hulls, and hulls are the outer husks of the grain. As shown in the above table, the component parts of the product of rice, cleaning and polishing, in the United States during the census year were: Clean rice, 61 per cent; polish, 3.8 per cent; bran, 17.3 per cent; and hulls and waste, 17.9 per cent. Thus, from a barrel (162 pounds) of rough rice is obtained an average of 99 pounds of clean rice, 6 pounds of polish, 28 pounds of bran, and 29 pounds of hulls and waste. Foreign rice is received in a partially cleaned condition and hence these ratios do not apply to it. Mills handling foreign rice show 74.9 per cent of clean rice, or 121 pounds per barrel of rough rice, and a very small percentage of waste. This accounts for the large percentage of clean rice shown for "all other states" in Table 3. "All other states" includes the states of New York, Washington, Ore-

gon, and California, which mill foreign rice almost exclusively.

Both rice flour and bran are considered excellent feed for cattle and hogs, and are ground together by mills in Georgia and the Carolinas and sold for this purpose. Such a feed is valued at about \$15 per ton. When sold separately the bran brings about \$12 per ton and the flour \$18. Owing to the large amount of starch in rice flour, it will not undergo fermentation with yeast, and hence can not be used alone in bread making, but mixed with wheat or rye flour it is used for this purpose. In Germany this product is used in making an imitation ivory, from which is manufactured doll heads and cheap jewelry. Starch, cement, paper, and other similar products are made from it. Hulls, which are a waste in most of the mills, are used by some of the larger ones as a fuel. Their recent use by the ice companies, canned goods factories, and crockery houses for packing purposes, is increasing the demand for them.

Table 4 presents, by decades, the quantity of clean rice produced in the United States from 1840 to 1900.

TABLE 4.—QUANTITY OF RICE GROWN IN THE UNITED STATES (IN POUNDS OF CLEAN RICE), BY DECADES, 1840 TO 1900.<sup>1</sup>

| STATES.             | 1900        | 1890        | 1880        | 1870       | 1860        | 1850        | 1840       |
|---------------------|-------------|-------------|-------------|------------|-------------|-------------|------------|
| United States.....  | 250,280,227 | 128,590,984 | 110,131,373 | 78,685,021 | 187,167,032 | 215,313,497 | 80,841,422 |
| Alabama.....        | 926,946     | 399,270     | 810,889     | 222,945    | 493,465     | 2,312,252   | 149,019    |
| Arkansas.....       | 8,680       | 7,110       |             | 78,021     | 16,831      | 63,179      | 5,454      |
| California.....     |             |             |             |            | 2,140       |             |            |
| Florida.....        | 2,254,492   | 1,011,805   | 1,294,677   | 401,687    | 223,704     | 1,075,090   | 481,420    |
| Georgia.....        | 11,174,562  | 14,556,432  | 25,869,687  | 22,277,380 | 52,507,652  | 38,950,691  | 12,384,732 |
| Illinois.....       |             |             |             |            |             |             | 460        |
| Kentucky.....       |             |             |             |            |             | 5,688       | 16,376     |
| Louisiana.....      | 172,732,480 | 75,645,433  | 23,188,311  | 15,854,012 | 6,331,257   | 4,425,349   | 3,604,534  |
| Michigan.....       |             |             |             |            | 716         |             |            |
| Minnesota.....      |             |             |             |            | 3,286       |             |            |
| Mississippi.....    | 739,222     | 676,746     | 1,718,951   | 374,627    | 809,082     | 2,719,856   | 777,195    |
| Missouri.....       |             |             |             |            | 9,767       | 700         | 50         |
| North Carolina..... | 7,892,580   | 5,846,404   | 5,609,191   | 2,059,281  | 7,693,976   | 5,465,868   | 2,820,388  |
| South Carolina..... | 47,860,128  | 30,338,951  | 52,077,515  | 32,304,825 | 119,100,528 | 159,930,613 | 60,590,861 |
| Tennessee.....      |             |             |             |            | 3,399       | 258,854     | 7,977      |
| Texas.....          | 7,186,868   | 108,423     | 62,152      | 63,844     | 40,372      | 88,203      |            |
| Virginia.....       | 4,374       | 860         |             |            | 26,031      | 17,154      | 2,956      |
|                     |             |             |             |            | 8,225       |             |            |

<sup>1</sup> As reported to the division of agriculture, Census Office.

The production of rice in 1900 (growth of 1899), as reported to the division of agriculture, Twelfth Census, expressed in terms of clean rice, was 250,280,227 pounds. The quantity of foreign-grown rice milled in the United States during the census year was 39,414,459 pounds. By subtracting this foreign rice from the total mill consumption given in Table 2, 398,602,018 pounds, the quantity of rice of domestic growth milled is found to be 359,187,559 pounds. There were two establishments in Louisiana and one in Texas whose products were primarily flour and grist, but which reported having cleaned in connection therewith 18,251,112 pounds of rough rice from the crop of 1899. By adding this to the amount of domestic rice milled, the total quantity of rice of domestic growth milled in the United States during the census year is found to be 377,438,671 pounds. The quantity of clean rice obtained from this was 224,912,528 pounds. The excess in the quantity of rice grown over that milled, expressed in terms of clean rice, is 25,367,699 pounds, which represents the quantity of rice held by the farmers for seed, or cleaned by hand on the farm for domestic use, or milled in local gristmills and returned by them with all other unclassified products.

The acreage devoted to rice culture in the United States for the crop of 1899 was 351,344. The amount of seed required per acre varies from 114 to 135 pounds in the Carolinas and Georgia to from 50 to 80 pounds in Louisiana and Texas. The increase in acreage for the crop of 1899 was marked in all the states, but especially in Louisiana and Texas, where the acreage increased from 84,555 in 1889 to 210,396 in 1899. A small part of the seed used in this region came from Japan, but it is safe to assume that 30,000,000 pounds of domestic rough rice, equivalent to about 18,000,000 pounds of clean rice, was thus kept from the mills. The remaining difference of 7,367,696 pounds represents the quantity of rice cleaned by hand on the farms or milled and not separately reported by gristmills. In the upland rice-growing territory, where this product is grown only for domestic consumption, the quantity milled in connection with the gristmills was of such small importance that it was included in "all other products" in the reports of such establishments.

Table 5 is a summary of rice, cleaning and polishing in Hawaii during the census year.

TABLE 5.—SUMMARY FOR HAWAII, CROP OF 1899.

|  |            |
|--|------------|
| Number of establishments .....                               | 41         |
| Capital .....  | \$381,625  |
| Salaries .....   | 18         |
| Wage-earners, average number .....                           | \$12,100   |
| Total wages .....  | 173        |
| Men, 16 years and over .....                                 | \$49,124   |
| Wages .....  | 171        |
| Children, under 16 years .....                               | \$48,800   |
| Wages .....  | 2          |
| Miscellaneous expenses .....                                 | \$824      |
| Cost of materials used .....                                 | \$23,329   |
| Value of products, including custom work and repairing ..... | \$481,925  |
| Pounds of rough rice milled .....                            | \$664,800  |
| Average consumption of rough rice per establishment .....    | 22,089,250 |
| Pounds of clean rice obtained .....                          | 528,762    |
| Production in pounds <sup>1</sup> .....                      | 15,001,020 |
| Acreage <sup>1</sup> .....                                   | 33,442,400 |
| Average production per acre (pounds) .....                   | 9,130      |
|  | 3,663      |

<sup>1</sup> As reported to division of agriculture, Twelfth Census.

The 41 establishments shown in the above table used 22,089,250 pounds of rough rice, and produced 15,001,020 pounds of clean rice, valued at \$664,800. Of this amount 596,100 pounds, valued at \$29,306, were imported, as shown in Table 8. The total production of the Hawaiian Islands was 33,442,400 pounds, expressed in terms of clean rice. The difference between this and the mill consumption is 18,441,380 pounds. It thus appears that less than one-half of the production was cleaned by the mills reporting. The remainder was either cleaned for domestic uses by primitive methods or held as rough rice for seed. The balance of trade in rice between the United States and the Hawaiian Islands is now in favor of this country, having become so within the past decade. The imports of rice from these islands decreased from 7,840,900 pounds in 1891 to 596,100 pounds in 1900, while the exports to them increased from nothing in 1891 to 6,619,188 pounds in 1900, as shown by Tables 10 and 11. The explanation of this is found both in the changed relationship between these countries and in the increased demand for rice in Hawaii, caused by the immigration in recent years of large numbers of Chinese and Japanese, who are very large consumers of rice. In Japan the per capita consumption of rice is 308.75 pounds yearly, while in the United States it is only 3.8 pounds.

Table 6 presents a comparison from 1890 to 1899 of the annual production of rice in the United States, exports and consumption of domestic rice, imports, exports, and net imports of foreign rice, total rice consumption, per cent of domestic product exported, per cent of consumption produced in the United States, and the per cent of consumption imported.

TABLE 6.—COMPARATIVE STATEMENT—PRODUCTION, EXPORTS, AND CONSUMPTION OF DOMESTIC RICE, IN POUNDS; IMPORTS, EXPORTS, AND NET IMPORTS OF FOREIGN RICE; TOTAL RICE CONSUMPTION; PER CENT OF DOMESTIC PRODUCT EXPORTED; PER CENT OF CONSUMPTION PRODUCED IN THE UNITED STATES; AND PER CENT OF CONSUMPTION IMPORTED: 1890 TO 1899.<sup>1</sup>

|   | 1899        | 1898        | 1897        | 1896        | 1895        | 1894        | 1893        | 1892        | 1891        | 1890        |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Production <sup>2</sup> .....                               | 250,280,227 | 136,990,720 | 116,301,760 | 96,886,400  | 168,665,440 | 109,820,800 | 122,865,160 | 237,546,900 | 155,665,600 | 136,800,000 |
| Exports of domestic <sup>3</sup> .....                      | 12,947,009  | 852,704     | 637,146     | 587,288     | 41,846,876  | 124,296     | 763,425     | 756,992     | (6)         | 540,620     |
| Consumption of domestic .....                               | 237,333,218 | 136,138,016 | 115,664,614 | 96,499,112  | 167,818,564 | 109,696,504 | 122,101,735 | 236,789,908 | 155,112,164 | 136,259,380 |
| Imports <sup>4</sup> .....                                  | 93,048,451  | 153,837,026 | 123,810,630 | 133,922,930 | 78,190,584  | 141,301,411 | 80,810,536  | 51,031,944  | 85,112,164  | 133,104,668 |
| Exports of foreign <sup>5</sup> .....                       | 18,267,687  | 19,114,698  | 10,305,694  | 11,607,634  | 13,619,406  | 10,271,357  | 11,877,253  | 10,870,572  | 10,591,923  | 8,119,574   |
| Net imports .....   | 75,380,764  | 134,722,328 | 113,504,936 | 122,322,296 | 64,570,868  | 131,030,054 | 74,933,283  | 70,161,372  | 74,520,241  | 124,984,438 |
| Total consumption .....                                     | 312,713,982 | 270,860,344 | 235,169,550 | 218,831,408 | 231,889,432 | 240,726,558 | 197,035,018 | 306,951,280 | 230,000,000 | 261,243,869 |
| Per cent of domestic product exported .....                 | 5.2         | 0.6         | 0.5         | 0.4         | 0.8         | 0.1         | 0.6         | 0.3         | .....       | 0.4         |
| Per cent of consumption produced in the United States ..... | 75.9        | 50.3        | 49.2        | 44.1        | 72.2        | 45.6        | 62.0        | 77.1        | .....       | 52.2        |
| Per cent of consumption imported .....                      | 24.1        | 49.7        | 50.8        | 55.9        | 27.8        | 54.4        | 38.0        | 22.9        | .....       | 47.8        |

<sup>1</sup> The statistics of production cover the growth of the years indicated; the commercial statistics cover the year ending June 30, following.

<sup>2</sup> Statistics from 1891 to 1898, inclusive, compiled from statistics (Dan Talmage's Sons Co.), Bulletin No. 22, United States Department of Agriculture. For 1899, from reports to the division of agriculture, Twelfth Census.

<sup>3</sup> Statistical Abstract of the United States Treasury Department, 1900.

<sup>4</sup> 693,000 pounds damaged.

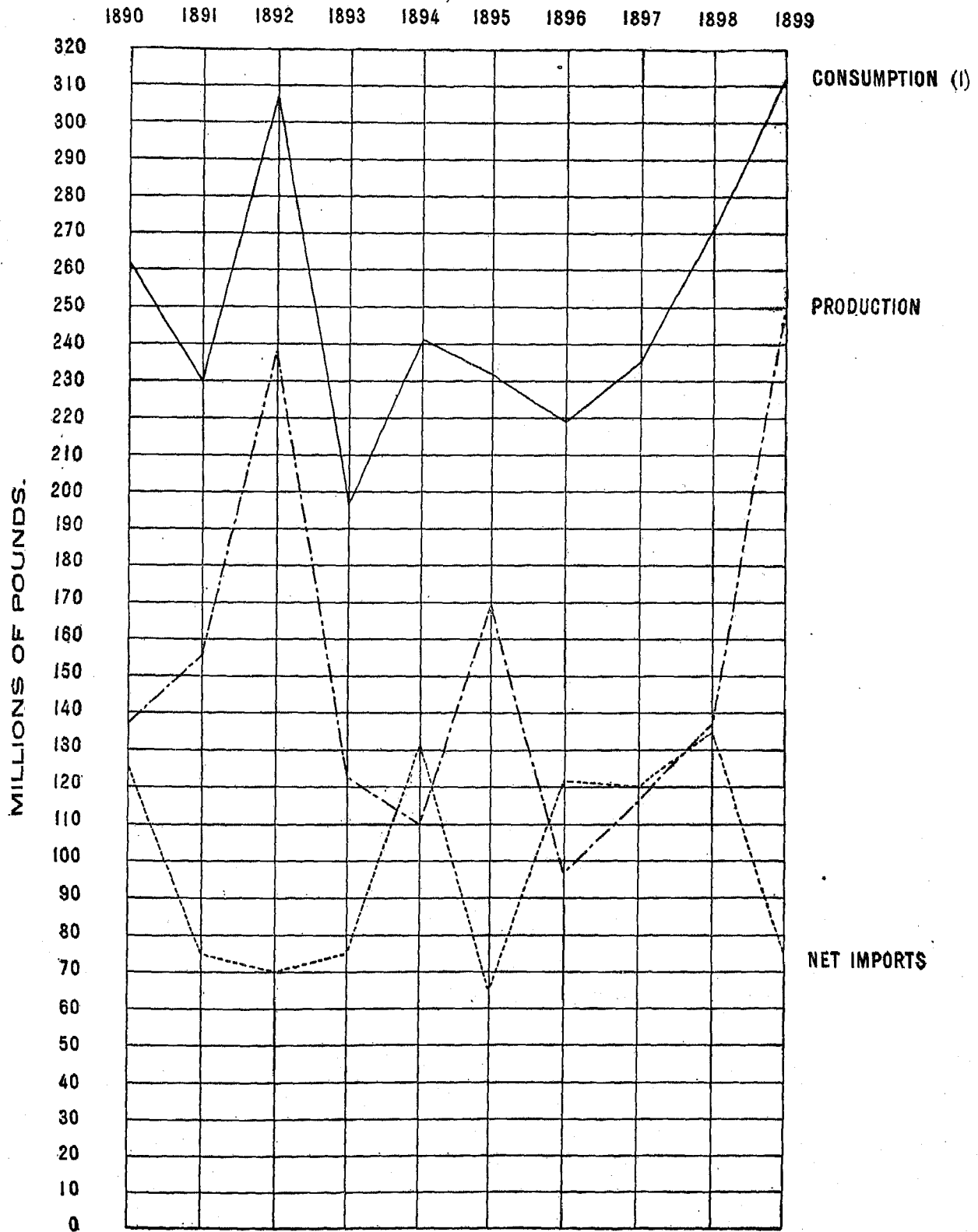
<sup>5</sup> Included in "rice bran, etc." Rice not reported separately.

The production statistics cover the growth of the years indicated, while those of imports and exports have to do with the same crop, but cover the fiscal years ending June 30, following. The consumption of domestic rice has been ascertained by deducting from the total production the quantity exported. This unexported quantity added to the net imports gives the total consumption. The net imports are the imports less the quantity of foreign rice reexported.

Table 6 shows the relation between the consumption of foreign and domestic rice in the United States for the past decade. Taking the period as a whole, there has been a general increase in both the production and consumption of rice. During the four years preceding 1899 the consumption of foreign rice showed a tendency to increase, the net imports having risen from 64,570,868 pounds in 1895 to 134,722,328 pounds in 1898. The percentage of the rice consumption im-

ported during this period increased from 27.8 to 49.7. It is gratifying to note, however, that the large production of 1899 reduced the net imports for the fiscal year ending June 30, 1900, to the very low figure of 75,380,764 pounds, which was only 24.1 per cent of the consumption. Besides furnishing 75.9 per cent of its total consumption in 1899 this country exported 12,947,009 pounds of clean rice, or 5.2 per cent of the total production. The solution of the irrigation problem in Louisiana and Texas will enable the United States to show a rapid increase in the annual rice production during the next decade, undisturbed by the large variations shown in the crops of the past ten years. The rice territory along the Carolina and Georgia coast is subject to harvest storms, and the upland territory to drought. These disturbing factors will be largely offset by the increased territory made available by irrigation.

# RICE CONSUMPTION, PRODUCTION AND NET IMPORTS FROM 1890 TO 1899.



(i) CONSUMPTION 1891 ESTIMATED

The foregoing diagram illustrates graphically variations in production, in net imports, and in the total consumption of rice for the United States during the decade between 1890 and 1900. Each vertical line represents a year and each longitudinal line 10,000,000 pounds of rice. The line connecting the points where the quantity intersects the year forms the line of variation for

the decade. Consumption statistics employed in this diagram cover the consumption of clean rice and not by-products.

Table 7 presents exports of rice, rice bran, meal, and polish, and imports of rice, rice flour, rice meal, and broken rice, 1891 to 1900

TABLE 7.—EXPORTS OF DOMESTIC RICE, AND RICE BRAN, MEAL, AND POLISH, AND IMPORTS OF RICE, AND RICE FLOUR, RICE MEAL, AND BROKEN RICE, YEARS ENDING JUNE 30, 1891 TO 1900.<sup>1</sup>

| YEARS.    | EXPORTS.    |           |                  |                  |                              |           | IMPORTS.    |             |             |             |   |           |
|-----------|-------------|-----------|------------------|------------------|------------------------------|-----------|-------------|-------------|-------------|-------------|---|-----------|
|           | Total.      |           | Rice.            |                  | Rice bran, meal, and polish. |           | Total.      |             | Rice.       |             | Rice flour, rice meal, and broken rice. |           |
|           | Pounds.     | Value.    | Pounds.          | Value.           | Pounds.                      | Value.    | Pounds.     | Value.      | Pounds.     | Value.      | Pounds.                                 | Value.    |
| 1900..... | 41,066,417  | \$667,387 | 12,947,009       | \$500,864        | 28,119,408                   | \$167,028 | 116,679,891 | \$2,279,086 | 98,648,451  | \$1,904,915 | 23,031,440                              | \$374,121 |
| 1899..... | 15,334,689  | 118,809   | 852,704          | 38,511           | 14,481,985                   | 80,298    | 204,177,293 | 3,930,149   | 153,837,026 | 3,152,771   | 50,340,267                              | 777,878   |
| 1898..... | 6,200,987   | 62,999    | 637,146          | 27,501           | 5,563,841                    | 35,498    | 190,285,815 | 3,746,833   | 129,810,630 | 2,793,111   | 60,474,685                              | 953,722   |
| 1897..... | 3,905,754   | 34,730    | 387,288          | 14,617           | 3,518,466                    | 20,118    | 197,816,134 | 3,517,160   | 133,939,930 | 2,555,960   | 63,876,204                              | 961,206   |
| 1896..... | 215,031,554 | 93,754    | 1,346,876        | 14,117           | 13,684,678                   | 79,637    | 146,724,607 | 2,185,579   | 78,190,334  | 1,274,574   | 68,534,273                              | 911,005   |
| 1895..... | 1,623,836   | 16,454    | 124,296          | 4,687            | 1,499,040                    | 11,767    | 219,564,320 | 3,445,512   | 141,801,411 | 2,353,974   | 78,262,909                              | 1,091,538 |
| 1894..... | 10,766,249  | 112,139   | 763,425          | 19,884           | 10,002,824                   | 92,255    | 142,161,817 | 2,374,835   | 86,010,536  | 1,540,992   | 55,351,281                              | 833,843   |
| 1893..... | 13,711,798  | 153,334   | 756,992          | 25,126           | 12,954,806                   | 128,208   | 147,483,828 | 2,790,151   | 81,031,944  | 1,698,025   | 66,451,884                              | 1,191,526 |
| 1892..... | 10,256,796  | 89,340    | ( <sup>a</sup> ) | ( <sup>a</sup> ) | 10,256,796                   | 89,340    | 148,103,688 | 3,030,888   | 85,112,164  | 1,933,447   | 62,991,524                              | 1,097,436 |
| 1891..... | 3,490,895   | 59,714    | 540,620          | 33,012           | 2,950,275                    | 26,702    | 214,363,582 | 4,659,540   | 133,104,063 | 3,170,132   | 81,259,519                              | 1,389,408 |

<sup>1</sup> Commerce and Navigation of the United States.

<sup>2</sup> 896,000 pounds damaged.

<sup>3</sup> Included in "rice bran, etc."

Table 8 presents imports of rice and its by-products, by countries, for the year ending June 30, 1900.

TABLE 8.—IMPORTS, BY COUNTRIES, RICE, AND RICE FLOUR, RICE MEAL, AND BROKEN RICE, YEAR ENDING JUNE 30, 1900.

| COUNTRIES.                           | TOTAL.      |             | RICE.      |             | RICE FLOUR, RICE MEAL, AND BROKEN RICE. |           |
|--------------------------------------|-------------|-------------|------------|-------------|---|-----------|
|                                      | Pounds.     | Value.      | Pounds.    | Value.      | Pounds.                                 | Value.    |
| Total.....                           | 116,679,891 | \$2,279,086 | 98,648,451 | \$1,904,915 | 23,031,440                              | \$374,121 |
| France.....                          | 66,584      | 1,205       | 380        | 29          | 66,204                                  | 1,176     |
| Germany.....                         | 39,173,448  | 683,186     | 18,603,235 | 353,112     | 20,570,163                              | 330,074   |
| Italy.....                           | 1,527,061   | 48,550      | 1,527,061  | 48,550      | .....                                   | .....     |
| Netherlands.....                     | 1,940,600   | 50,725      | 1,940,600  | 50,725      | .....                                   | .....     |
| United Kingdom.....                  | 18,878,015  | 370,004     | 16,470,735 | 335,937     | 1,907,280                               | 34,067    |
| Dominion of Canada:                  |             |             |            |             |   |           |
| Nova Scotia, New Brunswick, etc..... | 448         | 17          | 448        | 17          | .....                                   | .....     |
| Quebec, Ontario, Manitoba, etc.....  | 5,018       | 84          | 5,018      | 84          | .....                                   | .....     |
| British Columbia.....                | 4,865       | 649         | 4,865      | 649         | .....                                   | .....     |
| Mexico.....                          | 728,556     | 20,141      | 728,556    | 20,141      | .....                                   | .....     |
| West Indies:                         |             |             |            |             |   |           |
| British.....                         | 1,200       | 60          | 1,200      | 60          | .....                                   | .....     |
| Cuba.....                            | 1,785       | 46          | 1,785      | 46          | .....                                   | .....     |
| Brazil.....                          | 180         | 8           | 180        | 8           | .....                                   | .....     |
| Colombia.....                        | 150         | 6           | 150        | 6           | .....                                   | .....     |
| Chinese Empire.....                  | 24,604,713  | 489,809     | 24,354,806 | 485,347     | 250,407                                 | 4,462     |
| East Indies—British.....             | 123,375     | 1,034       | 123,375    | 1,034       | .....                                   | .....     |
| Hongkong.....                        | 4,813,633   | 92,725      | 4,720,708  | 91,238      | 92,925                                  | 1,487     |
| Japan.....                           | 24,713,735  | 491,471     | 24,669,699 | 488,631     | 144,086                                 | 2,849     |
| Turkey in Asia.....                  | 425         | 15          | .....      | .....       | 425                                     | 15        |
| Hawaii.....                          | 596,100     | 29,306      | 596,100    | 29,306      | .....                                   | .....     |

Table 9 presents imports of rice and its by-products, by countries, for the years ending June 30, 1891 to 1900.

TABLE 9.—IMPORTS, BY COUNTRIES, RICE AND ITS BY-PRODUCTS, IN POUNDS, YEARS ENDING JUNE 30, 1891 TO 1900.<sup>1</sup>

| COUNTRIES.                                  | 1900        | 1899        | 1898        | 1897        | 1896        | 1895        | 1894        | 1893        | 1892        | 1891        |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Total.....                                  | 116,679,891 | 204,177,293 | 190,285,315 | 197,816,134 | 146,724,607 | 219,564,320 | 142,161,817 | 147,483,828 | 148,103,688 | 214,863,582 |
| Hawaii.....(free.....                       | 596,100     | 2,595,000   | 4,414,800   | 5,881,600   | 4,354,500   | 5,144,087   | 9,115,483   | 8,473,800   | 7,489,700   | 7,840,900   |
| .....(dutiable.....                         |             |             |             | 46          |             |             | 22,890      |             |             |             |
| Austria-Hungary.....do.....                 |             |             |             | 220         |             |             |             |             |             |             |
| Belgium.....do.....                         |             |             | 3,358       | 840         | 613         |             |             |             | 112,260     | 200,000     |
| Denmark.....do.....                         |             |             | 110,236     |             |             |             |             |             | 448,000     | 2,240,000   |
| France.....do.....                          | 66,584      | 1,455       |             | 490         | 2,536       | 244         | 121         | 716         | 2,206       | 396         |
| Germany.....do.....                         | 39,173,448  | 68,876,114  | 101,329,151 | 98,180,979  | 76,031,104  | 109,091,207 | 57,592,434  | 63,911,049  | 59,046,542  | 92,775,543  |
| Italy.....do.....                           | 1,527,061   | 1,295,549   | 985,872     | 985,864     | 901,592     | 894,056     | 648,906     | 725,949     | 478,627     | 873,943     |
| Netherlands.....do.....                     | 1,940,600   | 3,283,467   | 9,866,662   | 7,321,861   | 698,419     | 10,733,022  | 2,068,497   | 22,400      | 143,936     | 621,540     |
| Portugal.....do.....                        |             |             |             |             | 4,000       |             |             | 2,729       |             |             |
| Spain.....do.....                           |             |             | 2,205       |             |             |             |             |             | 1,102       | 1,217       |
| Sweden and Norway.....do.....               |             |             |             |             |             |             | 313         |             |             |             |
| United Kingdom.....do.....                  | 18,378,015  | 19,799,935  | 19,154,899  | 21,641,430  | 7,290,095   | 8,829,497   | 12,281,985  | 14,516,868  | 11,760,466  | 20,952,347  |
| British Honduras.....do.....                |             |             |             |             | 6,400       |             |             |             |             |             |
| Dominion of Canada:                         |             |             |             |             |             |             |             |             |             |             |
| Nova Scotia, New Brunswick, etc.....do..... | 448         | 1,922       | 10          |             |             | 244         |             | 55          | 100         | 224         |
| Quebec, Ontario, Manitoba, etc.....do.....  | 5,018       | 115,012     | 980         | 36,456      | 321         | 1,413       | 844         | 2,266       | 622         | 261         |
| British Columbia.....do.....                | 4,865       | 21,761      | 7,324       | 100         | 158,015     | 367,201     | 554,500     | 556,498     | 519,500     | 1,348,610   |
| Central American States:                    |             |             |             |             |             |             |             |             |             |             |
| Costa Rica.....do.....                      |             | 295         |             |             |             |             |             |             |             |             |
| Guatemala.....do.....                       |             |             |             | 5,850       |             |             |             | 50          |             |             |
| Honduras.....do.....                        |             |             |             |             |             |             |             |             | 5,100       | 5,635       |
| Salvador.....do.....                        | 728,556     | 575,854     | 224,386     | 800         |             | 1,843       |             |             |             |             |
| Mexico.....do.....                          | 1,200       |             | 89,140      | 92,439      | 19,500      | 348,124     | 1,302       | 15,652      | 1,159       | 35,943      |
| West Indies:                                |             |             |             |             |             |             |             |             |             |             |
| British.....do.....                         | 1,785       | 163,384     | 663         |             |             |             |             |             | 300         | 5           |
| Cuba.....do.....                            |             |             | 218         | 1,780       | 24,365      | 50          | 1,190       | 2,683       | 56,836      | 57,015      |
| Porto Rico.....do.....                      | 180         |             |             |             |             |             |             |             |             |             |
| Brazil.....do.....                          | 150         |             |             |             |             |             |             |             |             | 26,455      |
| Colombia.....do.....                        |             |             |             |             |             |             |             |             | 361         |             |
| Guiana—British.....do.....                  | 24,004,713  | 34,484,841  | 32,038,874  | 192         |             |             |             |             |             |             |
| Chinese Empire.....do.....                  | 123,375     | 10,887,439  | 1,267,524   | 20,753,135  | 27,219,063  | 40,473,266  | 33,727,366  | 32,603,476  | 30,870,205  | 39,001,701  |
| East Indies:                                |             |             |             |             |             |             |             |             |             |             |
| British.....do.....                         |             |             |             |             | 2,129,724   | 5,131,923   | 1,684,921   | 3,813,480   | 5,926,000   | 13,500,019  |
| Dutch.....do.....                           | 4,813,683   | 5,166,403   | 3,679,174   | 413,793     | 197,057     | 56,000      | 16,522      | 27,547      |             |             |
| Hongkong.....do.....                        | 24,713,735  | 57,408,717  | 17,550,439  | 3,813,207   | 2,603,784   | 4,240,819   | 2,906,193   | 4,513,347   | 5,078,163   | 2,597,547   |
| Japan.....do.....                           | 425         |             |             | 34,785,112  | 24,482,909  | 34,251,824  | 21,538,050  | 18,293,273  | 26,162,463  | 32,184,221  |
| Turkey in Asia.....do.....                  |             | 50          |             |             |             |             | 200         |             |             |             |
| All other Asia.....do.....                  |             |             |             |             |             |             |             |             |             |             |
| Turkey in Africa—Egypt.....do.....          |             |             |             |             |             |             |             | 2,050       |             |             |

<sup>1</sup> Commerce and Navigation of the United States.

Table 10 presents the quantity and value of rice, and rice bran, rice meal, and polish exported, by countries, for the year ending June 30, 1900.

TABLE 10.—EXPORTS, BY COUNTRIES, QUANTITY AND VALUE OF RICE, AND RICE BRAN, RICE MEAL, AND POLISH; YEAR ENDING JUNE 30, 1900.<sup>1</sup>

| COUNTRIES TO WHICH EXPORTED.        | TOTAL.     |           | RICE.      |           | RICE BRAN, RICE MEAL, AND POLISH. |           |
|-------------------------------------|------------|-----------|------------|-----------|-----------------------------------|-----------|
|                                     | Pounds.    | Value.    | Pounds.    | Value.    | Pounds.                           | Value.    |
| Total.....                          | 41,066,417 | \$667,387 | 12,947,009 | \$500,364 | 28,119,408                        | \$167,023 |
| EUROPE.                             |            |           |            |           |                                   |           |
| France.....                         | 23,096     | 1,559     | 23,096     | 1,559     |                                   |           |
| Germany.....                        | 21,694,171 | 126,878   | 4,607      | 261       | 21,689,564                        | 126,617   |
| Greenland, Iceland, etc.....        | 589        |           | 589        | 38        |                                   |           |
| Netherlands.....                    | 4,058,200  | 28,261    |            |           | 4,058,200                         | 28,261    |
| United Kingdom.....                 | 2,773,065  | 32,332    | 428,821    | 20,884    | 2,344,244                         | 11,998    |
| NORTH AMERICA.                      |            |           |            |           |                                   |           |
| Bermuda.....                        | 1,082      | 80        | 1,082      | 80        |                                   |           |
| British Honduras.....               | 25,400     | 402       | 10,000     | 321       | 15,400                            | 81        |
| Quebec, Ontario, Manitoba, etc..... | 7,424      | 389       | 7,424      | 389       |                                   |           |
| British Columbia.....               | 24,272     | 1,263     | 24,272     | 1,263     |                                   |           |
| Central American States:            |            |           |            |           |                                   |           |
| Costa Rica.....                     | 2,500      | 16        |            |           | 2,500                             | 16        |
| Guatemala.....                      | 14,728     | 442       | 14,723     | 442       |                                   |           |
| Honduras.....                       | 70,842     | 2,577     | 70,842     | 2,577     |                                   |           |
| Nicaragua.....                      | 507,876    | 17,785    | 497,875    | 17,685    | 9,500                             | 50        |
| Mexico.....                         | 150,663    | 5,178     | 150,663    | 5,178     |                                   |           |
| West Indies:                        |            |           |            |           |                                   |           |
| British.....                        | 100        | 4         | 100        | 4         |                                   |           |
| Cuba.....                           | 155,486    | 3,145     | 155,486    | 3,145     |                                   |           |
| Haiti.....                          | 700        | 36        |            |           |                                   |           |
| Porto Rico.....                     | 4,852,008  | 158,882   | 4,852,008  | 158,882   |                                   |           |
| Santo Domingo.....                  | 325        | 20        |            |           |                                   |           |
| SOUTH AMERICA.                      |            |           |            |           |                                   |           |
| Colombia.....                       | 23,111     | 991       | 23,111     | 991       |                                   |           |
| OCEANIA.                            |            |           |            |           |                                   |           |
| French Oceania.....                 | 2,697      | 94        | 2,697      | 94        |                                   |           |
| Guam.....                           | 40,200     | 1,193     |            |           |                                   |           |
| Hawaii.....                         | 6,619,188  | 290,575   | 6,619,188  | 290,575   |                                   |           |
| Tongo, Samoa, etc.....              | 10,200     | 297       | 10,200     | 297       |                                   |           |

<sup>1</sup> Commerce and Navigation of the United States.



Table 11 presents exports of domestic rice and its by-products, by countries, for the years ending June 30, 1891 to 1900.

TABLE 11.—EXPORTS OF DOMESTIC RICE AND ITS BY-PRODUCTS, BY COUNTRIES, YEARS ENDING JUNE 30, 1891 TO 1900.<sup>1</sup>

| COUNTRIES TO WHICH EXPORTED.         | 1900<br>(pounds). | 1899<br>(pounds). | 1898<br>(pounds). | 1897<br>(pounds). | 1896<br>(pounds). | 1895<br>(pounds). | 1894<br>(pounds). | 1893<br>(pounds).       | 1892<br>(pounds).       | 1891<br>(pounds).      |
|--------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------------|-------------------------|------------------------|
| Total.....                           | 41,066,417        | 15,334,689        | 6,200,987         | 3,905,754         | 15,031,554        | 1,623,336         | 10,766,249        | <sup>2</sup> 13,711,798 | <sup>2</sup> 10,256,796 | <sup>3</sup> 3,490,895 |
| Belgium.....                         |                   |                   |                   |                   |                   |                   |                   |                         |                         | 460                    |
| France.....                          | 23,096            | 45,799            | 35,812            | 19,952            |                   |                   | 30,765            |                         |                         | 31,450                 |
| Germany.....                         | 21,094,171        | 13,029,985        | 5,647,922         | 3,493,642         | 10,350,557        | 800,205           | 9,677,859         |                         |                         | 2,620                  |
| Greenland, Iceland, etc.....         | 589               |                   |                   |                   |                   |                   |                   |                         |                         |                        |
| Netherlands.....                     | 4,058,200         | 728,000           |                   | 27,000            | 56,000            |                   | 154,560           |                         |                         |                        |
| Russia, Baltic and White seas.....   |                   | 800               |                   |                   |                   |                   |                   |                         |                         |                        |
| Sweden and Norway.....               |                   | 350               |                   |                   |                   |                   |                   |                         |                         |                        |
| United Kingdom.....                  | 2,773,065         | 1,052,719         | 400,596           | 118,890           | 2,606,346         | 54,759            | 179,865           |                         |                         | 240,444                |
| Bermuda.....                         | 1,082             | 681               | 948               | 500               | 777               |                   |                   |                         |                         |                        |
| British Honduras.....                | 25,400            | 8,088             | 31,886            | 4,020             | 420               | 2,540             | 7,725             |                         |                         | 675                    |
| Dominion of Canada:                  |                   |                   |                   |                   |                   |                   |                   |                         |                         |                        |
| Nova Scotia, New Brunswick, etc..... |                   |                   |                   |                   | 50                |                   |                   |                         |                         |                        |
| Quebec, Ontario, Manitoba, etc.....  | 7,424             | 22,116            | 38,688            |                   | 30,650            |                   |                   |                         |                         | 1,636                  |
| British Columbia.....                | 24,272            | 565               | 985               |                   | 8,080             | 5,600             | 680               |                         |                         |                        |
| Newfoundland and Labrador.....       |                   |                   | 340               | 448               |                   |                   |                   |                         |                         | 442                    |
| Central American States:             |                   |                   |                   |                   |                   |                   |                   |                         |                         |                        |
| Costa Rica.....                      | 2,500             |                   | 2,015             |                   | 22,825            | 500               | 251,575           |                         |                         | 11,979                 |
| Guatemala.....                       | 14,728            | 28,565            | 37,513            | 49,226            | 20,425            | 4,641             | 34,096            |                         |                         |                        |
| Honduras.....                        | 79,842            | 31,450            | 32,746            | 89,989            | 15,784            | 7,418             | 80,955            |                         |                         | 710                    |
| Nicaragua.....                       | 507,375           | 31,234            | 6,000             | 106,524           | 135,184           | 18,344            | 122,545           |                         |                         | 62,487                 |
| Mexico.....                          | 150,603           | 125,443           | 23,660            | 23,924            | 29,565            | 6,695             | 29,330            |                         |                         | 39,263                 |
| Miquelon, Langley, etc.....          |                   |                   | 318               |                   |                   |                   |                   |                         |                         | 1,010                  |
| West Indies:                         |                   |                   |                   |                   |                   |                   |                   |                         |                         |                        |
| British.....                         | 100               | 1,674             | 2,559             | 3,159             | 3,551             |                   |                   |                         |                         | 2,111                  |
| Cuba.....                            | 155,456           | 209,239           | 4,009             |                   | 1,093,478         | 655,950           | 122,000           |                         |                         | 17,433                 |
| Dutch.....                           |                   | 200               | 1,238             | 2,055             | 1,305             |                   |                   |                         |                         | 85                     |
| French.....                          |                   | 310               |                   |                   |                   |                   |                   |                         |                         |                        |
| Haiti.....                           | 700               | 126               | 15,490            | 3,332             | 3,667             | 3,283             |                   |                         |                         | 25,290                 |
| Porto Rico.....                      | 4,852,008         | 2,754             |                   |                   | 9,700             |                   |                   |                         |                         | 200                    |
| Santo Domingo.....                   | 325               | 691               | 400               |                   | 516               |                   |                   |                         |                         | 3,026                  |
| Brazil.....                          |                   |                   |                   |                   |                   |                   |                   |                         |                         | 75,735                 |
| Colombia.....                        | 23,111            | 10,471            | 16,484            | 12,158            | 71,075            | 23,750            | 74,844            |                         |                         | 2,775                  |
| Peru.....                            |                   |                   |                   |                   |                   |                   |                   |                         |                         | 8,990                  |
| Venezuela.....                       |                   | 416               | 723               | 1,535             | 662               |                   |                   |                         |                         | 10,565                 |
| British Australasia.....             |                   | 2,908             |                   |                   | 1,437             |                   |                   |                         |                         | 1,250                  |
| French Oceania.....                  | 2,697             |                   |                   |                   |                   |                   |                   |                         |                         |                        |
| Guam.....                            | 40,200            |                   |                   |                   |                   |                   |                   |                         |                         |                        |
| Hawaii.....                          | 6,619,188         |                   |                   |                   |                   |                   |                   |                         |                         |                        |
| Tonga, Samoa, etc.....               | 10,200            |                   |                   |                   |                   |                   |                   |                         |                         |                        |
| Liberia.....                         |                   | 100               |                   |                   |                   |                   |                   |                         |                         | 5,000                  |
| Portuguese Africa.....               |                   | 100               | 600               |                   |                   |                   |                   |                         |                         | 895                    |

<sup>1</sup> Commerce and Navigation of the United States.

<sup>2</sup> Rice, etc., not enumerated by countries, 1892 to 1893.

<sup>3</sup> Includes an item of 2,950,275 pounds of rice polish exported; destination of same not given.

Tables 7, 9, and 11 show the foreign trade in rice and the distribution of exports during each year of the decade ending June 30, 1900, while Tables 7, 8, and 10 show the distribution of the foreign trade in rice for the census year 1900. Although the foreign rice trade has fluctuated very much from year to year, there has been a general decrease in imports and a corresponding increase in exports. The imports of rice and its by-products decreased from 214,363,582 pounds in 1891 to 116,679,891 pounds in 1900, while the exports for the same period increased from 3,490,895 to 41,066,417 pounds. Exports prior to 1900 were on the average less than one-half of 1 per cent of the production, except in 1896, when a large proportion of damaged rice was exported. More than one-half of the exports of rice and its by-products, during the year ending June 30, 1900, went to Germany, the remainder being sent principally to the West Indies and Central America. The imports of whole rice have varied greatly from

year to year, but the amount of by-products imported, beginning with 81,259,519 pounds in 1891, has steadily decreased to 23,031,440 pounds in 1900. The amount of whole rice imported has been in inverse ratio to production, except in 1899 when a substantial increase in production failed to produce a reduction in imports. Importations of rice are chiefly for food and come principally from Japan, China, and Germany. There was a marked change in the foreign rice trade of the United States during the census year. The exportation of domestic whole rice was 12,947,009 pounds, or 5.2 per cent of the production of 1899. Of this quantity 6,619,188 pounds went to Hawaii, and 4,852,008 pounds to Porto Rico. The large increase in exports to these countries has been occasioned by the change of political relationship between them and the United States.

Table 12 presents the exports of domestic clean rice, by customs districts, for the years ending June 30, 1891 to 1900.

TABLE 12.—EXPORTS OF DOMESTIC CLEAN RICE, BY CUSTOM DISTRICTS, YEARS ENDING JUNE 30, 1891 TO 1900.<sup>1</sup>

| DISTRICTS FROM WHICH EXPORTED.    | 1900       |           | 1899    |          | 1898    |          | 1897    |          | 1896      |          |
|-----------------------------------|------------|-----------|---------|----------|---------|----------|---------|----------|-----------|----------|
|                                   | Pounds.    | Value.    | Pounds. | Value.   | Pounds. | Value.   | Pounds. | Value.   | Pounds.   | Value.   |
| Total.....                        | 12,947,000 | \$500,364 | 852,704 | \$38,511 | 637,146 | \$27,501 | 387,288 | \$14,617 | 1,346,876 | \$14,117 |
| Baltimore, Md.....                | 28,425     | 1,063     |         |          |         |          |         |          |           |          |
| Bangor, Me.....                   | 583        | 38        |         |          |         |          |         |          |           |          |
| Bath, Me.....                     | 6,000      | 300       |         |          |         |          |         |          |           |          |
| Belfast, Me.....                  |            |           |         |          |         |          |         |          |           |          |
| Boston and Charlestown, Mass..... |            |           |         |          |         |          | 9,100   | 458      |           |          |
| Charleston, S. C.....             | 2,700      | 145       | 1,190   | 79       | 2,831   | 159      |         |          | 750       | 50       |
| New Bedford, Mass.....            |            |           |         |          | 600     | 28       |         |          |           |          |
| New York, N. Y.....               | 5,100,693  | 168,143   | 306,499 | 19,604   | 352,620 | 18,518   | 91,122  | 4,851    | 88,867    | 4,807    |
| Philadelphia, Pa.....             |            |           | 5,249   | 196      |         |          |         |          |           |          |
| Providence, R. I.....             |            |           |         |          |         |          |         |          | 50        | 4        |
| St. Johns, Fla.....               |            |           |         |          |         |          |         |          | 200       | 10       |
| St. Augustine, Fla.....           |            |           |         |          |         |          |         |          |           |          |
| Savannah, Ga.....                 | 14,534     | 760       | 13,808  | 813      | 14,965  | 852      | 10,745  | 586      |           |          |
| Brazos de Santiago, Tex.....      | 76,787     | 2,015     |         |          |         |          | 21,484  | 427      | 28,446    | 601      |
| Corpus Christi, Tex.....          | 1,165      | 46        | 76,982  | 1,912    |         |          |         |          |           |          |
| Galveston, Tex.....               | 155,200    | 3,134     |         |          | 1,100   | 28       | 665     | 31       | 69,400    | 1,388    |
| Key West, Fla.....                | 236        | 9         | 72,786  | 2,110    | 1,580   | 57       | 220     | 8        |           |          |
| Mobile, Ala.....                  | 5,382      | 192       | 6,715   | 289      | 10,913  | 427      |         |          |           |          |
| New Orleans, La.....              | 602,400    | 24,662    | 246,393 | 8,563    | 190,854 | 4,988    | 251,702 | 8,198    | 1,155,774 | 7,827    |
| Paso del Norte, Tex.....          | 26,642     | 2,108     |         |          | 20,020  | 1,001    |         |          |           |          |
| Pearl River, Miss.....            |            |           |         |          |         |          |         |          |           |          |
| Saluria, Tex.....                 | 42,529     | 898       | 47,776  | 1,507    | 140     | 6        |         |          | 146       | 8        |
| Tampa, Fla.....                   |            |           | 72,000  | 3,284    |         |          |         |          |           |          |
| Alaska.....                       | 8,722      | 777       | 565     | 36       | 985     | 54       |         |          |           |          |
| Arizona.....                      |            |           | 450     | 15       | 485     | 30       | 2,190   | 63       | 763       | 51       |
| Puget Sound, Wash.....            | 15,550     | 486       |         |          |         |          |         |          |           |          |
| San Diego, Cal.....               |            |           | 95      | 4        | 565     | 29       |         |          | 200       | 7        |
| San Francisco, Cal.....           | 6,792,085  | 295,190   | 150     | 7        | 1,300   | 160      |         |          |           |          |
| Champlain, N. Y.....              | 2,616      | 130       | 1,721   | 69       |         |          |         |          |           |          |
| Huron, Mich.....                  | 1,860      | 93        | 100     | 4        | 88,588  | 1,158    |         |          |           |          |
| Minnesota, Minn.....              |            |           | 295     | 19       | 100     | 6        |         |          |           |          |
| Montana and Idaho.....            |            |           |         |          |         |          |         |          | 7,280     | 364      |
| Oswegatchie, N. Y.....            | 280        | 10        |         |          |         |          |         |          |           |          |
| Vermont, Vt.....                  | 2,668      | 156       |         |          |         |          |         |          |           |          |

| DISTRICTS FROM WHICH EXPORTED.    | 1895    |         | 1894    |          | 1893    |          | 1892 <sup>2</sup> |           | 1891    |          |
|-----------------------------------|---------|---------|---------|----------|---------|----------|-------------------|-----------|---------|----------|
|                                   | Pounds. | Value.  | Pounds. | Value.   | Pounds. | Value.   | Pounds.           | Value.    | Pounds. | Value.   |
| Total.....                        | 124,296 | \$4,687 | 763,425 | \$19,884 | 756,992 | \$25,126 | *10,256,796       | *\$89,340 | 540,620 | \$33,012 |
| Baltimore, Md.....                | 16,895  | 670     |         |          | 52,429  | 2,555    |                   |           | 6,908   | 346      |
| Bangor, Me.....                   |         |         |         |          |         |          |                   |           |         |          |
| Bath, Me.....                     |         |         |         |          |         |          |                   |           |         |          |
| Belfast, Me.....                  |         |         |         |          |         |          |                   |           |         |          |
| Boston and Charlestown, Mass..... |         |         |         |          | 990     | 59       |                   |           |         |          |
| Charleston, S. C.....             |         |         |         |          | 134,564 | 5,976    |                   |           | 1,120   | 89       |
| New Bedford, Mass.....            |         |         |         |          |         |          |                   |           |         |          |
| New York, N. Y.....               | 3,283   | 141     |         |          |         |          |                   |           | 444,045 | 29,217   |
| Philadelphia, Pa.....             |         |         |         |          |         |          |                   |           | 200     | 9        |
| Providence, R. I.....             |         |         |         |          |         |          |                   |           |         |          |
| St. Johns, Fla.....               |         |         |         |          |         |          |                   |           |         |          |
| St. Augustine, Fla.....           |         |         |         |          |         |          |                   |           |         |          |
| Savannah, Ga.....                 |         |         |         |          | 40      | 4        |                   |           |         |          |
| Brazos de Santiago, Tex.....      |         |         | 5,578   | 141      |         |          |                   |           |         |          |
| Corpus Christi, Tex.....          |         |         |         |          |         |          |                   |           | 1,900   | 102      |
| Galveston, Tex.....               |         |         |         |          |         |          |                   |           | 4,495   | 228      |
| Key West, Fla.....                | 212     | 11      | 122,580 | 2,068    |         |          |                   |           |         |          |
| Mobile, Ala.....                  |         |         |         |          |         |          |                   |           |         |          |
| New Orleans, La.....              | 97,288  | 3,516   | 611,087 | 16,986   | 668,969 | 16,532   |                   |           | 41,601  | 1,068    |
| Paso del Norte, Tex.....          |         |         |         |          |         |          |                   |           |         |          |
| Pearl River, Miss.....            | 1,063   | 38      |         |          |         |          |                   |           |         |          |
| Saluria, Tex.....                 | 665     | 48      | 23,550  | 658      |         |          |                   |           |         |          |
| Tampa, Fla.....                   |         |         |         |          |         |          |                   |           |         |          |
| Alaska.....                       |         |         |         |          |         |          |                   |           |         |          |
| Arizona.....                      |         |         |         |          |         |          |                   |           |         |          |
| Puget Sound, Wash.....            |         |         | 680     | 31       |         |          |                   |           |         |          |
| San Diego, Cal.....               |         |         |         |          |         |          |                   |           | 2,904   | 181      |
| San Francisco, Cal.....           |         |         |         |          |         |          |                   |           | 85,877  | 1,714    |
| Champlain, N. Y.....              |         |         |         |          |         |          |                   |           |         |          |
| Huron, Mich.....                  |         |         |         |          |         |          |                   |           |         |          |
| Minnesota, Minn.....              |         |         |         |          |         |          |                   |           | 1,630   | 108      |
| Montana and Idaho.....            | 4,240   | 212     |         |          |         |          |                   |           |         |          |
| Oswegatchie, N. Y.....            | 650     | 45      |         |          |         |          |                   |           |         |          |
| Vermont, Vt.....                  |         |         |         |          |         |          |                   |           |         |          |

<sup>1</sup> Commerce and Navigation of the United States.<sup>2</sup> Not enumerated by districts; total for year includes values for bran, meal flour, etc.

This table shows a decided increase in the exports of rice at nearly all the customs districts and especially at San Francisco, where the exports increased from practically nothing in 1899 to 6,792,085 pounds in 1900.

The leading customs districts in the exportation of rice in 1900 were San Francisco, New York, and New Orleans.

## HISTORICAL AND DESCRIPTIVE.

If its importance as a food product is to be measured by the number of persons who consume it, rice must, without doubt, be considered the greatest cereal. The countries in which rice forms the principal and, very often, the only food, have a population variously estimated to be from 825,000,000 to 900,000,000 of the world's population of nearly a billion and a half. There is no authentic record of its origin, though frequent mention is made of it in ancient literature. Nearly all authorities agree, however, that the Chinese were its first cultivators.

It was introduced, for cultivation, into the United States in 1647, when Sir William Berkeley, then governor of Virginia, received a half bushel of the grain from England. He caused this to be planted and from it a yield of 16 bushels was obtained. But with this the industry appears to have rested until 1694. In that year a ship bound from Madagascar was obliged to seek refuge in the harbor at Charleston, S. C., owing to a violent storm at sea. The captain of the vessel finding an old friend, Thomas Smith, governor of the province, presented him with a sack of the grain. Experiments in its cultivation were begun, resulting in making South Carolina, for more than a century, the leading rice producing state of this country.

Up to 1860 the industry was confined chiefly to the Carolinas and Georgia, these states producing practically the entire commercial crop. But the revolution in the system of labor, and the almost complete annihilation of the capital of the planters by the Civil War resulted in a new beginning for this industry; which brought radical changes in farming methods and in milling processes.

The effect of the change in labor conditions, resulting from the war, has been instrumental in keeping rice production practically at a standstill in the two Carolinas and Georgia, and to increase its culture on the prairie lands of Louisiana, where improved machinery can be more advantageously employed. For example, the combined production of the Carolinas and Georgia decreased from 56,641,486 pounds in 1869 to 50,741,787 pounds in 1889, while that of Louisiana increased from 15,854,012 to 75,645,433 pounds during the same period. The Twelfth Census, reporting for the crop of 1899, gives the Carolinas and Georgia 66,427,270 and Louisiana 172,732,430 pounds. The remarkable increase in rice culture in Louisiana and Texas during the past decade is due to the discovery that the lands of this region are both suitable to rice culture and capable of satisfactory irrigation. The farmers no longer raise "Providence rice," a localism for a crop dependent upon rainfall, but the rivers and bayous have been utilized and canal companies have grown rich furnishing water to rice planters. When the flooding season

is over, these lands are so readily and thoroughly drained as to permit of the employment of modern harvesting machines.

With the opening up of these vast prairies to rice culture have come the gang plow, the horse drill, the twine binder, and the steam thresher. One harvesting machine, operated by one man and five mules, does in one day what formerly required a whole family and hired help to do in a season. Nowhere else in the rice-growing belt has it been possible to introduce such implements, owing to the inability of the growers to properly drain their rice lands.

The problem of a fuel supply has been removed by the recent discovery of natural oil in Texas. Beaumont, the famous oil center, is in the midst of this rice belt. Oil tanks already dot this section, and rice farmers and rice millers alike are using the oil for fuel. There has thus been made available for rice culture in southwest Louisiana and southeast Texas a vast territory which will guarantee a steady increase of the rice crop, unaffected by drought and so cheapened by the utilization of machinery as to encourage the hope that the United States may at no distant time not only supply its own consumption requirements but successfully compete with the East in the markets of the world.

Although rice is one of the oldest cereals and constitutes the principal food of over half the people of the world, the methods of cleaning it have until recently been of very crude design. The great advancement in the methods of recent years is largely the result of greatly increased production and consumption among the civilized countries and the technical requirements of a fanciful trade.

The primitive method of milling rice in the United States, and at present in vogue in China and other foreign countries, is to place a small quantity of the grain in a hollow stone or block of wood and pound it with a stone pestle. The blow cracks the hull, and the friction created by the sliding motion of the rice under the pestle removes the hull from the cuticle. The hulls and bran are gotten rid of by winnowing. The first advance from this process was the use of a mortar made of a short section of a hollowed log, the pestle being a heavy pounder attached to a horizontal beam 6 to 8 feet long, which rested upon a fulcrum, 4 to 5 feet from the mortar. The pounder was raised and dropped by quickly stepping on and off the shorter end of the beam. This simple process and the fanning mill are in use in oriental countries at this time. Such a mill cleans about 11 bushels of paddy a day. The next advance was the use of the water wheel as a motive power, geared to a horizontal shaft. The pounder was a vertical beam, about 10 feet long and 6 inches square. As the horizontal shaft revolved, a rounded arm projecting from it caught

a pointed pin in the vertical shaft, raised the pounder, and slipping past dropped it into the mortar of rice. This was repeated until the hulls and bran were separated from the grain.

The usual process of milling the rice of commerce is more complicated. The paddy is first screened to remove trash and other foreign particles. The hulls are then removed by rapidly-revolving mill stones, and separated from the whole and broken rice by means of screens and blowers. This process does not remove the thin cuticle of the grain; to do this it is passed through a huller or subjected to heavy pounding. The huller is a short, horizontal tube of cast iron, with interior ribs and a funnel at one end to admit the rice. Within this tube revolves a shaft, with ribs so adjusted that the revolution of the shaft creates sufficient friction to remove the cuticle. The rice passes out of the huller at the end opposite the funnel, to be separated from the by-products and polished. In other mills the cuticle is removed by pounding in mortars, with pestles weighing from 380 to 400 pounds. Strange to say, this heavy weight breaks comparatively few grains. When it is sufficiently cleaned, the flour and bran are separated, and the grain sent to cooling pans, where it remains for eight or nine hours. After passing through the huller or the mortar, the rice is ready for the finishing process, polishing, which gives it a pearly luster. This finish is secured by passing the whole grains through a rapidly revolving screen with brushes, or with wire gauze and sheepskin.

This process gives to the rice grain its fine, glossy surface, and adds to its commercial value, but detracts from its value as a food. The outer surface of the clean, unpolished rice contains almost all the fats of the grain, and its removal materially lessens both the flavor and nutritive value. The fashion of highly polishing

the grain for the general trade does not tend to popularize it as a food. In its preparation for local consumption rice is seldom or never polished. This may explain the reason why travelers remark upon the excellent quality of oriental rice compared with that of commerce.

The grading of clean rice is not according to quality. From one kind of paddy may be obtained several grades according to the size of the grain, whole or broken, its susceptibility to polish, and general appearance. The average price for the crop of 1899 varied from 2½ cents per pound for common, to 6 cents for fancy grades. No. 2 rice, consisting of broken grains and fragments, and worth about 1½ cents per pound, is mostly used by breweries, and therefore called "brewers' rice." This arbitrary grading of rice according to size and luster, without regard to quality, makes breakage in milling a serious problem for both producer and miller. When a grain breaks it loses a large percentage of its commercial value, though its food value is unchanged. Rice worth 6½ cents as extra fancy, when broken so as to pass through a No. 12 sieve, is worth only 1½ cents.

The proportion of whole rice obtained by milling varies greatly, dependent largely upon the quality of the paddy. The selection of seed, cultivation, and curing all decidedly affect the friability of the grain. Careful attention on the part of the planter goes further to decrease the percentage of broken rice than that of the miller himself. The annual loss in the commercial value of the rice crop, on account of the difference in price between whole and broken rice, has been estimated by the United States Department of Agriculture (Bulletin No. 22, 1899) at about \$2,000,000. The most productive is not usually the best milling rice.

TABLE 13.—RICE, CLEANING AND POLISHING, BY STATES: 1900.

|  | United States. | Alabama. | Florida. | Georgia.  | Louisiana.  | North Carolina. | South Carolina. | All other states. <sup>1</sup> |
|--|----------------|----------|----------|-----------|-------------|-----------------|-----------------|--------------------------------|
| Number of establishments .....                                 | 80             | 4        | 4        | 4         | 37          | 4               | 18              | 9                              |
| Capital:   |                |          |          |           |             |                 |                 |                                |
| Total .....  | \$2,601,352    | \$2,995  | \$4,510  | \$113,155 | \$1,818,144 | \$51,825        | \$293,835       | \$317,838                      |
| Land .....   | \$202,927      | \$95     | \$550    | \$30,085  | \$119,100   | \$5,425         | \$40,012        | \$1,051                        |
| Buildings .....  | \$610,808      | \$400    | \$800    | \$40,075  | \$450,250   | \$13,600        | \$97,958        | \$7,715                        |
| Machinery, tools, and implements .....                         | \$764,125      | \$2,100  | \$2,060  | \$20,775  | \$522,250   | \$19,300        | \$51,090        | \$145,650                      |
| Cash and sundries .....  | \$1,028,492    | \$400    | \$200    | \$22,220  | \$726,525   | \$18,000        | \$98,822        | \$162,822                      |
| Proprietors and firm members .....                             | 71             | 5        | 5        | 4         | 26          | 2               | 22              | 7                              |
| Salaries:  |                |          |          |           |             |                 |                 |                                |
| Total number .....   | 169            |          |          | 5         | 126         | 9               | 18              | 11                             |
| Total salaries .....   | \$182,033      |          |          | \$4,800   | \$141,122   | \$3,325         | \$15,762        | \$12,024                       |
| Officers of corporations—                                      |                |          |          |           |             |                 |                 |                                |
| Number .....   | 27             |          |          |           | 20          | 4               | 2               | 1                              |
| Salaries .....   | \$50,570       |          |          |           | \$42,450    | \$4,400         | \$2,720         | \$1,000                        |
| General superintendents, managers, clerks, etc.—               |                |          |          |           |             |                 |                 |                                |
| Total number .....   | 142            |          |          | 5         | 106         | 5               | 16              | 10                             |
| Total salaries .....   | \$131,463      |          |          | \$4,800   | \$98,672    | \$3,925         | \$13,042        | \$11,024                       |
| Men—   |                |          |          |           |             |                 |                 |                                |
| Number .....   | 138            |          |          | 5         | 104         | 4               | 16              | 9                              |
| Salaries .....   | \$129,744      |          |          | \$4,800   | \$97,802    | \$3,700         | \$13,012        | \$10,400                       |
| Women—   |                |          |          |           |             |                 |                 |                                |
| Number .....   | 4              |          |          |           | 2           | 1               |                 | 1                              |
| Salaries .....   | \$1,710        |          |          |           | \$970       | \$225           |                 | \$624                          |
| Wage-earners, including pieceworkers and total wages:          |                |          |          |           |             |                 |                 |                                |
| Greatest number employed at any one time during the year ..... | 1,138          | 7        | 8        | 19        | 797         | 41              | 155             | 111                            |
| Least number employed at any one time during the year .....    | 591            | 7        | 8        | 12        | 414         | 7               | 78              | 65                             |
| Average number .....   | 651            | 3        | 8        | 14        | 412         | 30              | 112             | 77                             |

<sup>1</sup> Includes establishments distributed as follows: Washington, 2; Texas, 1; Oregon, 1; New York, 2; Mississippi, 2; California, 1.

TABLE 13.—RICE, CLEANING AND POLISHING, BY STATES: 1900—Continued.

|  | United States. | Alabama. | Florida. | Georgia.  | Louisiana.  | North Carolina. | South Carolina. | All other States. <sup>1</sup> |
|--|----------------|----------|----------|-----------|-------------|-----------------|-----------------|--------------------------------|
| Wage-earners, including pieceworkers and total wages—Continued.                                      |                |          |          |           |             |                 |                 |                                |
| Wages.....   | \$265,585      | \$360    | \$976    | \$8,250   | \$180,523   | \$7,675         | \$25,243        | \$42,553                       |
| Men, 16 years and over—  |                |          |          |           |             |                 |                 |                                |
| Average number.....  | 639            | 3        | 3        | 14        | 400         | 30              | 112             | 77                             |
| Children, under 16 years—  |                |          |          |           |             |                 |                 |                                |
| Average number.....  | 12             |          |          |           | 12          |                 |                 |                                |
| Wages.....   | \$3,543        |          |          |           | \$3,543     |                 |                 |                                |
| Average number of wage-earners, including pieceworkers, employed during each month:                  |                |          |          |           |             |                 |                 |                                |
| Men, 16 years and over—  |                |          |          |           |             |                 |                 |                                |
| January.....   | 872            | 6        | 4        | 19        | 574         | 39              | 132             | 98                             |
| February.....  | 785            | 6        | 4        | 19        | 513         | 39              | 120             | 84                             |
| March.....   | 711            | 6        | 1        | 17        | 446         | 39              | 113             | 89                             |
| April.....   | 678            | 4        |          | 12        | 320         | 39              | 118             | 90                             |
| May.....   | 485            | 4        |          | 15        | 182         | 39              | 109             | 86                             |
| June.....  | 285            | 4        |          | 18        | 90          | 12              | 104             | 62                             |
| July.....  | 204            |          | 3        | 2         | 92          | 9               | 39              | 69                             |
| August.....  | 310            |          | 3        | 2         | 208         | 9               | 42              | 62                             |
| September.....   | 675            |          | 6        | 16        | 355         | 12              | 134             | 63                             |
| October.....   | 914            | 1        | 7        | 19        | 633         | 37              | 144             | 73                             |
| November.....  | 1,012          | 3        | 7        | 19        | 702         | 41              | 146             | 94                             |
| December.....  | 994            | 2        | 7        | 18        | 654         | 41              | 144             | 93                             |
| Children, under 16 years—  |                |          |          |           |             |                 |                 |                                |
| January.....   | 14             |          |          |           | 14          |                 |                 |                                |
| February.....  | 14             |          |          |           | 14          |                 |                 |                                |
| March.....   | 12             |          |          |           | 12          |                 |                 |                                |
| April.....   | 8              |          |          |           | 8           |                 |                 |                                |
| May.....   | 7              |          |          |           | 7           |                 |                 |                                |
| June.....  | 3              |          |          |           | 3           |                 |                 |                                |
| July.....  | 2              |          |          |           | 2           |                 |                 |                                |
| August.....  | 7              |          |          |           | 7           |                 |                 |                                |
| September.....   | 18             |          |          |           | 18          |                 |                 |                                |
| October.....   | 22             |          |          |           | 22          |                 |                 |                                |
| November.....  | 18             |          |          |           | 18          |                 |                 |                                |
| December.....  | 14             |          |          |           | 14          |                 |                 |                                |
| Miscellaneous expenses:  |                |          |          |           |             |                 |                 |                                |
| Total.....   | \$230,203      | \$29     | \$109    | \$2,690   | \$162,104   | \$3,782         | \$0,862         | \$51,027                       |
| Rent of works.....   | \$19,556       |          | \$36     | \$100     | \$4,410     | \$500           | \$235           | \$14,275                       |
| Taxes, not including internal revenue.....   | \$24,769       | \$6      | \$36     | \$1,806   | \$17,394    | \$157           | \$4,785         | \$1,085                        |
| Rent of offices, interest, etc.....  | \$165,784      | \$23     | \$37     | \$1,284   | \$131,503   | \$3,125         | \$4,842         | \$24,970                       |
| Contract work.....   | \$20,094       |          |          |           | \$8,797     |                 |                 | \$11,297                       |
| Materials used:  |                |          |          |           |             |                 |                 |                                |
| Aggregate cost.....  | \$7,575,522    | \$3,615  | \$10,855 | \$161,070 | \$4,954,135 | \$200,465       | \$856,790       | \$1,888,592                    |
| Principal materials—   |                |          |          |           |             |                 |                 |                                |
| Total cost.....  | \$7,882,132    | \$3,442  | \$10,530 | \$158,703 | \$4,819,645 | \$187,020       | \$842,497       | \$1,869,295                    |
| Purchased in raw state.....  | \$7,169,294    | \$3,435  | \$10,505 | \$154,433 | \$4,044,838 | \$175,700       | \$821,698       | \$1,358,685                    |
| Purchased in partially manufactured form.....  | \$212,838      | \$7      | \$25     | \$4,270   | \$174,807   | \$11,320        | \$20,799        | \$1,010                        |
| Fuel.....  | \$89,307       | \$100    | \$235    | \$1,535   | \$72,233    | \$2,435         | \$0,867         | \$8,402                        |
| Rent of power and heat.....  | \$8,560        |          |          |           | \$300       |                 |                 | \$8,260                        |
| Mill supplies.....   | \$44,929       | \$48     | \$80     | \$782     | \$31,999    | \$700           | \$7,025         | \$3,635                        |
| Freight.....   | \$50,594       | \$25     | \$10     | \$50      | \$29,958    | \$10,250        | \$301           | \$10,000                       |
| Products:  |                |          |          |           |             |                 |                 |                                |
| Value.....   | \$8,723,726    | \$4,316  | \$13,995 | \$184,804 | \$5,736,451 | \$238,520       | \$973,132       | \$1,572,008                    |
| Comparison of products:  |                |          |          |           |             |                 |                 |                                |
| Number of establishments reporting for both years.....   | 47             | 3        | 2        | 3         | 23          |                 | 9               | 7                              |
| Value for census year.....   | \$5,296,141    | \$4,200  | \$6,773  | \$182,494 | \$3,561,950 |                 | \$184,960       | \$1,355,758                    |
| Value for preceding business year.....   | \$4,370,897    | \$4,150  | \$3,500  | \$70,754  | \$2,905,902 |                 | \$160,320       | \$1,220,211                    |
| Power:   |                |          |          |           |             |                 |                 |                                |
| Number of establishments reporting power.....  | 78             | 4        | 3        | 4         | 37          | 3               | 18              | 9                              |
| Total horsepower.....  | 7,573          | 28       | 60       | 210       | 5,106       | 140             | 913             | 1,110                          |
| Owned—   |                |          |          |           |             |                 |                 |                                |
| Engines—   |                |          |          |           |             |                 |                 |                                |
| Steam—   |                |          |          |           |             |                 |                 |                                |
| Number.....  | 90             | 2        | 3        | 3         | 50          | 3               | 24              | 5                              |
| Horsepower.....  | 7,002          | 18       | 42       | 210       | 5,069       | 125             | 898             | 640                            |
| Water wheels—  |                |          |          |           |             |                 |                 |                                |
| Number.....  | 9              | 2        | 1        | 1         |             | 1               | 1               | 3                              |
| Horsepower.....  | 264            | 10       | 18       | 6         |             | 15              | 15              | 200                            |
| Electric motors—   |                |          |          |           |             |                 |                 |                                |
| Number.....  | 2              |          |          |           | 2           |                 |                 |                                |
| Horsepower.....  | 27             |          |          |           | 27          |                 |                 |                                |
| Rented—  |                |          |          |           |             |                 |                 |                                |
| Electric horsepower.....   | 280            |          |          |           | 10          |                 |                 | 270                            |
| Establishments classified by number of persons employed, not including proprietors and firm members: |                |          |          |           |             |                 |                 |                                |
| Total number of establishments.....  | 80             | 4        | 4        | 4         | 37          | 4               | 18              | 9                              |
| No employees.....  | 6              |          |          | 1         |             | 1               | 3               | 1                              |
| Under 5.....   | 33             | 4        | 4        | 2         | 13          | 1               | 12              | 2                              |
| 5 to 20.....   | 15             |          |          | 1         | 9           | 1               |                 | 4                              |
| 21 to 50.....  | 14             |          |          |           | 9           | 1               | 2               | 2                              |
| 51 to 100.....   | 6              |          |          |           | 5           |                 | 1               |                                |
| 101 to 250.....  | 1              |          |          |           | 1           |                 |                 |                                |

<sup>1</sup>Includes establishments distributed as follows: Washington, 2; Texas, 1; Oregon, 1; New York, 2; Mississippi, 2; California, 1

Twelfth Census of the United States.

# CENSUS BULLETIN.

No. 202.

WASHINGTON, D. C.

JUNE 23, 1902.

## MANUFACTURES.

### DYEING AND FINISHING TEXTILES.

Hon. WILLIAM R. MERRIAM,  
*Director of the Census.*

SIR: I transmit herewith, for publication in bulletin form, a report on dyeing and finishing textiles for the census year 1900, prepared under my direction by Mr. Edward Stanwood, of Boston, acting in the capacity of an expert special agent of the division of manufactures.

The industry of dyeing and finishing textiles is carried on both in independent establishments and as a minor feature of cotton, wool, and silk manufacture.

The tables exhibited in this report do not embrace the statistics of establishments connected with cotton, wool, or silk factories, but show only the operations of independent dye works, bleacheries, and print works.

The statistics are presented in 5 tables: Table 1 is a comparative summary, 1850 to 1900, with percentage of increase for each decade; Table 2 is a comparative summary, by states, 1890 and 1900; Table 3 showing the kinds, quantity, and value of the goods operated upon in independent establishments, 1890 and 1900; Table 4 showing the total for establishments engaged in dyeing and finishing cotton, woollen, worsted, silk, and mixed goods, and yarns, respectively, by states, 1900; and Table 5 showing the details of the industry, by states, 1900.

In drafting the schedules of inquiry for the census of 1900 care was taken to preserve the basis of comparison with prior censuses. Comparison may be made safely with respect to all the items of inquiry except those relating to capital, salaried officials, clerks, etc., and

their salaries, the average number of employees, and the total amount of wages paid. Live capital, that is, cash on hand, bills receivable, unsettled ledger accounts, raw materials, stock in process of manufacture, finished products on hand, and other sundries, was first called for at the census of 1890. No definite attempt was made, prior to the census of 1890, to secure a return of live capital invested.

Changes were made in the inquiries relating to employees and wages in order to eliminate defects found to exist on the form of inquiry adopted in 1890. At the census of 1890 the average number of persons employed during the entire year was called for, and also the average number employed at stated weekly rates of pay, and the average number was computed for the actual time the establishments were reported as being in operation. At the census of 1900 the greatest and least numbers of employees were reported, and also the average number employed during each month of the year. The average number of wage-earners (men, women, and children) employed during the entire year was ascertained by using 12, the number of calendar months, as a divisor into the total of the average numbers reported for each month. This difference in the method of ascertaining the average number of wage-earners during the entire year may have resulted in a variation in the number, and should be considered in making comparisons.

At the census of 1890 the number and salaries of proprietors and firm members actively engaged in the

business or in supervision were reported, combined with clerks and other officials. In cases where proprietors and firm members were reported without salaries, the amount that would ordinarily be paid for similar services was estimated. At the census of 1900 only the number of proprietors and firm members actively engaged in the industry or in supervision was ascertained, and no salaries were reported for this class. It is therefore impossible to compare the number and salaries of salaried officials of any character for the two censuses.

Furthermore, the schedules for 1890 included in the wage-earning class, overseers, foremen, and superintendents (not general superintendents or managers), while the census of 1900 separates from the wage-earning class such salaried employees as general superintendents, clerks, and salesmen. It is possible and probable that this change in the form of the question has resulted in eliminating from the wage-earners, as reported by the present census, many high-salaried employees included in that group for the census of 1890.

In some instances, the number of proprietors and firm members, shown in the accompanying tables, falls short of the number of establishments reported. This is accounted for by the fact that no proprietors or firm members are reported for corporations or cooperative establishments. The number of salaried officials, clerks, etc., is the greatest number reported employed at any one time during the year.

The reports show a capital of \$60,643,104 invested in

dyeing and finishing textiles in the 298 establishments reporting. This sum represents the value of land, buildings, machinery, tools, and implements, and the live capital utilized, but does not include the capital stock of any of the manufacturing corporations. The value of the products is returned at \$44,963,331, to produce which involved an outlay of \$2,267,128 for salaries of officials, clerks, etc.; \$12,726,316 for wages; \$4,137,947 for miscellaneous expenses, including rent, taxes, internal revenue, etc.; and \$17,958,137 for materials used, mill supplies, freight, and fuel. It is not to be assumed, however, that the difference between the aggregate of these sums and the value of the products is, in any sense, indicative of the profits in the manufacture of the products during the census year. The census schedule takes no cognizance of the cost of selling manufactured articles, or of interest on capital invested, or of the mercantile losses incurred in the business, or of depreciation in plant. The value of the product given is the value as obtained or fixed at the shop or factory. This statement is necessary in order to avoid erroneous conclusions from the figures presented.

Very respectfully,



*Chief Statistician for Manufactures.*

## DYEING AND FINISHING TEXTILES.

By EDWARD STANWOOD, *Expert Special Agent.*

Dyeing and finishing textiles is carried on as an industry in independent establishments, and also as one of the processes in a considerable number of the factories engaged in cotton, wool, and silk manufactures. The various statistics relating to capital, employees, wages, miscellaneous expenses, cost of materials, and value of products, as to the independent establishments, must be given in order to complete the information regarding the textile industry as a whole. In the presentation of these statistics the rule adopted at all previous censuses, except one, has been followed. Inasmuch as all the material operated upon—yarn, cloth, hosiery, etc.—was reported by other textile establishments as products of manufacture, a return by the establishments exclusively engaged in dyeing and finishing textiles of the total value of the articles after the dyeing and finishing would have resulted in great duplication. For this reason the yarn and fabrics have been totally excluded from the statement of materials, and only the value added to the materials by the processes have been given as the value of the products of this particular branch of the textile industry.

The magnitude of the business of dyeing and finishing can be ascertained only by combining the statistics of independent establishments with similar information as to this work in other branches of the textile industry. Outside of the independent establishments, however, the finishing processes are subordinate to the process of manufacture, and the schedules provided for the taking of the textile industry were not sufficiently uniform in the details relating to dyeing and finishing to render a full presentation possible. Thus, the wool schedule calls for the value of chemicals and dye stuffs used in the mills devoted to that industry, but not for the amount of goods operated upon. On the other hand, the silk schedule calls for the amount of goods operated upon, but not for the value of chemicals and dye stuffs used.

The total cost of chemicals and dye stuffs used in all textile establishments in 1890 and 1900 so far as reported was as follows:

|  | 1900         | 1890         |
|--|--------------|--------------|
| Total .....  | \$25,392,573 | \$19,686,693 |
| Independent dyeing and finishing establishments..... | 10,667,621   | 8,407,693    |
| Other textile establishments.....                    | 14,724,952   | 11,278,970   |
| Cotton manufactures.....                             | 5,718,107    | 4,266,773    |
| Wool manufactures <sup>1</sup> .....                 | 7,983,684    | 5,889,612    |
| Hosiery and knit goods.....                          | 1,023,161    | 564,053      |
| Silk manufactures <sup>2</sup> .....                 |              | 553,532      |

<sup>1</sup> Including woolen goods; worsted goods; carpets and rugs, other than rag; felt goods; and wool hats in 1890 and 1900.

<sup>2</sup> Not reported separately in 1900.

The increase in cost of chemicals and dye stuffs for the last decade has been marked; for the independent establishments from \$8,407,693 in 1890 to \$10,667,621 in 1900, an increase of \$2,259,928, or 26.9 per cent; and in cotton and wool manufactures, including hosiery and knit goods, from \$10,720,438 to \$14,724,952, an increase of \$4,004,514, or 37.4 per cent.

The large decrease in the price of merchandise in the decade is to be taken into account in examining the foregoing table. The quantity of chemicals used and the quantity of yarn and cloth operated upon increased in a much greater ratio than the value represented in products. In the case of some articles the increase can be shown. For example, the amount of cotton piece goods printed in 1890 was 722,257,451 square yards, of which 579,667,368 square yards were printed in independent establishments and 142,590,083 in cotton mills. In 1900 the aggregate was 1,233,191,438 square yards, an increase of 70.7 per cent. Of this, 940,450,338 square yards were printed by independent establishments and 292,741,100 square yards in cotton



mills, an increase of 62.2 per cent and 105.3 per cent, respectively.

The facts relating to the dyeing and finishing of cotton goods and silk goods are set forth in the reports on those branches of the textile industry. It has been explained that those relating to the wool industry are

not ascertainable in a way to throw much light upon the subject. The following tables and remarks apply to the independent establishments only.

Table 1 presents a comparative summary of the industry of dyeing and finishing textiles during the last half century.

TABLE 1.—COMPARATIVE SUMMARY, 1850 TO 1900, WITH PER CENT OF INCREASE FOR EACH DECADE.

|  | DATE OF CENSUS. |              |              |              |             |              | PER CENT OF INCREASE. |                    |                    |                    |                    |
|--|-----------------|--------------|--------------|--------------|-------------|--------------|-----------------------|--------------------|--------------------|--------------------|--------------------|
|  | 1900            | 1890         | 1880         | 1870         | 1860        | 1850         | 1890<br>to<br>1900    | 1880<br>to<br>1890 | 1870<br>to<br>1880 | 1860<br>to<br>1870 | 1850<br>to<br>1860 |
| Number of establishments .....                 | 298             | 248          | 191          | 42           | 29          | 42           | 20.2                  | 29.8               | 354.8              | 44.8               | 181.0              |
| Capital .....                                  | \$60,643,104    | \$38,450,800 | \$26,223,981 | \$13,867,553 | \$3,517,250 | \$3,922,800  | 57.7                  | 46.6               | 96.2               | 280.1              | 110.3              |
| Salaried officials, clerks, etc., number ..... | 1,318           | 1,606        | (3)          | (3)          | (3)         | (3)          | 97.9                  | 181.5              | .....              | .....              | .....              |
| Salaries .....                                 | \$2,267,128     | \$305,291    | (3)          | (3)          | (3)         | (3)          | 51.9                  | 17.4               | 87.7               | 122.1              | 11.8               |
| Wage-earners, average number .....             | 29,776          | 19,601       | 16,698       | 8,894        | 4,005       | 4,080        | 42.8                  | 37.6               | 88.3               | 215.9              | 10.1               |
| Total wages .....                              | \$12,726,316    | \$8,911,720  | \$6,474,364  | \$3,438,089  | \$1,088,296 | \$1,088,904  | 47.9                  | 29.1               | 109.9              | 77.5               | 2.4                |
| Men, 16 years and over .....                   | 24,419          | 16,510       | 12,788       | 6,092        | 3,433       | 3,351        | 39.4                  | 85.1               | 12.8               | 46.3               | 143.5              |
| Wages .....                                    | \$11,861,194    | \$8,147,844  | (3)          | (3)          | (3)         | (3)          | 88.1                  | 89.2               | 157.6              | 32.9               | .....              |
| Women, 16 years and over .....                 | 4,253           | 2,298        | 2,038        | 1,898        | 572         | 729          | 88.1                  | 88.1               | 82.2               | .....              | .....              |
| Wages .....                                    | \$1,166,972     | \$620,390    | (3)          | (3)          | (3)         | (3)          | 45.0                  | 19.4               | 170.5              | 1093.7             | 162.9              |
| Children, under 16 years .....                 | 1,104           | 793          | 1,872        | 1,409        | (3)         | (3)          | 55.6                  | 110.5              | 140.7              | 583.0              | 141.7              |
| Wages .....                                    | \$198,150       | \$143,486    | (3)          | (3)          | (3)         | (3)          | .....                 | .....              | .....              | .....              | .....              |
| Miscellaneous expenses .....                   | \$4,137,947     | \$3,131,081  | (4)          | (4)          | (4)         | (4)          | .....                 | .....              | .....              | .....              | .....              |
| Cost of materials used .....                   | \$17,953,137    | \$12,335,220 | \$13,664,295 | \$46,373,358 | \$3,884,815 | \$10,462,044 | .....                 | .....              | .....              | .....              | .....              |
| Value of products .....                        | \$44,963,331    | \$28,900,560 | \$32,297,420 | \$54,446,044 | \$7,971,064 | \$13,680,805 | .....                 | .....              | .....              | .....              | .....              |

<sup>1</sup> Decrease.

<sup>2</sup> Includes proprietors and firm members, with their salaries; number only reported in 1900, but not included in this summary. (See Table 5.)

<sup>3</sup> Not reported separately.

<sup>4</sup> Not reported.

The statements for 1850 and 1860 included only the statistics of calico printing and satinet printing, but it may be fairly assumed that these processes were substantially the only ones which came properly under the head of dyeing and finishing that were then performed on a large scale in the United States. During the last half century the amount of capital employed in the industry has increased more than fifteenfold. It nearly doubled between 1870 and 1880, increased 46.6 per cent between 1880 and 1890, and 57.7 per cent during the last decade. The number of wage-earners increased at a smaller ratio, but the increase from 1890 to 1900 was substantially equal to the increase of capital.

The statements of materials used and value of products are necessarily misleading in one respect, namely, that in 1870 the total value of the yarn and cloth operated upon were reported as cost of materials, and the value of the goods after the operations were performed was reported as the total value. This accounts for the inconsistency in the cost of materials and value of products shown for 1870 compared with similar items at other censuses.

Table 2 exhibits the general facts relating to the industry in detail as ascertained at the censuses of 1890 and 1900.

TABLE 2.—COMPARATIVE SUMMARY BY STATES: 1890 AND 1900.

| STATES.                         | Year. | Number of establishments. | CAPITAL.     |             |              |                                   |                    | SALARIED OFFICIALS, CLERKS, ETC. |             | AVERAGE NUMBER WAGE-EARNERS AND TOTAL WAGES. |              |                         |                           |                           |
|---------------------------------|-------|---------------------------|--------------|-------------|--------------|-----------------------------------|--------------------|----------------------------------|-------------|--|--------------|-------------------------|---------------------------|---------------------------|
|                                 |       |                           | Total.       | Land.       | Buildings.   | Machinery, tools, and implements. | Cash and sundries. | Number.                          | Salaries.   | Average number.                              | Total wages. | Men, 16 years and over. | Women, 16 years and over. | Children, under 16 years. |
| United States..                 | 1900  | 298                       | \$60,643,104 | \$5,804,949 | \$12,251,886 | \$17,750,574                      | \$25,835,695       | 1,318                            | \$2,267,128 | 29,776                                       | \$12,725,316 | 24,419                  | 4,258                     | 1,104                     |
|                                 | 1890  | 248                       | 38,450,800   | 2,579,114   | 7,596,641    | 9,703,284                         | 13,571,761         | 666                              | 805,291     | 19,601                                       | 8,911,720    | 16,510                  | 2,298                     | 793                       |
| Connecticut .....               | 1900  | 5                         | 3,243,744    | 482,100     | 1,004,388    | 929,262                           | 827,994            | 39                               | 100,884     | 1,300  | 578,756      | 1,015                   | 238                       | 47                        |
|                                 | 1890  | 5                         | 775,352      | 58,700      | 331,184      | 231,212                           | 154,256            | 12                               | 14,250      | 477  | 237,102      | 390                     | 85                        | 2                         |
| Illinois.....                   | 1900  | 4                         | 113,694      | 7,500       | 42,000       | 50,800                            | 13,394             | 7                                | 6,700       | 84   | 27,878       | 69                      | 10                        | 5                         |
|                                 | 1890  | 3                         | 26,500       | 3,500       | 6,000        | 11,000                            | 6,000              | 5                                | 2,532       | 16   | 7,892        | 13                      | 3                         | .....                     |
| Kentucky.....                   | 1900  | 3                         | 161,239      | 7,800       | 28,922       | 55,455                            | 69,062             | 7                                | 9,090       | 116  | 45,225       | 83                      | 25                        | 8                         |
|                                 | 1890  | .....                     | .....        | .....       | .....        | .....                             | .....              | .....                            | .....       | .....  | .....        | .....                   | .....                     | .....                     |
| Massachusetts ..                | 1900  | 37                        | 15,206,200   | 1,161,508   | 1,960,972    | 2,499,388                         | 9,584,337          | 239                              | 547,862     | 4,678  | 2,081,015    | 3,846                   | 735                       | 97                        |
|                                 | 1890  | 33                        | 11,996,154   | 673,931     | 2,010,687    | 2,502,895                         | 6,808,641          | 82                               | 99,320      | 4,270  | 1,806,787    | 3,527                   | 539                       | 204                       |
| New Hampshire                   | 1900  | 5                         | 888,704      | 61,000      | 153,000      | 173,500                           | 496,204            | 21                               | 23,900      | 1,028  | 451,960      | 789                     | 239                       | .....                     |
|                                 | 1890  | .....                     | .....        | .....       | .....        | .....                             | .....              | .....                            | .....       | .....  | .....        | .....                   | .....                     | .....                     |
| New Jersey .....                | 1900  | 59                        | 11,600,695   | 651,481     | 2,100,396    | 4,624,059                         | 4,224,759          | 353                              | 614,910     | 7,074  | 3,003,491    | 6,120                   | 786                       | 168                       |
|                                 | 1890  | 41                        | 5,197,408    | 333,936     | 879,577      | 1,782,696                         | 2,201,194          | 129                              | 179,425     | 3,735  | 1,878,137    | 3,335                   | 846                       | 54                        |
| New York .....                  | 1900  | 42                        | 6,230,657    | 339,900     | 1,335,748    | 2,097,541                         | 2,457,459          | 107                              | 134,345     | 3,117  | 1,424,578    | 2,395                   | 636                       | 86                        |
|                                 | 1890  | 49                        | 4,963,095    | 366,300     | 721,700      | 1,137,666                         | 2,737,529          | 114                              | 137,473     | 2,725  | 1,844,250    | 2,174                   | 415                       | 136                       |
| North Carolina ..               | 1900  | 5                         | 293,831      | 4,700       | 33,800       | 184,022                           | 71,309             | 8                                | 6,650       | 184  | 45,340       | 142                     | 42                        | .....                     |
|                                 | 1890  | .....                     | .....        | .....       | .....        | .....                             | .....              | .....                            | .....       | .....  | .....        | .....                   | .....                     | .....                     |
| Pennsylvania....                | 1900  | 105                       | 7,679,906    | 733,612     | 1,290,133    | 2,368,629                         | 3,287,532          | 216                              | 260,277     | 4,716  | 2,065,752    | 4,013                   | 846                       | 357                       |
|                                 | 1890  | 83                        | 6,296,840    | 598,647     | 1,354,200    | 1,839,121                         | 2,504,372          | 190                              | 207,257     | 3,355  | 1,599,565    | 2,994                   | 212                       | 179                       |
| Rhode Island ...                | 1900  | 24                        | 12,853,123   | 1,572,306   | 3,765,814    | 3,862,803                         | 3,652,700          | 256                              | 449,996     | 5,042  | 2,474,042    | 4,044                   | 1,039                     | 259                       |
|                                 | 1890  | 22                        | 5,739,692    | 432,600     | 1,832,398    | 1,496,323                         | 1,976,371          | 101                              | 130,059     | 3,619  | 1,462,096    | 2,904                   | 570                       | 145                       |
| All other states <sup>2</sup> . | 1900  | 9                         | 2,376,311    | 233,038     | 537,213      | 905,115                           | 650,945            | 65                               | 112,514     | 1,537  | 528,279      | 1,303                   | 157                       | 77                        |
|                                 | 1890  | 12                        | 3,456,264    | 111,500     | 460,895      | 700,471                           | 2,133,398          | 33                               | 34,975      | 1,404  | 574,991      | 1,203                   | 128                       | 73                        |

| STATES.                          | Year. | Number of establishments. | Miscellaneous expenses. | COST OF MATERIALS USED. |                          |           |           |             |                         | Value of products. |                      |
|----------------------------------|-------|---------------------------|-------------------------|-------------------------|--------------------------|-----------|-----------|-------------|-------------------------|--------------------|----------------------|
|                                  |       |                           |                         | Total.                  | Chemicals and dyestuffs. | Starch.   | Soap.     | Fuel.       | Rent of power and heat. |                    | All other materials. |
| United States ..                 | 1900  | 298                       | \$4,137,947             | \$17,953,137            | \$10,667,621             | \$374,643 | \$563,809 | \$2,165,091 | \$53,730                | \$9,633,243        | \$44,963,331         |
|                                  | 1890  | 248                       | 3,131,081               | 12,385,220              | 8,407,693                | 660,577   | 279,272   | 1,647,848   | 23,138                  | 1,366,692          | 28,900,500           |
| Connecticut.....                 | 1900  | 5                         | 216,075                 | 907,877                 | 561,619                  | 36,715    | 17,129    | 113,780     | 7,955                   | 170,179            | 2,269,967            |
|                                  | 1890  | 5                         | 77,336                  | 300,300                 | 114,126                  | 17,815    | 2,049     | 63,711      | .....                   | 107,659            | 715,388              |
| Illinois.....                    | 1900  | 4                         | 5,913                   | 32,523                  | 18,966                   | 560       | 445       | 7,546       | .....                   | 5,006              | 86,960               |
|                                  | 1890  | 3                         | 1,426                   | 6,846                   | 4,270                    | .....     | 504       | 1,072       | .....                   | 1,000              | 26,741               |
| Kentucky.....                    | 1900  | 3                         | 9,702                   | 84,023                  | 71,518                   | 4,162     | 160       | 6,300       | 130                     | 1,703              | 179,123              |
|                                  | 1890  | .....                     | .....                   | .....                   | .....                    | .....     | .....     | .....       | .....                   | .....              | .....                |
| Massachusetts....                | 1900  | 37                        | 866,829                 | 3,110,910               | 2,031,072                | 160,016   | 9,506     | 393,711     | 5,512                   | 511,093            | 8,868,290            |
|                                  | 1890  | 33                        | 809,669                 | 2,801,364               | 1,950,550                | 125,288   | 25,599    | 404,778     | 6,413                   | 288,736            | 6,496,215            |
| New Hampshire..                  | 1900  | 5                         | 111,478                 | 636,469                 | 309,296                  | 23,646    | 25,034    | 74,451      | 50                      | 203,992            | 1,328,319            |
|                                  | 1890  | .....                     | .....                   | .....                   | .....                    | .....     | .....     | .....       | .....                   | .....              | .....                |
| New Jersey.....                  | 1900  | 59                        | 809,580                 | 4,513,768               | 2,755,553                | 165,728   | 224,298   | 411,178     | 9,497                   | 947,514            | 10,488,963           |
|                                  | 1890  | 41                        | 752,461                 | 2,711,121               | 2,068,192                | 109,466   | 83,775    | 239,329     | 2,500                   | 207,859            | 6,133,397            |
| New York.....                    | 1900  | 42                        | 210,395                 | 1,402,373               | 630,325                  | 63,124    | 46,131    | 202,074     | 8,564                   | 392,655            | 3,625,882            |
|                                  | 1890  | 49                        | 367,935                 | 1,454,119               | 839,577                  | 73,836    | 44,321    | 216,618     | 4,775                   | 224,992            | 3,036,051            |
| North Carolina...                | 1900  | 5                         | 13,366                  | 95,210                  | 13,000                   | 14,834    | 220       | 10,767      | .....                   | 56,389             | 175,750              |
|                                  | 1890  | .....                     | .....                   | .....                   | .....                    | .....     | .....     | .....       | .....                   | .....              | .....                |
| Pennsylvania....                 | 1900  | 105                       | 556,033                 | 3,174,507               | 2,068,174                | 94,373    | 172,970   | 342,671     | 8,772                   | 487,547            | 7,033,012            |
|                                  | 1890  | 83                        | 419,456                 | 2,395,482               | 1,308,041                | 107,269   | 80,793    | 284,546     | 6,250                   | 108,533            | 5,240,761            |
| Rhode Island.....                | 1900  | 24                        | 1,138,065               | 3,087,781               | 1,653,059                | 205,321   | 62,048    | 513,837     | 20                      | 653,496            | 8,484,878            |
|                                  | 1890  | 22                        | 393,549                 | 1,819,351               | 1,064,475                | 129,050   | 32,205    | 351,521     | 1,200                   | 240,900            | 4,743,561            |
| All other states <sup>2</sup> .. | 1900  | 9                         | 200,461                 | 913,196                 | 495,539                  | 106,164   | 5,868     | 88,776      | 13,180                  | 203,669            | 2,417,187            |
|                                  | 1890  | 12                        | 249,249                 | 896,577                 | 508,462                  | 97,853    | 10,026    | 91,273      | 2,000                   | 186,963            | 1,858,446            |

<sup>1</sup> No establishments reported, 1890.<sup>2</sup> Included in "all other states," 1890.<sup>3</sup> Includes establishments distributed as follows: 1900—Alabama, 1; Delaware, 2; Indiana, 1; Maine, 1; Maryland, 2; Ohio, 1; West Virginia, 1. 1890—Delaware, 1; Iowa, 1; Maine, 1; Maryland, 2; Minnesota, 1; Missouri, 1; New Hampshire, 2; Ohio, 2; West Virginia, 1.

The number of independent establishments increased during the decade from 248 to 298. Of this increase, 22 are credited to Pennsylvania and 18 to New Jersey, and they indicate a great extension of the business of silk dyeing and finishing in the 2 states where the silk industry is most concentrated. The increase in the other items is more nearly equalized among the states owing to the expansion of individual establishments. Thus, in Connecticut the amount of capital reported is more than four times as great in 1900 as in 1890, although the number of establishments is the same. Rhode Island, with only 2 additional establishments, has more than doubled its capital, and Massachusetts, although adding but 4 establishments, has 26.8 per cent greater capital. The same fact appears in the statement of the average number of wage-earners, for although nearly one-half of the increase has taken place in the states of New Jersey and Pennsylvania, there has also been a large increase in the New England states, where the number of establishments has not substantially increased.

Of the total cost of materials used, \$17,958,137, the cost of chemicals and dyestuffs represents a value of \$10,667,621, or about 59.4 per cent of the whole. In 1890 the corresponding percentage was about 67.9 per cent—a fact which illustrates the decline which has taken place during the decade in the cost of such materials.

The increase in the added value given to fabrics by the processes to which they were subjected is 55.6 per cent in comparison with an increase of 45 per cent in the cost of materials used. The difference is due to the fact that, while the cost of materials has declined, the items of wages and miscellaneous expenses have not.

Table 3 presents the quantity and value of all classes of goods operated upon and value added in independent establishments, 1890 and 1900.

TABLE 3.—COMPARATIVE SUMMARY, KINDS AND QUANTITY OF GOODS OPERATED UPON AND VALUE ADDED BY INDEPENDENT ESTABLISHMENTS, 1890 AND 1900.

|                                      | 1900          |              | 1890          |              |
|--------------------------------------|---------------|--------------|---------------|--------------|
|                                      | Pounds.       | Value.       | Pounds.       | Value.       |
| Aggregate value .....                |               | \$44,963,331 |               | \$28,900,560 |
| Total .....                          | 118,097,838   | 8,097,439    | 85,575,424    | 6,001,754    |
| Cotton stock, bleached .....         | 300,650       | 4,823        |               |              |
| Cotton stock, dyed .....             | 12,466,700    | 572,661      | 4,676,344     | 204,827      |
| Wool stock, dyed .....               | 2,403,511     | 88,071       | 1,160,666     | 48,828       |
| Cotton yarn, bleached .....          | 12,780,518    | 252,635      |               |              |
| Cotton yarn, dyed .....              | 54,103,555    | 2,226,912    | 48,762,759    | 2,036,127    |
| Cotton yarn, mercerized .....        | 868,851       | 159,616      |               |              |
| Woolen yarn, dyed .....              | 20,755,984    | 557,001      | 17,999,651    | 751,801      |
| Worsted yarn, dyed .....             | 8,474,562     | 491,291      | 9,342,157     | 493,974      |
| Silk yarn, dyed .....                | 5,609,444     | 8,615,644    | 3,322,017     | 2,346,387    |
| Spun silk yarn, dyed .....           | 329,063       | 133,785      | 311,830       | 119,810      |
|                                      | Square yards. | Value.       | Square yards. | Value.       |
| Total .....                          | 2,511,485,729 | \$34,599,542 | 1,569,422,631 | \$22,514,000 |
| Cotton piecegoods, bleached .....    | 964,902,357   | 6,691,423    | 454,357,758   | 3,369,940    |
| Cotton piece goods, dyed .....       | 559,430,339   | 7,585,204    | 446,496,822   | 5,671,483    |
| Cotton piece goods, mercerized ..... | 7,973,506     | 400,118      |               |              |
| Cotton piece goods, printed .....    | 940,450,838   | 15,997,087   | 579,667,368   | 10,355,032   |
| Woolen piece goods, dyed .....       | 11,243,894    | 451,864      | 20,779,034    | 652,998      |
| Worsted piece goods, dyed .....      | 9,413,837     | 476,951      |               |              |
| Silk piece goods, dyed .....         | 14,340,796    | 431,463      | 7,405,399     | 394,777      |
| Silk piece goods, printed .....      | 3,631,652     | 335,154      |               |              |
| Mixed piece goods, dyed .....        |               | 2,180,278    | 60,716,250    | 2,069,765    |
| All other work done .....            |               | 2,266,350    |               | 384,806      |

Inasmuch as the dyeing and finishing of goods in cotton mills represents generally merely work upon their own products, the true measure of increase of the business is discovered more from the foregoing table than from a combination of the two. It will be seen that there has been an increase in almost all departments of dyeing and finishing, but the increase is much less marked in the case of woolen goods than in cotton and silk.

Table 4 shows, by states, with totals for the United States, the returns of establishments engaged in dyeing and finishing cotton, woolen, and worsted, silk, and mixed goods, and yarns, respectively, 1900, and Table 5 presents a detailed summary of the industry for 1900.

TABLE 4.—DYEING AND FINISHING TEXTILES:

## COTTON GOODS AND YARNS.

|    | STATES.                             | Number of establishments. | Capital.     | AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES. |             |                         |                           |  |
|----|-------------------------------------|---------------------------|--------------|---|-------------|-------------------------|---------------------------|--|
|    |                                     |                           |              | Average number.                                 | Wages.      | Men, 16 years and over. | Women, 16 years and over. | Children, under 16 years. <sup>1</sup> |
| 1  | United States .....                 | 178                       | \$52,287,850 | 23,286  | \$9,847,474 | 18,847                  | 3,438                     | 956                                    |
| 2  | Connecticut.....                    | 5                         | 3,248,744    | 1,300   | 578,766     | 1,015                   | 238                       | 47                                     |
| 3  | Kentucky.....                       | 3                         | 161,239      | 116   | 45,225      | 88                      | 25                        | 8                                      |
| 4  | Massachusetts.....                  | 33                        | 14,927,375   | 4,577   | 2,081,255   | 3,771                   | 700                       | 97                                     |
| 5  | New Hampshire .....                 | 4                         | 675,704      | 908   | 409,960     | 749                     | 154                       | .....                                  |
| 6  | New Jersey .....                    | 20                        | 7,264,547    | 3,459   | 1,467,571   | 2,809                   | 552                       | 96                                     |
| 7  | New York.....                       | 17                        | 4,959,763    | 2,143   | 997,175     | 1,708                   | 349                       | 86                                     |
| 8  | North Carolina .....                | 5                         | 298,831      | 184   | 45,340      | 142                     | 42                        | .....                                  |
| 9  | Pennsylvania.....                   | 56                        | 5,799,650    | 3,286   | 1,369,807   | 2,748                   | 264                       | 284                                    |
| 10 | Rhode Island .....                  | 20                        | 12,573,769   | 5,760   | 2,389,911   | 4,531                   | 973                       | 256                                    |
| 11 | All other states <sup>1</sup> ..... | 10                        | 2,888,228    | 1,608   | 512,474     | 1,291                   | 137                       | 80                                     |

## WOOLEN GOODS AND WORSTED GOODS AND YARNS.

|   |                                     |    |             |       |           |       |     |       |
|---|-------------------------------------|----|-------------|-------|-----------|-------|-----|-------|
| 1 | United States .....                 | 38 | \$1,561,790 | 1,236 | \$603,100 | 1,076 | 137 | 23    |
| 2 | Massachusetts.....                  | 3  | 128,749     | 64    | 23,819    | 44    | 20  | ..... |
| 3 | New York.....                       | 8  | 63,322      | 45    | 19,965    | 44    | 1   | ..... |
| 4 | Pennsylvania.....                   | 23 | 1,201,442   | 942   | 477,081   | 867   | 54  | 21    |
| 5 | All other states <sup>2</sup> ..... | 4  | 168,277     | 185   | 82,235    | 121   | 62  | 2     |

## MIXED GOODS AND YARNS.

|   |                                 |    |             |       |           |     |     |       |
|---|---------------------------------|----|-------------|-------|-----------|-----|-----|-------|
| 1 | United States .....             | 41 | \$2,355,930 | 1,416 | \$598,653 | 950 | 404 | 56    |
| 2 | New Jersey .....                | 6  | 276,987     | 99    | 45,740    | 91  | 5   | 3     |
| 3 | New York.....                   | 10 | 1,010,952   | 685   | 288,464   | 444 | 241 | ..... |
| 4 | Pennsylvania.....               | 20 | 492,061     | 355   | 147,877   | 272 | 33  | 50    |
| 5 | Rhode Island <sup>3</sup> ..... | 5  | 575,980     | 277   | 110,572   | 149 | 125 | 3     |

## SILK GOODS AND YARNS.

|   |                     |    |             |       |             |       |     |       |
|---|---------------------|----|-------------|-------|-------------|-------|-----|-------|
| 1 | United States ..... | 51 | \$4,437,534 | 3,888 | \$1,677,089 | 3,540 | 279 | 69    |
| 2 | New Jersey .....    | 32 | 4,052,461   | 3,510 | 1,486,628   | 3,214 | 229 | 67    |
| 3 | New York.....       | 13 | 198,320     | 245   | 119,474     | 200   | 45  | ..... |
| 4 | Pennsylvania .....  | 6  | 186,753     | 133   | 70,987      | 126   | 5   | 2     |

<sup>1</sup> Includes establishments distributed as follows: Alabama, 1; Delaware, 2; Illinois, 2; Indiana, 1; Maine, 1; Maryland, 2; West Virginia, 1.<sup>2</sup> Includes establishments distributed as follows: Illinois, 1; New Jersey, 1; Ohio, 1; Rhode Island, 1.<sup>3</sup> Includes 1 establishment in Massachusetts and 1 in New Hampshire.<sup>4</sup> Includes 1 establishment in Illinois.

## BY CLASSES OF TEXTILES, 1900.

## COTTON GOODS AND YARNS.

| POWER.             |                    |                        | Printing machines. | Miscellaneous expenses. | COST OF MATERIALS USED. |                          |             |                         |                      | Value of products. |    |
|--------------------|--------------------|------------------------|--------------------|-------------------------|-------------------------|--------------------------|-------------|-------------------------|----------------------|--------------------|----|
| Steam horse-power. | Water horse-power. | All other horse-power. |                    |                         | Total.                  | Chemicals and dyestuffs. | Fuel.       | Rent of power and heat. | All other materials. |                    |    |
| 49,415             | 9,074              | 3,816                  | 298                | \$3,630,012             | \$14,019,084            | \$8,083,680              | \$1,827,815 | \$36,034                | \$4,121,555          | \$35,350,505       | 1  |
| 2,553              | 2,156              | 400                    | 16                 | 216,075                 | 907,377                 | 561,619                  | 113,780     | 7,955                   | 224,023              | 2,269,967          | 2  |
| 284                | -----              | 40                     | 1                  | 9,702                   | 84,023                  | 71,518                   | 6,300       | 180                     | 6,025                | 179,123            | 3  |
| 11,662             | 2,300              | 122                    | 68                 | 857,065                 | 3,035,697               | 1,984,716                | 382,562     | 5,512                   | 662,907              | 8,698,626          | 4  |
| 20                 | 375                | -----                  | 16                 | 89,128                  | 556,869                 | 294,296                  | 72,251      | 50                      | 190,272              | 1,132,819          | 5  |
| 6,864              | 1,330              | -----                  | 53                 | 599,590                 | 2,246,230               | 1,112,252                | 261,519     | 6,237                   | 376,222              | 5,247,300          | 6  |
| 5,139              | 240                | -----                  | 49                 | 123,686                 | 1,129,216               | 585,627                  | 170,774     | 1,245                   | 371,570              | 2,491,791          | 7  |
| 845                | -----              | 5                      | -----              | 13,866                  | 95,210                  | 13,000                   | 10,767      | -----                   | 71,443               | 175,760            | 8  |
| 7,464              | 35                 | -----                  | 30                 | 401,404                 | 2,136,181               | 1,372,179                | 235,871     | 1,655                   | 526,476              | 4,687,405          | 9  |
| 12,303             | 675                | 2,577                  | 68                 | 1,121,563               | 2,954,298               | 1,573,455                | 497,461     | 20                      | 883,362              | 8,192,350          | 10 |
| 2,781              | 1,968              | 172                    | 2                  | 198,433                 | 878,983                 | 465,018                  | 86,530      | 13,180                  | 309,255              | 2,275,374          | 11 |

## WOOLEN GOODS AND WORSTED GOODS AND YARNS.

|       |       |     |       |           |           |           |           |         |           |             |   |
|-------|-------|-----|-------|-----------|-----------|-----------|-----------|---------|-----------|-------------|---|
| 1,792 | 260   | 124 | ----- | \$115,894 | \$962,108 | \$641,413 | \$106,686 | \$4,150 | \$209,859 | \$2,104,418 | 1 |
| 150   | 60    | 3   | ----- | 4,377     | 45,004    | 32,400    | 7,764     | -----   | 4,840     | 102,114     | 2 |
| 10    | 200   | 4   | ----- | 2,432     | 31,751    | 21,557    | 4,248     | 400     | 5,546     | 66,158      | 3 |
| 1,404 | ----- | 107 | ----- | 100,417   | 725,503   | 485,048   | 75,620    | 3,750   | 161,085   | 1,572,233   | 4 |
| 228   | ----- | 10  | ----- | 8,668     | 159,850   | 102,408   | 19,054    | -----   | 38,888    | 363,913     | 5 |

## MIXED GOODS AND YARNS.

|       |       |       |       |           |           |           |          |         |           |             |   |
|-------|-------|-------|-------|-----------|-----------|-----------|----------|---------|-----------|-------------|---|
| 2,671 | 140   | 79    | 20    | \$174,495 | \$616,644 | \$255,362 | \$68,131 | \$7,746 | \$275,405 | \$1,969,446 | 1 |
| 362   | ----- | 20    | ----- | 27,510    | 68,020    | 27,125    | 9,053    | 360     | 31,482    | 182,610     | 2 |
| 882   | ----- | 39    | 6     | 65,935    | 174,010   | 40,898    | 20,962   | 4,119   | 108,037   | 804,213     | 3 |
| 1,015 | ----- | 20    | 11    | 37,021    | 215,316   | 137,779   | 25,155   | 3,267   | 49,115    | 551,845     | 4 |
| 412   | 140   | ----- | 3     | 43,429    | 159,292   | 59,500    | 12,061   | -----   | 86,771    | 430,778     | 5 |

## SILK GOODS AND YARNS.

|       |       |       |       |           |             |             |           |         |           |             |   |
|-------|-------|-------|-------|-----------|-------------|-------------|-----------|---------|-----------|-------------|---|
| 4,204 | ----- | 112   | 16    | \$217,546 | \$2,360,301 | \$1,727,166 | \$162,459 | \$5,800 | \$464,876 | \$5,538,962 | 1 |
| 3,767 | ----- | 112   | 11    | 182,248   | 2,194,665   | 1,611,955   | 150,044   | 2,900   | 429,766   | 5,046,088   | 2 |
| 375   | ----- | ----- | 5     | 18,657    | 68,129      | 42,043      | 6,390     | 2,800   | 16,896    | 266,345     | 3 |
| 62    | ----- | ----- | ----- | 16,641    | 97,507      | 73,168      | 6,025     | 100     | 18,214    | 226,529     | 4 |

TABLE 5.—DYEING AND FINISHING

|  | United States. | Connecticut. | Illinois. | Kentucky. |
|--|----------------|--------------|-----------|-----------|
| 1 Number of establishments.....  | 298            | 5            | 4         | 3         |
| 2 Character of organization:   |                |              |           |           |
| 3 Individual.....  | 108            |              | 2         | 1         |
| 4 Firm and limited partnership.....  | 81             |              |           | 2         |
| 5 Incorporated company.....  | 114            | 5            | 2         |           |
| 6 Miscellaneous.....   |                |              |           |           |
| 7 Capital:   |                |              |           |           |
| 8 Total.....   | \$60,648,104   | \$8,248,744  | \$113,694 | \$161,239 |
| 9 Land.....  | \$5,304,949    | \$482,100    | \$7,500   | \$7,800   |
| 10 Buildings.....  | \$12,251,886   | \$1,004,388  | \$42,000  | \$28,922  |
| 11 Machinery, tools, and implements.....   | \$17,750,574   | \$929,262    | \$50,800  | \$55,455  |
| 12 Cash and sundries.....  | \$25,335,695   | \$827,994    | \$18,394  | \$89,062  |
| 13 Proprietors and firm members.....   | 300            |              | 2         | 8         |
| 14 Salaried officials, clerks, etc.:   |                |              |           |           |
| 15 Total number.....   | 1,318          | 39           | 7         | 7         |
| 16 Total salaries.....   | \$2,267,128    | \$100,884    | \$8,700   | \$9,030   |
| 17 Officers of corporations—   |                |              |           |           |
| 18 Number.....   | 211            | 16           | 1         | 2         |
| 19 Salaries.....   | \$814,895      | \$51,797     | \$2,500   | \$5,300   |
| 20 General superintendents, managers, clerks, etc.—  |                |              |           |           |
| 21 Total number.....   | 1,107          | 23           | 6         | 5         |
| 22 Total salaries.....   | \$1,452,238    | \$49,087     | \$4,200   | \$3,790   |
| 23 Men—  |                |              |           |           |
| 24 Number.....   | 994            | 21           | 8         | 5         |
| 25 Salaries.....   | \$1,401,799    | \$48,050     | \$2,700   | \$3,790   |
| 26 Women—  |                |              |           |           |
| 27 Number.....   | 113            | 2            | 3         |           |
| 28 Salaries.....   | \$50,434       | \$1,037      | \$1,500   |           |
| 29 Wage-earners, including pieceworkers, and total wages:                                  |                |              |           |           |
| 30 Greatest number employed at any one time during the year.....                           | 83,387         | 1,511        | 113       | 128       |
| 31 Least number employed at any one time during the year.....                              | 26,275         | 1,184        | 54        | 100       |
| 32 Average number.....   | 29,776         | 1,300        | 84        | 116       |
| 33 Wages.....  | \$12,726,316   | \$578,756    | \$27,878  | \$45,225  |
| 34 Men, 16 years and over—   |                |              |           |           |
| 35 Average number.....   | 24,419         | 1,015        | 69        | 88        |
| 36 Wages.....  | \$11,361,194   | \$507,632    | \$24,129  | \$39,987  |
| 37 Women, 16 years and over—   |                |              |           |           |
| 38 Average number.....   | 4,253          | 238          | 10        | 25        |
| 39 Wages.....  | \$1,166,972    | \$61,639     | \$2,925   | \$4,138   |
| 40 Children under 16 years—  |                |              |           |           |
| 41 Average number.....   | 1,104          | 47           | 5         | 8         |
| 42 Wages.....  | \$198,150      | \$9,435      | \$824     | \$1,100   |
| 43 Average number of wage-earners, including pieceworkers, employed during each month:     |                |              |           |           |
| 44 Men, 16 years and over—   |                |              |           |           |
| 45 January.....  | 24,387         | 950          | 71        | 89        |
| 46 February.....   | 24,098         | 976          | 83        | 87        |
| 47 March.....  | 24,497         | 979          | 88        | 86        |
| 48 April.....  | 24,728         | 1,004        | 78        | 85        |
| 49 May.....  | 24,506         | 988          | 74        | 85        |
| 50 June.....   | 24,020         | 1,003        | 72        | 82        |
| 51 July.....   | 23,886         | 1,012        | 72        | 75        |
| 52 August.....   | 23,885         | 1,029        | 68        | 75        |
| 53 September.....  | 24,020         | 1,029        | 73        | 77        |
| 54 October.....  | 24,757         | 1,031        | 60        | 81        |
| 55 November.....   | 25,070         | 1,084        | 57        | 89        |
| 56 December.....   | 25,229         | 1,090        | 48        | 89        |
| 57 Women, 16 years and over—   |                |              |           |           |
| 58 January.....  | 4,374          | 217          | 18        | 30        |
| 59 February.....   | 4,328          | 221          | 18        | 31        |
| 60 March.....  | 4,359          | 239          | 17        | 31        |
| 61 April.....  | 4,344          | 255          | 17        | 30        |
| 62 May.....  | 4,256          | 253          | 18        | 27        |
| 63 June.....   | 4,147          | 246          | 8         | 19        |
| 64 July.....   | 4,010          | 216          | 4         | 13        |
| 65 August.....   | 4,008          | 233          | 3         | 13        |
| 66 September.....  | 4,135          | 238          | 4         | 25        |
| 67 October.....  | 4,304          | 225          | 4         | 22        |
| 68 November.....   | 4,347          | 233          | 4         | 27        |
| 69 December.....   | 4,424          | 230          | 4         | 30        |
| 70 Children, under 16 years—   |                |              |           |           |
| 71 January.....  | 1,093          | 45           | 4         | 8         |
| 72 February.....   | 1,073          | 48           | 4         | 8         |
| 73 March.....  | 1,080          | 47           | 4         | 8         |
| 74 April.....  | 1,095          | 44           | 4         | 8         |
| 75 May.....  | 1,075          | 41           | 4         | 8         |
| 76 June.....   | 1,089          | 42           | 5         | 8         |
| 77 July.....   | 1,111          | 50           | 5         | 8         |
| 78 August.....   | 1,125          | 50           | 5         | 8         |
| 79 September.....  | 1,113          | 50           | 5         | 8         |
| 80 October.....  | 1,124          | 49           | 5         | 8         |
| 81 November.....   | 1,130          | 50           | 5         | 8         |
| 82 December.....   | 1,140          | 51           | 5         | 8         |
| 83 Miscellaneous expenses:   |                |              |           |           |
| 84 Total.....  | \$4,137,947    | \$216,075    | \$5,913   | \$9,702   |
| 85 Rent of works.....  | \$145,075      |              | \$900     | \$360     |
| 86 Taxes, not including internal revenue.....  | \$281,974      | \$15,084     | \$234     | \$610     |
| 87 Rent of office, insurance, interest, and all sundry expenses not hitherto included..... | \$3,699,168    | \$192,068    | \$4,729   | \$3,702   |
| 88 Contract work.....  | \$41,735       | \$7,928      |           |           |
| 89 Materials used:   |                |              |           |           |
| 90 Aggregate cost.....   | \$17,958,137   | \$907,377    | \$32,523  | \$84,023  |
| 91 Chemicals and dyestuffs—  |                |              |           |           |
| 92 Cost.....   | \$10,667,021   | \$561,619    | \$18,966  | \$71,518  |
| 93 Starch—   |                |              |           |           |
| 94 Pounds.....   | 33,850,002     | 1,359,532    | 46,037    | 138,754   |
| 95 Cost.....   | \$374,643      | \$36,715     | \$560     | \$4,162   |
| 96 Silk soap—  |                |              |           |           |
| 97 Pounds.....   | 5,105,575      | 4,200        | 2,500     |           |
| 98 Cost.....   | \$232,706      | \$210        | \$135     |           |
| 99 Other soap—   |                |              |           |           |
| 100 Pounds.....  | 9,835,976      | 469,612      | 10,000    | 3,200     |
| 101 Cost.....  | \$331,103      | \$16,919     | \$310     | \$160     |
| 102 Fuel.....  | \$2,165,091    | \$113,780    | \$7,546   | \$6,300   |
| 103 Rent of power and heat.....  | \$59,730       | \$7,955      |           | \$180     |
| 104 Mill supplies.....   | \$972,207      | \$18,840     | \$629     | \$650     |
| 105 All other materials.....   | \$2,171,482    | \$103,804    | \$558     | \$1,053   |
| 106 Freight.....   | \$499,554      | \$47,535     | \$3,819   |           |

## TEXTILES: BY STATES, 1900.

| Massachusetts. | New Hampshire. | New Jersey.  | New York.   | North Carolina. | Pennsylvania. | Rhode Island. | All other states. <sup>1</sup> |    |
|----------------|----------------|--------------|-------------|-----------------|---------------|---------------|--------------------------------|----|
| 37             | 5              | 59           | 42          | 5               | 105           | 24            | 9                              | 1  |
| 9              | 3              | 22           | 16          | 2               | 46            | 2             | 2                              | 2  |
| 6              | 7              | 7            | 15          | 1               | 46            | 2             | 7                              | 3  |
| 22             | 2              | 30           | 11          | 2               | 13            | 20            | 7                              | 4  |
|                |                |              |             |                 |               |               |                                | 5  |
| \$15,206,200   | \$888,704      | \$11,600,695 | \$6,230,657 | \$298,881       | \$7,679,906   | \$12,853,123  | \$2,876,811                    | 6  |
| \$1,161,503    | \$61,000       | \$651,481    | \$339,909   | \$4,700         | \$733,612     | \$1,572,306   | \$288,088                      | 7  |
| \$1,960,972    | \$158,000      | \$2,100,396  | \$1,385,748 | \$33,800        | \$1,290,133   | \$3,765,314   | \$537,213                      | 8  |
| \$2,499,388    | \$178,500      | \$4,624,059  | \$2,097,641 | \$184,022       | \$2,368,629   | \$3,862,803   | \$905,115                      | 9  |
| \$9,584,387    | \$496,204      | \$4,224,759  | \$2,457,459 | \$71,309        | \$3,287,532   | \$3,652,700   | \$650,945                      | 10 |
| 24             | 4              | 47           | 50          | 5               | 155           | 6             | 4                              | 11 |
| 239            | 21             | 353          | 107         | 8               | 216           | 256           | 65                             | 12 |
| \$547,862      | \$23,900       | \$614,910    | \$134,345   | \$6,650         | \$260,277     | \$449,996     | \$112,514                      | 13 |
| 44             |                | 57           | 10          | 1               | 25            | 45            | 10                             | 14 |
| \$234,656      |                | \$224,127    | \$27,000    | \$1,000         | \$52,450      | \$174,605     | \$41,400                       | 15 |
| 195            | 21             | 296          | 97          | 7               | 191           | 211           | 55                             | 16 |
| \$313,206      | \$23,900       | \$390,783    | \$107,345   | \$5,650         | \$207,827     | \$275,391     | \$71,054                       | 17 |
| 174            | 18             | 278          | 90          | 6               | 167           | 186           | 46                             | 18 |
| \$303,655      | \$22,500       | \$382,739    | \$104,398   | \$5,150         | \$196,656     | \$264,575     | \$67,586                       | 19 |
| 21             | 3              | 18           | 7           | 1               | 24            | 25            | 9                              | 20 |
| \$9,651        | \$1,400        | \$3,044      | \$2,947     | \$500           | \$11,171      | \$10,816      | \$3,468                        | 21 |
| 5,287          | 1,088          | 8,186        | 3,520       | 193             | 5,303         | 6,428         | 1,630                          | 22 |
| 8,990          | 956            | 6,221        | 2,787       | 133             | 4,128         | 5,219         | 1,453                          | 23 |
| 4,678          | 1,028          | 7,074        | 3,117       | 134             | 4,716         | 5,942         | 1,537                          | 24 |
| \$2,081,015    | \$451,960      | \$3,008,491  | \$1,424,578 | \$45,340        | \$2,065,752   | \$2,474,042   | \$523,279                      | 25 |
| 3,346          | 789            | 6,120        | 2,395       | 142             | 4,013         | 4,644         | 1,303                          | 26 |
| \$1,833,344    | \$394,919      | \$2,775,797  | \$1,244,051 | \$38,081        | \$1,905,718   | \$2,113,454   | \$479,132                      | 27 |
| 735            | 239            | 786          | 636         | 42              | 340           | 1,039         | 157                            | 28 |
| \$229,597      | \$57,041       | \$197,093    | \$166,424   | \$7,309         | \$93,706      | \$309,949     | \$37,101                       | 29 |
| 97             |                | 168          | 86          |                 | 357           | 259           | 77                             | 30 |
| \$18,074       |                | \$30,601     | \$14,103    |                 | \$66,323      | \$45,639      | \$12,046                       | 31 |
| 3,904          | 749            | 6,004        | 2,420       | 147             | 4,087         | 4,672         | 1,294                          | 32 |
| 3,652          | 761            | 6,065        | 2,451       | 143             | 4,023         | 4,649         | 1,303                          | 33 |
| 3,882          | 783            | 6,160        | 2,467       | 143             | 4,086         | 4,637         | 1,291                          | 34 |
| 3,877          | 790            | 6,171        | 2,476       | 140             | 4,112         | 4,695         | 1,304                          | 35 |
| 3,821          | 810            | 6,131        | 2,415       | 143             | 4,103         | 4,636         | 1,296                          | 36 |
| 3,688          | 788            | 6,083        | 2,327       | 140             | 3,949         | 4,693         | 1,295                          | 37 |
| 3,743          | 784            | 6,394        | 2,243       | 140             | 3,932         | 4,650         | 1,291                          | 38 |
| 3,757          | 779            | 6,038        | 2,336       | 140             | 3,814         | 4,639         | 1,310                          | 39 |
| 3,888          | 800            | 6,870        | 2,355       | 137             | 3,935         | 4,619         | 1,277                          | 40 |
| 3,959          | 805            | 6,247        | 2,412       | 140             | 3,985         | 4,696         | 1,341                          | 41 |
| 3,967          | 810            | 6,396        | 2,422       | 143             | 4,031         | 4,764         | 1,307                          | 42 |
| 4,008          | 814            | 6,378        | 2,417       | 143             | 4,034         | 4,885         | 1,323                          | 43 |
| 330            | 237            | 810          | 641         | 42              | 352           | 1,047         | 150                            | 44 |
| 304            | 214            | 784          | 636         | 42              | 349           | 1,031         | 148                            | 45 |
| 786            | 216            | 795          | 672         | 42              | 349           | 1,005         | 157                            | 46 |
| 760            | 229            | 739          | 630         | 42              | 350           | 1,036         | 156                            | 47 |
| 746            | 237            | 771          | 661         | 42              | 346           | 1,008         | 147                            | 48 |
| 694            | 238            | 781          | 642         | 42              | 339           | 970           | 163                            | 49 |
| 631            | 232            | 734          | 579         | 42              | 349           | 1,045         | 165                            | 50 |
| 643            | 222            | 737          | 534         | 42              | 337           | 1,035         | 159                            | 51 |
| 699            | 254            | 724          | 604         | 42              | 361           | 1,026         | 158                            | 52 |
| 738            | 270            | 804          | 613         | 42              | 351           | 1,076         | 159                            | 53 |
| 733            | 209            | 847          | 633         | 42              | 330           | 1,067         | 162                            | 54 |
| 750            | 250            | 866          | 639         | 42              | 339           | 1,123         | 161                            | 55 |
| 97             |                | 147          | 85          |                 | 333           | 258           | 66                             | 56 |
| 98             |                | 142          | 77          |                 | 373           | 251           | 67                             | 57 |
| 97             |                | 143          | 82          |                 | 374           | 253           | 67                             | 58 |
| 92             |                | 160          | 83          |                 | 378           | 261           | 65                             | 59 |
| 93             |                | 161          | 80          |                 | 363           | 260           | 65                             | 60 |
| 89             |                | 134          | 82          |                 | 345           | 253           | 73                             | 61 |
| 97             |                | 172          | 87          |                 | 342           | 257           | 93                             | 62 |
| 89             |                | 176          | 92          |                 | 337           | 273           | 95                             | 63 |
| 100            |                | 174          | 89          |                 | 344           | 257           | 86                             | 64 |
| 104            |                | 182          | 94          |                 | 342           | 258           | 82                             | 65 |
| 104            |                | 181          | 94          |                 | 346           | 262           | 80                             | 66 |
| 104            |                | 191          | 89          |                 | 349           | 264           | 79                             | 67 |
| \$866,829      | \$111,478      | \$309,580    | \$210,395   | \$13,366        | \$556,083     | \$1,138,065   | \$200,461                      | 68 |
| \$7,517        | \$31,554       | \$29,067     | \$29,067    | \$322           | \$68,950      | \$4,805       | \$310                          | 69 |
| \$35,717       | \$14,478       | \$35,296     | \$34,749    | \$1,106         | \$28,238      | \$49,140      | \$16,137                       | 70 |
| \$756,802      | \$96,750       | \$738,914    | \$140,586   | \$11,438        | \$455,595     | \$1,080,120   | \$183,464                      | 71 |
| \$16,793       |                | \$3,816      | \$5,993     |                 | \$3,205       | \$4,000       |                                | 72 |
| \$3,110,910    | \$636,469      | \$4,513,768  | \$1,402,373 | \$95,210        | \$3,174,507   | \$3,087,781   | \$913,196                      | 73 |
| \$2,031,072    | \$309,296      | \$2,755,553  | \$689,325   | \$13,000        | \$2,063,174   | \$1,653,059   | \$495,639                      | 74 |
| 5,335,681      | 1,253,651      | 6,095,590    | 3,159,877   | 751,376         | 4,598,202     | 7,281,216     | 3,330,086                      | 75 |
| \$160,016      | \$23,646       | \$165,723    | \$63,124    | \$14,334        | \$94,378      | \$205,321     | \$106,164                      | 76 |
| 25,412         |                | 4,499,357    | 181,779     |                 | 337,827       | 2,000         | 1,500                          | 77 |
| \$1,369        |                | \$200,414    | \$9,035     |                 | \$21,233      | \$100         | \$160                          | 78 |
| 136,833        | 1,167,160      | 751,999      | 392,166     | 4,000           | 4,434,594     | 1,701,565     | 174,341                        | 79 |
| \$8,137        | \$25,034       | \$23,384     | \$37,096    | \$220           | \$151,637     | \$81,943      | \$5,708                        | 80 |
| \$393,711      | \$74,451       | \$411,173    | \$202,074   | \$10,767        | \$342,671     | \$513,337     | \$33,776                       | 81 |
| \$5,512        | \$50           | \$9,497      | \$3,564     |                 | \$3,772       | \$20          | \$13,180                       | 82 |
| \$176,010      | \$2,443        | \$200,419    | \$73,617    | \$3,610         | \$198,651     | \$251,169     | \$41,169                       | 83 |
| \$287,452      | \$174,296      | \$631,996    | \$277,042   | \$48,655        | \$264,743     | \$305,333     | \$76,020                       | 84 |
| \$47,631       | \$27,253       | \$115,099    | \$36,996    | \$4,144         | \$24,153      | \$96,444      | \$36,480                       | 85 |

<sup>1</sup>Includes establishments distributed as follows: Alabama, 1; Delaware, 2; Indiana, 1; Maine, 1; Maryland, 2; Ohio, 1; West Virginia, 1.

TABLE 5.—DYEING AND FINISHING

|     |  | United States. | Connecticut. | Illinois. | Kentucky.  |
|-----|--|----------------|--------------|-----------|------------|
| 86  | Products:  |                |              |           |            |
| 87  | Aggregate value.....                                   | \$44,963,331   | \$2,269,967  | \$86,960  | \$179,123  |
| 88  | Wool dyed—   |                |              |           |            |
|     | Pounds.....  | 2,408,511      |              |           |            |
|     | Value.....   | \$83,071       |              |           |            |
| 89  | Yarn dyed—   |                |              |           |            |
| 90  | Woolen—  |                |              |           |            |
|     | Pounds.....  | 20,755,984     |              | 39,600    |            |
|     | Value.....   | \$557,001      |              | \$2,900   |            |
| 91  | Worsted—   |                |              |           |            |
| 92  | Pounds.....  | 8,474,562      |              |           |            |
|     | Value.....   | \$491,291      |              |           |            |
| 93  | Piece goods, dyed—                                     |                |              |           |            |
|     | Woolen—  |                |              |           |            |
| 94  | Square yards.....                                      | 11,243,394     |              | 350,000   |            |
|     | Value.....   | \$451,864      |              | \$18,400  |            |
| 95  | Worsted—   |                |              |           |            |
| 96  | Square yards.....                                      | 9,413,337      |              |           |            |
|     | Value.....   | \$476,961      |              |           |            |
| 97  | Cotton stock—  |                |              |           |            |
| 98  | Bleached—  |                |              |           |            |
|     | Pounds.....  | 300,650        |              |           |            |
|     | Value.....   | \$4,823        |              |           |            |
| 99  | Dyed—  |                |              |           |            |
| 100 | Pounds.....  | 12,466,700     |              | 40,000    |            |
|     | Value.....   | \$572,661      |              | \$2,000   |            |
| 101 | Cotton yarn—   |                |              |           |            |
| 102 | Bleached—  |                |              |           |            |
|     | Pounds.....  | 12,780,518     |              |           |            |
|     | Value.....   | \$252,635      |              |           |            |
| 103 | Dyed—  |                |              |           |            |
| 104 | Pounds.....  | 54,103,555     | 360,000      | 1,960,000 | 1,651,347  |
|     | Value.....   | \$2,226,912    | \$16,500     | \$94,600  | \$38,769   |
| 105 | Mercerized—  |                |              |           |            |
| 106 | Pounds.....  | 868,851        |              | 1,000     |            |
|     | Value.....   | \$159,616      |              | \$150     |            |
| 107 | Cotton piece goods—                                    |                |              |           |            |
| 108 | Bleached—  |                |              |           |            |
|     | Square yards.....                                      | 964,902,367    | 290,000      | 3,456,600 |            |
|     | Value.....   | \$6,691,423    | \$2,400      | \$17,283  |            |
| 109 | Dyed—  |                |              |           |            |
| 110 | Square yards.....                                      | 559,480,339    | 84,204,496   | 830,000   | 13,000,000 |
|     | Value.....   | \$7,585,204    | \$1,290,441  | \$7,252   | \$140,354  |
| 111 | Mercerized—  |                |              |           |            |
| 112 | Square yards.....                                      | 7,973,506      | 580,000      |           |            |
|     | Value.....   | \$400,118      | \$29,000     |           |            |
| 113 | Printed—   |                |              |           |            |
| 114 | Square yards.....                                      | 940,450,338    | 45,755,428   |           |            |
|     | Value.....   | \$15,997,037   | \$827,885    |           |            |
| 115 | Silk, dyed—  |                |              |           |            |
| 116 | Pounds.....  | 5,609,444      |              | 5,200     |            |
|     | Value.....   | \$3,615,644    |              | \$2,600   |            |
| 117 | Spun silk, dyed—                                       |                |              |           |            |
| 118 | Pounds.....  | 329,068        |              | 50        |            |
|     | Value.....   | \$138,785      |              | \$25      |            |
| 119 | Silk piece goods—                                      |                |              |           |            |
| 120 | Dyed—  |                |              |           |            |
|     | Square yards.....                                      | 14,340,796     |              | 11,500    |            |
|     | Value.....   | \$481,463      |              | \$567     |            |
| 121 | Printed—   |                |              |           |            |
| 122 | Square yards.....                                      | 3,681,652      |              |           |            |
|     | Value.....   | \$935,154      |              |           |            |
| 123 | Mixed goods—   |                |              |           |            |
| 124 | Value.....   | \$2,180,278    |              |           |            |
|     | All other work done.....                               | \$2,266,350    | \$103,741    | \$1,188   |            |
| 125 | Machinery:   |                |              |           |            |
|     | Printing machines—                                     |                |              |           |            |
|     | Total number.....                                      | 334            | 16           |           | 1          |
| 126 | On cotton—   |                |              |           |            |
|     | Number.....  | 321            | 16           |           | 1          |
| 127 | On silk—   |                |              |           |            |
|     | Number.....  | 13             |              |           |            |
| 128 | Comparison of products:                                |                |              |           |            |
| 129 | Number of establishments reporting for both years..... | 242            | 4            | 4         | 2          |
| 130 | Value for census year.....                             | \$39,860,765   | \$1,967,267  | \$86,960  | \$167,063  |
| 131 | Value for preceding business year.....                 | \$34,031,544   | \$1,425,445  | \$88,326  | \$116,422  |
| 132 | Power:   |                |              |           |            |
|     | Number of establishments reporting.....                | 273            | 5            | 4         | 3          |
|     | Total horsepower.....                                  | 71,187         | 5,109        | 159       | 324        |
|     | Owned—   |                |              |           |            |
|     | Engines—   |                |              |           |            |
|     | Steam—   |                |              |           |            |
| 133 | Number.....  | 1,535          | 89           | 6         | 7          |
| 134 | Horsepower.....  | 57,216         | 2,568        | 159       | 280        |
|     | Gas or gasoline—                                       |                |              |           |            |
| 135 | Number.....  | 2              |              |           |            |
| 136 | Horsepower.....  | 8              |              |           |            |
|     | Water wheels—  |                |              |           |            |
| 137 | Number.....  | 86             | 15           |           |            |
| 138 | Horsepower.....  | 9,474          | 2,156        |           |            |
|     | Electric motors—                                       |                |              |           |            |
| 139 | Number.....  | 131            | 6            |           | 3          |
| 140 | Horsepower.....  | 1,949          | 385          |           | 40         |
|     | Other power—   |                |              |           |            |
| 141 | Number.....  | 9              |              |           |            |
| 142 | Horsepower.....  | 1,624          |              |           |            |
|     | Rented—  |                |              |           |            |
| 143 | Electric horsepower.....                               | 50             | 15           |           |            |
| 144 | All other horsepower.....                              | 866            |              |           | 4          |
| 145 | Furnished to other establishments—                     |                |              |           |            |
|     | Horsepower.....  | 285            | 125          |           |            |



## TEXTILES: BY STATES, 1900—Continued.

| Massachusetts. | New Hampshire. | New Jersey.  | New York.   | North Carolina. | Pennsylvania. | Rhode Island. | All other states. <sup>1</sup> |     |
|----------------|----------------|--------------|-------------|-----------------|---------------|---------------|--------------------------------|-----|
| \$8,868,290    | \$1,328,319    | \$10,488,963 | \$3,625,882 | \$176,750       | \$7,088,012   | \$8,484,878   | \$2,417,187                    | 86  |
| 40,328         |                | 150,798      | 109,187     |                 | 1,988,000     |               | 60,198                         | 87  |
| \$2,043        |                | \$9,151      | \$9,388     |                 | \$56,470      |               | \$6,019                        | 88  |
| 100,800        |                |              | 190,000     |                 | 20,425,584    |               |                                | 89  |
| \$7,069        |                |              | \$9,400     |                 | \$587,642     |               |                                | 90  |
| 382,525        |                | 62,800       | 673,560     |                 | 6,487,737     | 858,000       | 9,940                          | 91  |
| \$29,002       |                | \$4,385      | \$44,356    |                 | \$843,844     | \$68,700      | \$904                          | 92  |
|                |                | 600,368      |             |                 | 9,901,550     | 391,476       |                                | 93  |
|                |                | \$36,609     |             |                 | \$381,196     | \$15,659      |                                | 94  |
| 438,520        |                |              |             |                 | 5,381,208     | 1,265,133     | 2,328,478                      | 95  |
| \$19,952       |                |              |             |                 | \$227,878     | \$50,605      | \$178,516                      | 96  |
| 29,650         | 6,000          |              | 200,000     |                 | 60,000        |               | 5,000                          | 97  |
| \$1,743        | \$180          |              | \$1,000     |                 | \$1,750       |               | \$150                          | 98  |
| 2,771,290      | 99,452         | 1,720,699    | 1,837,281   | 50,000          | 5,347,978     | 600,000       |                                | 99  |
| \$249,114      | \$3,847        | \$29,990     | \$54,477    | \$1,030         | \$196,208     | \$36,000      |                                | 100 |
| 6,463,500      | 150,000        | 28,500       | 57,156      |                 | 3,637,567     | 2,463,795     |                                | 101 |
| \$98,662       | \$4,500        | \$2,280      | \$2,720     |                 | \$89,123      | \$55,880      |                                | 102 |
| 7,158,907      | 2,500          | 189,991      | 1,440,328   |                 | 34,174,822    | 6,709,637     | 456,023                        | 103 |
| \$294,909      | \$125          | \$22,000     | \$85,168    |                 | \$1,265,786   | \$438,168     | \$30,892                       | 104 |
|                |                | 2,000        | 1,100       |                 | 786,751       | 78,000        |                                | 105 |
|                |                | \$8,000      | \$110       |                 | \$148,996     | \$9,380       |                                | 106 |
| 276,321,266    | 18,736,899     | 70,447,673   | 23,197,762  | 2,715,663       | 6,814,468     | 338,442,903   | 174,479,143                    | 107 |
| \$1,637,830    | \$130,007      | \$745,542    | \$202,410   | \$16,262        | \$50,086      | \$2,605,031   | \$1,284,572                    | 108 |
| 90,458,727     | 7,918,490      | 91,876,898   | 19,041,259  |                 | 68,547,553    | 108,125,288   | 80,477,628                     | 109 |
| \$1,060,761    | \$93,044       | \$1,340,301  | \$227,353   |                 | \$1,023,829   | \$1,576,822   | \$825,047                      | 110 |
|                |                | 36,822       |             |                 | 78,410        | 7,277,774     |                                | 111 |
|                |                | \$1,365      |             |                 | \$4,461       | \$365,292     |                                | 112 |
| 282,619,600    | 50,418,199     | 187,425,755  | 150,432,209 |                 | 79,013,243    | 162,185,904   | 2,600,000                      | 113 |
| \$5,185,021    | \$885,405      | \$2,909,981  | \$1,872,721 |                 | \$1,428,600   | \$2,859,674   | \$78,000                       | 114 |
|                |                | 4,837,010    | 350,460     |                 | 416,774       |               |                                | 115 |
|                |                | \$3,287,048  | \$124,411   |                 | \$201,685     |               |                                | 116 |
|                |                | 220,629      | 41,000      |                 | 67,384        |               |                                | 117 |
|                |                | \$109,257    | \$10,796    |                 | \$13,707      |               |                                | 118 |
|                |                | 13,997,451   | 831,845     |                 |               |               |                                | 119 |
|                |                | \$459,675    | \$21,221    |                 |               |               |                                | 120 |
| 262,964        |                | 3,394,688    | 24,000      |                 |               |               |                                | 121 |
| \$20,350       |                | \$312,880    | \$1,924     |                 |               |               |                                | 122 |
| \$44,618       | \$192,500      | \$640,740    | \$303,422   | \$124,000       | \$542,141     | \$332,857     |                                | 123 |
| \$267,226      | \$18,711       | \$574,749    | \$656,005   | \$34,468        | \$520,316     | \$71,465      | \$12,997                       | 124 |
| 69             | 16             | 64           | 60          |                 | 41            | 65            | 2                              | 125 |
| 69             | 16             | 56           | 55          |                 | 41            | 65            | 2                              | 126 |
|                |                | 8            | 5           |                 |               |               |                                | 127 |
| 29             | 2              | 44           | 35          | 2               | 90            | 21            | 9                              | 128 |
| \$7,979,753    | \$1,124,305    | \$3,722,830  | \$3,470,303 | \$113,000       | \$6,394,059   | \$7,478,038   | \$2,417,187                    | 129 |
| \$6,774,611    | \$1,044,960    | \$7,876,560  | \$3,079,998 | \$116,000       | \$5,205,184   | \$6,478,137   | \$1,827,201                    | 130 |
| 37             | 4              | 49           | 41          | 4               | 93            | 24            | 9                              | 131 |
| 14,417         | 585            | 12,403       | 6,885       | 350             | 10,107        | 15,897        | 4,941                          | 132 |
| 281            | 1              | 339          | 203         | 10              | 316           | 256           | 27                             | 133 |
| 11,932         | 10             | 10,943       | 6,321       | 345             | 9,579         | 12,643        | 2,451                          | 134 |
|                |                |              | 2           |                 |               |               |                                | 135 |
|                |                |              | 8           |                 |               |               |                                | 136 |
| 24             | 4              | 17           | 6           |                 | 1             | 7             | 12                             | 137 |
| 2,360          | 515            | 1,330        | 440         |                 | 35            | 675           | 1,963                          | 138 |
| 9              |                | 4            |             | 1               | 1             | 92            | 15                             | 139 |
| 125            |                | 128          |             | 5               | 7             | 1,077         | 182                            | 140 |
|                |                | 1            |             |                 | 3             | 5             |                                | 141 |
|                |                | 4            |             |                 | 120           | 1,500         |                                | 142 |
|                |                |              | 35          |                 |               |               |                                | 143 |
|                |                |              | 81          |                 | 363           | 2             | 345                            | 144 |
|                | 10             | 58           |             |                 |               |               |                                | 145 |
|                |                |              | 30          | 10              | 120           |               |                                |     |

<sup>1</sup> Includes establishments distributed as follows: Alabama, 1; Delaware, 2; Indiana, 1; Maine, 1; Maryland, 2; Ohio, 1; West Virginia, 1.

TABLE 5.—DYEING AND FINISHING

|   | United States. | Connecticut. | Illinois. | Kentucky. |
|---|----------------|--------------|-----------|-----------|
| Establishments classified by number of persons employed not including proprietors and firm members: |                |              |           |           |
| 146 Total number of establishments .....  | 298            | 5            | 4         | 3         |
| 147 Under 5 .....   | 19             |              | 1         |           |
| 148 5 to 20 .....   | 82             |              |           |           |
| 149 21 to 50 .....  | 74             | 1            | 2         | 2         |
| 150 51 to 100 .....   | 50             |              | 1         | 1         |
| 151 101 to 250 .....  | 39             | 2            |           |           |
| 152 251 to 500 .....  | 13             | 1            |           |           |
| 153 501 to 1,000 .....  | 18             |              |           |           |
| 154 Over 1,000 .....  | 8              | 1            |           |           |

## TEXTILES: BY STATES, 1900—Continued.

| Massachusetts. | New Hampshire. | New Jersey. | New York. | North Carolina. | Pennsylvania. | Rhode Island. | All other States. <sup>1</sup> |
|----------------|----------------|-------------|-----------|-----------------|---------------|---------------|--------------------------------|
| 37             | 5              | 59          | 42        | 5               | 105           | 24            | 9                              |
| 1              | 2              | 3           | 1         |                 | 10            | 1             |                                |
| 7              |                | 14          | 18        | 3               | 39            | 1             |                                |
| 6              |                | 10          | 13        |                 | 34            | 2             | 4                              |
| 10             |                | 14          | 3         | 1               | 16            | 2             | 2                              |
| 8              | 2              | 6           | 4         | 1               | 3             | 12            | 1                              |
| 8              |                | 7           | 1         |                 |               | 1             |                                |
| 2              | 1              | 5           | 2         |                 | 2             | 4             | 2                              |
|                |                |             |           |                 | 1             | 1             |                                |
|                |                |             |           |                 |               |               | 154                            |

<sup>1</sup>Includes establishments distributed as follows: Alabama, 1; Delaware, 2; Indiana, 1; Maine, 1; Maryland, 2; Ohio, 1; West Virginia, 1.

Twelfth Census of the United States.

# CENSUS BULLETIN.

No. 203.

WASHINGTON, D. C.

JUNE 24, 1902.

## MANUFACTURES.

### THE LUMBER INDUSTRY.

Hon. WILLIAM R. MERRIAM,  
*Director of the Census.*

SIR: I transmit herewith, for publication in bulletin form, a report on the lumber industry, prepared under my direction by Mr. Henry Gannett, geographer of this office. Acknowledgment is also due to Mr. Jasper E. Wheelchel, who, as section chief, has had charge of the returns and tabulation of the lumber industry from the start.

The statistics herewith presented show a satisfactory rate of growth in the industry, a rate which, from one point of view, that of the destruction of our forests, is too rapid to be satisfactory, since the cut of lumber has increased from 27,041,573 M feet, B. M., to 35,084,166 M feet, B. M. The consumption of wood material in the industries is increasing at a much more rapid rate than the population, in spite of the fact that in many articles metals, especially iron and steel, are being substituted for wood. It results from this, that, while the timber is being used more and more economically and the waste is being diminished year by year, still the rate of destruction of the forests is yearly increasing. The white pine area in the northeast has passed its maximum of production, and the attention of lumbermen is being diverted from this region to the southern pine forests, and to the enormously heavy forests of the northwest coast, which will, in the course of a decade or two, become the chief source of lumber for the country.

The statistics of the industry are presented in tables, including, besides the main tables, a number of others

derived from them, viz: Table 1, comparative summary of the lumber industry, 1850 to 1900, with rates of increase; Table 2, average capital, number of employees, wages, materials, and products, per establishment; Table 3, average wages and output per employee; Table 4, comparative summary, by states, 1870 to 1900; Table 5, proportion of total lumber product, by geographical divisions, 1850 to 1900; Table 6, average value of machinery, product, wage-earners, and wages, per establishment, and average product and average wages per hand, by states; Table 7, logging camps, summary by states; Table 8, capital, wage-earners, wages, stumpage, and product, per establishment; Table 9, value of log stumpage and of saw logs per 1,000 feet; Table 10, amount, value, and average value, per 1,000 feet, of stumpage of different species; Table 11, stumpage value per 1,000 feet, by species, for the principal timber states; Table 12, steam power used in logging camps; Table 13, sawmills, summary by states; Table 14, capital, wage-earners, wages, materials, and products, per establishment; Table 15, products of sawmills; Table 16, quantity and value of rough lumber, by species; Table 17, quantity and value of shingles, by species; Table 18, sawmills classified by size; Table 19, planing mills, summary by states; Table 20, capital, wage-earners, wages, materials, and products, per establishment; Table 21, capital invested, area, average stand of timber, and total amount of timber owned by lumbermen; Table 22, cut of white pine in Michigan, Wisconsin, and Minnesota, 1873 to 1900; Table 23, imports; Table 24, exports; Table 25, statistics of lumber industries of the United States for

1900; summary of the extended tables; Table 26, establishments; Table 27, capital—logging and sawmill plants; Table 28, capital—planing-mill plants; Table 29, capital—independent timber camps; Table 30, employees and wages; Table 31, employees and wages in logging; Table 32, employees and wages in mills; Table 33, employees and wages in independent timber camps; Table 34, average number of wage-earners employed in logging; Table 35, average number of wage-earners employed in saw and planing mills; Table 36, average number of wage-earners employed in independent timber camps; Table 37, number and cost of keep of animals used in logging; Table 38, number and cost of keep of animals used in timber camps, and cost of transportation; Table 39, materials used in logging; Table 40, materials used in sawmills; Table 41, materials used in planing mills; Table 42, materials used in independent timber camps; Table 43, miscellaneous expenses; Table 44, summary of products, in quantity and value; Table 45, rough lumber by species, conifers; Table 46, rough lumber by species, hard woods; Table 47, shingles by species; Table 48, cooperage materials; Table 49, other sawed products; Table 50, planing-mill products; Table 51, timber-camp products; Table 52, power; Table 53, classification of mills, by persons employed; Table 54, summary of establishments with a product of less than \$500. Tables 26 to 54 include the detailed figures of establishments, capital, employees, wages, materials, and products.

In drafting the schedules of inquiry for the census of 1900, care was taken to preserve the basis of comparison with prior censuses so far as was possible. Comparison may be safely made with respect to all the general heads of inquiry except those relating to the average number of wage-earners and such items as appear first in this census. The limitations and quali-

fications of the figures are explained in the body of the report, in the introduction to the several tables.

In some instances the number of proprietors and firm members, shown in the accompanying tables, falls short of the number of establishments reported. This is accounted for by the fact that no proprietors or firm members are reported for corporations. The reports show a capital of \$611,611,524 invested in the 33,035 establishments reporting for the industry. This sum represents the value of land, buildings, machinery, tools, and implements, and the live capital utilized, but does not include the capital stock of any of the corporations. The value of the products is returned at \$566,832,984, to produce which involved an outlay of \$11,260,608 for salaries of officials, clerks, etc.; \$104,640,591 for wages; \$17,731,519 for miscellaneous expenses, including rent, taxes, etc.; and \$317,923,548 for materials used, mill supplies, freight, and fuel. It is not to be assumed, however, that the difference between the aggregate of these sums and the value of the products is, in any sense, indicative of the profits in the manufacture of the products during the census year. The census schedule takes no cognizance of the cost of selling manufactured articles, or of interest on capital invested, or of the mercantile losses incurred in the business, or of depreciation in plant. The value of the product given is the value as obtained or fixed at the factory. This statement is necessary in order to avoid erroneous conclusions from the figures presented.

Very respectfully,



*Chief Statistician for Manufactures.*

# THE LUMBER INDUSTRY.

## TABLE OF CONTENTS.

|   | Page. | TIMBER REGIONS OF THE UNITED STATES.  | Page. |
|---|-------|---|-------|
| CLASSIFICATION OF THE INDUSTRY.....   | 5     | Timber land owned by lumbermen:   |       |
| SUMMARY:  |       | Table 21.—Capital invested, area, average stand of timber, and total amount of timber owned by lumbermen..... | 28    |
| Table 1.—Comparative summary of the lumber industry, 1850 to 1900, with rates of increase.....  | 6     | White pine:   |       |
| Table 2.—Average capital, number of employees, wages, materials, and products, per establishment.....   | 7     | Table 22.—Cut of white pine in Michigan, Wisconsin, and Minnesota, 1873 to 1900.....                          | 30    |
| Table 3.—Average wages and output per employee..  | 7     | Spruce.....   | 30    |
| Table 4.—Comparative summary, by states, 1870 to 1900.....  | 7     | Hemlock.....  | 30    |
| OWNERSHIP:  |       | Cypress.....  | 31    |
| Number of establishments.....   | 11    | Southern yellow pine.....   | 31    |
| Capital.....  | 11    | Hard wood.....  | 31    |
| Product.....  | 11    | Western yellow pine.....  | 31    |
| Table 5.—Proportions of total lumber product, by geographical divisions, 1850 to 1900.....  | 12    | Sugar pine.....   | 32    |
| Table 6.—Average value of machinery, product, wage-earners and wages, per establishment, and average product and average wages per hand, by states..... | 12    | Red fir.....  | 32    |
| ELEMENTS OF THE LUMBER INDUSTRY.  |       | Redwood.....  | 32    |
| Logging:  |       | DESCRIPTIONS BY STATES:   |       |
| Table 7.—Logging camps: Summary by states....   | 16    | Maine.....  | 33    |
| Table 8.—Capital, wage-earners, wages, stumpage, and product, per establishment.....  | 18    | New Hampshire.....  | 33    |
| Table 9.—Value of log stumpage and of saw logs per thousand feet.....   | 19    | Vermont.....  | 34    |
| Table 10.—Amount, value, and average value per thousand feet, of stumpage of different species.....   | 19    | Massachusetts.....  | 34    |
| Table 11.—Stumpage value per thousand feet, by species, for the principal timber states.  | 20    | Rhode Island.....   | 34    |
| Table 12.—Steam power used in logging camps....   | 21    | Connecticut.....  | 34    |
| Sawmills:   |       | New York.....   | 35    |
| Table 13.—Sawmills: Summary by states.....  | 22    | New Jersey.....   | 36    |
| Table 14.—Capital, wage-earners, wages, materials, and products, per establishment.....   | 24    | Pennsylvania.....   | 36    |
| Table 15.—Products of sawmills.....   | 24    | Delaware.....   | 36    |
| Rough lumber:   |       | Maryland.....   | 36    |
| Table 16.—Quantity and value of rough lumber, by species.....   | 25    | Virginia.....   | 37    |
| Shingles:   |       | West Virginia.....  | 37    |
| Table 17.—Quantity and value of shingles, by species.....   | 25    | North Carolina.....   | 37    |
| Table 18.—Sawmills classified by size.....  | 26    | South Carolina.....   | 38    |
| Planing mills:  |       | Florida.....  | 39    |
| Table 19.—Planing mills: Summary by states....  | 27    | Alabama.....  | 39    |
| Table 20.—Capital, wage-earners, wages, materials, and products, per establishment.....   | 28    | Mississippi.....  | 39    |
|   |       | Louisiana.....  | 40    |
|   |       | Texas.....  | 40    |
|   |       | Indian Territory.....   | 40    |
|   |       | Oklahoma.....   | 40    |
|   |       | Arkansas.....   | 40    |
|   |       | Tennessee.....  | 41    |
|   |       | Kentucky.....   | 41    |
|   |       | Ohio.....   | 41    |
|   |       | Michigan.....   | 42    |
|   |       | Wisconsin.....  | 42    |
|   |       | Minnesota.....  | 42    |
|   |       | Indiana.....  | 43    |
|   |       | Illinois.....   | 43    |
|   |       | Nebraska.....   | 43    |
|   |       | Kansas.....   | 43    |

## TIMBER REGIONS OF THE UNITED STATES—Continued.

| Description by states—Continued.  | Page. |
|---|-------|
| Iowa .....  | 43    |
| Missouri .....  | 44    |
| North Dakota .....  | 44    |
| South Dakota .....  | 44    |
| Montana .....   | 44    |
| Idaho .....   | 45    |
| Colorado .....  | 45    |
| Wyoming .....   | 45    |
| Utah .....  | 45    |
| Nevada .....  | 46    |
| New Mexico .....  | 46    |
| Arizona .....   | 46    |
| California .....  | 46    |
| Oregon .....  | 47    |
| Washington .....  | 47    |
| <b>FOREIGN TRADE IN LUMBER.</b>   |       |
| Table 23.—Imports .....   | 48    |
| Table 24.—Exports .....   | 48    |
| <b>DETAILED SUMMARY.</b>  |       |
| Table 25.—Statistics of lumber industries of the United States for 1900. Summary of the extended tables ..... | 50    |
| <b>Extended tables:</b>   |       |
| Table 26.—Establishments .....  | 53    |
| Table 27.—Capital: Logging and sawmill plants .....   | 54    |
| Table 28.—Capital: Planing mill plants and live capital .....   | 56    |
| Table 29.—Capital: Independent timber camps .....   | 57    |
| Table 30.—Employees and wages .....   | 58    |
| Table 31.—Employees and wages in logging .....  | 59    |
| Table 32.—Employees and wages in lumber and sawmills .....  | 60    |

## DETAILED SUMMARY—Continued.

| Extended tables—Continued.  | Page. |
|---|-------|
| Table 33.—Employees and wages in independent timber camps .....                                     | 62    |
| Table 34.—Average number wage-earners employed in logging .....                                     | 63    |
| Table 35.—Average number wage-earners employed in saw and planing mills .....                       | 64    |
| Table 36.—Average number wage-earners employed in independent timber camps .....                    | 66    |
| Table 37.—Number and cost of keep of animals used in logging .....                                  | 67    |
| Table 38.—Number and cost of keep of animals used in timber camps, and cost of transportation ..... | 68    |
| Table 39.—Materials used in logging .....   | 69    |
| Table 40.—Materials used in saw mills .....   | 70    |
| Table 41.—Materials used in planing mills .....   | 71    |
| Table 42.—Materials used in independent timber camps .....  | 72    |
| Table 43.—Miscellaneous expenses .....  | 73    |
| Table 44.—Summary of products, in quantity and value .....  | 74    |
| Table 45.—Rough lumber, by species, conifers .....  | 76    |
| Table 46.—Rough lumber, by species, hard woods .....  | 78    |
| Table 47.—Shingles, by species .....  | 82    |
| Table 48.—Cooperage materials .....   | 84    |
| Table 49.—Other sawed products .....  | 86    |
| Table 50.—Planing-mill products .....   | 88    |
| Table 51.—Timber-camp products .....  | 90    |
| Table 52.—Power .....   | 94    |
| Table 53.—Classification of mills, by persons employed .....  | 95    |
| Table 54.—Summary of establishments with a product of less than \$500 .....                         | 96    |

# THE LUMBER INDUSTRY.

By HENRY GANNETT, *Expert Special Agent.*

The lumber industry of the United States includes three distinct operations, which are in some cases carried on by the same organization, in others separately. These are:

(1) The logging industry, including the felling of timber, cutting it into lengths, and transporting it by rail or river to the mill. This industry is carried on in part by individuals who own or operate sawmills. The raw material of this industry consists of standing timber, the finished product consists of logs delivered at the mill.

(2) The sawmill industry, in which the raw material consists of saw logs, the product of the lumber camp; and the product consists of rough lumber, including beams, joists, scantling, boards, shingles, laths, etc.

(3) The planing-mill industry, in which the raw material consists of rough lumber and the finished product of planed lumber, with such minor manufactures as are carried on in connection with these mills. Some of the planing mills are operated in connection with sawmills as a part of their operations, while others are under separate ownership and management.

It is proposed in this report, besides presenting the general statistics of the entire lumber industry and comparing them with similar figures from earlier censuses, to separate these three branches, so far as that is possible, and present independently the data relating to each.

In the following matter, therefore, comprising pages 5 to 97, the statistics and discussions relate to all lumber and timber manufacture, including independent timber camps, and sawmills with or without timber camps, and the planing mills attached thereto, unless otherwise specified. It is necessary to present them in this heterogeneous form in order to make comparison with the figures of earlier censuses.

## SUMMARY.

The lumber industry of the United States, taken as a whole, was in 1900 the fourth among the great manu-

facturing industries of the country, being exceeded in value of products only by the iron and steel, the textile, and the slaughtering and meat-packing industries. There were 33,035 establishments, with a total capital of \$611,611,524. They employed 283,260 wage-earners, exclusive of the administrative and clerical force, an average of 8.6 employees per establishment, and paid in wages \$104,640,591. The average wages per wage-earner was \$370, and per establishment, \$3,171. The cost of materials used was \$317,923,548, and the value of products was \$566,832,984. The product per establishment was \$17,177 and per employee \$2,003. The amount of lumber produced by the mills was 35,084,166 M feet, B. M. The average product per mill was slightly in excess of a million feet.

Table 1 gives a comparative summary of the leading statistics concerning the entire lumber industry in 1850, 1860, 1870, 1880, 1890, and 1900. In comparing the figures with one another certain qualifications must be kept in mind. The money values given for 1870 are expressed in depreciated currency, and are therefore not parallel to those given by later censuses. They may be reduced approximately to a gold basis by being diminished one-fifth. The value of hired property is not included in the capital reported in 1890 and 1900, because it was not included in the reports of previous censuses. The number of wage-earners and amount of wages in 1890 and 1900 include only the number of those employed and paid at the mills and in independent timber camps; that is, they do not include the number of employees and the wages paid at lumber camps which are connected with mills. Furthermore, the number of employees in 1890 is not comparable with that reported at other censuses, owing to differences in the methods used in determining the "average number of employees." It is probable that the number was greatly overstated for 1890. The cost of material in 1890 and 1900 includes the value of the stumpage, wages paid to employees, and all other items of logging expense at lumber camps which were dependent upon mills.



TABLE 1.—COMPARATIVE SUMMARY, 1850 TO 1900, WITH PER CENT OF INCREASE FOR EACH DECADE.

|   | DATE OF CENSUS. |               |               |               |              |              | PER CENT OF INCREASE. |                    |                    |                    |                    |
|---|-----------------|---------------|---------------|---------------|--------------|--------------|-----------------------|--------------------|--------------------|--------------------|--------------------|
|   | 1900            | 1890          | 1880          | 1870          | 1860         | 1850         | 1890<br>to<br>1900    | 1880<br>to<br>1890 | 1870<br>to<br>1880 | 1860<br>to<br>1870 | 1850<br>to<br>1860 |
| Number of establishments.....                                     | 33,035          | 22,617        | 25,708        | 25,832        | 20,659       | 18,769       | 46.1                  | 12.2               | 10.5               | 25.0               | 10.1               |
| Capital.....  | \$611,611,524   | \$557,881,054 | \$181,186,122 | \$143,498,232 | \$74,530,090 | \$41,444,364 | 9.6                   | 207.3              | 26.3               | 92.5               | 79.8               |
| Salaries officials, clerks, etc., number.....                     | 12,530          | 20,375        | (3)           | (3)           | (3)          | (3)          | 138.5                 |                    |                    |                    |                    |
| Salaries.....   | \$11,260,608    | \$11,203,757  | (3)           | (3)           | (3)          | (3)          | 0.5                   |                    |                    |                    |                    |
| Wage-earners, average number.....                                 | 283,260         | 311,961       | 147,556       | 142,997       | 75,862       | 55,810       | 19.2                  | 115.8              | 11.4               | 97.7               | 35.9               |
| Total wages.....  | \$104,640,591   | \$87,924,284  | \$31,545,974  | \$10,009,162  | \$21,702,465 | \$13,787,852 | 19.0                  | 176.1              | 120.4              | 81.4               | 57.4               |
| Men, 16 years and over.....                                       | 277,900         | 306,415       | 141,564       | 145,047       | 75,171       | 55,358       | 19.3                  | 116.4              | 13.1               | 94.3               | 35.7               |
| Wages.....  | \$103,741,166   | \$87,170,648  | (3)           | (3)           | (3)          | (3)          | 19.0                  |                    |                    |                    |                    |
| Women, 16 years and over.....                                     | 1,748           | 2,281         | 425           | 682           | 691          | 452          | 123.4                 | 432.7              | 127.7              | 11.3               | 52.8               |
| Wages.....  | \$333,283       | \$363,393     | (3)           | (3)           | (3)          | (3)          | 18.3                  |                    |                    |                    |                    |
| Children, under 16 years.....                                     | 3,612           | 3,265         | 5,967         | 3,268         | (3)          | (3)          | 10.5                  | 145.2              | 82.6               |                    |                    |
| Wages.....  | \$566,142       | \$403,217     | (3)           | (3)           | (3)          | (3)          | 41.5                  |                    |                    |                    |                    |
| Miscellaneous expenses.....                                       | \$17,731,519    | \$23,844,637  | (3)           | (3)           | (3)          | (3)          | 25.6                  |                    |                    |                    |                    |
| Cost of materials used.....                                       | \$317,923,548   | \$242,562,296 | \$146,155,385 | \$103,343,480 | \$44,581,753 | \$28,328,792 | 31.1                  | 66.0               | 41.4               | 131.8              | 57.4               |
| Value of products, including amount received for custom work..... | \$566,832,984   | \$437,957,582 | \$233,208,729 | \$210,159,327 | \$96,715,856 | \$60,413,187 | 29.4                  | 87.7               | 11.0               | 117.3              | 60.1               |

<sup>1</sup> Decrease.<sup>2</sup> Includes proprietors and firm members, with their salaries; number only reported in 1900, but not included in this table. (See Tables 30 and 31.)<sup>3</sup> Not separately reported.

This table shows the statistics for the lumber industry in condensed form and on the proper basis for comparison. For 1900 the number of establishments is given as 33,035; this number being the total of all sawmills whether operated separately or in connection with planing mills or logging camps or both, and of all independent timber camps.

Under the heading of "capital" the total amount of capital invested in all the four branches of the industry, namely, dependent logging camps, sawmills, planing mills, and independent logging camps or timber camps, is shown.

Under the headings of "wage-earners" and "wages" are shown the total average number of wage-earners employed in three of the four branches of the industry; namely, total average number for saw and planing mills combined, and the total average number for independent logging camps or timber camps. The wage-earners in dependent logging camps are not shown in this table because this branch of the industry was not considered as in any sense an establishment, all of the expenses incident to dependent logging operations being charged against the sawmill conducting such operations as an item in the total cost of materials. Hence the total number of wage-earners shown for the United States, 283,260, represents the total number employed in the industry exclusive of those in dependent logging camps.

Under the heading of "miscellaneous expenses" is shown the total of all miscellaneous expenses incurred in all four branches of the industry, except amounts paid for contract logging.

Under the heading of "materials" is placed, first, stumpage value of all timber reported as cut during the census year, together with all supplies consumed by forces engaged in the cutting of the timber. In the case of independent logging camps the cost of materials stops at this point. In the case of sawmills all further expenses incident to transporting the logs to the mill were added in. To this was added the cost of all logs and bolts purchased for the sawmill, rough lumber for the planing mill, and all other materials for both saw-

mill and planing mill, together with items of mill supplies, freight, fuel, power, and heat. This makes the aggregate cost of materials \$317,923,548, as shown for the United States.

Under the heading of "products" the total value to the establishment of all products turned out is given. In the case of the sawmill this means that to the value of all merchant sawed product was added the amount received by the mill for work done for customers, the value of custom products being in all cases excluded. In the cases of planing mills and timber camps, the total value of products as reported was taken. The total value of products for the United States, \$566,832,984, was made up in this way.

In the half century the value of products has multiplied nearly ten times. In the same time the number of establishments has less than doubled, showing a great increase in average capacity. The capital in 1900 was fifteen times as great as in 1850, again indicating the concentration of the business. The number of employees has multiplied in the half century about five and a half times, which, with the still greater increase in products, argues an increased efficiency per hand, due, probably, to the use of superior machinery and appliances. The cost of material has increased at a rate slightly greater than the value of products.

The marked decrease in the number of establishments in 1890 as compared with those of 1880 has not been continued in 1900, but in place thereof an enormous increase in the number of establishments is seen, amounting to not less than 46 per cent. Capital has increased nearly 10 per cent, indicating that the tendency toward the centralization of the business has ceased, at least for the present, and that small mills have multiplied. The number of employees has apparently decreased at the rate of 9.6 per cent during the last decade, but this is probably fallacious, as previously explained, while the amount of wages has increased 19 per cent, which would indicate a considerable increase in the amount of wages per hand. The cost of material has increased 31 per cent, and the value of product 29 per cent during the

past decade. Both these last two items have increased at a much smaller rate than before.

The following table shows the relation at each census between the number of establishments, on the one hand, and the capital, employees, wages, material, and product on the other:

TABLE 2.—AVERAGE CAPITAL, NUMBER OF EMPLOYEES, WAGES, MATERIALS, AND PRODUCTS PER ESTABLISHMENT.

| YEARS.    | Capital. | Number of employees. | Wages. | Cost of materials. | Value of products. |
|-----------|----------|----------------------|--------|--------------------|--------------------|
| 1850..... | \$2,237  | 3                    | \$728  | \$1,542            | \$3,270            |
| 1860..... | 3,608    | 4                    | 1,051  | 2,158              | 4,682              |
| 1870..... | 5,555    | 6                    | 1,549  | 4,001              | 8,136              |
| 1880..... | 7,048    | 6                    | 1,239  | 5,685              | 9,704              |
| 1890..... | 24,666   | 15                   | 4,383  | 10,725             | 19,364             |
| 1900..... | 18,514   | 9                    | 3,508  | 9,624              | 17,159             |

The striking feature of this table, aside from the general increase in the magnitude of the establishments, is the change that has taken place between 1890 and 1900. All the figures indicate the multiplication of small establishments with less capital, fewer employees, less wages, smaller amount of material used, and less value of product. This multiplication of establishments is probably the result of the great increase in the value of lumber in the year or two preceding the census.

TABLE 3.—AVERAGE WAGES AND OUTPUT PER EMPLOYEE.

| YEARS.    | Average wages per employee. | Gross output per employee. | Net output per employee. |
|-----------|-----------------------------|----------------------------|--------------------------|
| 1850..... | \$251                       | \$1,128                    | \$506                    |
| 1860..... | 284                         | 1,265                      | 682                      |
| 1870..... | 267                         | 1,403                      | 713                      |
| 1880..... | 214                         | 1,673                      | 693                      |
| 1890..... | 298                         | 1,317                      | 588                      |
| 1900..... | 394                         | 1,928                      | 847                      |

From the above figures it appears that wages and efficiency have on the whole increased. The average wages per employee have increased 37 per cent in the half century, and the average gross output of the industry per employee has increased in much greater proportion. If we consider the net product only, that is, the increased value given to the product by the manufacturing process, which is roughly obtained by subtracting the value of the raw material from that of the finished product, as given above, we find, however, that the net output per employee has increased only 42 per cent in the half century.

Table 4 shows, in comparison, the figures of the lumber industry by states and for the United States as returned at the censuses of 1870, 1880, 1890, and 1900, and are given in a form similar to that of Table 1. Prior to 1890, the reports of operations designated in the present census as "timber camps," were not taken, but have been included with the figures of the other branches of the lumber industry for 1890 and 1900. In making comparisons, the presence of these figures for the last two censuses should be considered. The number of wage-earners shown for 1870 and 1880 is the number of employees engaged in the industry, while the figures for 1890 and 1900 represent the number of wage-earning employees only; all salaried employees, such as general superintendents, managers, clerks, and salesmen, being excluded, distinction being sharply drawn between salaried employees and wage-earning employees or "wage-earners."

This comparative table being in the condensed form, does not show, in the total number of wage-earners, those hands employed in dependent logging camps, the logging camp conducted by the sawmill being considered as a part of the sawmill establishment, and all of the expenses incident to the delivery of logs at the mill being added in to give the total cost of materials.

TABLE 4.—COMPARATIVE SUMMARY: 1900, 1890, 1880, 1870.

| STATES AND TERRITORIES.   | Year. | Number of establishments. | Capital.      | AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES. |               |                         |                  |                           |                  |                           |                  | Cost of materials used. <sup>1</sup> | Value of products. |
|---------------------------|-------|---------------------------|---------------|---|---------------|-------------------------|------------------|---------------------------|------------------|---------------------------|------------------|--------------------------------------|--------------------|
|                           |       |                           |               | Total.  |               | Men, 16 years and over. |                  | Women, 16 years and over. |                  | Children, under 16 years. |                  |                                      |                    |
|                           |       |                           |               | Average number.                                 | Wages.        | Average number.         | Wages.           | Average number.           | Wages.           | Average number.           | Wages.           |                                      |                    |
| United States.....        | 1900  | 33,035                    | \$611,611,524 | 283,260   | \$104,640,591 | 277,900                 | \$103,741,166    | 1,748                     | \$333,288        | 3,612                     | \$566,142        | \$317,923,548                        | \$566,832,924      |
|                           | 1890  | 22,617                    | 557,881,054   | 311,964   | 87,934,284    | 306,415                 | 87,170,668       | 2,281                     | 363,399          | 3,268                     | 400,217          | 242,562,296                          | 437,957,832        |
|                           | 1880  | 25,708                    | 181,186,122   | 147,956   | 31,845,974    | 141,564                 | ( <sup>2</sup> ) | 425                       | ( <sup>2</sup> ) | 5,967                     | ( <sup>2</sup> ) | 146,155,385                          | 233,268,729        |
|                           | *1870 | 25,832                    | 143,493,232   | 149,997   | 40,009,162    | 140,047                 | ( <sup>2</sup> ) | 682                       | ( <sup>2</sup> ) | 3,268                     | ( <sup>2</sup> ) | 103,943,430                          | 210,159,327        |
| Alabama .....             | 1900  | 1,111                     | 13,020,183    | 9,273   | 2,265,018     | 8,851                   | 2,206,997        | 67                        | 11,757           | 955                       | 46,264           | 6,646,124                            | 12,867,551         |
|                           | 1890  | 472                       | 7,460,108     | 6,395   | 1,712,396     | 6,164                   | 1,687,719        | 5                         | 770              | 166                       | 23,847           | 4,551,261                            | 8,507,971          |
|                           | 1880  | 354                       | 1,545,655     | 1,647   | 424,156       | 1,611                   | .....            | .....                     | .....            | 36                        | .....            | 1,608,635                            | 2,649,634          |
|                           | 1870  | 284                       | 744,005       | 1,428   | 357,195       | 1,411                   | .....            | 8                         | .....            | 9                         | .....            | 520,513                              | 1,359,083          |
| Alaska <sup>4</sup> ..... | 1900  | 25                        | 181,950       | 81  | 76,988        | 81                      | 76,988           | .....                     | .....            | .....                     | .....            | 90,683                               | 211,229            |
|                           | 1890  | 10                        | 105,727       | 78  | 18,625        | 78                      | 18,625           | .....                     | .....            | .....                     | .....            | 30,198                               | 58,440             |
|                           | 1880  | .....                     | .....         | .....   | .....         | .....                   | .....            | .....                     | .....            | .....                     | .....            | .....                                | .....              |
|                           | 1870  | .....                     | .....         | .....   | .....         | .....                   | .....            | .....                     | .....            | .....                     | .....            | .....                                | .....              |
| Arizona .....             | 1900  | 14                        | 940,698       | 197   | 137,810       | 185                     | 133,810          | .....                     | .....            | 12                        | 4,000            | 304,205                              | 547,790            |
|                           | 1890  | 4                         | 212,975       | 94  | 57,770        | 94                      | 57,770           | .....                     | .....            | .....                     | .....            | 126,765                              | 248,790            |
|                           | 1880  | 13                        | 102,450       | 79  | 33,375        | 77                      | .....            | .....                     | .....            | 2                         | .....            | 131,786                              | 215,918            |
|                           | 1870  | 1                         | 5,000         | 16  | 6,000         | 16                      | .....            | .....                     | .....            | .....                     | .....            | 1,600                                | 10,000             |

<sup>1</sup> In 1890 and 1900, for purposes of comparison, "Cost of materials used" includes wages reported under the heads of "Logging" and "Cost of keep of animals."

<sup>2</sup> Wages of men, women, and children not separately shown in 1870 and 1880.

<sup>3</sup> For purposes of comparison the values of 1870 should be reduced about 20 per cent because of a depreciated currency for that year.

<sup>4</sup> No report received prior to 1890.

TABLE 4.—COMPARATIVE SUMMARY: 1900, 1890, 1880, 1870—Continued.

| STATES AND TERRITORIES.             | Year. | Number of establishments. | Capital.     | AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES. |             |                         |             |                           |         |                           |          | Cost of materials used. <sup>1</sup> | Value of products. |
|-------------------------------------|-------|---------------------------|--------------|---|-------------|-------------------------|-------------|---------------------------|---------|---------------------------|----------|--------------------------------------|--------------------|
|                                     |       |                           |              | Total.  |             | Men, 16 years and over. |             | Women, 16 years and over. |         | Children, under 16 years. |          |                                      |                    |
|                                     |       |                           |              | Average number.                                 | Wages.      | Average number.         | Wages.      | Average number.           | Wages.  | Average number.           | Wages.   |                                      |                    |
| Arkansas.....                       | 1900  | 1,199                     | \$21,727,710 | 15,895  | \$4,730,413 | 15,670                  | \$4,691,024 | 9                         | \$1,485 | 216                       | \$37,904 | \$18,068,267                         | \$23,959,983       |
|                                     | 1890  | 539                       | 6,928,720    | 6,563   | 1,894,395   | 6,509                   | 1,888,755   | 12                        | 560     | 42                        | 5,080    | 4,798,577                            | 8,943,052          |
|                                     | 1880  | 319                       | 1,067,840    | 1,744   | 237,894     | 1,690                   |             |                           |         | 54                        |          | 1,070,395                            | 1,793,848          |
|                                     | 1870  | 211                       | 694,400      | 1,107   | 255,186     | 1,075                   |             | 6                         |         | 26                        |          | 646,059                              | 1,344,403          |
| California.....                     | 1900  | 818                       | 28,236,332   | 5,806   | 2,849,457   | 5,706                   | 2,825,527   | 41                        | 13,527  | 59                        | 10,403   | 7,528,215                            | 13,764,647         |
|                                     | 1890  | 258                       | 16,184,235   | 4,689   | 1,927,551   | 4,654                   | 1,918,525   | 29                        | 7,176   | 6                         | 1,850    | 4,421,267                            | 8,794,655          |
|                                     | 1880  | 251                       | 6,454,718    | 3,484   | 1,095,736   | 3,423                   |             |                           |         | 11                        |          | 2,242,503                            | 4,428,950          |
|                                     | 1870  | 291                       | 3,856,440    | 4,077   | 1,620,626   | 4,059                   |             | 12                        |         | 6                         |          | 1,986,119                            | 5,227,064          |
| Colorado.....                       | 1900  | 159                       | 972,098      | 732   | 331,038     | 720                     | 326,628     | 11                        | 4,230   | 1                         | 180      | 854,454                              | 1,627,605          |
|                                     | 1890  | 120                       | 941,561      | 1,166   | 392,010     | 1,149                   | 390,875     | 7                         | 1,135   |                           |          | 647,058                              | 1,363,749          |
|                                     | 1880  | 96                        | 481,200      | 877   | 112,931     | 870                     |             |                           |         | 7                         |          | 700,294                              | 1,051,295          |
|                                     | 1870  | 32                        | 132,700      | 218   | 78,711      | 217                     |             | 1                         |         |                           |          | 117,075                              | 824,870            |
| Connecticut.....                    | 1900  | 200                       | 1,188,965    | 788   | 306,915     | 788                     | 306,915     |                           |         |                           |          | 902,391                              | 1,818,643          |
|                                     | 1890  | 176                       | 1,092,586    | 733   | 254,926     | 733                     | 254,926     |                           |         |                           |          | 765,751                              | 1,363,744          |
|                                     | 1880  | 300                       | 657,800      | 707   | 178,836     | 699                     |             |                           |         | 8                         |          | 641,569                              | 1,076,465          |
|                                     | 1870  | 393                       | 775,391      | 908   | 242,990     | 908                     |             |                           |         |                           |          | 940,605                              | 1,541,038          |
| Dakota.....                         | 1900  | ( <sup>2</sup> )          |              |   |             |                         |             |                           |         |                           |          |                                      |                    |
|                                     | 1890  | ( <sup>3</sup> )          |              |   |             |                         |             |                           |         |                           |          |                                      |                    |
|                                     | 1880  | 39                        | 113,750      | 290   | 54,974      | 286                     |             |                           |         | 4                         |          | 281,875                              | 435,792            |
|                                     | 1870  | 10                        | 37,400       | 68  | 14,256      | 66                      |             |                           |         | 2                         |          | 32,772                               | 72,280             |
| Delaware.....                       | 1900  | 76                        | 354,464      | 433   | 105,093     | 398                     | 100,325     | 23                        | 3,113   | 12                        | 1,655    | 234,193                              | 471,482            |
|                                     | 1890  | 48                        | 265,791      | 532   | 96,059      | 462                     | 93,509      |                           |         | 70                        | 2,550    | 195,340                              | 405,057            |
|                                     | 1880  | 86                        | 259,250      | 391   | 40,694      | 378                     |             |                           |         | 13                        |          | 248,375                              | 411,060            |
|                                     | 1870  | 80                        | 290,424      | 311   | 70,823      | 308                     |             |                           |         | 3                         |          | 229,856                              | 405,041            |
| Dist. of Columbia.....              | 1900  | ( <sup>3</sup> )          |              |   |             |                         |             |                           |         |                           |          |                                      |                    |
|                                     | 1890  | ( <sup>3</sup> )          |              |   |             |                         |             |                           |         |                           |          |                                      |                    |
|                                     | 1880  | 1                         | 25,000       | 25  | 6,000       | 25                      |             |                           |         |                           |          | 34,000                               | 50,000             |
|                                     | 1870  | 1                         | 1,500        | 15  | 1,800       | 10                      |             |                           |         | 5                         |          | 20,000                               | 30,000             |
| Florida.....                        | 1900  | 416                       | 14,937,093   | 7,081   | 2,197,875   | 6,936                   | 2,175,940   | 38                        | 6,999   | 107                       | 14,936   | 5,725,887                            | 10,848,403         |
|                                     | 1890  | 215                       | 5,488,866    | 4,363   | 1,289,276   | 4,276                   | 1,277,918   | 24                        | 4,400   | 63                        | 6,958    | 2,745,016                            | 5,514,879          |
|                                     | 1880  | 135                       | 2,219,650    | 2,030   | 562,249     | 1,945                   |             |                           |         | 85                        |          | 1,867,218                            | 3,060,291          |
|                                     | 1870  | 104                       | 775,090      | 1,116   | 421,820     | 1,091                   |             | 2                         |         | 23                        |          | 1,163,238                            | 2,235,780          |
| Georgia.....                        | 1900  | 1,254                     | 11,802,716   | 10,240  | 2,344,523   | 10,108                  | 2,330,622   | 11                        | 1,800   | 121                       | 12,101   | 6,565,897                            | 13,704,923         |
|                                     | 1890  | 449                       | 5,019,636    | 5,943   | 1,538,217   | 5,811                   | 1,521,119   | 31                        | 4,250   | 101                       | 7,848    | 3,304,249                            | 6,545,195          |
|                                     | 1880  | 655                       | 3,101,452    | 3,392   | 564,085     | 3,298                   |             |                           |         | 94                        |          | 3,197,155                            | 4,875,310          |
|                                     | 1870  | 532                       | 1,718,473    | 2,976   | 667,628     | 2,913                   |             | 11                        |         | 52                        |          | 1,616,527                            | 4,044,375          |
| Idaho.....                          | 1900  | 117                       | 913,352      | 406   | 180,179     | 398                     | 178,779     | 8                         | 1,400   |                           |          | 482,200                              | 937,665            |
|                                     | 1890  | 44                        | 462,130      | 393   | 136,195     | 389                     | 135,495     | 2                         | 500     | 2                         | 200      | 245,022                              | 631,790            |
|                                     | 1880  | 48                        | 192,460      | 173   | 33,367      | 169                     |             |                           |         | 4                         |          | 280,566                              | 349,635            |
|                                     | 1870  | 10                        | 50,760       | 47  | 17,924      | 47                      |             |                           |         |                           |          | 20,177                               | 56,850             |
| Illinois.....                       | 1900  | 837                       | 5,246,277    | 3,526   | 1,343,640   | 3,365                   | 1,314,793   | 33                        | 8,040   | 128                       | 20,807   | 4,619,705                            | 7,652,118          |
|                                     | 1890  | 363                       | 4,095,212    | 4,089   | 1,037,525   | 4,011                   | 1,029,092   | 7                         | 510     | 71                        | 7,923    | 2,907,390                            | 5,135,155          |
|                                     | 1880  | 640                       | 3,295,483    | 3,851   | 787,867     | 3,652                   |             |                           |         | 199                       |          | 3,144,905                            | 5,063,037          |
|                                     | 1870  | 511                       | 2,542,630    | 3,100   | 817,212     | 3,059                   |             | 2                         |         | 39                        |          | 2,163,655                            | 4,546,769          |
| Indiana.....                        | 1900  | 1,849                     | 10,947,574   | 9,503   | 3,608,982   | 9,403                   | 3,591,972   | 17                        | 3,886   | 83                        | 13,074   | 11,316,001                           | 20,613,724         |
|                                     | 1890  | 1,633                     | 11,887,470   | 15,021  | 4,356,196   | 14,480                  | 4,266,078   | 289                       | 48,197  | 302                       | 41,921   | 10,627,901                           | 20,278,023         |
|                                     | 1880  | 2,022                     | 7,048,088    | 10,339  | 1,671,740   | 9,926                   |             |                           |         | 413                       |          | 9,027,097                            | 14,260,830         |
|                                     | 1870  | 1,861                     | 6,975,746    | 9,446   | 1,901,612   | 9,097                   |             | 7                         |         | 342                       |          | 5,563,985                            | 12,324,755         |
| Indian Territory <sup>4</sup> ..... | 1900  | 49                        | 104,003      | 173   | 48,498      | 171                     | 48,108      | 1                         | 120     | 1                         | 270      | 81,792                               | 199,879            |
|                                     | 1890  | 3                         | 16,000       | 38  | 11,800      | 38                      | 11,800      |                           |         |                           |          | 23,900                               | 41,950             |
|                                     | 1880  |                           |              |   |             |                         |             |                           |         |                           |          |                                      |                    |
|                                     | 1870  |                           |              |   |             |                         |             |                           |         |                           |          |                                      |                    |
| Iowa.....                           | 1900  | 264                       | 3,762,219    | 2,793   | 1,046,181   | 2,677                   | 1,028,758   | 5                         | 1,229   | 111                       | 16,194   | 6,824,084                            | 8,677,053          |
|                                     | 1890  | 143                       | 17,530,335   | 6,819   | 2,101,648   | 6,465                   | 2,052,214   | 39                        | 15,751  | 265                       | 33,683   | 7,960,286                            | 12,056,302         |
|                                     | 1880  | 828                       | 4,946,390    | 2,989   | 825,244     | 2,526                   |             |                           |         | 463                       |          | 4,141,885                            | 6,185,628          |
|                                     | 1870  | 545                       | 3,925,001    | 3,782   | 995,962     | 3,563                   |             | 17                        |         | 202                       |          | 3,302,782                            | 5,794,285          |
| Kansas.....                         | 1900  | 54                        | 85,194       | 76  | 22,897      | 75                      | 22,747      |                           |         | 1                         | 150      | 43,251                               | 104,182            |
|                                     | 1890  | 27                        | 70,865       | 102   | 13,555      | 100                     | 13,355      |                           |         | 2                         | 200      | 43,298                               | 85,521             |
|                                     | 1880  | 146                       | 262,975      | 516   | 66,757      | 507                     |             |                           |         | 9                         |          | 447,449                              | 682,697            |
|                                     | 1870  | 195                       | 642,955      | 1,161   | 232,662     | 1,153                   |             | 1                         |         | 7                         |          | 822,028                              | 1,736,381          |
| Kentucky.....                       | 1900  | 1,280                     | 9,805,404    | 7,549   | 2,477,696   | 7,385                   | 2,451,590   | 4                         | 887     | 160                       | 25,219   | 7,379,148                            | 13,774,911         |
|                                     | 1890  | 599                       | 6,571,374    | 6,322   | 1,568,394   | 6,207                   | 1,556,123   | 7                         | 1,152   | 108                       | 11,119   | 4,375,392                            | 7,904,428          |
|                                     | 1880  | 670                       | 2,290,558    | 2,601   | 671,939     | 2,506                   |             | 1                         |         | 94                        |          | 2,410,743                            | 4,064,361          |
|                                     | 1870  | 562                       | 1,724,686    | 2,407   | 482,683     | 2,425                   |             | 13                        |         | 59                        |          | 1,805,591                            | 3,662,086          |
| Louisiana.....                      | 1900  | 432                       | 20,093,044   | 10,171  | 3,337,020   | 10,062                  | 3,317,967   | 1                         | 400     | 108                       | 18,653   | 9,419,678                            | 17,408,513         |
|                                     | 1890  | 127                       | 5,714,313    | 3,311   | 1,160,528   | 3,250                   | 1,146,139   | 37                        | 11,739  | 14                        | 2,650    | 3,089,179                            | 5,745,194          |
|                                     | 1880  | 175                       | 903,950      | 976   | 200,093     | 943                     |             |                           |         | 83                        |          | 1,187,059                            | 1,764,644          |
|                                     | 1870  | 152                       | 541,800      | 1,054   | 284,953     | 1,038                   |             | 2                         |         | 14                        |          | 619,938                              | 1,212,037          |
| Maine.....                          | 1900  | 838                       | 15,764,538   | 6,834   | 2,633,771   | 6,775                   | 2,621,110   | 54                        | 11,674  | 5                         | 987      | 7,994,596                            | 13,489,401         |
|                                     | 1890  | 894                       | 12,978,315   | 11,540  | 2,639,845   | 11,383                  | 2,605,803   | 97                        | 17,323  | 60                        | 6,719    | 6,228,808                            | 11,849,654         |
|                                     | 1880  | 848                       | 6,339,396    | 6,663   | 1,161,142   | 6,480                   |             |                           |         | 183                       |          | 4,951,957                            | 7,933,868          |
|                                     | 1870  | 1,099                     | 6,614,875    | 8,506   | 2,449,182   | 8,463                   |             | 2                         |         | 41                        |          | 6,872,728                            | 11,395,747         |
| Maryland.....                       | 1900  | 367                       | 2,622,928    | 1,964   | 476,776     | 1,718                   | 456,820     | 143                       | 13,778  | 103                       | 6,178    | 1,390,357                            | 2,650,082          |
|                                     | 1890  | 217                       | 1,459,895    | 1,552   | 335,909     | 1,462                   | 325,528     | 31                        | 5,300   | 59                        | 5,081    | 840,941                              | 1,600,472          |
|                                     | 1880  | 869                       | 1,237,694    | 1,239   | 223,786     | 1,216                   |             |                           |         | 23                        |          | 1,106,795                            | 1,813,332          |
|                                     | 1870  | 391                       | 1,056,600    | 1,245   | 259,551     | 1,229                   |             |                           |         | 16                        |          | 674,858                              | 1,501,471          |

<sup>1</sup> In 1880 and 1900, for purposes of comparison, "Cost of materials used" includes wages reported under the heads of "Logging" and "Cost of keep of animals."<sup>2</sup> See North Dakota and South Dakota.<sup>3</sup> None reported in 1880 and 1900.<sup>4</sup> No report received prior to 1890.

TABLE 4.—COMPARATIVE SUMMARY: 1900, 1890, 1880, 1870—Continued.

| STATES AND TERRITORIES.     | Year. | Number of establishments. | Capital.    | AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES. |             |                         |             |                           |          |                           |        | Cost of materials used. <sup>1</sup> | Value of products. |
|-----------------------------|-------|---------------------------|-------------|---|-------------|-------------------------|-------------|---------------------------|----------|---------------------------|--------|--------------------------------------|--------------------|
|                             |       |                           |             | Total.  |             | Men, 16 years and over. |             | Women, 16 years and over. |          | Children, under 16 years. |        |                                      |                    |
|                             |       |                           |             | Average number.                                 | Wages.      | Average number.         | Wages.      | Average number.           | Wages.   | Average number.           | Wages. |                                      |                    |
| Massachusetts.....          | 1900  | 553                       | \$6,253,171 | 2,768   | \$1,215,088 | 2,713                   | \$1,200,167 | 50                        | \$14,046 | 5                         | \$875  | 3,574,418                            | \$6,526,230        |
|                             | 1890  | 488                       | 5,135,860   | 3,000   | 1,042,508   | 2,988                   | 1,039,968   | 8                         | 2,200    | 4                         | 340    | 2,719,117                            | 5,211,607          |
|                             | 1880  | 606                       | 2,480,340   | 1,970   | 431,612     | 1,940                   |             |                           |          | 30                        |        | 1,904,105                            | 3,120,184          |
|                             | 1870  | 644                       | 2,054,829   | 2,291   | 569,300     | 2,266                   |             |                           |          | 25                        |        | 2,065,870                            | 3,556,870          |
| Michigan.....               | 1900  | 1,705                     | 67,379,698  | 26,199  | 11,122,030  | 25,685                  | 11,018,076  | 252                       | 54,384   | 262                       | 54,570 | 29,439,931                           | 54,290,520         |
|                             | 1890  | 2,124                     | 129,467,072 | 54,308  | 15,548,838  | 53,552                  | 15,444,888  | 202                       | 42,689   | 494                       | 61,256 | 49,418,374                           | 83,121,969         |
|                             | 1880  | 1,649                     | 39,260,428  | 24,235  | 6,967,905   | 22,732                  |             | 143                       |          | 1,360                     |        | 32,251,372                           | 52,449,928         |
|                             | 1870  | 1,571                     | 26,990,450  | 20,058  | 6,400,283   | 19,252                  |             | 63                        |          | 743                       |        | 14,347,661                           | 31,946,396         |
| Minnesota.....              | 1900  | 438                       | 52,095,923  | 15,140  | 7,140,571   | 15,087                  | 7,127,900   | 15                        | 2,985    | 38                        | 9,686  | 26,047,781                           | 43,585,161         |
|                             | 1890  | 392                       | 39,442,925  | 16,170  | 4,155,522   | 16,130                  | 4,150,541   | 13                        | 1,212    | 27                        | 3,769  | 15,170,349                           | 25,075,132         |
|                             | 1880  | 234                       | 6,771,145   | 2,854   | 924,473     | 2,732                   |             | 22                        |          | 100                       |        | 4,529,055                            | 7,366,038          |
|                             | 1870  | 207                       | 8,311,140   | 2,952   | 880,028     | 2,899                   |             | 14                        |          | 39                        |        | 2,193,965                            | 4,299,162          |
| Mississippi.....            | 1900  | 844                       | 17,337,538  | 9,676   | 2,790,780   | 9,597                   | 2,778,515   | 11                        | 2,465    | 68                        | 9,800  | 8,422,253                            | 15,656,110         |
|                             | 1890  | 366                       | 4,498,788   | 4,427   | 1,169,678   | 4,368                   | 1,162,419   | 21                        | 2,334    | 38                        | 4,920  | 2,867,798                            | 5,770,387          |
|                             | 1880  | 295                       | 922,595     | 1,170   | 197,867     | 1,128                   |             |                           |          | 47                        |        | 1,219,116                            | 1,920,385          |
|                             | 1870  | 265                       | 1,153,917   | 1,954   | 580,056     | 1,907                   |             | 15                        |          | 32                        |        | 828,793                              | 2,160,667          |
| Missouri.....               | 1900  | 1,197                     | 11,089,799  | 6,043   | 2,012,659   | 5,886                   | 1,985,223   | 51                        | 8,010    | 106                       | 19,426 | 6,410,216                            | 11,177,529         |
|                             | 1890  | 830                       | 8,245,425   | 6,708   | 1,930,504   | 6,596                   | 1,910,514   | 75                        | 16,698   | 32                        | 3,292  | 4,328,903                            | 8,359,925          |
|                             | 1880  | 881                       | 2,867,970   | 3,503   | 669,644     | 3,408                   |             |                           |          | 95                        |        | 3,215,292                            | 5,265,617          |
|                             | 1870  | 806                       | 3,241,670   | 3,900   | 1,031,513   | 3,789                   |             | 11                        |          | 100                       |        | 3,428,235                            | 6,363,112          |
| Montana.....                | 1900  | 139                       | 2,590,224   | 1,191   | 637,924     | 1,190                   | 637,684     | 1                         | 240      |                           |        | 1,665,536                            | 2,949,992          |
|                             | 1890  | 31                        | 832,948     | 609   | 307,617     | 608                     | 307,197     | 1                         | 420      |                           |        | 547,325                              | 1,182,510          |
|                             | 1880  | 36                        | 208,200     | 142   | 47,945      | 142                     |             |                           |          |                           |        | 278,098                              | 527,995            |
|                             | 1870  | 31                        | 146,000     | 161   | 80,965      | 161                     |             |                           |          |                           |        | 172,098                              | 430,957            |
| Nebraska.....               | 1900  | 23                        | 117,360     | 31  | 10,727      | 28                      | 10,196      | 1                         | 156      | 2                         | 375    | 27,123                               | 51,778             |
|                             | 1890  | 31                        | 96,539      | 138   | 40,497      | 138                     | 40,497      |                           |          |                           |        | 63,552                               | 151,945            |
|                             | 1880  | 38                        | 93,375      | 140   | 29,313      | 136                     |             |                           |          | 4                         |        | 164,878                              | 265,062            |
|                             | 1870  | 50                        | 152,200     | 202   | 47,102      | 202                     |             |                           |          |                           |        | 118,975                              | 278,205            |
| Nevada.....                 | 1900  | 4                         | 9,327       | 4   | 1,375       | 4                       | 1,375       |                           |          |                           |        | 3,234                                | 7,060              |
|                             | 1890  | ( <sup>2</sup> )          |             |   |             |                         |             |                           |          |                           |        |                                      |                    |
|                             | 1880  | 9                         | 132,000     | 35  | 9,892       | 35                      |             |                           |          |                           |        | 162,810                              | 243,200            |
|                             | 1870  | 18                        | 193,500     | 324   | 153,930     | 324                     |             |                           |          |                           |        | 135,450                              | 432,500            |
| New Hampshire.....          | 1900  | 553                       | 11,382,114  | 4,188   | 1,654,965   | 4,106                   | 1,637,309   | 70                        | 15,961   | 12                        | 1,695  | 4,927,399                            | 9,218,310          |
|                             | 1890  | 570                       | 7,592,167   | 5,370   | 1,600,993   | 5,213                   | 1,572,475   | 112                       | 22,379   | 45                        | 5,839  | 2,607,473                            | 5,641,445          |
|                             | 1880  | 680                       | 3,745,790   | 3,104   | 548,556     | 3,056                   |             |                           |          | 48                        |        | 2,272,991                            | 3,842,012          |
|                             | 1870  | 723                       | 2,428,193   | 3,398   | 725,304     | 3,379                   |             | 7                         |          | 12                        |        | 2,471,427                            | 4,286,142          |
| New Jersey.....             | 1900  | 205                       | 1,477,930   | 706   | 305,486     | 704                     | 305,186     |                           |          | 2                         | 300    | 998,161                              | 1,859,014          |
|                             | 1890  | 114                       | 1,557,508   | 641   | 201,751     | 632                     | 200,251     | 3                         | 800      | 6                         | 700    | 695,987                              | 1,225,766          |
|                             | 1880  | 284                       | 1,657,395   | 768   | 179,693     | 760                     |             |                           |          | 8                         |        | 989,979                              | 1,627,640          |
|                             | 1870  | 285                       | 2,238,900   | 1,145   | 369,835     | 1,122                   |             |                           |          | 23                        |        | 1,612,802                            | 2,745,317          |
| New Mexico.....             | 1900  | 32                        | 291,599     | 340   | 112,957     | 339                     | 112,832     | 1                         | 125      |                           |        | 212,571                              | 411,627            |
|                             | 1890  | 26                        | 193,335     | 316   | 151,725     | 314                     | 151,165     | 2                         | 560      |                           |        | 172,321                              | 389,761            |
|                             | 1880  | 26                        | 74,675      | 172   | 24,240      | 172                     |             |                           |          |                           |        | 117,055                              | 173,980            |
|                             | 1870  | 12                        | 47,100      | 63  | 35,425      | 63                      |             |                           |          |                           |        | 40,083                               | 121,225            |
| New York.....               | 1900  | 1,765                     | 21,873,203  | 6,850   | 2,737,361   | 6,751                   | 2,719,966   | 77                        | 12,985   | 22                        | 4,410  | 9,088,425                            | 15,706,977         |
|                             | 1890  | 1,734                     | 21,430,739  | 12,981  | 3,369,484   | 12,552                  | 3,321,782   | 210                       | 22,959   | 219                       | 24,743 | 8,865,653                            | 17,160,547         |
|                             | 1880  | 2,822                     | 13,230,934  | 11,445  | 2,162,972   | 11,056                  |             |                           |          | 389                       |        | 9,119,263                            | 14,856,910         |
|                             | 1870  | 3,510                     | 15,110,981  | 15,409  | 3,438,601   | 14,720                  |             | 44                        |          | 645                       |        | 11,228,613                           | 21,238,228         |
| North Carolina.....         | 1900  | 1,770                     | 13,385,097  | 11,751  | 2,491,089   | 11,521                  | 2,463,915   | 35                        | 4,447    | 195                       | 22,727 | 7,743,235                            | 14,862,593         |
|                             | 1890  | 713                       | 5,376,807   | 6,466   | 1,202,994   | 6,396                   | 1,195,876   | 16                        | 1,363    | 54                        | 5,755  | 3,038,960                            | 5,898,742          |
|                             | 1880  | 776                       | 1,743,217   | 3,029   | 447,431     | 2,938                   |             |                           |          | 91                        |        | 1,577,139                            | 2,672,796          |
|                             | 1870  | 523                       | 1,175,950   | 2,361   | 379,611     | 2,329                   |             | 3                         |          | 29                        |        | 970,294                              | 2,000,243          |
| North Dakota.....           | 1900  | 4                         | 27,275      | 12  | 3,000       | 12                      | 3,000       |                           |          |                           |        | 11,532                               | 24,200             |
|                             | 1890  | 5                         | 118,830     | 135   | 22,510      | 135                     | 22,510      |                           |          |                           |        | 36,045                               | 76,173             |
|                             | 1880  | ( <sup>3</sup> )          |             |   |             |                         |             |                           |          |                           |        |                                      |                    |
|                             | 1870  | ( <sup>3</sup> )          |             |   |             |                         |             |                           |          |                           |        |                                      |                    |
| Ohio.....                   | 1900  | 2,054                     | 13,741,418  | 8,539   | 3,298,668   | 8,402                   | 3,274,682   | 79                        | 16,305   | 58                        | 7,680  | 11,296,045                           | 20,790,854         |
|                             | 1890  | 1,461                     | 11,806,709  | 11,727  | 3,143,494   | 11,319                  | 3,091,260   | 73                        | 9,786    | 335                       | 42,448 | 7,621,133                            | 15,279,843         |
|                             | 1880  | 2,352                     | 7,944,412   | 9,817   | 1,708,300   | 8,769                   |             |                           |          | 548                       |        | 8,896,106                            | 13,864,460         |
|                             | 1870  | 2,230                     | 6,191,679   | 8,237   | 1,535,909   | 8,046                   |             | 12                        |          | 179                       |        | 6,038,678                            | 10,236,180         |
| Oklahoma <sup>4</sup> ..... | 1900  | 33                        | 136,361     | 43  | 9,475       | 43                      | 9,475       |                           |          |                           |        | 27,621                               | 63,569             |
|                             | 1890  | 8                         | 16,605      | 29  | 5,170       | 29                      | 5,170       |                           |          |                           |        | 13,900                               | 27,260             |
|                             | 1880  |                           |             |   |             |                         |             |                           |          |                           |        |                                      |                    |
|                             | 1870  |                           |             |   |             |                         |             |                           |          |                           |        |                                      |                    |
| Oregon.....                 | 1900  | 436                       | 8,167,433   | 4,084   | 2,023,914   | 3,991                   | 2,002,897   | 78                        | 15,532   | 20                        | 5,485  | 5,727,720                            | 10,852,167         |
|                             | 1890  | 350                       | 8,103,000   | 4,214   | 1,680,618   | 4,192                   | 1,676,970   | 18                        | 2,698    | 4                         | 950    | 3,061,439                            | 6,530,757          |
|                             | 1880  | 228                       | 1,577,875   | 579   | 242,154     | 560                     |             |                           |          | 13                        |        | 1,331,842                            | 2,030,463          |
|                             | 1870  | 165                       | 913,262     | 692   | 261,785     | 686                     |             | 2                         |          | 4                         |        | 358,273                              | 1,014,211          |
| Pennsylvania.....           | 1900  | 2,338                     | 47,832,548  | 18,510  | 5,550,163   | 18,337                  | 5,521,469   | 42                        | 7,756    | 131                       | 20,938 | 20,777,869                           | 35,749,965         |
|                             | 1890  | 1,948                     | 45,107,800  | 19,598  | 5,440,480   | 19,316                  | 5,400,751   | 98                        | 14,336   | 184                       | 25,393 | 15,677,103                           | 29,037,970         |
|                             | 1880  | 2,827                     | 21,418,588  | 14,914  | 2,918,459   | 14,443                  |             | 8                         |          | 463                       |        | 13,955,430                           | 22,457,859         |
|                             | 1870  | 3,739                     | 24,804,304  | 17,427  | 5,261,576   | 17,278                  |             | 15                        |          | 134                       |        | 14,940,096                           | 23,938,985         |
| Rhode Island.....           | 1900  | 85                        | 216,670     | 123   | 43,280      | 122                     | 43,162      |                           |          | 1                         | 118    | 124,973                              | 233,579            |
|                             | 1890  | 32                        | 135,156     | 195   | 64,697      | 195                     | 64,697      |                           |          |                           |        | 116,696                              | 264,625            |
|                             | 1880  | 49                        | 144,250     | 152   | 33,143      | 139                     |             |                           |          | 13                        |        | 120,883                              | 240,579            |
|                             | 1870  | 81                        | 161,200     | 204   | 39,826      | 194                     |             | 1                         |          | 9                         |        | 157,079                              | 267,258            |

<sup>1</sup> In 1890 and 1900, for purposes of comparison, "Cost of materials used" includes wages reported under the heads of "Logging" and "Cost of keep of animals."<sup>2</sup> None reported in 1890.<sup>3</sup> See Dakota.<sup>4</sup> Part of Indian Territory prior to 1890.

TABLE 4.—COMPARATIVE SUMMARY: 1900, 1890, 1880, 1870—Continued.

| STATES AND TERRITORIES. | Year. | Number of establishments. | Capital.    | AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES. |            |                         |            |                           |        |                           |         | Cost of materials used. <sup>1</sup> | Value of products. |
|-------------------------|-------|---------------------------|-------------|---|------------|-------------------------|------------|---------------------------|--------|---------------------------|---------|--------------------------------------|--------------------|
|                         |       |                           |             | Total.  |            | Men, 16 years and over. |            | Women, 16 years and over. |        | Children, under 16 years. |         |                                      |                    |
|                         |       |                           |             | Average number.                                 | Wages.     | Average number.         | Wages.     | Average number.           | Wages. | Average number.           | Wages.  |                                      |                    |
| South Carolina .....    | 1900  | 729                       | \$5,187,727 | 4,585   | \$897,899  | 4,545                   | \$893,686  | 4                         | \$300  | 36                        | \$3,913 | \$2,629,805                          | \$5,207,181        |
|                         | 1890  | 352                       | 1,848,155   | 2,590   | 420,588    | 2,590                   | 420,588    |                           |        |                           |         | 996,289                              | 2,146,750          |
|                         | 1880  | 420                       | 1,056,265   | 1,408   | 221,968    | 1,431                   |            |                           |        | 37                        |         | 1,237,361                            | 2,031,807          |
|                         | 1870  | 227                       | 583,425     | 1,212   | 200,806    | 1,183                   |            | 1                         |        | 28                        |         | 581,499                              | 1,197,005          |
| South Dakota .....      | 1900  | 29                        | 288,720     | 181   | 92,425     | 181                     | 92,425     |                           |        |                           |         | 258,955                              | 445,861            |
|                         | 1890  | 41                        | 251,255     | 351   | 91,585     | 348                     | 91,145     | 3                         | 440    |                           |         | 180,757                              | 375,703            |
|                         | 1880  | ( <sup>2</sup> )          |             |   |            |                         |            |                           |        |                           |         |                                      |                    |
|                         | 1870  | ( <sup>2</sup> )          |             |   |            |                         |            |                           |        |                           |         |                                      |                    |
| Tennessee .....         | 1900  | 1,782                     | 12,900,595  | 11,192  | 3,424,510  | 10,832                  | 3,367,115  | 118                       | 25,767 | 242                       | 31,628  | 10,008,275                           | 18,127,781         |
|                         | 1890  | 820                       | 7,259,027   | 7,424   | 1,860,008  | 7,281                   | 1,848,485  | 21                        | 2,156  | 122                       | 14,367  | 5,045,905                            | 9,073,686          |
|                         | 1880  | 755                       | 2,004,508   | 3,718   | 549,222    | 3,577                   |            |                           |        | 141                       |         | 2,142,885                            | 3,741,305          |
|                         | 1870  | 702                       | 1,622,741   | 2,910   | 578,364    | 2,868                   |            | 7                         |        | 35                        |         | 1,446,782                            | 3,390,687          |
| Texas .....             | 1900  | 637                       | 19,161,265  | 7,924   | 3,094,917  | 7,883                   | 3,087,398  | 3                         | 296    | 38                        | 7,223   | 9,668,343                            | 16,296,473         |
|                         | 1890  | 314                       | 11,175,551  | 7,485   | 2,656,119  | 7,446                   | 2,650,039  | 8                         | 1,638  | 31                        | 4,542   | 6,420,878                            | 11,942,566         |
|                         | 1880  | 324                       | 1,660,952   | 3,186   | 732,914    | 3,136                   |            | 1                         |        | 49                        |         | 2,095,775                            | 3,673,419          |
|                         | 1870  | 324                       | 870,491     | 1,750   | 390,149    | 1,714                   |            | 16                        |        | 21                        |         | 644,274                              | 1,960,851          |
| Utah .....              | 1900  | 81                        | 182,780     | 140   | 43,504     | 130                     | 42,881     | 5                         | 635    | 5                         | 488     | 102,932                              | 214,187            |
|                         | 1890  | 32                        | 198,248     | 257   | 58,901     | 256                     | 58,886     | 1                         | 15     |                           |         | 131,432                              | 249,940            |
|                         | 1880  | 107                       | 272,750     | 385   | 65,175     | 375                     |            |                           |        |                           |         | 238,274                              | 375,161            |
|                         | 1870  | 95                        | 338,500     | 541   | 139,533    | 538                     |            |                           |        | 10                        |         | 266,047                              | 661,431            |
|                         |       |                           |             |   |            |                         |            |                           |        | 3                         |         |                                      |                    |
| Vermont .....           | 1900  | 658                       | 7,051,523   | 3,625   | 1,184,904  | 3,486                   | 1,166,227  | 99                        | 18,411 | 40                        | 5,266   | 3,377,131                            | 6,131,808          |
|                         | 1890  | 779                       | 7,789,874   | 6,054   | 1,501,776  | 5,946                   | 1,485,491  | 51                        | 8,275  | 57                        | 8,010   | 3,854,670                            | 6,953,674          |
|                         | 1880  | 688                       | 3,274,260   | 2,511   | 426,953    | 2,411                   |            |                           |        | 100                       |         | 2,021,868                            | 3,258,816          |
|                         | 1870  | 637                       | 2,872,451   | 2,782   | 729,925    | 2,761                   |            | 6                         |        | 15                        |         | 1,731,516                            | 3,525,122          |
| Virginia .....          | 1900  | 1,341                     | 9,299,046   | 7,611   | 2,144,382  | 7,244                   | 2,109,579  | 157                       | 17,384 | 210                       | 17,419  | 6,763,831                            | 12,137,177         |
|                         | 1890  | 663                       | 4,427,627   | 5,973   | 1,244,633  | 5,550                   | 1,196,997  | 335                       | 37,226 | 88                        | 10,410  | 2,925,474                            | 5,630,600          |
|                         | 1880  | 907                       | 2,122,925   | 4,011   | 540,231    | 3,922                   |            |                           |        | 89                        |         | 1,933,777                            | 3,434,163          |
|                         | 1870  | 605                       | 979,386     | 2,288   | 343,823    | 2,254                   |            | 16                        |        | 13                        |         | 860,949                              | 2,111,055          |
| Washington .....        | 1900  | 778                       | 26,041,089  | 15,696  | 8,511,224  | 15,603                  | 8,483,203  | 50                        | 16,412 | 43                        | 11,609  | 16,455,558                           | 30,236,280         |
|                         | 1890  | 462                       | 21,400,307  | 9,491   | 4,643,564  | 9,461                   | 4,637,517  | 19                        | 4,032  | 11                        | 2,015   | 8,331,336                            | 17,450,301         |
|                         | 1880  | 37                        | 2,456,450   | 499   | 200,530    | 495                     |            |                           |        |                           |         | 1,188,075                            | 1,734,742          |
|                         | 1870  | 46                        | 1,285,202   | 474   | 388,830    | 474                     |            |                           |        | 4                         |         | 580,259                              | 1,307,585          |
| West Virginia .....     | 1900  | 950                       | 10,421,570  | 5,327   | 1,828,558  | 5,266                   | 1,817,684  | 5                         | 869    | 56                        | 10,005  | 5,584,717                            | 10,612,337         |
|                         | 1890  | 454                       | 5,086,114   | 4,182   | 1,039,530  | 4,134                   | 1,034,292  | 5                         | 508    | 43                        | 4,730   | 3,023,297                            | 5,515,065          |
|                         | 1880  | 472                       | 1,668,920   | 2,188   | 459,945    | 2,057                   |            |                           |        | 126                       |         | 1,375,872                            | 2,431,837          |
|                         | 1870  | 343                       | 981,950     | 1,515   | 349,368    | 1,484                   |            | 3                         |        | 28                        |         | 682,180                              | 1,478,329          |
| Wisconsin .....         | 1900  | 1,066                     | 77,366,223  | 21,701  | 9,480,011  | 21,181                  | 9,369,994  | 83                        | 18,486 | 437                       | 91,531  | 35,199,409                           | 57,631,816         |
|                         | 1890  | 1,119                     | 105,191,521 | 41,305  | 10,712,947 | 40,855                  | 10,644,676 | 308                       | 49,462 | 142                       | 18,809  | 36,649,353                           | 60,936,444         |
|                         | 1880  | 704                       | 19,824,059  | 8,465   | 2,257,218  | 7,748                   |            | 250                       |        | 467                       |         | 12,471,473                           | 17,952,317         |
|                         | 1870  | 720                       | 11,448,545  | 12,461  | 3,755,089  | 11,795                  |            | 362                       |        | 304                       |         | 7,422,866                            | 15,130,719         |
| Wyoming .....           | 1900  | 52                        | 603,956     | 559   | 256,025    | 559                     | 256,025    |                           |        |                           |         | 297,476                              | 831,558            |
|                         | 1890  | 17                        | 160,049     | 102   | 37,803     | 100                     | 37,253     | 1                         | 250    | 1                         | 200     | 52,166                               | 124,462            |
|                         | 1880  | 7                         | 26,700      | 38  | 6,380      | 38                      |            |                           |        |                           |         | 27,850                               | 40,990             |
|                         | 1870  | 8                         | 110,500     | 213   | 104,500    | 211                     |            | 1                         |        | 1                         |         | 99,000                               | 268,000            |

<sup>1</sup> In 1890 and 1900, for purposes of comparison, "Cost of materials used" includes wages reported under the heads of "Logging" and "Cost of keep of animals."

<sup>2</sup> See Dakota.

#### OWNERSHIP.

The revival of business near the close of the decade is illustrated by the fact that 7,913 establishments, or nearly one-fourth of the total number of 33,035, commenced operations during the census year. The proportion of establishments which thus commenced operations during the census year differed widely among the different states. In the Northeastern states the proportion of new establishments was less than the average of the country. Of the Lake states, Minnesota was the only one which had a larger proportion of new establishments than the entire country, while in every state in the Southern pine belt the proportion was greater than that of the United States. On the other hand, it is a curious fact that of the three great lumber states of the Pacific coast, Washington was the only one which showed a greater proportion of new establishments than the country. In view of the great increase in the production in these states this situation

can only be accounted for by the fact that the new mills were of large capacity.

A classification of the kind of ownership shows that of the 33,035 establishments, 62 per cent were owned by individuals, 31 per cent by firms, and 7 per cent by chartered companies. The last are presumably the largest establishments, and the proportion which they bear in the different states to the total number may be an indication of their magnitude. The largest proportion of chartered companies is found in Washington, with 25 per cent and in California, with 24 per cent, while Oregon has only 15 per cent. Of the Lake states, Minnesota and Wisconsin each have about 18 per cent, while Michigan has but 11 per cent. Of the states in the Southern pine belt, Louisiana has the highest proportion of chartered concerns, 20 per cent; Arkansas, 13 per cent; Florida, 11 per cent; Texas, 9 per cent; Mississippi, 8 per cent; Alabama, 7 per cent. All the other states in this belt have less than the average of

the country. The Northeastern states contain but few chartered companies.

#### NUMBER OF ESTABLISHMENTS.

The total number of establishments, including not only sawmills but also independent timber camps, was 33,035 in 1900. They were distributed very irregularly over the country and not necessarily in proportion to the importance of the lumber industry. In the Northeastern states are 22 per cent of the mills, with only 16 per cent of the product, indicating that the mills of this section are of smaller capacity than the average of the country. The North Central states contain 29 per cent of the mills with 40 per cent of the product, indicating that the mills of this part of the country exceed in capacity the average of the country. In the Southern states are 43 per cent of the mills and only 33 per cent of the product, indicating that they, like those of the Northeastern states, are of less average capacity than that of the country. The Western states contain 6 per cent only of the mills but produce 11 per cent of the entire product. The above figures of product depend upon values, not upon quantity of timber. If the latter, they would be modified somewhat by the species and its value per thousand feet. Thus the Northeastern states produce 16 per cent of the total product, both as to value and quantity. The North Central states, where mainly white pine is cut, produce 35 per cent of the product expressed in feet of lumber, but 40 per cent expressed in value. The case is reversed in the Southern states, which produce 39 per cent in quantity and only 33 per cent in value, while the Western states, which consist in the main of the heavy forests of the Pacific coast, produce 10 per cent in quantity and 11 per cent in value.

Studying this subject with reference to individual states it appears that, as a rule, the older lumber states contain the smallest mills. The greatest number of mills is found in Pennsylvania, which has, however, a low product per mill. In the three great lumber states about the Lakes—Michigan, Wisconsin, and Minnesota—Michigan still contains the largest number of mills, and Minnesota the smallest. In product, Wisconsin is the foremost, followed by Michigan and Minnesota in the order named. The lumber industry commenced in this Lake region in the state of Michigan and has moved westward, so that Minnesota represents the latest stage in the lumber movement in this region. The mills are smallest in Michigan and far the largest in Minnesota. At present the pine is largely cut from Michigan, and the industry is moving away from that state. Wisconsin appears to be enjoying the height of its prosperity as a lumber state, while Minnesota has not yet reached its maximum.

In the Southern states we find a similar progress. The eastern portion of this yellow-pine belt, mainly that comprised in the states of Virginia, the Carolinas, and

Georgia, which have long been the scene of active lumber operations, have, in the main, small mills. The recent movement in the Southern pine belt has apparently gone, mainly, to Mississippi, Louisiana, Arkansas, and Texas, the western half of this region, and here the mills are much larger than in the eastern part.

#### CAPITAL.

Of the aggregate capital of "lumber and sawmills," 43 per cent is applied to logging; three-fourths of this consisting of land, nearly all of which is timber land. Nineteen per cent of the aggregate capital applies to the sawmill plant, and 3 per cent to the planing-mill plant, the remainder, 35 per cent, consisting of what is denominated live capital, comprising raw material, finished products on hand, and cash, bills receivable, unsettled accounts, etc., which belongs in unknown proportions to each of the three branches of the industry. Of the plant of the independent logging camps, two-thirds represent the value of timber land.

The largest capital invested is found in the three white-pine states on the Lakes, Wisconsin having the heaviest capital invested of any state in the country. After these states Pennsylvania has the largest amount, followed by California and Washington. Among the Southern states the westernmost in the yellow-pine belt have the largest capital invested.

Wages paid to the hands in this industry differ widely in different parts of the country, and, in a general way, follow the magnitude of the operations, being higher in the larger mills, although controlled, to some extent, by general lumber conditions. As a whole, wages are less in the South than in the North, but in the South they differ widely between the states on the Atlantic border and the western portion of this timber region. The wages in the Northeastern states are somewhat higher than the average of the country, while in the West they are far above that average.

#### PRODUCT.

Of the total product of the lumber industry, excluding planing, which is a remanufacture, sawed lumber formed in value 81.2 per cent, or nearly five-sixths of all products. Shingles formed 3.9 per cent, cooperage materials 3.6 per cent, piles, telegraph poles, and railway ties, charcoal, etc., products of the timber camp, 3.3 per cent, and all other products 8 per cent. Of the sawed lumber, 75.2 per cent consisted of conifers, and 24.8 per cent of hard woods. Of the conifers, yellow pine predominated, the cut of southern yellow pine being 9,671,280 M feet, and that of western yellow pine 931,828 M feet. The cut of southern yellow pine was 27.8 per cent of all lumber, and 37 per cent of all conifers. The cut of white pine was 21.5 per cent of all lumber; of hemlock, 9.8 per cent; of red fir, 5 per cent; of spruce, 4.2 per cent; and of other conifers, smaller proportions.

Of the hard woods, more than half consists of oaks, which furnish 51.4 per cent of hard woods, and 12.8 per cent of all lumber. Poplar supplies 3.2 per cent of all lumber, and other species in still smaller proportion.

The great lumber states are Wisconsin, with 10 per cent of the product of the country; Michigan, with 9.6 per cent; Minnesota, with 7.7 per cent; Pennsylvania, with 6.3 per cent, and Washington, with 5.3 per cent. These five states collectively cut nearly two-fifths of all the lumber product of the country. The three states on the northern Lakes, Michigan, Wisconsin, and Minnesota, the three leading states in this industry, cut about 27 per cent of all. The three states on the Pacific coast, Washington, Oregon, and California, which contain at least one-third of the standing timber of the country, cut only 9.5 per cent of its total lumber product, less than Wisconsin and about the same as Michigan. The states of the Southern pine belt cut 25.2 per cent, less than those of the northern Lakes, although their area is several times as great.

The movement of the lumber industry in the country in its broad outlines is set forth for the past fifty years in the following table, showing the percentage of the total production in the country which was contributed by each of the four principal lumber regions at each census:

TABLE 5.—PROPORTION OF TOTAL LUMBER PRODUCT BY GEOGRAPHICAL DIVISIONS.

| YEARS     | North-eastern states. | Lake states. | Southern states. | Pacific states. |
|-----------|-----------------------|--------------|------------------|-----------------|
| 1850..... | 54.5                  | 6.4          | 13.8             | 3.9             |
| 1860..... | 36.2                  | 13.6         | 16.5             | 6.2             |
| 1870..... | 36.3                  | 24.4         | 9.4              | 3.6             |
| 1880..... | 24.8                  | 33.4         | 11.9             | 3.5             |
| 1890..... | 18.4                  | 36.3         | 15.9             | 7.3             |
| 1900..... | 16.0                  | 27.4         | 25.2             | 9.6             |

In 1850 the Northeastern states contributed considerably more than half of the total lumber product of the country. In 1860 and 1870 it had dropped to somewhat more than a third; in 1880 to a fourth; and in 1900 it was less than one-sixth of the total lumber product. The Lake states, starting in 1850 with one-sixth of the lumber product, increased their proportional output rapidly and continuously up to 1890, when, with the growing scarcity of white pine, the industry commenced to languish in this region, and in the last ten years shows a substantial relative decrease. The Southern states, starting with a little more than one-eighth of the lumber product of the country, increased in 1860 to about one-sixth. Then came the war, which of course paralyzed the industry. We find these states starting over again in 1870 with less than one-tenth of the country's production. From that time on the increase has been steady and fairly rapid, and in 1900 these states contributed one-fourth of the country's product.

The three states of the Pacific coast have never been

a large factor in production, the proportion prior to 1880 commonly ranging between 3 and 4 per cent, excepting about 1860, when, probably owing to the prosperity of the California mines, the proportion ran up to over 6 per cent. Since 1880, however, the proportion has increased, and in 1890 these states produced nearly one-tenth of the country's product. It is probable that in the future the proportional production from these states will greatly increase.

In the following table are presented the average value of machinery, implements, etc., the average product, average number of wage-earners and average wages per establishment, and the average product and average wages per wage-earner, for each state in 1900:

TABLE 6.—AVERAGES PER ESTABLISHMENT OF MACHINERY, PRODUCT, WAGE-EARNERS AND WAGES; AND AVERAGES PER WAGE-EARNER OF PRODUCT AND WAGES; BY STATES: 1900.

| STATES.                | Average machinery per establishment. | Average product per establishment. | Average number wage-earners per establishment. | Average total wages paid per establishment. | Average product per wage-earner. | Average wages per wage-earner. |
|------------------------|--------------------------------------|------------------------------------|--|---|----------------------------------|--------------------------------|
| Alabama .....          | \$3,905                              | \$11,581                           | 8  | \$2,039                                     | \$1,388                          | \$244                          |
| Alaska .....           | 4,949                                | 8,449                              | 3  | 3,079                                       | 2,008                            | 950                            |
| Arizona .....          | 18,715                               | 39,128                             | 14   | 9,844                                       | 2,760                            | 659                            |
| Arkansas .....         | 4,998                                | 13,983                             | 13   | 3,945                                       | 1,507                            | 235                            |
| California .....       | 24,152                               | 43,976                             | 18   | 9,104                                       | 2,371                            | 491                            |
| Colorado .....         | 2,371                                | 10,236                             | 5  | 2,082                                       | 2,224                            | 452                            |
| Connecticut .....      | 1,548                                | 9,093                              | 4  | 1,535                                       | 2,303                            | 380                            |
| Delaware .....         | 1,635                                | 6,203                              | 4  | 1,353                                       | 1,089                            | 243                            |
| Florida .....          | 8,612                                | 26,077                             | 17   | 5,283                                       | 1,582                            | 310                            |
| Georgia .....          | 3,306                                | 10,929                             | 8  | 1,369                                       | 1,333                            | 229                            |
| Idaho .....            | 2,518                                | 8,014                              | 3  | 1,539                                       | 2,310                            | 444                            |
| Illinois .....         | 1,672                                | 9,142                              | 4  | 1,605                                       | 2,170                            | 381                            |
| Indiana .....          | 1,554                                | 10,148                             | 5  | 1,952                                       | 2,169                            | 380                            |
| Indian Territory ..... | 1,842                                | 4,079                              | 4  | 990   | 1,155                            | 280                            |
| Iowa .....             | 3,080                                | 32,807                             | 10   | 3,963                                       | 3,107                            | 375                            |
| Kansas .....           | 888                                  | 1,929                              | 1  | 424   | 1,371                            | 301                            |
| Kentucky .....         | 1,775                                | 10,761                             | 6  | 1,936                                       | 1,825                            | 323                            |
| Louisiana .....        | 10,454                               | 40,297                             | 24   | 7,725                                       | 1,712                            | 328                            |
| Maine .....            | 3,200                                | 16,097                             | 8  | 3,143                                       | 1,974                            | 355                            |
| Maryland .....         | 2,146                                | 7,221                              | 5  | 1,299                                       | 1,349                            | 243                            |
| Massachusetts .....    | 2,010                                | 11,801                             | 5  | 2,197                                       | 2,358                            | 439                            |
| Michigan .....         | 5,755                                | 31,842                             | 15   | 6,523                                       | 2,072                            | 425                            |
| Minnesota .....        | 13,939                               | 99,509                             | 35   | 16,303                                      | 2,379                            | 472                            |
| Mississippi .....      | 5,415                                | 18,550                             | 11   | 3,306                                       | 1,618                            | 288                            |
| Missouri .....         | 3,015                                | 9,338                              | 5  | 1,681                                       | 1,850                            | 333                            |
| Montana .....          | 4,088                                | 21,223                             | 8  | 4,589                                       | 2,477                            | 536                            |
| Nebraska .....         | 1,210                                | 2,251                              | 1  | 466   | 1,670                            | 346                            |
| Nevada .....           | 976                                  | 1,765                              | 1  | 344   | 1,765                            | 344                            |
| New Hampshire .....    | 3,935                                | 16,670                             | 8  | 2,993                                       | 2,201                            | 395                            |
| New Jersey .....       | 1,802                                | 9,068                              | 3  | 1,490                                       | 2,633                            | 433                            |
| New Mexico .....       | 2,129                                | 12,863                             | 11   | 3,529                                       | 1,211                            | 332                            |
| New York .....         | 2,183                                | 8,983                              | 4  | 1,551                                       | 2,302                            | 400                            |
| North Carolina .....   | 2,560                                | 8,397                              | 7  | 1,407                                       | 1,265                            | 212                            |
| North Dakota .....     | 1,485                                | 6,050                              | 3  | 750   | 2,617                            | 250                            |
| Ohio .....             | 1,591                                | 10,122                             | 4  | 1,606                                       | 2,435                            | 386                            |
| Oklahoma .....         | 1,148                                | 1,926                              | 1  | 287   | 1,478                            | 220                            |
| Oregon .....           | 6,281                                | 23,743                             | 9  | 4,642                                       | 2,535                            | 496                            |
| Pennsylvania .....     | 3,421                                | 15,291                             | 6  | 2,374                                       | 2,646                            | 411                            |
| Rhode Island .....     | 1,413                                | 6,674                              | 4  | 1,237                                       | 1,899                            | 352                            |
| South Carolina .....   | 2,407                                | 7,143                              | 6  | 1,232                                       | 1,158                            | 196                            |
| South Dakota .....     | 3,023                                | 15,375                             | 6  | 3,187                                       | 2,463                            | 510                            |
| Tennessee .....        | 1,973                                | 10,466                             | 6  | 1,977                                       | 1,620                            | 306                            |
| Texas .....            | 7,163                                | 25,533                             | 12   | 4,859                                       | 2,057                            | 391                            |
| Utah .....             | 1,149                                | 2,644                              | 2  | 537   | 1,530                            | 310                            |
| Vermont .....          | 2,527                                | 9,319                              | 5  | 1,801                                       | 1,692                            | 327                            |
| Virginia .....         | 2,016                                | 9,051                              | 6  | 1,599                                       | 1,595                            | 282                            |
| Washington .....       | 9,595                                | 33,923                             | 20   | 10,940                                      | 1,930                            | 542                            |
| West Virginia .....    | 3,266                                | 11,171                             | 6  | 1,925                                       | 1,992                            | 343                            |
| Wisconsin .....        | 8,952                                | 54,066                             | 20   | 8,898                                       | 2,650                            | 437                            |
| Wyoming .....          | 5,595                                | 15,991                             | 10   | 4,924                                       | 1,488                            | 468                            |

As a rule, the average value of machinery per establishment is greatest in the newest and most active lumber regions, where are naturally the largest mills employing



the most modern methods, as is seen in the cases of Wisconsin, Minnesota, Florida, Louisiana, Washington, California, and Arizona; while in the older lumber states, like Maine, Michigan, and the Carolinas, the value of machinery is low.

The situation is much the same with products, and for the same reason. The product per mill is greatest in Minnesota, is large in Wisconsin, Washington, and California, and small in the older lumber states. Similar features are brought out by the columns of wage-earners and wages.

The average product per wage-earner is in general greatest in the great lumber states, especially those in the North and West, and is least in the Southern states and in those states in which the lumber industry is not of great importance.

### THE ELEMENTS OF THE LUMBER INDUSTRY.

Table 7 presents the principal statistics for the United States and for the states and territories separately of all the logging camps, including those operating independently and those carried on by sawmill organizations, the figures for the two being here consolidated. Table 13 presents the statistics of sawmills distinct from those of associated lumber camps on the one hand and of associated planing mills on the other, and Table 19 presents the statistics of all planing mills, including those which are associated with sawmills and those which are operated independently. The figures of the latter have not been presented in any matter which precedes. The leading figures of the three branches of the industry are presented side by side below:

|                               | Logging camps.  | Sawmills.       | Planing mills.  |
|-------------------------------|-----------------|-----------------|-----------------|
| Number of establishments..... | 15, 376         | 31, 833         | 10, 203         |
| Capital.....                  | \$274, 466, 098 | \$305, 785, 226 | \$150, 631, 331 |
| Wage-earners.....             | 120, 122        | 229, 717        | 106, 628        |
| Wages.....                    | \$44, 439, 100  | \$82, 694, 951  | \$45, 879, 083  |
| Materials.....                | \$67, 206, 494  | \$226, 138, 992 | \$182, 012, 392 |
| Products.....                 | \$174, 066, 365 | \$422, 812, 061 | \$275, 965, 522 |
| Net products.....             | \$106, 859, 871 | \$196, 673, 069 | \$93, 953, 130  |

The gross products are in the proportions of 20, 48, and 32 per cent, while the net products are in the quite different proportions of 27, 49, and 24 per cent.

These three special tables, showing the two logging branches of the lumber industry combined, the sawmill branch separated, and the planing-mill operations combined, are not intended to be exact tabulations of returns made at the Twelfth Census, but are presented in this detailed way for the purpose of giving a clearer conception of both the relative and actual importance of each branch of the lumber industry; and since such presentation of the subject was not contemplated when the schedule was framed, it has been found necessary to complete the information under certain headings by estimates. In all such cases, however, these figures have been supplied with extreme care; so that the results should hardly be described as estimates, but rather as logical inferences from data and relations actually reported.

The average wages per wage-earner are distributed in much the same way; that is, the greater the efficiency the higher the wages. Of the prominent lumber states the highest wages are paid in Washington, where the employees receive annually an average of \$542. In Oregon they receive \$496 and in California \$491. The wages paid in the Lake states are less, being \$472 in Minnesota, \$437 in Wisconsin, and \$425 in Michigan. In the Southern yellow pine states the average annual wage is \$283. Wages are higher in the newer states, in which the lumber industry is developed upon a large scale, than in the older states, where it has been prosecuted for generations, as in Texas, where the average annual wage is \$391; in Louisiana, \$328, and in Florida, \$310.

### LOGGING CAMPS.

Table 7 presents separately the entire logging business, including the logging camps operated in connection with sawmills, together with those operated independently. The 15,376 establishments reporting had a capital of \$274,466,098, an average per establishment of \$17,870. The average number of wage-earners per establishment was 8. The stumpage cost on an average for all species and for the entire country was \$2.18 per thousand feet. Saw logs, which formed the chief product, had an average value per thousand feet of \$6.28, thus the increase in value due to the operations of logging was \$4.10 per thousand feet. Out of this, wages cost \$1.76 per thousand feet, and miscellaneous expenses \$0.94 per thousand, leaving \$1.40 per thousand feet as profit. Other products of logging camps consisted of basket, cooperage and excelsior stock, fence posts, hop poles, handle stock, bark for tanning, piles, paving stock, railway ties, rived shingles, masts and spars, ship knees, telegraph poles, wheel stock, and charcoal. Of the total product, saw logs formed 91 per cent, leaving only 9 per cent as the proportional value of miscellaneous products.

The following is a schedule of the principal miscellaneous products of timber camps:

|                              | Quantity.   | Value.      |
|------------------------------|-------------|-------------|
| Basket stock, cords.....     | 7, 443      | \$28, 301   |
| Cooperage stock, cords.....  | 82, 546     | 345, 816    |
| Excelsior stock, cords.....  | 12, 670     | 48, 978     |
| Fence posts, M.....          | 5, 716      | 608, 115    |
| Hop poles, M.....            | 1, 206      | 12, 456     |
| Handle stock, cords.....     | 6, 423      | 41, 790     |
| Hemlock bark, cords.....     | 478, 222    | 1, 945, 452 |
| Oak bark, cords.....         | 39, 844     | 228, 900    |
| Piles, M.....                | 397         | 758, 945    |
| Paving stock, cords.....     | 554         | 2, 067      |
| Ties, M.....                 | 22, 592     | 6, 298, 633 |
| Rived shingles, M.....       | 41, 433     | 78, 826     |
| Masts and spars, number..... | 2, 580      | 28, 513     |
| Ship knees, number.....      | 1, 601      | 4, 873      |
| Telegraph poles, number..... | 337, 963    | 1, 893, 576 |
| Wheel stock, cords.....      | 9, 317      | 46, 135     |
| Charcoal, bushels.....       | 6, 796, 334 | 450, 221    |
| Other products.....          |             | 1, 666, 553 |

Measured in quantity of product, Wisconsin is the leading state in the logging industry, with 2,412,833,000



feet, Michigan is second in rank, and Washington third, followed by Minnesota and Pennsylvania.

Measured by amount of capital, Wisconsin is still in the first place, followed by Michigan, Minnesota, Pennsylvania, California, and Washington in the order named. Measured by the number of wage-earners, Michigan takes first place, with Wisconsin second, then Minnesota, then Washington.

The discrepancy between the amount of product of the logging camps, 26,000,000,000 feet, and the product of the sawmills, 35,000,000,000 feet, more or less, is accounted for as follows:

(1) Failure to report by individuals and small concerns. It is probable that the returns from the sawmills are far more complete than those from logging operations, because much of the latter is on a petty scale.

(2) Difference between the scaling of the logs in camp and the actual cut.

The amount of the first item is unknown, but is probably great. The effect of the second is also probably large, as it is perfectly well understood that the scaling of the logs at the camp is less than the amount of sawed product actually produced.

Under the heading of "capital" are included all items of capital invested in both plant and live capital in the two branches of the logging industry. Under the heading of "wage-earners" are combined the total number of wage-earners employed in dependent logging camps and those employed in independent logging camps, together with their wages, and under "materials," is shown the total quantity of saw logs reported as cut from the stump throughout the United States

during the census year, together with their value on the stump, and, also, under a separate heading, the value of all other stumpage cut during the census year. This "other stumpage" covers the class of timber from which such products as telegraph poles, fence posts, railway cross-ties, etc., were manufactured. The products in this table are similarly arranged, those products of the camps which went to the sawmills to be used in producing lumber being classified as saw logs, while the value of all other products of the logging industry is separately shown.

In making up this item of products, it was necessary to estimate the value of products in dependent logging camps, for the reason that this branch of the lumber industry had not, in the arrangement of the schedule, been treated as a complete establishment; i. e., the reports were not made in such a way as to show on the schedules a product for dependent logging camps. The estimated value of the dependent logging camp products, however, it is believed, was computed with approximate accuracy, on account of the similarity of operations and expenses in dependent logging camps and independent logging camps. Another guide in arriving at the proper value to assign to the products of dependent logging camps was in adding together the items of expense shown on sawmill reports that were incurred in bringing the logs from the stump to the mill. By adding to this total cost a reasonable amount of profit, an amount representing approximately the same percentage of increase over cost of materials as was found to have been reported on the independent logging camp schedules, it is thought that the value of this product has been fixed with practical correctness.

TABLE 7.—LOGGING CAMPS—SUMMARY

|    | STATES AND TERRITORIES. | Number of establishments. | Capital.      | Proprietors. | SALARIED EMPLOYEES. |             | WAGE-EARNERS. |              |
|----|-------------------------|---------------------------|---------------|--------------|---------------------|-------------|---------------|--------------|
|    |                         |                           |               |              | Number.             | Salaries.   | Number.       | Wages.       |
| 1  | United States.....      | 15,376                    | \$274,466,098 | 18,469       | 2,406               | \$1,785,738 | 120,122       | \$44,439,100 |
| 2  | Alabama.....            | 653                       | 6,583,875     | 797          | 111                 | 62,457      | 3,703         | 892,822      |
| 3  | Alaska.....             | 12                        | 54,000        | 5            | 1                   | 560         | 23            | 19,443       |
| 4  | Arizona.....            | 7                         | 489,026       | 8            | 6                   | 8,960       | 145           | 107,040      |
| 5  | Arkansas.....           | 736                       | 9,572,851     | 872          | 121                 | 84,016      | 5,779         | 1,809,364    |
| 6  | California.....         | 231                       | 18,295,293    | 278          | 75                  | 36,805      | 4,063         | 2,078,507    |
| 7  | Colorado.....           | 84                        | 236,856       | 99           | 3                   | 485         | 269           | 124,007      |
| 8  | Connecticut.....        | 97                        | 451,968       | 120          | 8                   | 4,100       | 351           | 132,456      |
| 9  | Delaware.....           | 31                        | 31,135        | 38           | 1                   | 700         | 98            | 22,000       |
| 10 | Florida.....            | 252                       | 8,143,661     | 301          | 67                  | 46,273      | 2,676         | 814,673      |
| 11 | Georgia.....            | 798                       | 6,146,964     | 956          | 77                  | 38,881      | 5,096         | 1,172,068    |
| 12 | Idaho.....              | 66                        | 284,532       | 79           | 3                   | 550         | 191           | 84,006       |
| 13 | Illinois.....           | 342                       | 1,513,362     | 406          | 10                  | 9,450       | 760           | 268,392      |
| 14 | Indiana.....            | 591                       | 1,833,526     | 707          | 26                  | 16,125      | 2,430         | 898,496      |
| 15 | Indian Territory.....   | 19                        | 10,885        | 22           | .....               | .....       | 39            | 7,909        |
| 16 | Iowa.....               | 85                        | 3,066,092     | 102          | 2                   | 2,000       | 126           | 52,536       |
| 17 | Kansas.....             | 19                        | 27,388        | 23           | .....               | .....       | 17            | 5,275        |
| 18 | Kentucky.....           | 522                       | 3,405,932     | 633          | 26                  | 10,264      | 1,915         | 583,907      |
| 19 | Louisiana.....          | 273                       | 8,492,539     | 324          | 84                  | 72,996      | 3,332         | 1,217,732    |
| 20 | Maine.....              | 292                       | 5,178,405     | 349          | 55                  | 23,737      | 2,232         | 762,829      |
| 21 | Maryland.....           | 164                       | 1,101,641     | 197          | 14                  | 5,750       | 521           | 147,213      |
| 22 | Massachusetts.....      | 247                       | 1,700,742     | 294          | 4                   | 700         | 789           | 322,903      |
| 23 | Michigan.....           | 690                       | 31,588,689    | 824          | 349                 | 301,894     | 13,107        | 5,345,880    |
| 24 | Minnesota.....          | 165                       | 26,042,470    | 189          | 223                 | 170,135     | 8,889         | 3,002,231    |
| 25 | Mississippi.....        | 500                       | 8,825,755     | 600          | 77                  | 49,342      | 4,261         | 1,223,297    |
| 26 | Missouri.....           | 508                       | 4,309,060     | 606          | 48                  | 30,238      | 2,566         | 864,109      |
| 27 | Montana.....            | 94                        | 705,019       | 110          | 14                  | 16,490      | 778           | 409,817      |
| 28 | Nebraska.....           | 8                         | 72,975        | 10           | .....               | .....       | 8             | 3,190        |
| 29 | Nevada.....             | 4                         | 4,165         | 5            | .....               | .....       | 2             | 850          |
| 30 | New Hampshire.....      | 260                       | 5,393,667     | 315          | 42                  | 20,099      | 2,773         | 906,110      |
| 31 | New Jersey.....         | 84                        | 405,796       | 101          | 2                   | 1,248       | 297           | 113,145      |
| 32 | New Mexico.....         | 16                        | 124,991       | 19           | 3                   | 2,200       | 317           | 87,333       |
| 33 | New York.....           | 647                       | 9,499,802     | 774          | 57                  | 38,673      | 2,634         | 1,036,357    |
| 34 | North Carolina.....     | 918                       | 6,242,710     | 1,100        | 70                  | 37,315      | 4,812         | 1,059,329    |
| 35 | North Dakota.....       | 4                         | 19,160        | 5            | .....               | .....       | 5             | 1,400        |
| 36 | Ohio.....               | 691                       | 3,253,257     | 829          | 13                  | 7,595       | 2,093         | 700,300      |
| 37 | Oklahoma.....           | 7                         | 89,206        | 8            | .....               | .....       | 6             | 1,250        |
| 38 | Oregon.....             | 274                       | 2,976,044     | 335          | 41                  | 29,071      | 1,637         | 806,391      |
| 39 | Pennsylvania.....       | 1,046                     | 23,243,085    | 1,264        | 77                  | 54,837      | 7,185         | 2,395,904    |
| 40 | Rhode Island.....       | 19                        | 111,560       | 22           | 1                   | 600         | 66            | 23,537       |
| 41 | South Carolina.....     | 370                       | 1,990,440     | 444          | 36                  | 16,800      | 2,103         | 437,433      |
| 42 | South Dakota.....       | 25                        | 130,485       | 30           | 2                   | 1,800       | 144           | 69,346       |
| 43 | Tennessee.....          | 658                       | 2,890,722     | 788          | 38                  | 17,965      | 1,959         | 571,857      |
| 44 | Texas.....              | 413                       | 9,594,929     | 492          | 52                  | 37,245      | 3,421         | 1,281,805    |
| 45 | Utah.....               | 48                        | 72,205        | 58           | .....               | .....       | 62            | 22,822       |
| 46 | Vermont.....            | 299                       | 2,136,032     | 350          | 7                   | 2,950       | 1,126         | 350,553      |
| 47 | Virginia.....           | 661                       | 3,440,113     | 792          | 75                  | 50,965      | 3,580         | 1,039,765    |
| 48 | Washington.....         | 551                       | 11,854,999    | 697          | 202                 | 218,131     | 8,206         | 4,716,129    |
| 49 | West Virginia.....      | 407                       | 4,757,919     | 487          | 45                  | 29,484      | 2,734         | 898,347      |
| 50 | Wisconsin.....          | 459                       | 37,420,320    | 550          | 226                 | 173,452     | 9,656         | 3,813,251    |
| 51 | Wyoming.....            | 37                        | 460,850       | 46           | 12                  | 8,000       | 521           | 239,559      |

## BY STATES AND TERRITORIES.

| MISCELLANEOUS EXPENSES. |                               |                | MATERIALS.   |                        |              |                 | PRODUCTS.   |               |                        |               |                 |
|-------------------------|-------------------------------|----------------|--------------|------------------------|--------------|-----------------|-------------|---------------|------------------------|---------------|-----------------|
| Total.                  | Cost of keep of animals used. | Contract work. | Total cost.  | Log stumpage.          |              | Other stumpage. | Supplies.   | Total value.  | Saw logs.              |               | Other products. |
|                         |                               |                |              | Quantity, M. ft. B. M. | Cost.        | Cost.           | Cost.       |               | Quantity, M. ft. B. M. | Value.        | Value.          |
| \$23,795,596            | \$10,988,079                  | \$12,807,517   | \$67,206,494 | 25,928,940             | \$56,439,474 | \$1,737,747     | \$9,029,278 | \$174,066,865 | 25,279,702             | \$158,880,352 | \$16 186,013    |
| 626,928                 | 433,388                       | 193,590        | 1,312,424    | 818,585                | 978,316      | 50,923          | 283,185     | 3,608,065     | 808,354                | 3,474,565     | 128,500         |
| 1,725                   | 1,725                         |                | 10,974       | 2,186                  | 2,114        | 5,225           | 3,635       | 57,423        | 2,186                  | 11,105        | 46,318          |
| 20,150                  | 14,650                        | 5,500          | 39,065       | 35,975                 | 37,150       |                 | 1,915       | 299,813       | 35,975                 | 269,813       | 30,000          |
| 1,166,357               | 539,985                       | 626,372        | 1,951,817    | 1,460,354              | 1,689,902    | 25,878          | 336,037     | 7,032,361     | 1,434,868              | 6,804,366     | 227,995         |
| 514,528                 | 316,246                       | 198,282        | 1,356,857    | 902,876                | 1,043,244    | 30,949          | 282,664     | 4,658,717     | 843,646                | 3,905,502     | 748,215         |
| 111,156                 | 58,221                        | 52,985         | 127,088      | 94,237                 | 105,161      | 1,205           | 20,717      | 492,799       | 90,937                 | 453,920       | 38,879          |
| 164,770                 | 54,848                        | 109,922        | 264,635      | 82,411                 | 238,898      | 1,670           | 24,067      | 946,419       | 76,655                 | 604,017       | 342,402         |
| 11,104                  | 10,984                        | 120            | 49,277       | 13,260                 | 46,775       |                 | 2,502       | 85,218        | 13,260                 | 73,593        | 11,625          |
| 641,730                 | 279,978                       | 361,752        | 945,812      | 597,929                | 732,039      | 37,628          | 176,145     | 3,719,799     | 554,707                | 3,453,154     | 266,645         |
| 669,799                 | 637,931                       | 31,868         | 1,293,306    | 1,041,289              | 1,052,594    | 10,749          | 229,993     | 4,787,052     | 1,010,101              | 4,456,402     | 330,650         |
| 44,800                  | 32,955                        | 11,845         | 103,154      | 55,005                 | 59,997       | 1,920           | 41,237      | 309,862       | 54,798                 | 216,457       | 93,405          |
| 152,127                 | 90,244                        | 61,883         | 458,598      | 144,716                | 382,233      | 2,669           | 73,696      | 1,281,736     | 133,357                | 1,115,053     | 166,683         |
| 419,455                 | 286,938                       | 132,517        | 2,468,977    | 420,628                | 2,207,006    | 12,890          | 179,081     | 4,058,050     | 407,514                | 3,825,913     | 232,137         |
| 3,808                   | 3,508                         | 300            | 6,002        | 4,267                  | 5,157        | 20              | 825         | 20,533        | 4,237                  | 19,533        | 1,000           |
| 374,078                 | 22,739                        | 351,939        | 572,094      | 107,735                | 632,871      | 50              | 30,173      | 1,333,165     | 107,735                | 1,310,588     | 23,107          |
| 2,554                   | 2,554                         |                | 5,845        | 2,170                  | 4,710        | 270             | 865         | 17,931        | 2,170                  | 17,013        | 918             |
| 487,216                 | 222,015                       | 265,201        | 1,128,909    | 371,253                | 989,913      | 12,077          | 126,919     | 2,628,112     | 357,288                | 2,449,907     | 178,205         |
| 750,659                 | 263,942                       | 495,717        | 1,500,337    | 928,569                | 1,129,132    | 15,624          | 355,581     | 5,315,067     | 915,779                | 5,115,083     | 199,984         |
| 217,923                 | 217,923                       | 224,396        | 1,140,900    | 372,207                | 936,564      | 8,320           | 190,016     | 3,140,345     | 370,737                | 3,021,499     | 118,846         |
| 161,129                 | 60,755                        | 100,374        | 387,337      | 117,596                | 343,902      | 9,335           | 34,100      | 807,214       | 117,376                | 792,113       | 75,101          |
| 175,453                 | 101,360                       | 74,093         | 551,785      | 163,843                | 433,200      | 42,508          | 76,077      | 1,681,801     | 159,073                | 1,509,402     | 172,399         |
| 1,782,481               | 845,221                       | 937,260        | 8,616,002    | 2,807,813              | 7,067,793    | 459,482         | 1,088,727   | 20,462,235    | 2,216,224              | 16,850,747    | 3,611,488       |
| 1,954,652               | 633,752                       | 1,320,900      | 7,431,408    | 1,934,157              | 6,585,304    | 106,930         | 739,174     | 16,081,839    | 1,920,002              | 15,525,752    | 506,087         |
| 686,609                 | 499,261                       | 187,348        | 1,409,210    | 891,903                | 1,162,130    | 15,590          | 291,490     | 867,513       | 4,137,652              | 3,994,865     | 142,787         |
| 430,038                 | 224,071                       | 205,967        | 990,442      | 440,238                | 831,098      | 12,240          | 147,104     | 3,159,528     | 426,572                | 2,947,443     | 212,085         |
| 151,346                 | 142,696                       | 8,650          | 345,087      | 239,356                | 282,294      | 625             | 62,168      | 1,060,333     | 234,929                | 965,558       | 94,775          |
| 1,244                   | 1,244                         |                | 5,774        | 1,855                  | 4,250        |                 | 1,524       | 10,973        | 1,855                  | 10,573        | 400             |
| 618                     | 618                           |                | 960          | 725                    | 755          | 25              | 180         | 2,914         | 725                    | 2,914         |                 |
| 370,041                 | 250,068                       | 119,973        | 1,526,034    | 520,814                | 1,394,884    | 4,580           | 126,570     | 3,930,448     | 510,005                | 3,552,268     | 378,180         |
| 38,130                  | 31,655                        | 6,475          | 198,084      | 39,239                 | 154,222      | 32,365          | 11,497      | 427,999       | 38,159                 | 288,565       | 139,434         |
| 17,248                  | 16,248                        | 1,000          | 36,674       | 25,088                 | 28,617       | 1,000           | 7,057       | 204,794       | 21,088                 | 101,644       | 103,150         |
| 610,010                 | 298,357                       | 311,653        | 1,931,343    | 497,736                | 1,554,015    | 139,362         | 237,966     | 4,364,081     | 496,220                | 3,844,752     | 519,329         |
| 733,696                 | 421,595                       | 312,101        | 1,450,927    | 883,508                | 1,180,886    | 19,188          | 250,858     | 3,974,689     | 880,963                | 3,018,592     | 56,097          |
| 1,175                   | 1,175                         |                | 3,150        | 1,700                  | 1,700        |                 | 1,450       | 8,500         | 1,700                  | 8,500         |                 |
| 672,969                 | 242,821                       | 430,148        | 2,351,972    | 421,916                | 2,077,414    | 81,753          | 192,805     | 4,384,269     | 407,047                | 3,854,939     | 529,330         |
| 665                     | 665                           |                | 2,430        | 805                    | 2,045        |                 | 385         | 4,685         | 805                    | 4,685         |                 |
| 225,069                 | 110,346                       | 114,723        | 426,788      | 483,723                | 320,088      | 14,967          | 91,783      | 2,079,613     | 443,175                | 1,977,169     | 102,444         |
| 2,523,796               | 711,132                       | 1,812,664      | 6,150,164    | 1,759,507              | 5,173,444    | 285,869         | 690,851     | 14,316,677    | 1,747,476              | 11,732,110    | 2,584,567       |
| 23,945                  | 8,847                         | 15,098         | 51,979       | 17,210                 | 51,889       |                 | 90          | 154,638       | 15,658                 | 111,955       | 42,683          |
| 212,072                 | 197,609                       | 14,463         | 497,155      | 323,876                | 398,647      | 6,615           | 91,893      | 1,386,774     | 817,109                | 1,318,634     | 68,140          |
| 22,124                  | 21,949                        | 175            | 55,037       | 27,296                 | 49,222       |                 | 5,815       | 161,879       | 23,436                 | 123,089       | 38,840          |
| 585,583                 | 258,313                       | 326,770        | 952,723      | 387,956                | 846,146      | 19,197          | 87,380      | 2,628,252     | 371,996                | 2,438,749     | 189,503         |
| 631,110                 | 386,567                       | 244,543        | 1,348,732    | 897,320                | 1,049,786    | 10,094          | 288,852     | 4,113,501     | 879,337                | 3,982,854     | 180,647         |
| 10,069                  | 8,969                         | 1,100          | 21,524       | 12,078                 | 15,899       | 290             | 5,335       | 65,334        | 12,078                 | 64,134        | 1,200           |
| 240,452                 | 152,602                       | 87,850         | 501,948      | 212,675                | 443,901      | 7,357           | 50,690      | 1,272,491     | 213,275                | 1,236,075     | 36,416          |
| 569,330                 | 351,889                       | 217,441        | 1,438,392    | 651,587                | 1,167,945    | 41,399          | 229,048     | 5,645,727     | 631,810                | 5,274,211     | 371,516         |
| 1,113,646               | 441,072                       | 672,574        | 2,548,961    | 2,151,433              | 1,716,042    | 67,148          | 765,771     | 11,531,776    | 2,164,601              | 11,115,044    | 416,732         |
| 587,554                 | 271,459                       | 316,095        | 1,385,039    | 509,017                | 1,202,361    | 7,255           | 175,423     | 3,501,654     | 506,151                | 3,333,531     | 168,123         |
| 2,616,569               | 773,024                       | 1,843,545      | 9,638,316    | 2,462,901              | 8,658,582    | 119,361         | 865,373     | 18,112,112    | 2,412,833              | 17,364,091    | 748,021         |
| 31,910                  | 31,515                        | 395            | 165,051      | 88,417                 | 112,287      | 15,150          | 37,614      | 599,516       | 15,552                 | 88,491        | 511,025         |

Logging is conducted in different parts of the country at different times of the year, on account of the difference in climate, and by differing methods and appliances, which are controlled in large part by the size of the timber. In the Northeastern and Lake states lumbering is carried on mainly in the winter time in order to take advantage of the snow upon the ground for hauling the logs to the streams or railroads which are the means of transportation. Felling is done mainly by sawing upon the upper side, while upon the falling side the tree is chopped. The logs are cut into lengths by sawing. Logs are moved about in the woods principally by animals, such as oxen or horses, upon roads made sometimes of earth and sometimes by logs placed crosswise on the ground, or by two lines of logs laid lengthwise with a space between them forming a sort of chute. In some cases logs are dragged on these roads by wire cables operated by donkey engines. The earliest logging was done in the neighborhood of streams which were used as carriers. As the timber in the neighborhood of the streams was exhausted and operations were carried into the areas between the streams, light logging railroads were built and logs hauled to the streams upon them. As areas were successively stripped of their timber the rails were taken up and put down elsewhere.

In the Southern pine region lumbering goes on at all times of the year with little distinction of season. Otherwise the methods employed are very similar to those in use in the lake states.

In the Pacific coast region logging is also carried on at all times of the year. Here the comparatively great size of the timber requires the use of more complicated machinery than in the East, and the use of animals is almost entirely given up. Here, as in the East, trees are cut in part by the saw, in part by the ax, chopping them on the falling side. In the fir forests of Washington and Oregon and in the redwood forests of California the use of donkey engines in the woods for handling the logs and debris is very general, as is also the use of similar engines and wire cables for dragging the logs over skid or other roads to the railroad. In the more open forests of yellow pine in the Sierra Nevada Mountains traction engines are commonly used in the woods and for hauling. Cranes are commonly employed throughout this region for loading logs on the cars, and at present, transportation of logs is done almost exclusively by railroad, since the areas adjacent to drivable streams are nearly exhausted.

TABLE 8.—LOGGING CAMPS—AVERAGES PER ESTABLISHMENT BY STATES AND TERRITORIES, AND FOR THE UNITED STATES: 1900.

|                       | Capital. | Number of wage-earners. | Amount of wages. | Quantity M. B. log stampage. | Value of product. |
|-----------------------|----------|-------------------------|------------------|------------------------------|-------------------|
| United States .....   | \$17,850 | 8                       | \$2,890          | 1,644                        | \$11,321          |
| Alabama.....          | 10,083   | 6                       | 1,867            | 1,238                        | 5,518             |
| Alaska.....           | 4,500    | 2                       | 1,620            | 182                          | 4,785             |
| Arizona.....          | 69,861   | 21                      | 15,291           | 5,189                        | 42,880            |
| Arkansas.....         | 12,971   | 8                       | 2,452            | 1,944                        | 9,529             |
| California.....       | 79,200   | 18                      | 8,998            | 8,652                        | 20,146            |
| Colorado.....         | 8,415    | 3                       | 1,477            | 1,083                        | 5,867             |
| Connecticut.....      | 4,659    | 4                       | 1,866            | 790                          | 9,757             |
| Delaware.....         | 2,617    | 3                       | 712              | 428                          | 2,749             |
| Florida.....          | 32,316   | 11                      | 3,233            | 2,201                        | 14,761            |
| Georgia.....          | 7,752    | 6                       | 1,478            | 1,274                        | 6,037             |
| Idaho.....            | 4,311    | 3                       | 1,274            | 830                          | 4,695             |
| Illinois.....         | 4,425    | 2                       | 785              | 390                          | 3,748             |
| Indiana.....          | 3,187    | 4                       | 1,520            | 690                          | 6,866             |
| Indian Territory..... | 573      | 2                       | 416              | 223                          | 1,081             |
| Iowa.....             | 36,425   | 1                       | 618              | 1,267                        | 15,634            |
| Kansas.....           | 1,441    | 1                       | 278              | 114                          | 944               |
| Kentucky.....         | 6,525    | 4                       | 1,128            | 684                          | 5,085             |
| Louisiana.....        | 31,108   | 14                      | 4,439            | 3,355                        | 19,469            |
| Maine.....            | 17,734   | 8                       | 2,613            | 1,270                        | 10,751            |
| Maryland.....         | 6,717    | 3                       | 898              | 716                          | 5,288             |
| Massachusetts.....    | 6,886    | 3                       | 1,307            | 644                          | 6,809             |
| Michigan.....         | 45,781   | 19                      | 7,748            | 3,212                        | 20,655            |
| Minnesota.....        | 157,833  | 54                      | 23,450           | 11,636                       | 97,103            |
| Mississippi.....      | 17,652   | 9                       | 2,447            | 1,785                        | 8,275             |
| Missouri.....         | 8,482    | 5                       | 1,701            | 840                          | 6,220             |
| Montana.....          | 7,500    | 8                       | 4,360            | 2,499                        | 11,280            |
| Nebraska.....         | 9,122    | 1                       | 399              | 232                          | 1,372             |
| Nevada.....           | 1,041    | 1                       | 212              | 181                          | 728               |
| New Hampshire.....    | 20,745   | 11                      | 3,485            | 1,962                        | 15,117            |
| New Jersey.....       | 4,831    | 4                       | 1,347            | 454                          | 5,095             |
| New Mexico.....       | 7,812    | 20                      | 5,458            | 1,318                        | 12,800            |
| New York.....         | 14,683   | 4                       | 1,602            | 767                          | 6,745             |
| North Carolina.....   | 6,800    | 5                       | 1,154            | 960                          | 4,330             |
| North Dakota.....     | 4,790    | 1                       | 350              | 425                          | 2,125             |
| Ohio.....             | 4,708    | 3                       | 1,144            | 589                          | 6,345             |
| Oklahoma.....         | 12,714   | 1                       | 179              | 115                          | 669               |
| Oregon.....           | 10,861   | 6                       | 2,943            | 1,617                        | 7,550             |
| Pennsylvania.....     | 22,221   | 7                       | 2,769            | 1,671                        | 13,637            |
| Rhode Island.....     | 5,872    | 3                       | 1,239            | 824                          | 8,139             |
| South Carolina.....   | 5,380    | 6                       | 1,182            | 857                          | 3,748             |
| South Dakota.....     | 5,219    | 6                       | 2,774            | 937                          | 6,475             |
| Tennessee.....        | 4,427    | 3                       | 876              | 570                          | 4,025             |
| Texas.....            | 23,232   | 8                       | 3,104            | 2,131                        | 9,960             |
| Utah.....             | 1,504    | 1                       | 473              | 252                          | 1,361             |
| Vermont.....          | 7,144    | 4                       | 1,172            | 713                          | 4,256             |
| Virginia.....         | 5,218    | 5                       | 1,573            | 956                          | 8,541             |
| Washington.....       | 21,515   | 15                      | 8,559            | 3,928                        | 20,029            |
| West Virginia.....    | 11,630   | 7                       | 2,207            | 1,244                        | 8,604             |
| Wisconsin.....        | 81,526   | 21                      | 8,319            | 5,257                        | 39,461            |
| Wyoming.....          | 12,455   | 14                      | 6,475            | 420                          | 16,203            |

Table 8 gives several measures of the magnitude of the logging business in the United States, and in the different states and territories, individually. Measured by the capital invested per establishment, the average of the United States is exceeded in only 12 states, these states being in the Lake region, the Southern pine region, and the fur West. The largest logging camps, whether measured by the amount of capital, the number of hands employed, the amount of wages paid, or the quantity and value of the timber produced, are, on the average, in the state of Minnesota. Here the industry is carried on upon a larger scale than anywhere else. The capital invested per establishment is nearly double that of Wisconsin or California, whose operations are next largest. The

average number of hands employed in the camps of Minnesota is more than double that of any other state. The wages are double those of any other state or territory except Arizona, and the cut and value are double those of any other state. The study of this table shows that the lumber camps in the newer lumber regions are, in nearly all cases, the largest. For instance, those of Minnesota are larger than those of Wisconsin, and those of Wisconsin larger than those of Michigan, while the operations of all three states are conducted on a scale of great magnitude. In the Southern states we find the same rule to hold good. The camps of Texas and Louisiana have larger capital, employ more men, pay a larger amount of wages, and cut more timber per establishment than those of the Carolinas and Georgia.

TABLE 9.—LOGGING CAMPS—STUMPAGE AND LOG VALUE, PER M FEET, B. M., BY STATES AND TERRITORIES, AND FOR THE UNITED STATES.

|                       | Log stump-<br>age, value. | Saw logs,<br>value. |
|-----------------------|---------------------------|---------------------|
| United States.....    | \$2.18                    | \$6.28              |
| Alabama.....          | 1.20                      | 4.30                |
| Alaska.....           | 0.97                      | 5.08                |
| Arizona.....          | 1.03                      | 7.60                |
| Arkansas.....         | 1.09                      | 4.74                |
| California.....       | 1.16                      | 4.63                |
| Colorado.....         | 1.12                      | 4.99                |
| Connecticut.....      | 2.90                      | 7.88                |
| Delaware.....         | 3.53                      | 5.55                |
| Florida.....          | 1.22                      | 6.23                |
| Georgia.....          | 1.01                      | 4.41                |
| Idaho.....            | 1.09                      | 3.95                |
| Illinois.....         | 2.64                      | 8.30                |
| Indiana.....          | 5.39                      | 9.39                |
| Indian Territory..... | 1.21                      | 4.61                |
| Iowa.....             | 4.95                      | 12.16               |
| Kansas.....           | 2.17                      | 7.84                |
| Kentucky.....         | 2.07                      | 6.86                |
| Louisiana.....        | 1.22                      | 5.59                |
| Maine.....            | 2.52                      | 8.15                |
| Maryland.....         | 2.92                      | 6.75                |
| Massachusetts.....    | 2.64                      | 9.49                |
| Michigan.....         | 3.06                      | 7.60                |
| Minnesota.....        | 3.40                      | 8.09                |
| Mississippi.....      | 1.30                      | 4.60                |
| Missouri.....         | 1.89                      | 6.91                |
| Montana.....          | 1.18                      | 4.11                |
| Nebraska.....         | 2.20                      | 5.69                |
| Nevada.....           | 1.04                      | 4.02                |
| New Hampshire.....    | 2.68                      | 6.96                |
| New Jersey.....       | 3.98                      | 7.56                |
| New Mexico.....       | 1.14                      | 4.82                |
| New York.....         | 3.12                      | 7.75                |
| North Carolina.....   | 1.34                      | 4.45                |
| North Dakota.....     | 1.00                      | 5.00                |
| Ohio.....             | 4.02                      | 9.47                |
| Oklahoma.....         | 2.54                      | 5.32                |
| Oregon.....           | 0.66                      | 4.46                |
| Pennsylvania.....     | 2.94                      | 6.71                |
| Rhode Island.....     | 3.02                      | 7.15                |
| South Carolina.....   | 1.23                      | 4.10                |
| South Dakota.....     | 1.50                      | 5.25                |
| Tennessee.....        | 2.18                      | 6.56                |
| Texas.....            | 1.17                      | 4.47                |
| Utah.....             | 1.82                      | 5.31                |
| Vermont.....          | 2.09                      | 5.80                |
| Virginia.....         | 1.79                      | 8.35                |
| Washington.....       | 0.80                      | 5.14                |
| West Virginia.....    | 2.36                      | 6.59                |
| Wisconsin.....        | 5.51                      | 7.20                |
| Wyoming.....          | 1.27                      | 5.69                |

Table 9, showing the value of stumpage and of saw logs by states, presents data collectively for all species cut within the limits of the several states. Still, in certain states certain species are so greatly predominant that practically the figures given represent the values of those predominant species.

The average stumpage in the United States has a

value of \$2.18 per thousand, while the saw logs are valued at \$6.28 per thousand, showing an increase in value, due to the logging operations, of \$4.10. The figures for stumpage and saw logs and the value of the logging operations differ widely in different parts of the country, owing to the different conditions of labor, the supply of and demand for lumber, and the species of lumber. In the Southern pine states the average cost of stumpage ranges from \$1.01 to \$1.34 per thousand, with an average not far from \$1.20, while the saw logs in the same states range in value from \$4.14 up to \$6.23, with an average of \$4.77, leaving an increase in value, due to logging operations, of \$3.57. In the white pine region of the Great Lakes the figures differ decidedly from those above quoted. The average value of stumpage in these states, which is mainly white pine, is \$3.30 per thousand feet. The average value of saw logs is \$7.63 per thousand, and the value of logging operations is \$4.33 per thousand feet. In the Pacific coast states there is a great variation in the value of stumpage and the value of saw logs, due in the main to the different species. In Washington, where the timber consists mainly of fir, the stumpage is given as \$0.80 per thousand, and the value of saw logs at \$5.14 leaving \$4.34 as the value of logging operations. In Oregon the stumpage is still lower—indeed, the lowest of any state—only \$0.66 per thousand, while saw logs have a value of \$4.46, the value of logging operations being \$3.80. In California, where there is a great variety of species, the principal ones being yellow pine and redwood, the value of stumpage is \$1.16 and of saw logs \$4.63, the difference between them, which is the value of the logging operations, being \$3.47 only. The high stumpage values in the interior states, such as Indiana and Iowa, as well as the high values of saw logs, are probably due to the fact that they consist almost entirely of hard woods.

TABLE 10.—STUMPAGE—PRINCIPAL SPECIES FOR THE UNITED STATES: 1900.

| SPECIES.          | Quantity,<br>M ft., B. M. | Value.       | Average<br>value<br>per M ft.,<br>B. M. |
|-------------------|---------------------------|--------------|---|
| Total.....        | 24,006,079                | \$51,123,633 | \$2.13                                  |
| Yellow pine.....  | 7,886,388                 | 8,813,687    | 1.12                                    |
| White pine.....   | 5,241,016                 | 19,156,206   | 3.66                                    |
| Norway pine.....  | 53,805                    | 153,700      | 2.88                                    |
| Sugar pine.....   | 63,872                    | 125,839      | 1.96                                    |
| White oak.....    | 2,405,615                 | 7,637,830    | 3.18                                    |
| Cedar.....        | 618,078                   | 814,334      | 1.32                                    |
| Hemlock.....      | 2,418,147                 | 6,200,834    | 2.56                                    |
| Spruce.....       | 1,166,274                 | 2,609,618    | 2.20                                    |
| Chestnut.....     | 27,883                    | 75,677       | 2.71                                    |
| Elm.....          | 56,461                    | 186,134      | 3.30                                    |
| Ash.....          | 26,770                    | 81,055       | 3.03                                    |
| Basswood.....     | 8,990                     | 15,480       | 1.50                                    |
| Maple.....        | 282,219                   | 750,005      | 2.66                                    |
| Tamarack.....     | 31,151                    | 31,061       | 1.00                                    |
| Poplar.....       | 394,432                   | 1,109,485    | 2.81                                    |
| Cottonwood.....   | 231,750                   | 423,360      | 1.45                                    |
| Red gum.....      | 80,445                    | 184,962      | 1.68                                    |
| Red fir.....      | 1,936,334                 | 1,536,574    | 0.77                                    |
| Black walnut..... | 200                       | 1,000        | 5.00                                    |
| Redwood.....      | 526,576                   | 556,870      | 1.06                                    |
| Cypress.....      | 450,128                   | 712,302      | 1.58                                    |

TABLE 11.—AVERAGE STUMPAGE VALUE PER THOUSAND FEET, BY SPECIES, FOR THE PRINCIPAL TIMBER STATES.

| STATES         | Yellow pine. | White pine. | Norway pine. | Sugar pine. | White oak. | Cedar. | Hemlock. | Spruce. | Chestnut. | Elm.   | Ash.   |
|----------------|--------------|-------------|--------------|-------------|------------|--------|----------|---------|-----------|--------|--------|
| Alabama        | \$1.17       |             |              |             | \$1.70     |        |          |         |           |        |        |
| Arizona        | 1.03         |             |              |             |            |        |          |         |           |        |        |
| Arkansas       | 0.86         |             |              |             | 1.89       |        |          |         |           |        |        |
| California     | 1.17         |             |              | \$1.96      |            |        |          | \$1.34  |           |        |        |
| Colorado       | 1.10         |             |              |             |            |        |          |         |           |        |        |
| Florida        | 1.18         |             |              |             |            |        |          |         |           |        |        |
| Georgia        | 1.01         |             |              |             |            |        |          |         |           |        |        |
| Idaho          | 1.11         | \$1.50      |              |             |            | \$0.77 |          |         |           |        |        |
| Illinois       |              |             |              |             | 2.84       |        |          |         |           |        |        |
| Indiana        |              |             |              |             | 5.88       |        |          |         |           |        |        |
| Kentucky       |              |             |              |             | 2.72       |        |          |         |           |        | \$2.88 |
| Louisiana      | 1.01         |             |              |             | 2.66       |        |          |         |           |        |        |
| Maine          |              | 2.51        |              |             |            |        | \$2.52   | 2.70    |           |        |        |
| Massachusetts  |              | 2.55        |              |             |            |        |          |         |           |        |        |
| Michigan       |              | 3.82        |              |             | 3.58       | 2.02   | 2.25     |         |           | \$3.43 | 3.10   |
| Minnesota      |              | 3.61        | \$2.70       |             |            |        |          |         |           |        |        |
| Mississippi    | 1.17         |             |              |             | 2.00       |        |          |         |           |        |        |
| Missouri       |              |             |              |             | 2.45       |        |          |         |           | 2.39   |        |
| Montana        | 1.23         |             |              |             |            |        |          |         |           |        |        |
| New Hampshire  |              | 2.67        |              |             |            |        | 3.19     | 2.71    |           |        |        |
| New Mexico     | 1.16         |             |              |             |            |        |          |         |           |        |        |
| New York       |              | 4.33        |              |             |            |        | 2.98     | 2.81    |           |        |        |
| North Carolina | 1.23         |             |              |             | 1.61       |        |          |         |           |        |        |
| Ohio           |              |             |              |             | 4.70       |        |          |         |           |        |        |
| Oregon         | 0.79         |             |              |             |            | 1.04   |          | 0.67    |           |        |        |
| Pennsylvania   |              | 3.69        |              |             | 4.19       |        | 2.75     |         | \$2.71    |        |        |
| South Carolina | 1.04         |             |              |             | 1.00       |        |          |         |           |        |        |
| South Dakota   | 1.85         |             |              |             |            |        |          |         |           |        |        |
| Tennessee      |              |             |              |             | 2.21       |        |          |         |           |        | 2.27   |
| Texas          | 1.12         |             |              |             |            |        |          |         |           |        |        |
| Vermont        |              |             |              |             |            |        | 2.01     | 2.04    |           |        |        |
| Virginia       | 1.60         |             |              |             | 2.37       |        |          |         |           |        |        |
| Washington     | .85          |             |              |             |            | 0.75   |          | 0.76    |           |        |        |
| West Virginia  | 1.90         |             |              |             | 2.41       |        | 2.19     | 1.42    |           |        |        |
| Wisconsin      |              | 3.85        | 2.97         |             | 1.87       |        | 2.16     |         |           |        |        |
| Wyoming        | 1.27         |             |              |             |            |        |          |         |           |        |        |

| STATES.        | Basswood. | Maple. | Tamarack. | Poplar. | Cottonwood. | Red gum. | Red fir. | Black walnut. | Redwood. | Cypress. |
|----------------|-----------|--------|-----------|---------|-------------|----------|----------|---------------|----------|----------|
| Alabama        |           |        |           |         |             |          |          |               |          |          |
| Arizona        |           |        |           |         |             |          |          |               |          |          |
| Arkansas       |           |        |           |         | \$1.17      | \$1.72   |          |               |          | \$1.47   |
| California     |           |        |           |         |             |          | \$1.06   |               | \$1.06   |          |
| Colorado       |           |        |           |         |             |          |          |               |          | 1.55     |
| Florida        |           |        |           |         |             |          |          |               |          |          |
| Georgia        |           |        |           |         |             |          |          |               |          |          |
| Idaho          |           |        |           |         |             |          | 1.71     |               |          |          |
| Illinois       |           |        |           |         | 1.95        |          |          |               |          |          |
| Indiana        |           |        |           |         |             |          |          |               |          |          |
| Kentucky       |           |        |           | \$2.94  |             |          |          | \$5.00        |          |          |
| Louisiana      |           |        |           |         | 2.24        |          |          |               |          | 1.51     |
| Maine          |           |        |           |         |             |          |          |               |          |          |
| Massachusetts  |           |        |           |         |             |          |          |               |          |          |
| Michigan       | \$1.50    | \$2.66 |           |         |             |          |          |               |          |          |
| Minnesota      |           |        |           |         |             |          |          |               |          |          |
| Mississippi    |           |        |           |         | 1.49        | 1.41     |          |               |          |          |
| Missouri       |           |        |           |         | 1.15        | 1.68     |          |               |          | 0.75     |
| Montana        |           |        | \$1.00    |         |             |          | 1.04     |               |          |          |
| New Hampshire  |           |        |           |         |             |          |          |               |          |          |
| New Mexico     |           |        |           |         |             |          |          |               |          |          |
| New York       |           |        |           |         |             |          |          |               |          |          |
| North Carolina |           |        |           | 2.48    |             |          |          |               |          | 2.06     |
| Ohio           |           |        |           |         |             |          |          |               |          |          |
| Oregon         |           |        |           |         |             |          | 0.59     |               |          |          |
| Pennsylvania   |           |        |           |         |             |          |          |               |          |          |
| South Carolina |           |        |           |         |             |          |          |               |          | 2.46     |
| South Dakota   |           |        |           |         |             |          |          |               |          |          |
| Tennessee      |           |        |           | 2.37    |             | 1.60     |          |               |          |          |
| Texas          |           |        |           |         |             |          |          |               |          |          |
| Vermont        |           |        |           |         |             |          |          |               |          |          |
| Virginia       |           |        |           | 2.63    |             |          |          |               |          |          |
| Washington     |           |        |           |         |             |          | 0.80     |               |          |          |
| West Virginia  |           |        |           | 3.15    |             |          |          |               |          |          |
| Wisconsin      |           |        |           |         |             |          |          |               |          |          |
| Wyoming        |           |        |           |         |             |          |          |               |          |          |

Table 11 shows the average stumpage value of the different species in the principal lumber states. Under the name yellow pine are combined all species popularly known by that name which are used for lumber, such as long-leaf, short-leaf, loblolly, and Cuban pines of the South, and the western yellow pine (*Pinus ponderosa*) of the West. The southern yellow pines show stumpage values generally higher in the Eastern states, where timber is now less abundant, and where long-leaf pine is most predominant, the price ranging from \$1.60 in Virginia to \$0.86 in Arkansas, with an average stump-

age value of about \$1.15. Western yellow pine brings a much smaller price—\$0.85 in Washington and \$0.79 in Oregon, while in California it is \$1.17.

Under the head of white pine are two species, *Pinus strobus* of the East and *Pinus monticola* of the Northwest. The eastern white pine has, on the whole, the highest stumpage value of any of the species here given, ranging in the states in which it is of importance between \$3.50 and \$4 per thousand feet. Western white pine is reported only from Idaho, and there in small quantity at \$1.50. Norway pine is reported in quantity



TABLE 12.—STEAM POWER, OTHER THAN RAILWAY LOCOMOTIVES, USED IN LOGGING CAMPS, BY STATES AND TERRITORIES: 1900.—Continued.

| STATES AND COUNTRIES. | Number of establishments. | TOTAL.  |              | DONKEY. |              | CAPSTAN. |              | TUG-BOAT. |              | TRACTION. |              | WENCH.  |              | PULL-BOAT. |              | SKIDDING. |              |
|-----------------------|---------------------------|---------|--------------|---------|--------------|----------|--------------|-----------|--------------|-----------|--------------|---------|--------------|------------|--------------|-----------|--------------|
|                       |                           | Number. | Horse-power. | Number. | Horse-power. | Number.  | Horse-power. | Number.   | Horse-power. | Number.   | Horse-power. | Number. | Horse-power. | Number.    | Horse-power. | Number.   | Horse-power. |
| Oregon .....          | 26                        | 56      | 1,826        | 35      | 1,075        | 1        | 10           | 11        | 320          | 4         | 125          | 1       | 6            | 2          | 210          | 2         | 80           |
| Clatsop .....         | 6                         | 11      | 506          | 10      | 500          |          |              |           |              |           |              | 1       | 6            |            |              |           |              |
| Columbia .....        | 3                         | 4       | 150          | 3       | 110          |          |              |           |              | 1         | 40           |         |              |            |              |           |              |
| Coos .....            | 9                         | 11      | 207          | 5       | 87           | 1        | 10           | 4         | 100          | 1         | 10           |         |              |            |              |           |              |
| Douglas .....         | 2                         | 6       | 88           | 4       | 48           |          |              | 2         | 40           |           |              |         |              |            |              |           |              |
| Jackson .....         | 1                         | 1       | 35           |         |              |          |              |           |              | 1         | 35           |         |              |            |              |           |              |
| Klamath .....         | 1                         | 1       | 20           |         |              |          |              | 1         | 20           |           |              |         |              |            |              |           |              |
| Marion .....          | 1                         | 6       | 180          | 6       | 180          |          |              |           |              |           |              |         |              |            |              |           |              |
| Multnomah .....       | 1                         | 5       | 100          | 5       | 100          |          |              |           |              |           |              |         |              |            |              |           |              |
| Tillamook .....       | 1                         | 3       | 250          |         |              |          |              |           |              | 1         | 40           |         |              | 2          | 210          |           |              |
| Yamhill .....         | 1                         | 8       | 290          | 2       | 50           |          |              | 4         | 160          |           |              |         |              |            |              | 2         | 80           |
| Arkansas .....        | 2                         | 3       | 130          | 3       | 130          |          |              |           |              |           |              |         |              |            |              |           |              |
| Drew .....            | 1                         | 1       | 10           | 1       | 10           |          |              |           |              |           |              |         |              |            |              |           |              |
| Ouchitta .....        | 1                         | 2       | 120          | 2       | 120          |          |              |           |              |           |              |         |              |            |              |           |              |
| Louisiana .....       | 8                         | 14      | 564          |         |              | 3        | 130          | 2         | 45           | 1         | 10           | 1       | 4            | 7          | 375          |           |              |
| Bossier .....         | 1                         | 2       | 80           |         |              | 1        | 70           |           |              | 1         | 10           |         |              |            |              |           |              |
| Orleans .....         | 1                         | 1       | 25           |         |              |          |              | 1         | 25           |           |              |         |              |            |              |           |              |
| St. Charles .....     | 1                         | 3       | 80           |         |              | 2        | 60           |           |              |           |              |         |              | 1          | 20           |           |              |
| St. Martin .....      | 1                         | 1       | 20           |         |              |          |              | 1         | 20           |           |              |         |              |            |              |           |              |
| St. Mary .....        | 4                         | 7       | 359          |         |              |          |              |           |              |           |              | 1       | 4            | 6          | 355          |           |              |
| Mississippi .....     | 3                         | 4       | 190          | 3       | 130          |          |              |           |              |           |              |         |              |            |              | 1         | 60           |
| Jackson .....         | 1                         | 1       | 40           | 1       | 40           |          |              |           |              |           |              |         |              |            |              |           |              |
| Leflore .....         | 1                         | 1       | 60           |         |              |          |              |           |              |           |              |         |              |            |              | 1         | 60           |
| Lincoln .....         | 1                         | 2       | 90           | 2       | 90           |          |              |           |              |           |              |         |              |            |              |           |              |
| Minnesota .....       | 1                         | 1       | 12           | 1       | 12           |          |              |           |              |           |              |         |              |            |              |           |              |
| Beltrami .....        | 1                         | 1       | 12           | 1       | 12           |          |              |           |              |           |              |         |              |            |              |           |              |
| Texas .....           | 1                         | 2       | 120          | 2       | 120          |          |              |           |              |           |              |         |              |            |              |           |              |
| Jefferson .....       | 1                         | 2       | 120          | 2       | 120          |          |              |           |              |           |              |         |              |            |              |           |              |

Table 13 shows the figures for the sawmill branch of the lumber industry segregated from the adjunct or auxiliary industries of logging camp and planing mill. This separation and independent tabulation of the statistics of exclusively sawmill operations was made for the purpose of showing the relative and actual magnitude of this part of the lumber industry.

TABLE 13.—SAWMILLS—SUMMARY BY STATES: 1900.

[Separated from planing mills and timber camps.]

| STATES AND TERRITORIES. | Number of establishments. | Capital.      | Proprietors. | SALARIED EMPLOYEES. |             | WAGE-EARNERS. |              | Miscellaneous expenses. | Cost of materials. | Value of product. |
|-------------------------|---------------------------|---------------|--------------|---------------------|-------------|---------------|--------------|-------------------------|--------------------|-------------------|
|                         |                           |               |              | Number.             | Salaries.   | Number.       | Wages.       |                         |                    |                   |
| United States .....     | 31,838                    | \$305,785,226 | 42,120       | 10,835              | \$9,702,785 | 229,717       | \$82,694,951 | \$17,731,519            | \$226,138,992      | \$422,812,061     |
| Alabama .....           | 1,087                     | 5,708,312     | 1,492        | 347                 | 276,116     | 7,858         | 1,933,088    | 277,521                 | 4,956,251          | 10,514,349        |
| Alaska .....            | 17                        | 99,300        | 27           | 13                  | 7,250       | 63            | 59,106       | 12,280                  | 40,553             | 95,449            |
| Arizona .....           | 14                        | 363,876       | 13           | 15                  | 23,794      | 180           | 126,073      | 12,822                  | 230,788            | 411,833           |
| Arkansas .....          | 1,142                     | 10,534,242    | 1,508        | 744                 | 592,161     | 15,273        | 3,859,932    | 522,658                 | 8,330,968          | 17,306,562        |
| California .....        | 285                       | 8,351,543     | 307          | 283                 | 308,798     | 4,385         | 2,120,281    | 513,047                 | 4,703,253          | 8,729,654         |
| Colorado .....          | 155                       | 601,872       | 197          | 41                  | 35,413      | 625           | 282,617      | 27,322                  | 631,800            | 1,290,000         |
| Connecticut .....       | 187                       | 667,047       | 236          | 29                  | 15,753      | 681           | 267,513      | 36,799                  | 773,100            | 1,304,304         |
| Delaware .....          | 76                        | 247,367       | 105          | 1                   | 200         | 411           | 99,801       | 6,195                   | 200,797            | 401,042           |
| Florida .....           | 368                       | 6,104,352     | 489          | 326                 | 271,950     | 5,678         | 1,770,010    | 486,706                 | 4,218,000          | 8,493,424         |
| Georgia .....           | 1,201                     | 5,133,630     | 1,644        | 390                 | 238,030     | 8,705         | 2,019,459    | 249,636                 | 5,239,823          | 11,601,361        |
| Idaho .....             | 114                       | 542,505       | 138          | 19                  | 13,006      | 302           | 160,176      | 17,942                  | 357,326            | 641,868           |
| Illinois .....          | 825                       | 3,147,593     | 1,094        | 111                 | 92,440      | 2,890         | 1,102,135    | 200,073                 | 3,329,508          | 5,624,331         |
| Indiana .....           | 1,829                     | 8,298,433     | 2,451        | 887                 | 301,787     | 8,924         | 3,394,106    | 469,306                 | 10,153,138         | 18,745,545        |
| Indian Territory .....  | 48                        | 91,718        | 64           | 4                   | 857         | 168           | 47,238       | 2,478                   | 78,582             | 194,504           |
| Iowa .....              | 264                       | 4,965,726     | 327          | 104                 | 124,650     | 1,560         | 583,519      | 342,336                 | 3,432,398          | 5,264,931         |
| Kansas .....            | 54                        | 57,806        | 68           |                     |             | 76            | 22,897       | 3,827                   | 28,182             | 101,264           |
| Kentucky .....          | 1,232                     | 5,738,461     | 1,651        | 309                 | 241,015     | 6,768         | 2,231,037    | 379,074                 | 6,044,893          | 11,346,565        |
| Louisiana .....         | 405                       | 10,463,718    | 495          | 492                 | 485,473     | 7,568         | 2,519,406    | 505,025                 | 5,691,272          | 12,074,056        |
| Maine .....             | 332                       | 9,779,413     | 1,106        | 239                 | 212,605     | 6,290         | 2,425,425    | 514,059                 | 6,664,482          | 11,476,563        |
| Maryland .....          | 366                       | 1,333,229     | 473          | 68                  | 36,037      | 1,825         | 442,787      | 63,004                  | 1,181,406          | 2,286,248         |
| Massachusetts .....     | 534                       | 4,014,837     | 666          | 85                  | 74,848      | 2,439         | 1,073,090    | 297,759                 | 2,859,038          | 5,057,488         |
| Michigan .....          | 1,613                     | 33,760,232    | 2,069        | 1,062               | 1,055,960   | 22,105        | 9,253,991    | 2,328,961               | 24,566,899         | 42,517,495        |
| Minnesota .....         | 404                       | 24,582,436    | 509          | 396                 | 534,487     | 8,223         | 4,076,298    | 1,782,439               | 13,973,267         | 25,891,210        |
| Mississippi .....       | 820                       | 7,696,179     | 1,075        | 413                 | 361,854     | 7,965         | 2,321,077    | 448,710                 | 6,780,801          | 12,136,488        |
| Missouri .....          | 1,169                     | 6,237,749     | 1,586        | 201                 | 181,639     | 5,050         | 1,637,056    | 321,300                 | 4,703,444          | 8,882,000         |



TABLE 13.—SAWMILLS—SUMMARY BY STATES: 1900.—Continued.

| STATES AND TERRITORIES. | Number of establishments. | Capital.    | Proprietors. | SALARIED EMPLOYEES. |           | WAGE-EARNERS. |           | Miscellaneous expenses. | Cost of materials. | Value of product. |
|-------------------------|---------------------------|-------------|--------------|---------------------|-----------|---------------|-----------|-------------------------|--------------------|-------------------|
|                         |                           |             |              | Number.             | Salaries. | Number.       | Wages.    |                         |                    |                   |
| Montana.....            | 127                       | \$1,711,321 | 166          | 32                  | \$40,609  | 1,070         | \$573,017 | \$58,038                | \$1,285,809        | \$2,291,289       |
| Nebraska.....           | 23                        | 44,385      | 80           | 4                   | 10,727    | 31            | 10,727    | 880                     | 14,565             | 51,373            |
| Nevada.....             | 4                         | 5,162       | 4            | 1                   | 1,375     | 1             | 1,375     | 269                     | 100                | 7,000             |
| New Hampshire.....      | 535                       | 5,460,705   | 663          | 83                  | 73,697    | 3,226         | 1,320,126 | 238,129                 | 3,626,211          | 6,726,754         |
| New Jersey.....         | 197                       | 858,351     | 238          | 27                  | 19,922    | 570           | 247,617   | 51,237                  | 677,393            | 1,276,014         |
| New Mexico.....         | 31                        | 160,798     | 35           | 9                   | 6,000     | 234           | 80,851    | 7,188                   | 191,305            | 290,527           |
| New York.....           | 1,742                     | 10,786,550  | 2,138        | 297                 | 242,503   | 5,578         | 2,225,333 | 523,407                 | 6,441,677          | 11,676,620        |
| North Carolina.....     | 1,751                     | 6,255,000   | 2,407        | 364                 | 257,478   | 9,910         | 2,084,650 | 321,048                 | 5,832,625          | 11,732,101        |
| North Dakota.....       | 4                         | 7,950       | 6            | 1                   | 300       | 11            | 2,670     | 86                      | 6,507              | 21,800            |
| Ohio.....               | 2,023                     | 9,331,739   | 2,769        | 333                 | 277,873   | 7,508         | 2,901,774 | 508,562                 | 9,100,063          | 17,305,294        |
| Oklahoma.....           | 33                        | 46,955      | 46           | 1                   | 600       | 43            | 9,475     | 1,450                   | 22,701             | 63,569            |
| Oregon.....             | 365                       | 4,481,236   | 525          | 188                 | 179,933   | 2,844         | 1,434,533 | 261,917                 | 3,668,636          | 6,833,234         |
| Pennsylvania.....       | 2,280                     | 22,989,861  | 3,020        | 463                 | 393,418   | 12,017        | 4,940,970 | 930,637                 | 17,363,644         | 28,516,775        |
| Rhode Island.....       | 33                        | 103,339     | 36           | 3                   | 725       | 115           | 40,607    | 5,833                   | 116,802            | 185,313           |
| South Carolina.....     | 716                       | 2,933,475   | 905          | 199                 | 123,642   | 3,945         | 776,377   | 107,445                 | 1,972,659          | 4,253,670         |
| South Dakota.....       | 28                        | 138,115     | 23           | 13                  | 11,161    | 122           | 61,979    | 7,860                   | 151,589            | 292,933           |
| Tennessee.....          | 1,694                     | 8,956,798   | 2,448        | 375                 | 323,270   | 10,007        | 3,067,312 | 402,409                 | 7,962,119          | 15,229,933        |
| Texas.....              | 601                       | 8,331,728   | 809          | 318                 | 316,204   | 5,867         | 2,296,614 | 368,437                 | 5,132,035          | 10,533,433        |
| Utah.....               | 81                        | 99,148      | 106          | 7                   | 1,850     | 135           | 41,825    | 2,193                   | 90,768             | 139,562           |
| Vermont.....            | 657                       | 4,141,842   | 814          | 68                  | 39,929    | 2,976         | 972,654   | 176,026                 | 2,039,311          | 4,206,936         |
| Virginia.....           | 1,324                     | 5,208,551   | 1,772        | 311                 | 209,527   | 6,581         | 1,852,614 | 327,615                 | 5,124,405          | 9,900,057         |
| Washington.....         | 535                       | 12,592,523  | 735          | 500                 | 435,935   | 9,710         | 5,085,156 | 748,946                 | 10,755,467         | 18,617,179        |
| West Virginia.....      | 929                       | 5,233,975   | 1,312        | 240                 | 194,639   | 4,823         | 1,657,437 | 314,111                 | 4,763,950          | 9,390,818         |
| Wisconsin.....          | 1,033                     | 37,146,043  | 1,251        | 950                 | 1,014,849 | 16,177        | 7,086,215 | 2,420,060               | 21,561,310         | 39,944,711        |
| Wyoming.....            | 46                        | 122,935     | 71           | 6                   | 2,495     | 106           | 44,915    | 6,303                   | 116,858            | 285,567           |

The number of establishments, 31,833, was obtained by subtracting from the total number of establishments for the lumber industry, those that had been classified as independent timber camps. The amount of capital shown as invested in sawmills excludes all capital invested in dependent logging camps, conducted by such sawmills, as well as all capital invested in planing mills operated in connection with such sawmills. The same is true as to the total number of wage-earners shown, together with their wages. Under this item it was necessary, in all cases where the sawmill reports showed also planing-mill operations, to divide the number of wage-earners, together with their wages, by taking out from the total that part that was engaged exclusively in operations in the sawmill. In making this separation, it was necessary, in such cases, to estimate the number. Such estimates were based, first, on the known, or approximately known, number of wage-earners necessary to turn out a product in the sawmill of the size reported, under conditions shown to have obtained by other features of the report, and as a check on this, or a measure of its accuracy, the wage-earners left, after taking away a number sufficient to carry on the sawmill operations indicated, were considered in connection with the quantity and character of the planing-mill product, and in this way, it is believed, the separation of wage-earners was made with practical accuracy. The heading of "miscellaneous expenses" includes all items of miscellaneous expense reported for the lumber industry, except the amount paid for contract logging, which is essentially an item of logging wages.

No attempt at separation was made under this head, for the reason that 31,833 establishments out of a total of 33,035 were sawmills, and by far the larger part of the total miscellaneous expenses incurred by the whole

industry during the census year is properly chargeable to the sawmill feature of it.

The total of material is made up, first, of the stumpage value of all timber cut in the dependent logging camps and used by the sawmills, together with all items of logging expense, such as wages, supplies, etc., from the stump to the mill; second, all logs and bolts purchased; and to these were added the usual items of "all other materials," "mill supplies," "fuel" (when such was bought), "power and heat," and "freight."

Under the heading of "products" is shown the total value of all merchant sawed products plus the amount received for custom work. This item of custom work includes the total amount received for custom sawing, custom grinding, and custom ginning. The latter two items of custom grinding and custom ginning comprise the amounts shown on the reports of establishments, where a sawmill was operated in connection with a grist-mill or a cotton gin, or both, and in which combination plant the value of the sawmill product exceeded that of the product of each of the industries operated in connection with it.

The number of establishments was 31,833, with a total capital of \$305,785,226. Wage-earners numbered 229,717, and wages were \$82,694,951. The miscellaneous expenses here given include those of associated timber camps and planing mills, since they can not be separated, but it is believed that they comprise not over 10 per cent of the total amount. The value of product was \$422,812,061, and cost of materials, \$226,138,992, leaving as the net product of the sawmill industry, \$196,673,069.

In value of product of sawmills, Michigan stands first, and Wisconsin second, with Pennsylvania third, and Minnesota fourth.

Thus, in logging and in the manufacture of rough

lumber, Michigan still holds first rank among the states, its relegation to second place in the total lumber industry being due to the large planing-mill output of Wisconsin, as seen below.

Table 14 shows, for sawmills only, the average capital, number of wage-earners, amount of wages, cost of materials, and value of products per establishment.

TABLE 14.—SAWMILLS—AVERAGES PER ESTABLISHMENT, BY STATES AND TERRITORIES: 1900.

| STATES.               | Capital. | Number of wage-earners. | Amount of wages. | Cost of materials. | Value of products. |
|-----------------------|----------|-------------------------|------------------|--------------------|--------------------|
| United States .....   | \$9,606  | 7                       | \$2,598          | \$7,104            | \$18,282           |
| Alabama.....          | 5,251    | 7                       | 1,778            | 4,560              | 9,678              |
| Alaska.....           | 5,841    | 4                       | 3,477            | 2,385              | 5,615              |
| Arizona.....          | 25,991   | 13                      | 9,005            | 16,485             | 29,417             |
| Arkansas.....         | 9,224    | 13                      | 3,380            | 7,295              | 15,155             |
| California.....       | 29,304   | 15                      | 7,440            | 16,503             | 30,630             |
| Colorado.....         | 8,883    | 4                       | 1,823            | 4,076              | 8,323              |
| Connecticut.....      | 3,567    | 4                       | 1,431            | 4,134              | 6,975              |
| Delaware.....         | 3,265    | 5                       | 1,313            | 2,642              | 5,277              |
| Florida.....          | 16,588   | 15                      | 4,810            | 11,462             | 23,080             |
| Georgia.....          | 4,274    | 7                       | 1,681            | 4,363              | 9,660              |
| Idaho.....            | 4,759    | 3                       | 1,405            | 3,134              | 5,630              |
| Illinois.....         | 3,815    | 4                       | 1,336            | 3,036              | 6,317              |
| Indiana.....          | 4,634    | 5                       | 1,856            | 3,551              | 10,249             |
| Indian Territory..... | 1,911    | 4                       | 984              | 1,637              | 4,052              |
| Iowa.....             | 18,885   | 6                       | 2,210            | 13,092             | 19,943             |
| Kansas.....           | 1,070    | 1                       | 424              | 522                | 1,875              |
| Kentucky.....         | 4,658    | 5                       | 1,811            | 4,907              | 9,616              |
| Louisiana.....        | 25,812   | 19                      | 6,221            | 14,053             | 29,812             |
| Maine.....            | 11,764   | 8                       | 2,915            | 8,010              | 13,794             |
| Maryland.....         | 3,643    | 5                       | 1,210            | 3,228              | 6,247              |
| Massachusetts.....    | 7,518    | 5                       | 2,010            | 5,354              | 9,471              |
| Michigan.....         | 20,980   | 14                      | 5,737            | 15,230             | 26,359             |
| Minnesota.....        | 60,848   | 20                      | 10,090           | 34,600             | 64,087             |
| Mississippi.....      | 9,386    | 10                      | 2,831            | 6,989              | 14,801             |
| Missouri.....         | 5,336    | 4                       | 1,448            | 4,028              | 7,598              |
| Montana.....          | 13,475   | 8                       | 4,512            | 10,121             | 18,042             |
| Nebraska.....         | 1,930    | 1                       | 466              | 633                | 2,231              |
| Nevada.....           | 1,290    | 1                       | 314              | 26                 | 1,765              |
| New Hampshire.....    | 10,207   | 6                       | 2,468            | 6,778              | 12,573             |
| New Jersey.....       | 4,357    | 3                       | 1,257            | 3,439              | 6,477              |
| New Mexico.....       | 5,187    | 8                       | 2,608            | 6,171              | 9,372              |
| New York.....         | 6,163    | 3                       | 1,277            | 3,098              | 6,703              |
| North Carolina.....   | 3,572    | 6                       | 1,191            | 3,331              | 6,729              |
| North Dakota.....     | 1,987    | 3                       | 669              | 1,627              | 5,450              |
| Ohio.....             | 4,638    | 4                       | 1,434            | 4,498              | 8,555              |
| Oklahoma.....         | 1,423    | 1                       | 287              | 688                | 1,026              |
| Oregon.....           | 12,277   | 8                       | 3,030            | 9,887              | 18,858             |
| Pennsylvania.....     | 10,083   | 5                       | 2,167            | 7,616              | 12,507             |
| Rhode Island.....     | 3,131    | 3                       | 1,231            | 3,539              | 5,616              |
| South Carolina.....   | 4,097    | 6                       | 1,084            | 2,755              | 5,941              |
| South Dakota.....     | 4,933    | 4                       | 2,214            | 5,414              | 10,462             |
| Tennessee.....        | 5,287    | 6                       | 1,811            | 4,706              | 8,991              |
| Texas.....            | 13,946   | 10                      | 3,821            | 8,539              | 17,527             |
| Utah.....             | 1,224    | 2                       | 516              | 1,121              | 2,340              |
| Vermont.....          | 6,304    | 5                       | 1,480            | 3,181              | 6,403              |
| Virginia.....         | 3,934    | 5                       | 1,399            | 3,870              | 7,477              |
| Washington.....       | 23,537   | 18                      | 9,505            | 20,104             | 34,798             |
| West Virginia.....    | 5,699    | 5                       | 1,784            | 5,128              | 10,109             |
| Wisconsin.....        | 35,959   | 16                      | 6,860            | 20,873             | 38,669             |
| Wyoming.....          | 2,672    | 2                       | 976              | 2,540              | 6,208              |

The average capital per establishment in the United States is \$9,606; the number of wage-earners, 7; the amount of wages, \$2,598; the cost of materials, \$7,104; and the value of products, \$18,282. The capital per establishment is greatest by far in Minnesota, where the lumber industry is rapidly extending by the addition of modern mills and appliances; second in Wisconsin, and third in California, where the redwood lumber cut from enormous trees requires the most powerful machines and appliances for handling and cutting. In Louisiana, Arizona, and Washington the capital is also heavy, both because the timber is large and the operations are of recent development.

In number of wage-earners per establishment Minnesota is in the lead, followed closely by Washington, while in California and Wisconsin the number is large. Very much the same order is followed in regard to the

amount of wages per establishment and in the cost of materials. In product per establishment Minnesota is far in the lead, with Wisconsin second, and Washington, California, and Louisiana following closely. The cost of materials for the entire United States is a little more than half the value of the products, and this proportion is followed closely by the states. In certain of them where the value of timber is not great, as in the yellow pine of the South, the cost of material is a little less than half that of the product, while in the white pine states of the Great Lakes the materials considerably exceed half the value of product, owing to the high value of the wood. The proportion of material to product is still higher in such states as Iowa and Illinois, which import their raw material from adjacent states, and in Kentucky and Tennessee and other hard wood states, where the timber is of great value.

Of the total value of product (\$422,812,061), \$342,303,152, or 81 per cent, consists of merchant sawed rough lumber. There was also produced by the mills a quantity of rough lumber sawed for customers or by contract, valued at \$43,086,970. Of the other products of the mill the most important is shingles, with a value, merchant and custom, of \$18,869,705. The other principal products are cooperage materials, including hoops, staves, and headings, with a value of \$20,714,670; hobbin and spool stock, furniture stock, agricultural implement stock, carriage and wagon stock, pickets, palings, and laths.

TABLE 15.—SAWMILLS, PRINCIPAL PRODUCTS.

|   | Quantity.  | Value.        |
|---|------------|---------------|
| Rough lumber, M feet.....                 | 34,787,084 | \$385,298,304 |
| Shingles, M.....                          | 12,102,017 | 18,869,705    |
| Cooperage materials:                      |            |               |
| Hoops, M.....                             | 441,827    | 2,669,465     |
| Staves, M.....                            | 1,664,792  | 13,697,621    |
| Headings, M.....                          | 124,089    | 4,347,534     |
| Hobbin and spool stock, M feet.....       | 40,037     | 526,007       |
| Furniture stock, M feet.....              | 105,305    | 1,921,741     |
| Agricultural implement stock, M feet..... | 33,250     | 596,415       |
| Carriage and wagon stock, M feet.....     | 82,686     | 1,806,330     |
| Pickets and palings, M.....               | 35,804     | 341,076       |
| Laths, M.....                             | 2,523,998  | 4,698,909     |
| All others.....                           |            | 19,600,779    |

#### ROUGH LUMBER.

Of the rough lumber, which, expressed in thousands of feet, B. M., amounts to 34,787,084 feet, coniferous woods comprise 26,153,063 feet, B. M., or three-fourths of all the timber cut in the mills, while hard woods form but one-fourth. The principal species was yellow pine, including in that designation all the southern pines and the western yellow pine, the amount of which was 10,603,108 M feet, B. M., or 30 per cent of all the timber cut in the mills. The amount of white pine which heretofore has been the most prominent species cut, and which still remains in value the most prominent, was 7,483,283 M feet, B. M., or 21 per cent of all. Hemlock constituted about 10 per cent of the total cut, and other coniferous species showed still smaller amounts.

Of the hard woods, oak is by far the most important cut, being more than half of all the hard woods, and 13 per cent of all the timber cut by the mills.

Of the cut shingles, which number 12,102,017 M, cedar contributes more than one-half, or nearly 53 per cent, the remainder being contributed by white pine, cypress, yellow pine, and other species in small amounts.

Table 16 classifies rough lumber according to species:

TABLE 16.—QUANTITY AND VALUE OF ROUGH LUMBER, BY SPECIES: 1900.

| ROUGH LUMBER.            | Quantity<br>(M feet<br>B. M.). | Value.        |
|--------------------------|--------------------------------|---------------|
| Aggregate .....          | 34,787,084                     | \$385,298,304 |
| CONIFERS.                |                                |               |
| Total .....              | 26,153,063                     | 268,481,112   |
| Yellow pine .....        | 10,603,108                     | 90,903,550    |
| White pine .....         | 7,483,283                      | 94,979,885    |
| Hemlock .....            | 3,420,673                      | 34,136,892    |
| Redwood .....            | 860,167                        | 8,645,608     |
| Spruce .....             | 1,448,091                      | 16,322,660    |
| Cypress .....            | 495,836                        | 6,604,495     |
| Cedar .....              | 232,978                        | 2,542,818     |
| Norway pine .....        | 259,108                        | 3,022,670     |
| Red fir .....            | 1,736,507                      | 15,050,638    |
| Sugar pine .....         | 53,558                         | 659,016       |
| Tamarack .....           | 50,619                         | 442,016       |
| All other conifers ..... | 9,135                          | 170,852       |
| HARD WOODS.              |                                |               |
| Total .....              | 8,634,021                      | 116,817,192   |
| Ash .....                | 269,120                        | 4,263,599     |
| Birch .....              | 132,601                        | 1,657,621     |
| Chestnut .....           | 206,688                        | 2,764,089     |
| Cottonwood .....         | 416,124                        | 4,303,544     |
| Elm .....                | 456,731                        | 5,240,530     |
| Gum .....                | 286,417                        | 2,747,680     |
| Hickory .....            | 96,636                         | 1,814,500     |
| Basswood .....           | 308,069                        | 3,954,625     |
| Oak .....                | 4,438,027                      | 61,174,129    |
| Poplar .....             | 1,115,242                      | 15,646,331    |
| Black walnut .....       | 38,681                         | 1,411,011     |
| Maple .....              | 638,466                        | 7,495,052     |
| Sycamore .....           | 29,715                         | 327,933       |
| Other hard woods .....   | 208,504                        | 4,015,948     |

## SHINGLES.

The next product of the lumber industry after sawed lumber, in the order of importance, is shingles, the total number of which was 12,102,017 M, with a value of \$18,869,705, or \$1.56 per thousand. Shingles are made mainly from cedars, the various species furnishing not less than 52.6 per cent of all the shingles made, which was more than three times as much as was made from any other wood. Next to cedar, white pine and cypress were most largely used in this branch of manufacture. Hard woods were little used, the total number of shingles from these species being less than 2 per cent of the total production.

Of all the states Washington produced far the largest number, its product being 35.8 per cent of that of the country and more than double that of any other state, its nearest competitor, Michigan, producing only 16 per cent. Nearly all the shingles produced in Washington are made from cedar.

TABLE 17.—QUANTITY AND VALUE OF SHINGLES, BY SPECIES: 1900.

|                      | Quantity<br>(number of thou-<br>sands). | Value.       | Value per<br>thousand. | Per cent<br>of total. |
|----------------------|---|--------------|------------------------|-----------------------|
| Total .....          | 12,102,017                              | \$18,869,705 | \$1.56                 | 100.0                 |
| Yellow pine .....    | 936,611                                 | 1,492,653    | 1.59                   | 7.7                   |
| White pine .....     | 1,859,440                               | 2,969,805    | 1.60                   | 15.4                  |
| Cypress .....        | 1,247,161                               | 2,280,645    | 1.83                   | 10.3                  |
| Cedar .....          | 6,867,345                               | 9,516,497    | 1.49                   | 62.6                  |
| Hemlock .....        | 391,949                                 | 786,253      | 2.00                   | 3.2                   |
| Spruce .....         | 218,958                                 | 393,245      | 1.79                   | 1.8                   |
| Red fir .....        | 225,887                                 | 269,233      | 1.19                   | 1.9                   |
| Redwood .....        | 630,122                                 | 662,293      | 1.05                   | 5.2                   |
| Other conifers ..... | 23,861                                  | 40,244       | 1.63                   | 0.2                   |
| All hard woods ..... | 200,683                                 | 458,837      | 2.23                   | 1.7                   |

TABLE 18.—SAWMILLS—GROUPED ACCORDING TO THE NUMBER OF M FEET, B. M., OF LUMBER SAWED.

| STATES AND TERRITORIES. | Totals. | GROUP 1.                             | GROUP 2.                                | GROUP 3.                                  | GROUP 4.                                   | GROUP 5.                                    | GROUP 6.                                     | GROUP 7.                                   |
|-------------------------|---------|--------------------------------------|---|---|--|---|--|--|
|                         |         | Mills sawing<br>50 M to 500<br>M ft. | Mills sawing<br>500 M to 1,000<br>M ft. | Mills sawing<br>1,000 M to<br>5,000 M ft. | Mills sawing<br>5,000 M to<br>10,000 M ft. | Mills sawing<br>10,000 M to<br>50,000 M ft. | Mills sawing<br>50,000 M to<br>100,000 M ft. | Mills sawing<br>100,000 M ft.<br>and over. |
| United States.....      | 32,136  | 20,837                               | 5,179                                   | 4,827                                     | 607  | 655   | 27   | 4  |
| Alabama.....            | 1,100   | 673                                  | 209                                     | 175                                       | 27   | 22  |  |  |
| Alaska.....             | 15      | 8                                    | 5                                       | 2   |  |   |  |  |
| Arizona.....            | 13      | 11                                   |   | 1   |  | 1   |  |  |
| Arkansas.....           | 1,055   | 493                                  | 199                                     | 294                                       | 85   | 33  | 1  |  |
| California.....         | 248     | 94                                   | 46                                      | 62  | 21   | 25  |  |  |
| Colorado.....           | 152     | 70                                   | 34                                      | 39  | 9  |   |  |  |
| Connecticut.....        | 203     | 140                                  | 27                                      | 34  | 2  |   |  |  |
| Delaware.....           | 80      | 54                                   | 18                                      | 8   |  |   |  |  |
| Florida.....            | 356     | 143                                  | 71                                      | 89  | 30   | 23  |  |  |
| Georgia.....            | 1,230   | 678                                  | 246                                     | 262                                       | 30   | 23  |  |  |
| Idaho.....              | 113     | 72                                   | 16                                      | 25  |  |   |  |  |
| Illinois.....           | 879     | 755                                  | 79                                      | 39  | 1  | 4   | 1  |  |
| Indiana.....            | 1,925   | 1,356                                | 291                                     | 259                                       | 12   | 7   |  |  |
| Indian.....             | 50      | 41                                   | 5                                       | 4   |  |   |  |  |
| Iowa.....               | 278     | 234                                  | 22                                      | 10  | 1  | 10  | 1  |  |
| Kansas.....             | 56      | 58                                   | 2                                       | 1   |  |   |  |  |
| Kentucky.....           | 1,246   | 855                                  | 192                                     | 176                                       | 17   | 6   |  |  |
| Louisiana.....          | 380     | 143                                  | 67                                      | 102                                       | 81   | 37  |  |  |
| Maine.....              | 741     | 486                                  | 121                                     | 92  | 26   | 16  |  |  |
| Maryland.....           | 304     | 245                                  | 75                                      | 40  | 4  |   |  |  |
| Massachusetts.....      | 541     | 335                                  | 105                                     | 99  | 1  | 1   |  |  |
| Michigan.....           | 1,504   | 813                                  | 259                                     | 301                                       | 53   | 75  | 8  |  |
| Minnesota.....          | 447     | 283                                  | 55                                      | 42  | 6  | 47  | 11   | 3  |
| Mississippi.....        | 801     | 453                                  | 141                                     | 157                                       | 25   | 25  |  |  |
| Missouri.....           | 1,285   | 1,041                                | 115                                     | 110                                       | 8  | 10  | 1  |  |
| Montana.....            | 124     | 63                                   | 15                                      | 30  | 11   | 5   |  |  |
| Nebraska.....           | 23      | 21                                   | 2                                       |   |  |   |  |  |
| Nevada.....             | 3       | 2                                    | 1                                       |   |  |   |  |  |
| New Hampshire.....      | 544     | 294                                  | 110                                     | 126                                       | 8  | 6   |  |  |
| New Jersey.....         | 192     | 147                                  | 30                                      | 14  | 1  |   |  |  |
| New Mexico.....         | 81      | 13                                   | 4                                       | 14  |  |   |  |  |
| New York.....           | 1,889   | 1,492                                | 248                                     | 126                                       | 18   | 10  |  |  |
| North Carolina.....     | 1,837   | 1,257                                | 283                                     | 258                                       | 32   | 7   |  |  |
| North Dakota.....       | 4       | 2                                    | 1                                       | 1   |  |   |  |  |
| Ohio.....               | 2,138   | 1,563                                | 362                                     | 203                                       | 6  | 3   | 1  |  |
| Oklahoma.....           | 38      | 38                                   |   |   |  |   |  |  |
| Oregon.....             | 358     | 172                                  | 77                                      | 78  | 13   | 17  |  |  |
| Pennsylvania.....       | 2,352   | 1,666                                | 382                                     | 313                                       | 40   | 49  | 1  | 1  |
| Rhode Island.....       | 34      | 24                                   | 2                                       | 8   |  |   |  |  |
| South Carolina.....     | 750     | 512                                  | 104                                     | 121                                       | 11   | 2   |  |  |
| South Dakota.....       | 29      | 14                                   | 6                                       | 8   | 1  |   |  |  |
| Tennessee.....          | 1,703   | 1,242                                | 244                                     | 189                                       | 19   | 9   |  |  |
| Texas.....              | 542     | 260                                  | 103                                     | 121                                       | 20   | 38  |  |  |
| Utah.....               | 79      | 74                                   | 4                                       | 1   |  |   |  |  |
| Vermont.....            | 661     | 419                                  | 123                                     | 117                                       | 2  |   |  |  |
| Virginia.....           | 1,333   | 891                                  | 263                                     | 211                                       | 10   | 8   |  |  |
| Washington.....         | 319     | 87                                   | 46                                      | 122                                       | 29   | 31  | 4  |  |
| West Virginia.....      | 952     | 608                                  | 182                                     | 143                                       | 7  | 12  |  |  |
| Wisconsin.....          | 1,034   | 507                                  | 189                                     | 199                                       | 44   | 93  | 2  |  |
| Wyoming.....            | 46      | 40                                   | 4                                       | 1   | 1  |   |  |  |

The above table, which classifies lumber mills in accordance with the amount annually cut, shows that of all mills, 68 per cent, or more than two-thirds, cut less than half a million feet, and 81 per cent, less than a million feet. These mills may, from their small size, be regarded as supplying only local demands, while the large mills, whose number is 19 per cent of all, supply in the main the commercial trade. The mills of the Northeastern states, where the lumber industry has been long established and where the forests are largely depleted, are small, the proportion of mills of commercial size being less than the average of the country, except in the case of New Hampshire. The mills of the Lake region are much larger, the proportion of commercial mills in each of the 3 states of Michigan, Wisconsin, and Minnesota being greater than that of the country, while Minnesota contains 3 of the 4 mills of the largest class. In the yellow-pine region of the

South there are comparatively few mills of the commercial class in the easternmost states, as Virginia and the Carolinas, but the proportion increases westward in the states whose lumber industries have been developed more recently. Texas, Louisiana, Arkansas, and Florida have high proportions of commercial mills, much above the average of the country. The Central hard wood states have small mills and comparatively few of commercial capacity. The mills of the Pacific coast states are larger, with higher proportions of those of commercial capacity. The highest proportion of commercial mills in the country is in Washington, where 58 per cent of the mills saw more than a million feet, board measure, each annually.

## PLANING MILLS.

Table 19 shows in condensed form the planing-mill industry for the United States.

TABLE 19.—PLANING MILLS—SUMMARY BY STATES: 1900.

[Dependent and independent combined.]

| STATES AND TERRITORIES.   | Number of establishments. | Capital.      | Proprietors. | SALARIED EMPLOYEES. |             | WAGE-EARNERS. |              | Miscellaneous expenses. | Cost of materials. | Value of products. |
|---------------------------|---------------------------|---------------|--------------|---------------------|-------------|---------------|--------------|-------------------------|--------------------|--------------------|
|                           |                           |               |              | Number.             | Salaries.   | Number.       | Wages.       |                         |                    |                    |
| United States.....        | 10,203                    | \$150,631,831 | 5,094        | 6,774               | \$6,281,252 | 106,628       | \$45,879,083 | \$7,289,615             | \$182,012,392      | \$275,965,522      |
| Alabama.....              | 251                       | 1,073,868     | 58           | 69                  | 54,046      | 1,509         | 406,620      | 15,680                  | 2,064,537          | 2,843,552          |
| Alaska.....               | 12                        | 28,650        | 4            | 7                   | 6,708       | 7             | 6,708        | .....                   | 40,630             | 69,462             |
| Arizona.....              | 6                         | 128,340       | 2            | 2                   | 2,006       | 30            | 21,737       | 1,595                   | 109,492            | 177,039            |
| Arkansas.....             | 222                       | 2,833,028     | 57           | 97                  | 73,337      | 1,332         | 1,087,351    | 60,778                  | 6,094,295          | 8,471,932          |
| California.....           | 257                       | 5,021,445     | 149          | 191                 | 207,929     | 2,896         | 1,633,312    | 175,114                 | 5,074,664          | 8,724,202          |
| Colorado.....             | 66                        | 927,015       | 28           | 47                  | 43,909      | 509           | 358,436      | 42,133                  | 746,330            | 1,855,491          |
| Connecticut.....          | 76                        | 1,979,895     | 39           | 89                  | 84,908      | 818           | 422,423      | 56,795                  | 1,609,860          | 2,451,807          |
| Delaware.....             | 26                        | 241,457       | 17           | 8                   | 5,790       | 113           | 43,028       | 5,169                   | 136,609            | 284,888            |
| District of Columbia..... | 10                        | 252,397       | 11           | 20                  | 16,095      | 235           | 109,558      | 106,014                 | 204,979            | 498,744            |
| Florida.....              | 162                       | 1,105,029     | 20           | 46                  | 44,777      | 1,168         | 400,271      | 29,048                  | 1,740,468          | 2,536,520          |
| Georgia.....              | 235                       | 2,506,348     | 120          | 181                 | 167,111     | 3,091         | 885,688      | 102,159                 | 3,614,526          | 5,953,038          |
| Idaho.....                | 68                        | 139,955       | 7            | 2                   | 1,044       | 52            | 25,293       | 1,033                   | 136,096            | 208,877            |
| Illinois.....             | 280                       | 7,135,890     | 275          | 440                 | 419,316     | 5,645         | 2,776,104    | 572,890                 | 7,322,036          | 12,916,754         |
| Indiana.....              | 423                       | 4,164,609     | 257          | 204                 | 171,895     | 2,569         | 1,052,055    | 259,818                 | 4,035,457          | 6,644,912          |
| Indian territory.....     | 8                         | 207,083       | 6            | 19                  | 17,100      | 256           | 89,452       | 10,617                  | 225,311            | 428,774            |
| Iowa.....                 | 82                        | 4,256,706     | 66           | 228                 | 229,553     | 3,605         | 1,446,586    | 255,979                 | 6,086,879          | 8,684,566          |
| Kansas.....               | 28                        | 344,265       | 32           | 19                  | 14,340      | 297           | 134,371      | 14,301                  | 811,907            | 559,203            |
| Kentucky.....             | 205                       | 2,169,049     | 123          | 100                 | 73,294      | 1,575         | 574,985      | 101,882                 | 2,312,635          | 3,469,153          |
| Louisiana.....            | 150                       | 2,186,827     | 30           | 127                 | 123,407     | 2,067         | 918,190      | 46,109                  | 4,447,312          | 6,238,313          |
| Maine.....                | 334                       | 2,138,275     | 81           | 74                  | 58,880      | 1,269         | 554,983      | 69,839                  | 2,037,850          | 3,119,206          |
| Maryland.....             | 102                       | 3,447,550     | 81           | 98                  | 77,911      | 1,422         | 662,136      | 141,244                 | 2,516,116          | 3,837,536          |
| Massachusetts.....        | 300                       | 4,657,629     | 156          | 238                 | 235,915     | 2,069         | 1,447,734    | 280,761                 | 4,283,679          | 7,535,689          |
| Michigan.....             | 476                       | 10,602,170    | 288          | 427                 | 398,779     | 6,969         | 2,718,605    | 509,357                 | 12,753,400         | 18,292,013         |
| Minnesota.....            | 174                       | 3,960,331     | 75           | 239                 | 256,888     | 4,603         | 2,140,354    | 133,850                 | 11,827,740         | 16,058,269         |
| Mississippi.....          | 170                       | 1,447,157     | 41           | 97                  | 85,768      | 2,205         | 657,739      | 32,256                  | 3,485,850          | 4,621,140          |
| Missouri.....             | 155                       | 4,083,233     | 69           | 247                 | 242,976     | 2,772         | 1,274,425    | 487,641                 | 3,862,631          | 6,395,119          |
| Montana.....              | 39                        | 449,665       | 7            | 17                  | 14,777      | 150           | 98,267       | 5,027                   | 469,367            | 648,897            |
| Nebraska.....             | 21                        | 378,906       | 19           | 32                  | 27,525      | 294           | 129,441      | 18,428                  | 561,731            | 886,333            |
| New Hampshire.....        | 237                       | 1,660,943     | 70           | 62                  | 43,827      | 1,254         | 630,394      | 65,879                  | 1,875,119          | 3,014,073          |
| New Jersey.....           | 164                       | 4,198,827     | 122          | 171                 | 186,136     | 2,104         | 1,109,200    | 186,678                 | 3,197,058          | 5,531,005          |
| New Mexico.....           | 13                        | 41,484        | 6            | .....               | .....       | 35            | 18,291       | 3,172                   | 39,853             | 75,050             |
| New York.....             | 1,069                     | 24,578,391    | 648          | 893                 | 884,516     | 12,496        | 5,974,886    | 1,197,987               | 20,954,837         | 33,149,801         |
| North Carolina.....       | 429                       | 2,254,210     | 100          | 174                 | 117,926     | 3,366         | 773,415      | 78,377                  | 3,618,603          | 5,652,408          |
| Ohio.....                 | 662                       | 8,604,686     | 435          | 463                 | 380,194     | 5,554         | 2,500,786    | 468,548                 | 8,621,659          | 13,921,181         |
| Oklahoma.....             | 3                         | 15,400        | 5            | .....               | .....       | 10            | 4,490        | 325                     | 3,935              | 14,600             |
| Oregon.....               | 226                       | 1,219,150     | 57           | 46                  | 45,817      | 964           | 493,707      | 16,337                  | 2,238,400          | 3,385,013          |
| Pennsylvania.....         | 900                       | 15,790,850    | 765          | 566                 | 483,847     | 8,629         | 3,092,443    | 698,316                 | 12,415,963         | 20,597,428         |
| Rhode Island.....         | 23                        | 613,071       | 25           | 22                  | 23,240      | 288           | 136,325      | 25,503                  | 827,004            | 665,751            |
| South Carolina.....       | 153                       | 675,940       | 67           | 42                  | 27,821      | 1,008         | 247,821      | 20,042                  | 1,251,717          | 1,842,709          |
| South Dakota.....         | 20                        | 49,672        | 6            | 2                   | 1,659       | 44            | 21,313       | 2,155                   | 121,340            | 162,447            |
| Tennessee.....            | 284                       | 2,396,466     | 108          | 105                 | 90,627      | 2,184         | 763,434      | 85,198                  | 3,276,771          | 4,947,832          |
| Texas.....                | 241                       | 2,117,468     | 93           | 118                 | 107,662     | 2,381         | 986,905      | 4,992,032               | 6,802,146          | 8,022,146          |
| Utah.....                 | 40                        | 210,970       | 32           | 16                  | 9,300       | 119           | 65,296       | 29,676                  | 126,452            | 267,412            |
| Vermont.....              | 351                       | 2,869,156     | 54           | 74                  | 65,882      | 1,455         | 510,965      | 121,913                 | 3,127,346          | 4,448,737          |
| Virginia.....             | 239                       | 2,259,540     | 108          | 125                 | 94,492      | 2,203         | 713,496      | 163,314                 | 3,160,088          | 4,504,432          |
| Washington.....           | 233                       | 2,355,687     | 22           | 98                  | 99,712      | 1,874         | 972,842      | 66,152                  | 4,706,799          | 6,437,914          |
| West Virginia.....        | 179                       | 1,173,349     | 126          | 41                  | 28,681      | 872           | 347,855      | 41,171                  | 1,882,790          | 2,583,799          |
| Wisconsin.....            | 384                       | 9,390,974     | 123          | 395                 | 437,307     | 9,041         | 3,696,394    | 399,644                 | 17,805,989         | 23,849,791         |
| Wyoming.....              | 25                        | 130,076       | 6            | 3                   | 3,250       | 77            | 43,418       | 8,076                   | 156,341            | 255,504            |

In compiling this table the statistics of those dependent planing mills, or planing mills operated in connection with sawmills, numbering 5,999 for the United States, were combined with the statistics of independent planing mills throughout the United States, with the object of showing in one table the magnitude of this branch of the lumber industry, which, in the interest of accuracy and expediency was reported on different schedules. The independent planing mills are not included in any of the other statistics presented in this report. The item of capital in this table shows the total amount of capital invested, both in plant and live capital, in the planing-mill industry in the United States. The number of wage-earners employed in dependent planing mills was determined, as explained above, in connection with the special table of sawmill operations, and to this number was added the number reported as being employed in independent planing mills. In the case of materials the combination was made item by item and no estimating was necessary. Under the heading of "miscellaneous expenses," are shown only those miscellaneous

expenses that were incurred by the independent or separately conducted planing mills. The small percentage of the total miscellaneous expenses for the lumber industry (exclusive of the miscellaneous expenses in the independent planing mills) which was incurred by the dependent planing mills was considered to be relatively so unimportant, and the difficulty in separating it from the miscellaneous expenses of the other three branches of the industry so great, that no miscellaneous expenses have been assigned to these dependent planing mills. The total miscellaneous expense, therefore, on this condensed table of the planing-mill industry, is perhaps smaller than the other totals of the table would indicate. Under the heading "products" the amounts for dependent and independent planing mills were combined, item for item, showing the total value of planing-mill products for the United States and by states.

Table 19, therefore, presents the statistics of all the planing mills of the United States and the several states. The number of establishments is 10,203; the total capital, \$150,631,831, or \$14,763 per establish-

ment; the number of wage earners is 106,628, or 10 per establishment; the amount of wages is \$45,879,083, or \$4,497 per establishment; the cost of materials is \$182,012,392, or \$17,839 per establishment, and the gross value of products is \$275,965,522, or \$27,047 per establishment. The cost of materials is, therefore, 66 per cent of the value of products, the difference between them, \$93,953,130, being the net value of the manufacture. The cost of materials is necessarily much higher proportionately than in sawmills or timber camps, and the net value of the manufacturing process proportionately less.

The distribution of the industry differs markedly from that of the lumber camps or sawmills, being influenced not only by the presence of forests, but by that of large bodies of population to be supplied, the latter in a far higher degree than in the other branches of the industry. Consequently, we find that in this branch New York leads, with a product exceeding 33 million dollars. Next is Wisconsin, with nearly 24 millions, and Pennsylvania, with 20.6 millions.

Table 20 shows the average capital, number of wage-earners, amount of wages, cost of materials, and value of product per establishment for the United States, and for each state and territory.

TABLE 20.—PLANING MILLS—AVERAGES PER ESTABLISHMENT, BY STATES AND TERRITORIES: 1900.

| STATES.                    | Capital. | Number of wage-earners. | Amount of wages. | Cost of materials. | Value of products. |
|----------------------------|----------|-------------------------|------------------|--------------------|--------------------|
| United States .....        | 14,763   | 10                      | \$4,497          | \$17,839           | \$27,047           |
| Alabama .....              | 4,278    | 6                       | 1,610            | 8,225              | 11,329             |
| Alaska .....               | 2,387    | 1                       | 3,559            | 3,386              | 5,789              |
| Arizona .....              | 20,557   | 5                       | 3,023            | 18,249             | 29,506             |
| Arkansas .....             | 12,761   | 6                       | 4,898            | 27,462             | 38,162             |
| California .....           | 19,599   | 11                      | 6,355            | 19,746             | 33,946             |
| Colorado .....             | 14,046   | 8                       | 5,431            | 11,308             | 20,538             |
| Connecticut .....          | 26,051   | 11                      | 5,553            | 21,182             | 32,261             |
| Delaware .....             | 9,287    | 4                       | 1,655            | 5,254              | 9,084              |
| District of Columbia ..... | 25,240   | 23                      | 10,956           | 20,498             | 49,874             |
| Florida .....              | 6,821    | 7                       | 2,471            | 10,744             | 15,658             |
| Georgia .....              | 11,048   | 13                      | 3,769            | 15,381             | 25,332             |
| Idaho .....                | 1,823    | 1                       | 372              | 2,001              | 3,072              |
| Illinois .....             | 25,485   | 20                      | 9,915            | 26,150             | 46,131             |
| Indiana .....              | 9,846    | 6                       | 2,487            | 9,540              | 15,709             |
| Indian Territory .....     | 33,385   | 31                      | 11,181           | 28,164             | 53,597             |
| Iowa .....                 | 61,911   | 44                      | 17,041           | 74,230             | 105,909            |
| Kansas .....               | 12,295   | 11                      | 4,799            | 11,140             | 19,972             |
| Kentucky .....             | 10,581   | 8                       | 2,805            | 11,281             | 16,928             |
| Louisiana .....            | 14,579   | 18                      | 6,121            | 29,649             | 41,589             |
| Maine .....                | 6,462    | 4                       | 1,662            | 6,101              | 9,339              |
| Maryland .....             | 33,800   | 14                      | 5,511            | 24,668             | 37,623             |
| Massachusetts .....        | 15,525   | 9                       | 4,826            | 14,279             | 25,119             |
| Michigan .....             | 22,273   | 15                      | 5,711            | 25,793             | 38,429             |
| Minnesota .....            | 22,761   | 26                      | 12,301           | 67,976             | 92,289             |
| Mississippi .....          | 8,513    | 13                      | 3,869            | 20,505             | 27,183             |
| Missouri .....             | 26,343   | 18                      | 8,222            | 24,920             | 41,259             |
| Montana .....              | 11,530   | 4                       | 2,520            | 12,085             | 16,638             |
| Nebraska .....             | 18,046   | 14                      | 6,164            | 26,749             | 42,206             |
| Nevada .....               |          |                         |                  |                    |                    |
| New Hampshire .....        | 7,046    | 5                       | 2,238            | 7,912              | 12,718             |
| New Jersey .....           | 27,265   | 14                      | 7,203            | 20,760             | 35,916             |
| New Mexico .....           | 8,191    | 3                       | 1,407            | 3,066              | 5,773              |
| New York .....             | 22,992   | 12                      | 5,589            | 19,602             | 31,010             |
| North Carolina .....       | 6,255    | 8                       | 1,803            | 8,435              | 13,176             |
| North Dakota .....         |          |                         |                  |                    |                    |
| Ohio .....                 | 12,998   | 8                       | 3,778            | 13,024             | 21,029             |
| Oklahoma .....             | 5,133    | 2                       | 1,497            | 1,312              | 4,867              |
| Oregon .....               | 5,894    | 4                       | 2,185            | 9,904              | 14,978             |
| Pennsylvania .....         | 17,545   | 10                      | 4,436            | 13,796             | 22,886             |
| Rhode Island .....         | 26,655   | 12                      | 5,927            | 14,218             | 28,946             |
| South Carolina .....       | 4,418    | 7                       | 1,616            | 8,181              | 12,044             |
| South Dakota .....         | 2,484    | 2                       | 1,066            | 6,067              | 8,122              |
| Tennessee .....            | 3,433    | 8                       | 2,688            | 11,538             | 17,422             |
| Texas .....                | 8,786    | 10                      | 4,095            | 20,714             | 28,225             |
| Utah .....                 | 5,274    | 3                       | 1,632            | 3,161              | 6,685              |
| Vermont .....              | 8,174    | 4                       | 1,456            | 8,910              | 12,680             |
| Virginia .....             | 9,454    | 9                       | 2,985            | 13,222             | 18,847             |
| Washington .....           | 10,110   | 8                       | 4,175            | 20,201             | 27,631             |
| West Virginia .....        | 6,555    | 5                       | 1,943            | 10,518             | 14,435             |
| Wisconsin .....            | 24,456   | 24                      | 9,625            | 46,370             | 62,109             |
| Wyoming .....              | 6,203    | 3                       | 1,737            | 6,254              | 10,220             |

# TIMBER REGIONS OF THE UNITED STATES.

The country, considered in a broad way, naturally separates itself into certain timber regions, as follows:

(1) The Northeastern states, including New England, New York, New Jersey, and Pennsylvania. The northern part of this region is forested with conifers, mainly white pine, spruce, and hemlock, becoming mixed in the southern part with hard woods, while in southern New Jersey, yellow pines are found.

(2) The Southern states, which are characterized by a broad belt of yellow pine of several species, stretching from southern New Jersey, southwest and west, to Texas and Indian Territory, while the lowlands on the coast and the Mississippi bottoms are covered with cypress, and the mountain regions are mainly covered with hard woods.

(3) The Lake states—Michigan, Wisconsin, and Minnesota—whose northern portions are, or were, forested mainly with white pine, merging into hard woods in the southern parts.

(4) The Central states, characterized by a growth of hard woods, with a varying admixture of conifers.

(5) The Rocky Mountain region, where the timber is in the main confined to the mountains and consists almost entirely of conifers of several species, but largely of yellow pine.

(6) The Pacific coast region, that is, those parts of Washington, Oregon, and California lying west of the Cascade Range and the Sierra Nevada. These forests, which are far the heaviest in the United States, if not in the world, consist almost entirely of conifers, the prevalent tree in Washington and northern Oregon being the red fir, with some cedar, spruce, and hemlock, while in the southern part of the latter state yellow and sugar pine appear and increase southward. In California yellow pine is the predominating tree, with some sugar pine, incense cedar, and several species of fir, and with *Sequoia gigantea* in small groves in the southern Sierra Nevada, while the redwood is found in a narrow strip along the coast north of San Francisco Bay.

TABLE 21.—TIMBER LANDS OWNED BY LUMBERMEN: BY STATES AND BY GEOGRAPHICAL GROUPS.

|                     | Number establishments reporting. | Capital invested. | Area, in acres, according to ownership. | Average quantity merchantable timber per acre, in feet. | Estimated total quantity merchantable timber, in millions of feet. |
|---------------------|----------------------------------|-------------------|---|---|--|
| 1900                |                                  |                   |   |   |  |
| United States ..... | 8,888                            | \$214,989,366     | 32,222,097                              | 6,700   | 215,550.6  |
| Eastern group ..... | 1,865                            | 40,700,556        | 4,498,812                               | 4,700   | 20,987.3   |
| Maine .....         | 204                              | 4,427,513         | 2,107,606                               | 2,000   | 4,317.5  |
| New Hampshire ..... | 159                              | 4,200,128         | 663,879                                 | 5,800   | 3,879.1  |
| Vermont .....       | 330                              | 2,064,800         | 372,754                                 | 7,300   | 2,746.2  |
| Massachusetts ..... | 162                              | 1,715,459         | 41,028                                  | 9,000   | 375.5  |
| Rhode Island .....  | 13                               | 50,995            | 1,673                                   | 3,000   | 6.3  |
| Connecticut .....   | 50                               | 355,102           | 9,195                                   | 9,200   | 82.8   |
| New York .....      | 276                              | 8,097,840         | 648,181                                 | 5,600   | 3,630.1  |
| Pennsylvania .....  | 614                              | 19,339,297        | 644,766                                 | 9,300   | 5,910.5  |
| New Jersey .....    | 47                               | 390,677           | 7,576                                   | 3,600   | 28.9   |
| Delaware .....      | 10                               | 58,745            | 2,204                                   | 5,000   | 10.4   |

TABLE 21.—TIMBER LANDS OWNED BY LUMBERMEN:  
BY STATES AND BY GEOGRAPHICAL GROUPS—Cont'd.

| 1900                      | Number establishments reporting. | Capital invested. | Area, in acres, according to ownership. | Average quantity merchantable timber per acre, in feet. | Estimated total quantity merchantable timber, in millions of feet. |
|---------------------------|----------------------------------|-------------------|---|---|--|
| Lake group .....          | 632                              | \$75,184,637      | 6,694,153                               | 4,900   | 32,925.0   |
| Michigan .....            | 320                              | 24,979,990        | 2,747,447                               | 5,300   | 14,546.1   |
| Wisconsin .....           | 227                              | 30,909,588        | 1,920,607                               | 5,400   | 10,387.8   |
| Minnesota .....           | 85                               | 19,295,059        | 2,026,099                               | 3,900   | 7,991.1  |
| Central group .....       | 1,599                            | 17,527,334        | 3,244,420                               | 4,700   | 15,423.9   |
| Ohio .....                | 157                              | 3,071,577         | 80,699                                  | 4,100   | 334.8  |
| Indiana .....             | 162                              | 1,864,061         | 104,167                                 | 5,700   | 593.7  |
| Illinois .....            | 167                              | 1,110,062         | 162,652                                 | 4,800   | 778.0  |
| West Virginia .....       | 221                              | 3,158,542         | 506,059                                 | 5,200   | 2,608.4  |
| Kentucky .....            | 208                              | 2,644,006         | 382,649                                 | 4,700   | 1,787.2  |
| Tennessee .....           | 410                              | 2,717,973         | 1,138,649                               | 3,900   | 4,496.1  |
| Missouri .....            | 274                              | 2,961,113         | 869,545                                 | 5,500   | 4,825.7  |
| Southern group .....      | 3,854                            | 54,037,320        | 12,414,165                              | 5,000   | 62,711.9   |
| Maryland .....            | 114                              | 888,988           | 66,928                                  | 3,700   | 250.1  |
| Virginia .....            | 418                              | 2,986,491         | 402,360                                 | 4,800   | 1,712.9  |
| North Carolina .....      | 629                              | 4,680,355         | 1,714,135                               | 3,800   | 6,468.4  |
| South Carolina .....      | 261                              | 1,410,050         | 454,785                                 | 4,400   | 1,998.2  |
| Georgia .....             | 453                              | 4,044,247         | 1,107,838                               | 3,500   | 4,212.2  |
| Florida .....             | 113                              | 6,717,592         | 1,318,387                               | 4,500   | 5,918.5  |
| Alabama .....             | 525                              | 5,156,012         | 1,224,835                               | 4,200   | 5,100.7  |
| Mississippi .....         | 349                              | 7,229,895         | 1,214,458                               | 7,600   | 9,242.7  |
| Louisiana .....           | 170                              | 6,625,622         | 1,497,352                               | 6,700   | 9,964.1  |
| Arkansas .....            | 517                              | 7,060,807         | 1,741,779                               | 4,500   | 7,917.8  |
| Texas .....               | 315                              | 7,287,341         | 1,071,308                               | 5,900   | 9,906.3  |
| Pacific group .....       | 648                              | 23,784,549        | 3,188,149                               | 24,500  | 78,141.6   |
| California .....          | 156                              | 13,403,324        | 1,177,537                               | 30,600  | 36,087.7   |
| Oregon .....              | 212                              | 2,186,171         | 825,687                                 | 24,500  | 20,351.8   |
| Washington .....          | 275                              | 8,195,054         | 1,184,925                               | 18,800  | 21,702.1   |
| Miscellaneous group ..... | 295                              | 3,754,970         | 2,182,398                               | 2,500   | 5,360.9  |
| Colorado .....            | 59                               | 184,136           | 91,993                                  | 7,300   | 671.1  |
| Idaho .....               | 43                               | 210,484           | 84,420                                  | 6,900   | 576.9  |
| Indian Territory .....    | 16                               | 5,358             | 32,347                                  | 3,800   | 120.5  |
| Iowa .....                | 48                               | 1,978,335         | 56,160                                  | 4,900   | 273.5  |
| Kansas .....              | 22                               | 19,841            | 7,680                                   | 3,500   | 28.4   |
| Montana .....             | 35                               | 452,105           | 95,538                                  | 6,600   | 632.8  |
| Nebraska .....            | .....                            | 70,805            | .....                                   | .....   | .....  |
| New Mexico .....          | 11                               | 112,515           | 1,618,780                               | 1,500   | 2,819.7  |
| North Dakota .....        | .....                            | 17,660            | .....                                   | .....   | .....  |
| South Dakota .....        | 6                                | 90,770            | 5,940                                   | 3,000   | 18.2   |
| Utah .....                | 23                               | 51,827            | 19,800                                  | 2,100   | 40.6   |
| Wyoming .....             | 21                               | 112,301           | 56,960                                  | 4,500   | 254.3  |
| Arizona .....             | 4                                | 350,611           | 202,080                                 | 2,000   | 409.2  |
| Alaska .....              | .....                            | 7,225             | .....                                   | .....   | .....  |
| Oklahoma .....            | 7                                | 88,915            | 10,940                                  | 1,300   | 14.6   |
| Nevada .....              | 2                                | 2,082             | 260                                     | 4,000   | 1.1  |

## TIMBER LAND OWNED BY LUMBERMEN.

Table 21 shows the number of establishments reporting, the amount of capital invested in timber land, the area in acres of timber land held by these establishments, the average amount of timber of all species on these lands, and its total amount. The total amount thus reported in the United States, 215,550.6 million feet, is probably somewhat more than one-tenth the amount now standing in the country.

The total area, 50,347 square miles, is about one-twentieth of the estimated wooded area of the country. By "wooded area" is not meant the area covered by merchantable forests, which is quite a different matter, and one concerning which little is known.

The average stand of timber per acre, being that of the selected tracts owned by lumbermen, is of course higher than the average of the country or state, and, in the case of several of the states where the average stand has been obtained, it is known to be much higher. Thus, in Minnesota the average stand is about one-half that

here given, or about 2,000 feet per acre. The same is the case in Oregon and Washington, where the large stands here given must be divided by 2 to obtain the average stand of the state. The southern pine has an average stand, according to the best information, of not far from 3,000 feet per acre, a little lower perhaps in the east and somewhat higher in the west, while the figures here given show a stand in these states of 5,000 feet per acre.

The amount given for Michigan represents probably one-half the timber yet remaining in the state. That reported for Wisconsin is about 23 per cent of that estimated to be still standing, which according to the estimate of Dr. Filibert Roth, is 45 billion feet. That for Minnesota is about one-third the amount estimated for the state by General Andrews, chief fire warden, who estimated in 1896 that the state contained 24,790 million feet of merchantable timber. The states of Oregon, Washington, and South Dakota have been canvassed as to their timber supplies by the United States Geological Survey. The mills of Oregon report a stand of 20,351.8 million feet, board measure, as owned, while cruises in the state indicate its total stand of timber to be 215,000 million feet, or more than ten times as much. In Washington about the same proportion is reported. The estimate of the stand of the state is 195,688 million feet, of which 21,702 million feet is reported. In South Dakota the timber is practically all in the Black Hills, in the western part of the state, and is estimated at 1,502 million feet. Of this 18 million only, or a little over 1 per cent is reported. Nearly all this body of timber is contained within a Federal forest reserve. The above are the only estimates of the total stands of states available for comparison with the returns from the mill companies, and, as is seen, they afford little basis for discussion. They serve to demonstrate only that, as was stated above, the average stand of the lands reported is much greater than that of the states as a whole, but how much greater does not appear. They show, moreover, that in old lumber regions like Michigan the lands are reported much more fully than in newer ones, such as the Pacific coast states.

## WHITE PINE.

This species, the most valuable of the common kinds of timber, has its home in northern New England and in the northern half of the Lake states, Michigan, Wisconsin, and Minnesota. Much of New York, especially the Adirondack region, contained white pine originally, but from this state it has almost entirely disappeared. Its habitat stretches southward, following the line of the Appalachian Mountains down through the higher parts of Pennsylvania, well into West Virginia, in which state there are still considerable bodies of this timber, and it is found in small amount in the high mountains of North Carolina.

White pine, formerly the most abundant tree in New England, has become, by persistent lumbering through



many decades, greatly reduced in quantity. In Maine the holdings of lumbermen, which probably include most of the remaining stand of this species, amount to only a trifle more than a billion feet. In New Hampshire the holdings reported amount to 562 millions, or a little more than half of those of Maine. In Vermont they are trifling, and in Massachusetts 340 millions, all of which is doubtless second or third growth. The holdings reported from New York are still less than those of Massachusetts, being only 290 millions. In Pennsylvania the holdings reported are large when we consider the limited territory occupied by the species, amounting to 850 million feet.

In West Virginia, which is known to contain quite a body of untouched white pine situated in the most elevated region of the state, there is practically none reported by the lumber companies.

The greatest bodies of white pine in the country are still to be found in the northern portion of the Lake states, the upper half of the lower peninsula of Michigan, the entire area of the upper peninsula, and in general terms the northern halves of the states of Wisconsin and Minnesota. Before lumbering commenced, these regions were covered with a fairly dense stand of almost pure white pine, merging near the lower borders into hard-wood forests. Lumbering operations have progressed westward from the east. The lower peninsula of Michigan has been nearly depleted of this timber; the upper peninsula has been cut to a large extent, while Wisconsin has suffered less, and Minnesota still less, from the operations of lumbermen. In these three states it is estimated that the enormous amount of 183,063 millions of feet, board measure, of white pine has been cut since 1873, as is shown by the following table extracted from the American Lumberman of January 18, 1902:

TABLE 22.—CUT OF WHITE PINE, M FEET, B. M., IN MICHIGAN, WISCONSIN, AND MINNESOTA, 1873 TO 1900.

| YEAR.      | Total cut.  |
|------------|-------------|
| 1900.....  | 5,419,333   |
| 1899.....  | 6,056,508   |
| 1898.....  | 6,155,300   |
| 1897.....  | 6,233,454   |
| 1896.....  | 5,725,768   |
| 1895.....  | 7,050,689   |
| 1894.....  | 6,821,516   |
| 1893.....  | 7,326,264   |
| 1892.....  | 8,594,223   |
| 1891.....  | 7,879,948   |
| 1890.....  | 8,597,623   |
| 1889.....  | 8,183,048   |
| 1888.....  | 8,254,291   |
| 1887.....  | 7,757,917   |
| 1886.....  | 7,425,368   |
| 1885.....  | 7,053,095   |
| 1884.....  | 7,935,033   |
| 1883.....  | 7,624,790   |
| 1882.....  | 7,552,150   |
| 1881.....  | 6,768,857   |
| 1880.....  | 5,651,295   |
| 1879.....  | 4,806,943   |
| 1878.....  | 3,629,473   |
| 1877.....  | 3,595,333   |
| 1876.....  | 3,879,046   |
| 1875.....  | 3,968,553   |
| 1874.....  | 3,751,306   |
| 1873.....  | 3,993,780   |
| Total..... | 183,063,250 |

Of the stand of white pine remaining we have estimates in Wisconsin and Minnesota, but none in Michigan later than that of Professor Sargent made in 1880, when he estimated that the amount of pine standing in Michigan was 35 billion feet, at the same time placing that of Wisconsin at 41 billion feet. In 1897 an estimate was made of the standing timber of Wisconsin by Dr. Filibert Roth, of the United States Department of Agriculture, in cooperation with the geological survey of Wisconsin. He found 15 billion feet of white pine standing in the state at that time. Several estimates of the stand in Minnesota have been made, the earliest one which comes under my notice having been made by Professor Sargent in connection with the United States census of 1880. His figures gave a total of 8,170 million feet then standing. In 1896 Gen. C. C. Andrews, state fire warden, estimated the amount at 16,849 million feet, or a little more than double that made by Sargent sixteen years earlier. Three years later, in 1899, Mr. H. B. Ayres, acting for the United States Geological Survey, estimated that there was standing 11,190 million feet, his estimate agreeing closely with that of General Andrews. There is probably 50 billion feet of white pine standing in the country. The total amount reported as owned by lumbermen is 16,352 million feet, and the cut in the census year was approximately 7,500 million feet, showing that the holdings of lumber companies, so far as reported, are sufficient to supply the cut for two or three years only.

#### SPRUCE.

Spruce in the Eastern states is found mainly in New England and in New York, where in recent years, since the partial destruction of white pine, it has become the principal commercial timber, the amount annually cut far exceeding that of pine. The estimated stand in these states is, in round numbers, 50 billion feet, of which 8,600 million feet was reported as owned by lumbermen. The cut in these states in the census year was 1,448 million feet.

Spruce is found also in the Rocky Mountain region, where in some places it forms a notable component of the forest.

It is found also in western Washington and Oregon, scattered sparsely through the forests in the interior, and upon the Pacific coast, forming a large and important component of the forests.

#### HEMLOCK.

Hemlock occupies much the same range as does white pine, being found in the New England and other North-eastern states, and extending down the Appalachian Mountains as far as southwest Virginia or North Carolina. It is found also in the neighborhood of the Great Lakes in considerable quantity. It exists in large quantities in the forests of the Pacific coast, but heretofore has been cut, at least under its proper name, to a



trifling extent only, although it is a valuable timber and will be appreciated hereafter.

Growing nowhere as a pure forest but everywhere intermingled with other species, its stand is a difficult thing to even guess at, but is doubtless not less than 100 billion feet. The total amount in the country reported by lumbermen is 6,755 million feet. The cut in the census year was 3,420 million feet.

#### CYPRESS.

Cypress is a tree of low marshy regions. It occurs along the Atlantic and Gulf coasts from the Dismal Swamp in southeastern Virginia nearly to the Rio Grande. It is found in the lowlands and marshes of the Mississippi from southeastern Missouri to the mouth of the river.

Little is known of the amount of this timber, though it is of great value. The total amount reported as owned by lumbermen was 6,562 million feet, and this is probably but a small fraction, probably not more than 10 per cent, of the total stand. The cut in the census year was 495 million feet.

#### SOUTHERN YELLOW PINE.

Yellow pine, of the species known as long leaved, short leaved, loblolly, and Cuban, is found in all the Southern states, but more than nine-tenths of it is in the Carolinas, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, and Arkansas. In these states it occupies the Atlantic plain, with the exception of the low, marshy strips near the coast occupied by cypress, while inland it extends beyond the Fall Line to varying distances in the Piedmont region, passing slowly by different stages of admixture into the hard wood forests of the interior. Over most of its range it forms pure forests of open stand, with little or no undergrowth. The area occupied by pure pine forests in the nine states above enumerated is approximately 150,000 square miles, or about 100,000,000 acres. The average stand of timber on this area, from the best information obtainable, is not far from 3,000 feet, B. M., per acre, giving a total stand on this area of 300 billions of feet. An estimate made in 1880 (Tenth Census) by Prof. C. S. Sargent gives at that time but 237 billion feet, but there is abundant evidence to show that this estimate is much too low. The holdings by lumbermen of yellow pine in 1900 in these states showed a total of 46,507 million feet, or 15 per cent of the total estimated stand. The cut in the census year 1900 was 8,523 million feet, or 3 per cent of the estimated stand, and 18 per cent of the amount held by lumbermen. If the estimate of the total stand given above is approximately correct, there is sufficient yellow pine to supply the present cut for thirty-three years, without allowing anything for growth in the interval.

#### HARD WOODS.

The central part of the United States, including the eastern portion of the Upper Mississippi Valley, is a region of hard woods, composed of a great variety of species. The principal of these, from an economic point of view, are the oaks, which, with gum, poplar, maple, cottonwood, elm, and ash, make up the great bulk of the forest. The forest is nowhere composed of any one species, but is mixed commonly, not only of various species of hard woods, but with more or less conifers intermingled. The area in which hard woods form a predominant element of the forest is large, comprising several hundred thousand square miles, but it is ill defined. The stand differs greatly in different parts, hence it is impossible to make even a guess at the amount of timber of this species. The amount reported as owned by lumbermen is in the neighborhood of 30 billion feet, half of which consists of oak. This amount reported by lumbermen doubtless forms only a small part of the stand, which may be five or ten times as great. The total cut of this species in the census year was 4,438 million feet, B. M. The species cut most largely, with the approximate amount, were as follows:

| SPECIES.     | Quantity<br>(million<br>feet, B. M.). |
|--------------|---------------------------------------|
| Oak .....    | 4,438                                 |
| Poplar ..... | 1,115                                 |
| Maple .....  | 683                                   |
| Elm .....    | 456                                   |
| Ash .....    | 269                                   |

#### WESTERN YELLOW PINE.

Western yellow pine, *pinus ponderosa*, is the commonest pine of the Rocky Mountain and Pacific coast states. Its range extends from the Black Hills of South Dakota on the east nearly to the coast, and from the southern to the northern boundaries of the country. While many other species are found intermingled with it in the forests, it is in most localities the predominant tree, excepting in Oregon and Washington west of the Cascade Range, and in the redwood belt of California. In some localities it appears as a pure growth, in others greatly mingled with other species. Its tendency, however, is to form pure growths of open forests with little underbrush. It endures moderately arid conditions, its lower limit representing approximately the isohyetal line of 20 to 25 inches. In Oregon and northern Washington, its western extension is limited by the Cascade Range, the moist conditions of the western side of that region enabling the red fir and associate species to monopolize the ground, and, in about the middle latitude of Oregon, the increasing temperature and diminishing rainfall enable it to cross the Cascade Range and to mingle with red fir in the southwestern part of the state. Throughout California, excepting in the red-

wood strip, it is the predominant tree, occupying in the Sierra Nevada range a belt whose altitude ranges from 3,000 feet in the southern end of the range, to 1,500 feet in its northern end, and extending upward to 8,000 or 9,000 feet. The southern portion of the Cascade Range contains a mixed forest, in which yellow pine is a predominant element. It is found in the ranges of southern California above an altitude of 5,000 feet.

In size the tree ranges greatly with localities. In the Black Hills, where it forms pure growth, it is small, while in the Sierra Nevada and coast ranges in southern California, it is a good-sized tree, commonly 3 to 5 feet in diameter, but with individual trees much larger, ranging up to 200 and 250 feet in height, cutting 3 to 5 clear logs per tree.

Most of the logging in this species, as well as in the sugar pine, is done for local consumption and in a small way; consequently, there are few distinctive features associated with it.

The total supply of yellow pine, which is mainly in Washington, Oregon, and California, is estimated to be about 125 billion feet. Of this, 24,610 million feet, or about one-fifth, was reported as owned by lumbermen. The cut for the census year was a trifle less than a billion feet.

#### SUGAR PINE.

Sugar pine, *pinus lambertiana*, is found mainly on the western slope of the Sierra Nevada range in a belt ranging from 3,000 feet above the sea in the southern portion of the range, to 1,500 feet in the northern part, its upper limit being between 8,000 and 9,000 feet above the sea. It is also found in the northern part of the coast ranges in the same state in considerable quantities, as well as in the southern portion of Oregon. It is never found in pure forests, but always intermingled with other species, the principal of which is yellow pine, which commonly forms from two-thirds to three-fourths of the forest. Some red fir and incense cedar is also commonly intermingled.

The sugar pine is a large tree, from 5 to 10 feet in diameter, and 250 feet in height, and a large proportion of it is clear. The wood is fine, greatly resembling in many respects the white pine of the East, and splits easily, for which reason it was in early days largely used for shakes, and much of it was culled from the forest in the mining days for this purpose, involving an enormous waste of valuable timber.

Heretofore it has been cut mainly for local consumption, but at present two or three large companies are operating in the Sierra Nevada regions cutting this timber, as well as the other components of the forest in large amounts.

The stand of sugar pine in California and Oregon is estimated at about 25 billion feet, 3,911 million of which was reported as owned by lumbermen. The cut in the census year was 53,558 M feet, B. M.

#### RED FIR.

The red fir, *pseudotsuga taxifolia*, is found quite generally distributed over the Rocky Mountain country, where it forms, however, but a minor component of the forest. Its home is in western Oregon and Washington, west of the Cascade range, whence it extends nearly to the Pacific coast. In altitude it extends from the sea level on Puget Sound and the Columbia River up to from 3,000 to 6,000 feet, dropping with the latitude. Under conditions most favorable to its development it forms pure forest, as in the country bordering upon Puget Sound, and thence southward to the Columbia. In other localities the proportion of fir to other trees differs greatly and in southern Oregon, where it is largely mixed with yellow and sugar pine, the proportion becomes small. The tree is one of the largest on the Pacific coast, being exceeded in size only by the *sequoia gigantea*, or big tree, and the redwood. The red fir ranges from 200 to 300 feet in height and up to 20 feet in diameter, although the average diameter is much less. Growing in close stand, the clear height is great, six logs being frequently cut from a tree. The stand is heavy, 50,000 feet to the acre on entire townships being not uncommon. The timber is of great strength, and is largely used for dimension timber in bridges, and for other purposes where great strength is required. It is transported east in considerable quantities for this purpose. It is also shipped to Asiatic and Australian ports and to South America.

The stand of red fir is estimated at about 300 billion feet, of which 23,772 million feet were reported by the lumbermen. The cut of the census year was 1,736 million feet.

#### REDWOOD.

Redwood, *sequoia sempervirens*, is found only in a narrow strip closely bordering the Pacific coast, from the southern line of Oregon southward through California nearly to San Francisco Bay, with a few comparatively small patches south of the bay. The strip ranges in width from 5 to 25 miles, never extending inland beyond the influence of the coast fogs. The area of the strip is approximately 2,000 square miles. The characteristics of its habitat are those of extreme moisture, with much rain in the winter season and fogs at all times of the year.

The forest is nearly pure, practically the only admixture consisting of a small percentage of red fir, or, as it is there designated, Oregon pine. The trees are large, with an average diameter of about 5 to 10 feet, while many individuals exceed 20 feet in diameter. In height they range up to 300 feet, from one-half to two-thirds of which is clear lumber. The forest is extremely dense, the average stand being nearly 60,000 feet per acre, while many tracts of considerable size carry from 100,000 to 150,000 feet per acre. Indeed,

in the yield of lumber, this forest is probably the densest on earth, exceeding the fir forests of Oregon and Washington.

Lumbering is carried on at many points in the strip, at Crescent City, Humboldt Bay, and in various points in Mendocino and Sonoma counties. The principal center of this lumber industry, however, is about Humboldt Bay, of which Eureka is the metropolis. The lumbering and milling are carried on in this neighborhood by large companies, and the most modern methods and machinery are there employed. The mills are of the most modern type, equipped with gang and band saws, while the machinery for moving the logs and lumber is very complete. Indeed, the redwood mills about Eureka probably represent the highest development of this branch of manufacture in the world.

Redwood is a strong and very durable lumber, and is used in California for a great variety of purposes, for house building, for water pipes, shingles, and inside finishing. It is shipped not only to all parts of California but to Australia, Japan, and South America. There is only a limited local consumption of the wood, by far the greater part of it entering into commerce.

The supply of redwood is estimated at 75 billion feet, of which 14,245 million feet was reported as owned by lumbermen. The cut for the census year was 360 million feet.

#### DESCRIPTIONS, BY STATES.

*Maine.*—Maine was originally a forest-clad state throughout. The timber consisted mainly of white pine and spruce with some admixture of hemlock, tamarack, and cedar, and in the southern part of hard woods of various species. The southern part of the state has been largely cleared, and the forests in the northern part have in the main been culled of white pine, although there still remains in the remoter parts of the state, especially in the northwest, and in areas removed from the streams, a notable amount of this species. That considerable white pine still remains in the state, in spite of the fact that for a century the lumbermen have been cutting it, is shown by the fact that the lumbermen own tracts comprising a stand of 1,017.6 millions of feet. As the supply of white pine has diminished, the cut of spruce has increased, both absolutely and relatively, until it is at present far the more important of the two.

The extension in recent years of railroads into the northern portion of the state, supplementing and in many places supplanting the streams as the means of conveying logs to the mill, has resulted in opening up new regions previously almost untouched.

The wooded area of the state is estimated at 23,700 square miles, or 79 per cent of the entire area. The land covered with merchantable timber is, of course, of much less area. The only estimates of the stand of timber are those of Prof. C. S. Sargent, made in 1880.

His estimate of 475 million feet of white pine is certainly only a fraction of the amount then standing, and his estimate of 5 billion feet of spruce, though probably not so greatly in error, is evidently much less than the fact, since more than half that amount is to-day reported as owned, after twenty years of cutting.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$5,872,578       |
| 1860..... | 6,553,565         |
| 1870..... | 11,355,747        |
| 1880..... | 7,933,868         |
| 1890..... | 11,840,054        |
| 1900..... | 13,489,401        |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Spruce.....         | 2,575,600              | 1,900          | 425,148                   |
| White pine.....     | 1,017,600              | 2,300          | 220,285                   |
| Hemlock.....        | 508,100                | .....          | 88,552                    |
| Other conifers..... | 108,600                | .....          | 86,994                    |
| Hard woods.....     | 112,600                | .....          | 28,767                    |
| Total.....          | 4,317,500              | .....          | 849,686                   |

*New Hampshire.*—New Hampshire was originally covered with forests of white pine, spruce, and hemlock, with some hard woods intermingled in the southern part of the state. The result of two centuries of cutting, with much destruction by fire, has been to reduce the stand of white pine to a very small amount, and instead of being the principal timber product, it has become of very little importance, while spruce is cut in far greater amount. In the last half century the value of the lumber product has multiplied nine times, and has nearly doubled in the past decade, as shown below.

The woodland of the state is estimated at 5,200 square miles, or 58 per cent of the area of the state. For the quantity of timber we have the figures of Professor Sargent, who estimated to be standing in 1880, 1,510 million feet of spruce and 165 million feet of hemlock. Since more spruce and hemlock were reported as owned in 1900, besides the cut of twenty years, it is seen that these estimates were far below the truth. In 1898 Professor Fernow estimated that the state contained 3,000 million feet of conifers. Since more than that amount is reported as owned by lumbermen in 1900, this estimate also is seen to be of no value.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$1,099,492       |
| 1860..... | 1,208,629         |
| 1870..... | 4,286,142         |
| 1880..... | 3,842,012         |
| 1890..... | 5,641,445         |
| 1900..... | 9,218,310         |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Spruce.....         | 2, 070, 100            | 6, 700         | 188, 605                  |
| White pine.....     | 562, 600               | 6, 800         | 310, 421                  |
| Hemlock.....        | 504, 500               | .....          | 45, 557                   |
| Other conifers..... | 79, 800                | .....          | 2, 303                    |
| Hard woods.....     | 662, 600               | .....          | 23, 468                   |
| Total.....          | 3, 879, 100            | .....          | 570, 357                  |

*Vermont.*—This state was originally forested throughout with white pine, spruce, and hemlock, with some hard woods in the southern part and near the shores of Lake Champlain. For many decades its lumber trade was of much importance, but since 1890 it has begun to decline, owing to the practical exhaustion of white pine, although spruce and hemlock are still found in considerable amounts. In 1900 its product had a value nearly ten times as great as in 1850.

The woodland of the state is estimated to have an area of 3,900 square miles, or 43 per cent of the area of the state. The only estimates of standing timber are those of Prof. C. S. Sargent, who estimated that in 1880 there were 755,000,000 feet standing, an amount less than half that reported in 1900.

## LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$618, 065        |
| 1860..... | 901, 519          |
| 1870..... | 3, 525, 122       |
| 1880..... | 3, 258, 816       |
| 1890..... | 6, 955, 674       |
| 1900..... | 6, 131, 808       |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Spruce.....         | 1, 604, 200            | 6, 000         | 261, 759                  |
| Hemlock.....        | 870, 100               | .....          | 42, 826                   |
| Other conifers..... | 51, 900                | .....          | 21, 367                   |
| Hard woods.....     | 720, 000               | .....          | 50, 495                   |
| Total.....          | 2, 746, 200            | .....          | 376, 447                  |

*Massachusetts.*—Originally covered with forests of conifers, mixed with hard woods, the state was long ago thoroughly lumbered, and to-day contains very little, if any, virgin forest, and cutting is confined to second growth. Most of the timber reported as owned in the state is located in other states, mainly New Hampshire and Vermont, and consists almost entirely of white pine, of which 340,400 M feet, B. M. is reported. The lumber cut probably comes entirely from the two states above mentioned. The cut of Massachusetts has increased quite steadily for the past fifty years, and in 1900 had a value four times that of 1850.

The woodland has an area, by measurement from the maps of the state, prepared by the United States Geological Survey, of 4,200 square miles, or 52 per cent of the area of the state. Very little of this, however, contains timber of mill size and quality.

## LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$1, 552, 265     |
| 1860..... | 2, 218, 144       |
| 1870..... | 3, 556, 870       |
| 1880..... | 3, 120, 184       |
| 1890..... | 5, 211, 607       |
| 1900..... | 6, 526, 230       |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| White pine.....     | 340, 400               | 10, 300        | 261, 133                  |
| Other conifers..... | 7, 200                 | .....          | 42, 846                   |
| Hard woods.....     | 27, 900                | .....          | 42, 539                   |
| Total.....          | 375, 500               | .....          | 346, 518                  |

*Rhode Island.*—Originally a forest-clad state, Rhode Island was long since cleared, and in great part put under cultivation. The only timber now in the state is second or third growth, and little, if any, is of lumber size. Practically all the timber reported as cut within the state is brought from other states.

The woodland of the state has an area, as measured from the maps of the United States Geological Survey, of 400 square miles, or 40 per cent of the area of the state.

## LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$241, 556        |
| 1860..... | 74, 592           |
| 1870..... | 257, 258          |
| 1880..... | 240, 573          |
| 1890..... | 254, 625          |
| 1900..... | 283, 579          |

*Connecticut.*—Like Massachusetts, Connecticut was originally covered with forests of mixed growth, nearly all of which was long ago cut away, and to-day the state contains little virgin forest and not much of second growth fit for the mill. Most of the timber reported as owned in the state is probably located in other states, and most of the timber reported as cut is probably brought from elsewhere.

The woodlands of the state, as measured from the maps prepared by the United States Geological Survey, have an area of 1,900 square miles, or 39 per cent of the state's area.

## LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$584,794         |
| 1860..... | 872,731           |
| 1870..... | 1,541,088         |
| 1880..... | 1,076,455         |
| 1890..... | 1,853,544         |
| 1900..... | 1,818,643         |

## TIMBER OWNED AND CUT.

| SPECIES.        | Owned (M feet, B. M.). | 1900 cut (M feet, B. M.). |
|-----------------|------------------------|---------------------------|
| Coniferæ.....   | 35,200                 | 14,600                    |
| Hard woods..... | 47,600                 | 4,118                     |
| Total.....      | 82,800                 | 18,718                    |

*New York.*—New York was originally covered with forests, composed, in the Adirondacks, of white pine, spruce, and hemlock, and in other parts of the state, of these species mingled with hard woods. During the centuries which have elapsed since the commencement of settlement half the area has been cleared for cultivation, and, except in the Adirondacks, the merchantable timber has in great part been destroyed. In these mountains the pine has been largely culled, so that but little of that species remains, and lumbermen are now actively at work on the spruce and hemlock.

The wooded area of the state is estimated at 18,700 square miles, or 39 per cent of the area of the state. This area is, of course, much greater than that occupied by merchantable timber.

The earliest estimates of the stand of timber are those of Sargent and are confined to the Adirondack region. His figures gave this region, in 1880, a stand of only 320 million feet of white pine, 5,000 million feet of spruce, 3,000 million feet of hemlock, and 6,400 million feet of hard wood. In 1896 Professor Fernow estimated a total stand of conifers of 5,000 million feet in the state. All the above figures are plainly much too small. The state possesses lands in the Adirondack region having a total area of 1,325,851 acres. Outside of these tracts there were considerable bodies of timber owned by lumbermen. As shown below, the amount of white pine reported as owned by lumber men was nearly as great, after twenty years' cutting, as was estimated by Sargent, and the amount of spruce was nearly half that estimated.

The Adirondack region, or Park, as it is known, is an area comprising 3,226,144 acres, or 5,041 square miles, including the mountainous portion of the region. Of this area, 1,163,414 acres are owned by the state, 705,914 acres are held as private reserves by individuals or organizations, and the remainder, 1,356,816 acres, by individuals or companies for other purposes. These

lands are classified as follows by the Fish, Forest, and Game Committee of New York:

| CLASS.            | State acres. | Private preserves. | Individuals or companies. |
|-------------------|--------------|--------------------|---------------------------|
| Forest.....       | 455,415      | 257,186            | 445,453                   |
| Lumbered.....     | 592,630      | 368,115            | 710,894                   |
| Waste.....        | 10,276       | 22,483             | 15,793                    |
| Burned.....       | 14,617       | 5,301              | 23,247                    |
| Denuded.....      | 15,739       | 18,565             | 27,388                    |
| Wild meadows..... | 9,961        | 380                | 12,188                    |
| Improved.....     | 4,642        | 6,239              | 90,099                    |
| Water.....        | 60,135       | 32,655             | 82,254                    |
| Total.....        | 1,163,414    | 705,914            | 1,356,816                 |

Forest lands include those covered with virgin forest and those lumbered for pine or spruce only, many years ago, and which still contain valuable coniferous timber. Lumbered lands are those from which the coniferous timber has been removed, leaving little except hard woods. Assuming that the forest lands contain an average stand of 3,000 feet per acre, it appears that this region contains three and a half billion feet of coniferous timber. Of this amount, about two and one-tenth billions were state and private preserves. In the Adirondack region there is held by lumbermen about an equal amount, making a total stand accounted for of 4,200 million feet of coniferous timber. How much more there may be unaccounted for is, of course, unknown. The state possesses also a small preserve in the Catskills, comprising 82,330 acres.

The value of the lumber product of New York shows violent fluctuations at different times, so that it is unsafe to conclude, from the slight reduction in the value in 1900 as compared with that in 1890, that the lumber industry has passed its maximum. In 1850 it was the leading state in this industry; in 1860 it had been passed by Pennsylvania, and in 1900 it stood twelfth in the list.

## LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$18,128,759      |
| 1860..... | 9,710,945         |
| 1870..... | 21,238,228        |
| 1880..... | 14,356,010        |
| 1890..... | 17,190,547        |
| 1900..... | 15,766,977        |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Hemlock.....        | 638,300                | .....          | 314,191                   |
| Spruce.....         | 2,352,700              | 6,000          | 255,939                   |
| White pine.....     | 290,300                | 4,700          | 122,756                   |
| Other conifers..... | 7,900                  | .....          | 5,950                     |
| Hard woods.....     | 840,900                | .....          | 207,976                   |
| Total.....          | 3,630,100              | .....          | 906,812                   |

*New Jersey.*—The northern part of New Jersey was originally covered with a mixed forest, composed mainly of hard woods, while the southern part was a continuous forest of yellow pine, with some cypress in the lowlands bordering the coast. Most of the timber suitable for the mill has been removed and a large proportion of the land cleared for cultivation. The state now contains, however, much valuable second-growth timber. Measurements made on the state map show that 43 per cent of its area, or 3,234 square miles, are wooded. The area is said to be at least holding its own, and the value of forest to be increasing.

The cut is not large; indeed, this state has never been of great importance in this industry.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$1,123,052       |
| 1860..... | 1,608,610         |
| 1870..... | 2,745,817         |
| 1880..... | 1,627,640         |
| 1890..... | 1,225,765         |
| 1900..... | 1,859,014         |

*Pennsylvania.*—The state was originally forest clad, with pine and hemlock on the higher parts of the Alleghany plateau, and with an increasing mixture of hard woods as the altitude diminishes to the westward. The southeastern part of the state, outside of the Appalachian region, was timbered with hard woods almost exclusively. The result of over two centuries of lumbering has been to reduce the wooded area one-half, leaving, as is estimated, 23,000 square miles, or 51 per cent, wooded. This wooded area, moreover, has been in great part depleted of its merchantable timber, especially of its white pine, although there still remains a large amount, as is shown by the fact that the cut of this species in 1900 was nearly 3 billion feet.

The earliest estimates of the stand of timber in the state are Sargent's. He assigned a white-pine stumpage of 1,800 million feet, and of hemlock, 4,500 million feet, figures which are far below the truth.

In 1896, Professor Fernow published an estimate made by the commissioner of forestry of the state, giving a pine stumpage of 500 million feet; spruce, 70 million feet; and hemlock, 5,000 million feet. The statements of cut and of the stand owned of these species presented below show that these figures are much below the truth.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$7,729,058       |
| 1860..... | 10,743,752        |
| 1870..... | 28,938,985        |
| 1880..... | 22,457,359        |
| 1890..... | 29,087,970        |
| 1900..... | 35,749,965        |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------------|------------------------|----------------|---------------------------|
| Hemlock.....          | 3,904,200              | .....          | 1,608,252                 |
| White pine.....       | 858,200                | 6,500          | 238,021                   |
| Other conifers.....   | 125,600                | .....          | 19,168                    |
| Chestnut.....         | 208,800                | .....          | 50,789                    |
| Oak.....              | 655,700                | 7,200          | 342,404                   |
| Other hard woods..... | 153,000                | .....          | 140,282                   |
| Total.....            | 5,910,500              | .....          | 2,398,916                 |

Pennsylvania has always been a state of great importance in the lumber industry. In 1850 it was exceeded in product only by New York, and in 1860 it took first place. In 1870 and 1880 it was exceeded by Michigan only. In 1890 Michigan and Wisconsin produced more, and in 1900 the third of the lake states, Minnesota, also took rank above it, making it the fourth state in the country.

*Delaware.*—This state, originally covered with forests of hard wood and yellow pine, has been pretty well cut over, and the greater part of it cleared and cultivated. It is estimated that 700 square miles, or 36 per cent of its area, are wooded. It probably contains little, if any, merchantable timber.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$236,883         |
| 1860..... | 278,161           |
| 1870..... | 405,041           |
| 1880..... | 411,060           |
| 1890..... | 405,057           |
| 1900..... | 471,482           |

*Maryland.*—Originally the northwest portion of the state, which lies within the Appalachian mountain region, was covered with mixed forests of white pine, hemlock, and hard wood. The central portion, stretching from the Blue Ridge to Chesapeake Bay, was covered with forests of hard woods, while the eastern shore contained pine forests with some hard woods. At present the pine has been cut, and much of the hard woods have been removed from the western part, while east of the Blue Ridge the merchantable timber of all sorts has been practically all cut away, and a large proportion of the land cleared for cultivation.

The wooded area is estimated at 4,400 square miles, or 44 per cent of the land area of the state. Very little of this, however, is occupied by merchantable timber.

The lumber industry has never been a prominent factor, but has grown quite steadily from the beginning.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$535,168         |
| 1860..... | 605,864           |
| 1870..... | 1,501,471         |
| 1880..... | 1,818,382         |
| 1890..... | 1,600,472         |
| 1900..... | 2,650,082         |

## TIMBER OWNED AND CUT, BY SPECIES.

| SPECIES.         | Owned (M feet, B. M.). | 1900 cut (M feet, B. M.). |
|------------------|------------------------|---------------------------|
| Conifers .....   | 120,600                | 109,651                   |
| Hard woods ..... | 129,500                | 78,806                    |
| Total .....      | 250,100                | 187,957                   |

*Virginia.*—In common with many of the other Southern states, this one may be divided into three areas; the mountain section formerly forested with pine, hemlock, and hard woods; the Piedmont region largely with oaks, mingled with some pine; and the Tertiary lands below the Fall Line formerly covered with yellow pine.

The pine has been, in the main, removed from the mountain region, and the yellow-pine belt below the Fall Line has been, in great part, depleted, and everywhere the better class of the hard woods has been cut away. Still the production of timber is large and rapidly increasing, the value of the cut having more than doubled between 1890 and 1900. The principal lumber product of the state is yellow pine, but much white pine and poplar is also cut.

The area of woodland is estimated at 23,400 square miles, or 58 per cent of the area of the state.

## LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$977,412         |
| 1860..... | 2,201,187         |
| 1870..... | 2,111,055         |
| 1880..... | 3,434,163         |
| 1890..... | 5,630,600         |
| 1900..... | 12,137,177        |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.               | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|------------------------|------------------------|----------------|---------------------------|
| Hemlock.....           | 101,400                | .....          | 1,364                     |
| Yellow pine .....      | 1,197,900              | 4,600          | 710,607                   |
| Poplar .....           | 132,700                | .....          | 86,201                    |
| White oak .....        | 270,200                | 3,600          | 143,243                   |
| Other hard woods ..... | 4,700                  | .....          | 12,674                    |
| Total.....             | 1,712,900              | .....          | 954,089                   |

*West Virginia.*—The entire area of West Virginia lies on the Alleghany plateau, which, in a general way, slopes from the east line of the state northwestward to the Ohio and Big Sandy rivers. The higher parts of this plateau are timbered with white pine, hemlock, and hard woods, while lower down the slope the proportion of hard woods increases, and the lower slopes were originally covered with forests of these species. Lumbering has been most active in the western part of the state near the Ohio River, where considerable areas have been cleared for cultivation. In the more eastern and higher parts of the state the forests have been in

great part culled for their more valuable species, such as black walnut and yellow poplar, but little cutting of the white pine has yet been done owing to its inaccessibility.

Until recently West Virginia has not been important in the lumber industry, but during the last ten years the value of its product has more than doubled. The principal species cut are hard woods; and of these, white oak and poplar.

The wooded area of West Virginia is estimated at 18,400 square miles, or 73 per cent of the area of the state, and most of this is occupied by timber of merchantable size and quantity.

## LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1870..... | \$1,478,399       |
| 1880..... | 2,431,857         |
| 1890..... | 5,515,065         |
| 1900..... | 10,612,837        |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------------|------------------------|----------------|---------------------------|
| Hemlock.....          | 188,100                | .....          | 90,776                    |
| Spruce .....          | 439,400                | .....          | 94,067                    |
| Yellow pine .....     | 352,200                | 9,800          | 17,954                    |
| Other conifers.....   | 100                    | .....          | 5,054                     |
| Poplar .....          | 589,200                | .....          | 193,402                   |
| White oak .....       | 1,004,400              | 6,100          | 853,469                   |
| Other hard woods..... | 35,000                 | .....          | 25,731                    |
| Total .....           | 2,608,400              | .....          | 780,463                   |

*North Carolina.*—The mountain regions of this state were originally covered with dense forests of mixed conifers and hard woods, the Piedmont region mainly with oak forests and the Atlantic plain with open forests of yellow pine, while the swampy regions near the coast contain large quantities of cypress. Considerable areas in all parts of the state have been cleared for cultivation. The forests in the mountain region and in the Piedmont country have been, in great part, culled of their most valuable species, mainly of oak and poplar, while vast amounts of yellow pine have been cut, and a beginning has been made upon the cypress. Much timber, however, still remains in the state, and the lumber industry is rapidly increasing in importance.

The wooded area of the state is estimated at 35,300 square miles, or 73 per cent of its area, and much the greater part of this, in spite of the extensive cutting, is still occupied by merchantable timber. In 1900 and 1901 an examination was made of the forests in the mountain region of the state by Messrs. H. B. Ayres and W. W. Ashe, under the United States Geological Survey. They found in this region a total stand of timber, of all species, of 10,650 million feet, distributed as follows among the different species represented, with an average stand per acre upon the timbered areas of



2,640 feet of merchantable timber and 16.83 cords of fire wood.

| SPECIES.        | Percent-<br>age of<br>total. | SPECIES.             | Percent-<br>age of<br>total. |
|-----------------|------------------------------|----------------------|------------------------------|
| Oak.....        | 41.41                        | Linnwood.....        | 2.69                         |
| Chestnut.....   | 17.20                        | Black gum.....       | 1.64                         |
| White pine..... | 2.68                         | Beech.....           | 1.06                         |
| Hemlock.....    | 5.30                         | Birch.....           | 3.03                         |
| Spruce.....     | 0.80                         | Maple.....           | 2.67                         |
| Poplar.....     | 1.85                         | Hickory.....         | 3.16                         |
| Ash.....        | 1.43                         | Locust.....          | 0.67                         |
| Cherry.....     | 0.17                         | Black pine.....      | 1.34                         |
| Cucumber.....   | 0.84                         | Short leaf pine..... | 0.43                         |
| Peawood.....    | 0.09                         | Other species.....   | 9.40                         |
| Buckeye.....    | 2.00                         |                      |                              |

The only estimate of the stand of yellow pine in the eastern portion of the state is that made by Professor Sargent in 1880. His figures give a total of 5,229 million feet at that time. This estimate must be greatly in error, inasmuch as several times this amount has been cut during the twenty years which have elapsed, and in 1900 an amount greater than these figures was reported as owned by lumbermen.

#### LUMBER INDUSTRY.

| YEARS.    | Value of<br>product. |
|-----------|----------------------|
| 1850..... | \$985,075            |
| 1860..... | 1,074,003            |
| 1870..... | 2,000,243            |
| 1880..... | 2,672,796            |
| 1890..... | 5,898,742            |
| 1900..... | 14,862,593           |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M<br>feet, B. M.). | Average<br>stand. | 1900 cut<br>(M feet, B.<br>M.). |
|-----------------------|---------------------------|-------------------|---------------------------------|
| Cypress.....          | 267,600                   | 3,700             | 31,845                          |
| Yellow pine.....      | 5,827,100                 | 3,900             | 1,228,022                       |
| Other conifers.....   | 31,600                    |                   | 10,696                          |
| Poplar.....           | 267,000                   |                   | 51,693                          |
| White oak.....        | 534,900                   | 3,700             | 86,245                          |
| Other hard woods..... | 60,800                    |                   | 7,977                           |
| Total.....            | 6,488,400                 |                   | 1,415,978                       |

*South Carolina.*—The upland portion of this state, from the Blue Ridge down to the Fall Line, was originally covered with hard-wood forests, in which was interspersed some pine. Below the Fall Line stretches the yellow-pine belt, while in the lowlands along the coast is some cypress. Lumbering has never been actively prosecuted in the state, and the probability is that a large part of the original stand still remains. The lumber product has increased greatly during the past ten years, the principal product being yellow pine, with a small quantity of cypress.

The wooded area of the state is estimated to be 20,500 square miles, or 68 per cent of its area, and the

most of this is believed to be timber of merchantable size and quality.

The only estimate that we have of timber in the state is that made by Professor Sargent in 1880, of the yellow pine, the stand of which was given in 1880 as 5,316 million feet, which may not be far from the truth.

#### LUMBER INDUSTRY.

| YEARS.    | Value of<br>product. |
|-----------|----------------------|
| 1850..... | \$1,108,880          |
| 1860..... | 1,124,440            |
| 1870..... | 1,197,005            |
| 1880..... | 2,031,507            |
| 1890..... | 2,146,750            |
| 1900..... | 5,207,184            |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M<br>feet B. M.). | Average<br>stand. | 1900 cut (M<br>feet B. M.). |
|-----------------------|--------------------------|-------------------|-----------------------------|
| Cypress.....          | 185,800                  | 4,700             | 32,155                      |
| Yellow pine.....      | 1,184,500                | 4,000             | 433,396                     |
| Other conifers.....   |                          |                   | 370                         |
| White oak.....        | 223,700                  | 9,300             | 11,419                      |
| Other hard woods..... | 404,200                  |                   | 6,544                       |
| Total.....            | 1,998,200                |                   | 483,884                     |

*Georgia.*—The northern mountainous portion of the state and the Piedmont region, extending southwestward to the Fall Line, which passes through Augusta, Macon, and Columbus, are covered with mixed forests, mainly of hard wood; and the region below the Fall Line comprises the yellow pine belt, which is succeeded in the lower regions immediately bordering the coast by cypress. Aside from the clearing for cultivation no great amount of timber has been cut in the state until recent years, the cut in 1900 being more than double that of 1890, and reaching a very respectable total. This cut consists almost entirely of yellow pine.

The wooded area of Georgia is estimated at 42,000 square miles, or 71 per cent of its area, and it is believed that most of this wooded area is occupied by merchantable timber.

The only estimates which we have of the stand of timber relate to yellow pine, which was estimated by Professor Sargent in 1880 at 16,778 million feet.

#### LUMBER INDUSTRY.

| YEARS.    | Value of<br>product. |
|-----------|----------------------|
| 1850..... | \$923,403            |
| 1860..... | 2,412,995            |
| 1870..... | 4,044,375            |
| 1880..... | 4,875,310            |
| 1890..... | 6,545,195            |
| 1900..... | 13,704,923           |



## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Yellow pine.....    | 4,123,300              | 3,800          | 1,295,664                 |
| Other conifers..... | 1,500                  | .....          | 13,724                    |
| Hard woods.....     | 87,400                 | .....          | 39,022                    |
| Total.....          | 4,212,200              | .....          | 1,354,010                 |

*Florida.*—The northern part of Florida, including half of the peninsula, is a forested region, covered in the main with yellow pine, with a large amount of cypress in the marshy regions, especially along the coasts. The forest is not continuous, but is much broken by prairie openings. Cutting in recent years has been quite active, the product having doubled between 1890 and 1900. The chief lumber product of the state is yellow pine, with a large amount of cypress.

The wooded area of the state is estimated at 37,700 square miles, or 70 per cent of its area, most of which is occupied by merchantable timber.

The only estimate of the timber which we have is that of Professor Sargent in 1880, which gives 6,615 million feet of yellow pine.

## LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$391,034         |
| 1860..... | 1,476,645         |
| 1870..... | 2,235,780         |
| 1880..... | 3,060,291         |
| 1890..... | 5,514,879         |
| 1900..... | 10,848,403        |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.         | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|------------------|------------------------|----------------|---------------------------|
| Cypress.....     | 1,342,800              | 10,500         | 110,367                   |
| Yellow pine..... | 4,573,700              | 3,800          | 11,762                    |
| Hard woods.....  | 2,000                  | .....          | 2,200                     |
| Total.....       | 5,918,500              | .....          | 824,329                   |

*Alabama.*—The northern part of the state, including nearly three-fourths of it, is covered with a timber growth of which hard woods form the principal component. Throughout this region, however, there is scattered some yellow pine, which in several localities develops into nearly pure growth. The southern fourth of the state is covered with a nearly pure growth of yellow pine, mainly of the long-leaf species. In the marshes around Mobile Bay, however, this gives way to cypress.

The estimated wooded area of the state is 38,300 square miles, or about 74 per cent of the total area. Sargent's estimate of the stand of yellow pine in the state assigned to it 21,192 million feet. Of this there were owned by lumbermen in 1900 nearly 4 billion feet, or a little less than one-fifth of the estimated stand.

The cut of pine in 1900 was a trifle over a billion feet, being nine-tenths of the total cut of the state.

## LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$1,103,481       |
| 1860..... | 1,873,484         |
| 1870..... | 1,359,083         |
| 1880..... | 2,649,634         |
| 1890..... | 8,507,971         |
| 1900..... | 12,867,551        |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------------|------------------------|----------------|---------------------------|
| Yellow pine.....      | 3,925,000              | 3,700          | 1,012,286                 |
| Other conifers.....   | 99,100                 | .....          | 32,111                    |
| White oak.....        | 908,400                | 5,800          | 61,268                    |
| Other hard woods..... | 178,200                | .....          | 44,384                    |
| Total.....            | 5,100,700              | .....          | 1,149,994                 |

*Mississippi.*—This state was originally nearly all covered with timber, consisting of pine in the southern third, of which a long tongue extended nearly to the north line of the state, following roughly the divide between the Mississippi and the Tuscaloosa rivers. There was also a small area near the Tennessee River in the northeastern corner. Elsewhere the timber consisted almost entirely of hard wood with much cypress in the Yazoo Bottom.

The timbered area of the state is estimated to comprise 32,300 square miles, or seven-tenths of its area. The estimated stand of yellow pine, as given by Sargent in 1880, was 24,975 million feet. Of this, seven and a half billion are reported as owned by lumbermen. More than three-fourths of the cut of 1900 consisted of yellow pine, the remainder being largely oak.

## LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$913,197         |
| 1860..... | 1,823,627         |
| 1870..... | 2,160,667         |
| 1880..... | 1,920,385         |
| 1890..... | 5,770,387         |
| 1900..... | 15,666,110        |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------------|------------------------|----------------|---------------------------|
| Yellow pine.....      | 7,539,600              | 7,900          | 964,360                   |
| Other conifers.....   | 93,800                 | .....          | 37,057                    |
| Cottonwood.....       | 141,900                | .....          | 39,714                    |
| Red gum.....          | 890,400                | .....          | 23,270                    |
| White oak.....        | 503,800                | 4,300          | 102,506                   |
| Other hard woods..... | 73,200                 | .....          | 41,832                    |
| Total.....            | 9,242,700              | .....          | 1,208,739                 |

*Louisiana.*—The southern portion, and especially the southwestern part, of the state, the counties of Cameron, Vermilion, and Calcasieu, are largely prairie. Elsewhere the state is densely forested. The southeastern part of the state, south of the Mississippi boundary, is largely covered with pine, as is also the northwestern portion of the state—that is, west of the Mississippi bottom lands and north of the prairie region of the southwest. The timber of the bottom lands consists of hard woods and cypress, in which the latter species largely predominates.

The timbered area of the state is estimated at 28,300 square miles, or 62 per cent of its area. The estimate of the stand of pine made by Sargent is 48,213 million feet. Of this between one-fifth and one-sixth was reported as owned by lumbermen. There was also reported as owned by them not less than 2 billion feet of cypress. Two-thirds of the cut consisted of yellow pine, the remainder consisting mainly of cypress.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$1,129,677       |
| 1860..... | 1,575,995         |
| 1870..... | 1,212,087         |
| 1880..... | 1,784,640         |
| 1890..... | 5,745,194         |
| 1900..... | 17,408,518        |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------------|------------------------|----------------|---------------------------|
| Cypress.....          | 2,024,900              | 6,500          | 399,663                   |
| Yellow pine.....      | 6,177,100              | 7,100          | 802,526                   |
| Cottonwood.....       | 904,900                | .....          | 58,097                    |
| White oak.....        | 823,900                | 7,800          | 5,186                     |
| Other hard woods..... | 28,300                 | .....          | 13,966                    |
| Total.....            | 9,964,100              | .....          | 1,214,387                 |

*Texas.*—With the exception of the northeastern portion this great state is almost treeless. A considerable area in the northeastern portion adjoining Louisiana is covered with yellow pine of commercial size. West of this extends woodland, covered mainly with post oak and black-jack of value only for firewood, fencing, and other minor purposes. Further to the southwest extends a considerable area of mesquite, which in some regions develops into the magnitude of trees, and becomes of service for fencing and firewood.

Of the area of the state, 64,000 square miles, or 24 per cent, is estimated to be wooded. The stand of yellow pine in the state is estimated by Sargent at 67,508.5 million feet. Of this, 9,750 million feet are reported as owned by lumbermen. The cut consists almost entirely of this yellow pine.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$466,012         |
| 1860..... | 1,735,454         |
| 1870..... | 1,960,851         |
| 1880..... | 3,673,449         |
| 1890..... | 11,942,686        |
| 1900..... | 16,296,473        |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Yellow pine.....    | 9,760,700              | 6,100          | 1,225,344                 |
| Other conifers..... | .....                  | .....          | 9,540                     |
| Hard woods.....     | 145,600                | .....          | 11,294                    |
| Total.....          | 9,906,300              | .....          | 1,246,178                 |

*Indian Territory.*—Pine is found in Indian Territory only in the eastern part, and, with the exception of a small area in the Boston Mountains, only in the southeastern part south of the Arkansas River. Elsewhere the timber of the territory consists of hard woods, mainly of black-jack and post oak upon the uplands, with larger and more valuable species in the bottom lands.

The woodland of the territory is 20,000 square miles, or 65 per cent of its area, as derived from the maps made by the United States Geological Survey.

#### LUMBER INDUSTRY.

| YEAR.     | Value of product. |
|-----------|-------------------|
| 1900..... | \$199,879         |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.        | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------|------------------------|----------------|---------------------------|
| Conifers.....   | 8,400                  | .....          | 6,602                     |
| Hard woods..... | 112,100                | .....          | 9,378                     |
| Total.....      | 120,500                | .....          | 15,980                    |

*Oklahoma.*—Of the area of Oklahoma it is estimated that 4,400 square miles, or 11 per cent, is timber, consisting almost entirely of black-jack and post oak.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1890..... | \$27,260          |
| 1900..... | 63,569            |

*Arkansas.*—The area of Arkansas is almost entirely covered with forests, the only exception being a few prairies in the eastern part of the state. The timber

in the northern part consists mainly of hard woods, with a little pine, while in the southern part of the state, west of the alluvial region, are extensive forests of yellow pine. The alluvial regions are wooded, as elsewhere, with an admixture of cypress and hard woods.

The timbered area of the state is estimated at 45,000 square miles, or 84 per cent of its area. The stand of pine in the state, as estimated by Sargent, is 41,315 million feet. Of this nearly 4 billion feet is reported as owned by lumbermen. Of the total cut of the state, more than two-thirds consisted of yellow pine, the remainder being mainly hard wood.

The lumber industry of this state has increased enormously in the past ten years, making it one of the leading states of the Union in this industry.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$122,918         |
| 1860..... | 1,155,902         |
| 1870..... | 1,844,408         |
| 1880..... | 1,793,848         |
| 1890..... | 8,949,052         |
| 1900..... | 23,953,988        |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------------|------------------------|----------------|---------------------------|
| Cypress.....          | 515,100                | 5,000          | 108,398                   |
| Yellow pine.....      | 3,896,000              | 4,500          | 1,113,297                 |
| Other conifers.....   | 2,900                  | .....          | 20                        |
| Cottonwood.....       | 588,300                | .....          | 116,825                   |
| Red gum.....          | 708,000                | .....          | 60,656                    |
| White oak.....        | 1,829,600              | 4,700          | 226,948                   |
| Other hard woods..... | 317,900                | .....          | 40,014                    |
| Total.....            | 7,917,800              | .....          | 1,665,158                 |

*Tennessee.*—The western part of Tennessee is still heavily timbered with a mixture of hard woods and cypress, the latter species being mainly found in the river valleys. In the central part of the state much clearing has been done. The eastern part of the state, with the exception of the valley of the Tennessee, which has been to a large extent cleared, is still heavily forested with hard woods, while upon the greater elevations the growth changes to coniferæ.

The wooded area is estimated at 27,300 square miles, or 65 per cent of the area of the state. As is seen from the table of timber holdings, the amount of conifers is trifling, while more than two-thirds of the entire stand owned consists of white oak. The lumber industry of the state has more than doubled in the past ten years.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$725,387         |
| 1860..... | 2,199,708         |
| 1870..... | 3,890,687         |
| 1880..... | 3,744,905         |
| 1890..... | 9,073,686         |
| 1900..... | 18,127,784        |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------------|------------------------|----------------|---------------------------|
| Conifers.....         | 55,500                 | .....          | 82,038                    |
| Ash.....              | 149,500                | .....          | 18,830                    |
| Poplar.....           | 446,900                | .....          | 275,623                   |
| Red gum.....          | 276,300                | .....          | 52,333                    |
| White oak.....        | 2,653,600              | 3,300          | 408,888                   |
| Other hard woods..... | 163,400                | .....          | 114,208                   |
| Total.....            | 3,745,200              | .....          | 951,408                   |

*Kentucky.*—The timber conditions of Kentucky are very similar to those of Tennessee, with heavy hard wood and cypress forests in the west, the extensive clearing in the central part of the state—the Blue Grass country—and heavy forests again in the Alleghany plateau, which forms the eastern part of the state.

It is estimated that 22,200 square miles, or 53 per cent, of the area of the state is wooded.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$1,602,434       |
| 1860..... | 2,463,085         |
| 1870..... | 3,692,086         |
| 1880..... | 4,064,361         |
| 1890..... | 7,904,428         |
| 1900..... | 13,774,911        |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------------|------------------------|----------------|---------------------------|
| Conifers.....         | 5,700                  | .....          | 34,602                    |
| Ash.....              | 125,500                | .....          | 4,877                     |
| Black walnut.....     | 125,000                | .....          | 2,118                     |
| Poplar.....           | 549,800                | .....          | 279,740                   |
| White oak.....        | 874,400                | 4,800          | 392,804                   |
| Other hard woods..... | 79,400                 | .....          | 68,082                    |
| Total.....            | 1,759,800              | .....          | 777,218                   |

*Ohio.*—When settlement commenced in this state it was in the main covered with heavy forests of hard woods, through which was scattered a small admixture of white pine. Persistent cutting for a century, however, has practically destroyed all the forests of the state, and even the areas upon which timber is growing have been greatly reduced, since much the larger part of the state is now devoted to agriculture.

It is estimated that 9,300 square miles, or 23 per cent of its area, is wooded.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$3,804,462       |
| 1860..... | 5,158,076         |
| 1870..... | 10,235,180        |
| 1880..... | 13,864,460        |
| 1890..... | 15,279,843        |
| 1900..... | 20,790,850        |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------------|------------------------|----------------|---------------------------|
| Conifers.....         | 100                    | .....          | 42,818                    |
| White oak.....        | 296,700                | 5,300          | 598,440                   |
| Other hard woods..... | 88,000                 | .....          | 325,010                   |
| Total.....            | 384,800                | .....          | 961,268                   |

*Michigan.*—The upper peninsula and the northern half of the lower peninsula were originally covered with heavy forests of conifers, consisting mainly of white pine. Southward, in the lower peninsula, hard woods were intermingled in increasing proportion, while the southern part was largely prairie. The result of a half century of lumbering is to reduce the white pine to a small fraction of its former stand, to cut much of the hard wood, and to make a good beginning on the other conifers. Much of the southern part of the lower peninsula has been cleared for cultivation.

The woodland of the state, including stump lands, is estimated to have an area of 38,000 square miles, or 67 per cent of the estimated area. The stand of white pine was estimated by Sargent in 1880 at 35 billion feet, which, judging from the amount subsequently cut and that now supposed to be standing, was probably not far from correct. In 1896 Professor Fernow estimated the coniferous stand at 18 billion feet, of which 6 billions was white pine. The last item is somewhat small, as the cut, plus the amount reported as owned, two items which we know quite definitely, foot up more than 6 billion feet.

With a relatively small production in 1850 and 1860, Michigan leaped in 1870 into the leading position as a lumber state and maintained that position until 1900, when, owing to the partial exhaustion of her resources, she fell slightly behind Wisconsin, but still remains the second state in the production of lumber.

## LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$2,404,329       |
| 1860..... | 7,040,190         |
| 1870..... | 31,946,396        |
| 1880..... | 52,449,328        |
| 1890..... | 83,121,969        |
| 1900..... | 54,290,520        |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------------|------------------------|----------------|---------------------------|
| Cedar.....            | 1,299,700              | .....          | 871,082                   |
| Hemlock.....          | 4,522,000              | .....          | 847,634                   |
| White pine.....       | 3,716,000              | 6,200          | 1,306,092                 |
| Other conifers.....   | 482,100                | .....          | 110,669                   |
| Ash.....              | 768,900                | .....          | 86,759                    |
| Basswood.....         | 729,700                | .....          | 45,796                    |
| Elm.....              | 391,800                | .....          | 110,043                   |
| Maple.....            | 1,230,700              | .....          | 898,165                   |
| White oak.....        | 701,200                | 13,200         | 134,562                   |
| Other hard woods..... | 259,600                | .....          | 52,440                    |
| Total.....            | 14,546,100             | .....          | 3,462,152                 |

*Wisconsin.*—The northern part of Wisconsin was formerly covered with coniferous forests, consisting mainly of white pine. Southward these forests changed into hard wood, which in the southern part of the state were broken by prairies. Lumbermen have cut much of the pine, although that species is still far the largest product of its mills, forming two-thirds of the cut, and Wisconsin is still the chief contributor to the country's supply of this species.

The woodland of the state, including stump land, is estimated to have an area of 31,750 square miles, or 58 per cent of its area. An estimate of the stand of white pine was made by Sargent in 1880, showing 41 billion feet. Another estimate by Roth in 1897 gave 17 billions. In the interval 50 billions had been cut. Since 1897 about 7,500 millions have been cut, and the cut is increasing, rather than diminishing. Moreover, there are reported as owned by lumbermen 4,750 million feet. These facts suggest the probability that Dr. Roth's estimate may be rather small.

The lumber industry did not acquire great prominence in the state until 1870. In 1880 it occupied third place, being exceeded by Pennsylvania and Michigan. In 1890 it rose to second place, and in 1900 had the largest product of all the states.

## LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$1,218,516       |
| 1860..... | 4,877,880         |
| 1870..... | 15,130,719        |
| 1880..... | 17,952,347        |
| 1890..... | 60,906,444        |
| 1900..... | 57,634,816        |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------------|------------------------|----------------|---------------------------|
| Hemlock.....          | 1,713,200              | .....          | 402,054                   |
| Norway pine.....      | 2,518,700              | .....          | 93,798                    |
| White pine.....       | 4,747,600              | 4,600          | 2,478,795                 |
| Other conifers.....   | 44,900                 | .....          | 66,141                    |
| White oak.....        | 813,600                | 6,400          | 127,754                   |
| Other hard woods..... | 549,800                | .....          | 392,285                   |
| Total.....            | 10,387,800             | .....          | 3,560,828                 |

*Minnesota.*—This, the latest of the Lake states to develop a great lumber industry, was, like Michigan and Wisconsin, heavily timbered, mainly with white pine in the northern portion, while the Red River Valley on the west and the southern portion were largely prairie, with a belt of mixed hard-wood forests intervening.

Lumbering has been carried on actively for thirty years, and a large part of the pine has been removed. The woodland of the state, including stump lands, is estimated at 52,200 square miles, or 66 per cent of the total area. The stand of timber has been variously estimated. In 1880 Sargent estimated the stand of white pine remaining at 8,170 million feet. Since then

double that amount has been cut, and the cut is still increasing. In 1896 Gen. C. C. Andrews, state fire warden, estimated the white pine at 17 billions, and in 1899 Mr. H. B. Ayres estimated it at between 11 and 12 billions. The last two estimates agree closely, and yet it is safe to say that for various reasons much more than the amount given will eventually be cut.

The lumber industry in Minnesota grew slowly, and became of great importance only between 1880 and 1890. In the latter year its product placed it third among the states, following Wisconsin and Michigan.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$57,800          |
| 1860..... | 1,234,203         |
| 1870..... | 4,299,162         |
| 1880..... | 7,366,038         |
| 1890..... | 25,076,132        |
| 1900..... | 48,686,161        |

#### TIMBER OWNED AND CUT BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Norway pine.....    | 2,623,800              |                | 107,695                   |
| Spruce.....         | 894,000                |                | 1,217                     |
| White pine.....     | 4,290,000              | 3,600          | 2,250,841                 |
| Other conifers..... | 800                    |                | 19,669                    |
| Hard woods.....     | 183,000                |                | 61,776                    |
| Total.....          | 7,991,100              |                | 2,441,198                 |

*Indiana.*—This state, with the exception of a small proportion of prairie, was originally covered with forest. This, however, has in the great part been cut away and the land is now devoted to agriculture.

It is estimated that the area of woodland comprises 10,800 square miles, or 30 per cent of the state's area. Little of this, however, consists of merchantable forests. It is probable that most of the lumber manufactured in the state is brought from outside the state.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$2,195,351       |
| 1860..... | 4,271,605         |
| 1870..... | 12,324,755        |
| 1880..... | 14,260,830        |
| 1890..... | 20,278,023        |
| 1900..... | 20,618,724        |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------------|------------------------|----------------|---------------------------|
| Conifers.....         |                        |                | 2,985                     |
| White oak.....        | 422,900                | 6,500          | 646,065                   |
| Other hard woods..... | 170,800                |                | 335,668                   |
| Total.....            | 593,700                |                | 984,718                   |

*Illinois.*—The surface of this state is mainly prairie with forests only in the southern part. These consist of hard wood, and comprise, it is estimated, 10,200 square miles, or 18 per cent of the area of the state.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$1,324,484       |
| 1860..... | 2,543,385         |
| 1870..... | 4,546,769         |
| 1880..... | 5,063,037         |
| 1890..... | 5,135,155         |
| 1900..... | 7,652,118         |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------------|------------------------|----------------|---------------------------|
| Conifers.....         | 12,100                 |                | 188,206                   |
| Cottonwood.....       | 363,000                |                | 18,938                    |
| White oak.....        | 353,800                | 5,100          | 170,001                   |
| Other hard woods..... | 49,000                 |                | 63,004                    |
| Total.....            | 778,000                |                | 390,149                   |

*Nebraska.*—In this state woodlands are found only in the eastern part closely bordering the Missouri River, and in narrow strips extending up the streams. It is estimated that only 2,300 square miles, or 3 per cent of the area of the state, are wooded.

*Kansas.*—There are no forests in Kansas. Hard wood is found in the southeastern part of the state, and there only to a small extent, comprising, it is estimated, 5,700 square miles, or 7 per cent of the area of the state.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1860..... | \$1,550,737       |
| 1870..... | 1,736,381         |
| 1880..... | 682,697           |
| 1890..... | 85,521            |
| 1900..... | 104,182           |

*Iowa.*—Iowa is a prairie state without merchantable forests. Such as formerly existed have been practically cut away. Scattered woodlands are found in the eastern part of the state, especially along the courses of the rivers and upon the face of bluffs. The total extent is estimated at 7,000 square miles, or 13 per cent of the area of the state.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$470,760         |
| 1860..... | 2,124,502         |
| 1870..... | 5,794,285         |
| 1880..... | 6,185,628         |
| 1890..... | 12,056,302        |
| 1900..... | 8,677,058         |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.        | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------|------------------------|----------------|---------------------------|
| Conifers.....   | 231,500                | .....          | 303,969                   |
| Hard woods..... | 42,000                 | .....          | 40,884                    |
| Total.....      | 273,500                | .....          | 344,853                   |

*Missouri.*—The northern part of Missouri is, like Iowa, a prairie region, with timber in the valleys of the principal streams and in occasional patches on the uplands. The southern portion is, except where cleared for farming, quite continuously wooded. The forests consist in the main of hard wood with a little admixture of pine, while in the bottom lands of the southeast is considerable cypress.

The timber land of the state is estimated at 41,000 square miles, or 60 per cent of its area.

## LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$1,479,124       |
| 1860..... | 3,074,226         |
| 1870..... | 6,353,112         |
| 1880..... | 8,205,617         |
| 1890..... | 8,359,925         |
| 1900..... | 11,177,529        |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.              | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|-----------------------|------------------------|----------------|---------------------------|
| Cypress.....          | 2,006,000              | .....          | 9,848                     |
| Other conifers.....   | 208,000                | .....          | 269,394                   |
| Cottonwood.....       | 126,300                | .....          | 75,750                    |
| Elm.....              | 418,300                | .....          | 23,124                    |
| Red gum.....          | 278,900                | .....          | 51,498                    |
| White oak.....        | 1,458,000              | 3,300          | 251,552                   |
| Other hard woods..... | 61,700                 | .....          | 35,466                    |
| Total.....            | 4,557,200              | .....          | 721,632                   |

*North Dakota.*—In this state woodlands are found only on the Turtle mountains and perhaps a few other glacial hills and in narrow strips along the Missouri and other streams.

The total area of wooded land is estimated at only 600 square miles, or 1 per cent of the state's area.

*South Dakota.*—In the eastern part of this state timber is found only in the valley of the Missouri and perhaps one or two other streams. In the western part of the state are the Black Hills, which are covered with a pure forest of yellow pine. The trees are not large but are of sufficient size to serve for building purposes and mine props, and this forest is of inestimable value to the great mines about Deadwood, for without a supply of cheap lumber it would probably be impossible to work these mines at a profit.

Nearly all of this timber has been reserved by the United States Government for the purpose of protect-

ing this source of supply from destruction by reckless lumbering and fires. The area of land thus reserved is 1,833 square miles.

The wooded area of the state is estimated at 2,500 square miles, or 3 per cent of its area. It is estimated that there is in the Black Hills a total amount of 1,500 million feet of standing yellow pine. The reported cut for 1900 is but 30 millions.

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Yellow pine.....    | 15,100                 | .....          | 80,163                    |
| Other conifers..... | .....                  | .....          | 1,143                     |
| Hard woods.....     | 3,100                  | .....          | 558                       |
| Total.....          | 18,200                 | .....          | 81,864                    |

*Montana.*—The forests of Montana are limited to the western half of the state, and in that region almost entirely to the mountains, the valleys being, as a rule, timberless. The timber consists entirely of conifers, yellow pine, red fir, and tamarack being the principal species represented.

The woodland of the state is estimated at 42,000 square miles, or 29 per cent of its area. A large part of this area, however, has been burned over, with a greater or less destruction of the timber, and is in various stages of regrowth.

Within this state the United States has reserved for forest purposes areas amounting to 7,875 square miles, containing, it is estimated, 4,517 million feet of timber. This reserved area is somewhat more than one-tenth of the wooded area of the state.

The principal timber cut of the state is yellow pine, with less quantities of red fir and tamarack. The small amount of hard wood reported as cut in the state is doubtless brought in from other parts of the country, as no hard wood grows within its limits.

## LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1870..... | \$430,957         |
| 1880..... | 527,695           |
| 1890..... | 1,182,510         |
| 1900..... | 2,949,992         |

## TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Red fir.....        | 230,600                | .....          | 61,981                    |
| Tamarack.....       | 264,200                | .....          | 34,197                    |
| Yellow pine.....    | 85,500                 | .....          | 154,171                   |
| Other conifers..... | 2,500                  | .....          | 5,462                     |
| Hard woods.....     | .....                  | .....          | 1,300                     |
| Total.....          | 632,800                | .....          | 257,061                   |

*Idaho.*—The northern part of Idaho is well timbered, the amount and density of the forest diminishing southward, so that in the Salmon River Mountains there is not much timber, while the great lava plateau occupying the southern part of the state is entirely devoid of anything larger than sagebrush. The timber consists entirely of conifers, and mainly of western yellow pine, western white pine, and red fir, with a little cedar. Four-fifths of the cut in the census year consisted of yellow pine.

The area of woodland is estimated at 35,000 square miles, or 42 per cent of the area of the state. Much of this land, however, has been burned over, causing the partial or complete destruction of the timber, and is now covered with young growth.

Within the state the United States has reserved an area of 6,164 square miles, estimated to contain 6,800 million feet of timber.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1870..... | \$56,850          |
| 1880..... | 349,035           |
| 1890..... | 681,790           |
| 1900..... | 937,665           |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Cedar.....          | 137,500                | .....          | 4,975                     |
| Red fir.....        | 56,700                 | .....          | 4,966                     |
| White pine.....     | 178,700                | .....          | 1,990                     |
| Yellow pine.....    | 197,200                | 5,800          | 53,076                    |
| Other conifers..... | 6,800                  | .....          | 3,485                     |
| Total.....          | 576,900                | .....          | 68,492                    |

*Colorado.*—The timber of Colorado is found only in the mountainous portions of the state, the plains in the east and the plateaus in the west being almost entirely destitute of tree growth. The timber of merchantable character consists entirely of conifers, and largely, if not mainly, of yellow pine. Nearly three-fourths of the cut during the census year consisted of that species.

The wooded area of the state is estimated to comprise 33,500 square miles, or 32 per cent of its total area.

The United States has reserved areas amounting to 4,849 square miles, or nearly one-seventh of the wooded area of the state. These reserves, however, contain but little merchantable timber, as they had been cut and burned very exhaustively before being reserved. They are of value principally for the protection of future crops.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1870..... | \$324,370         |
| 1880..... | 1,051,295         |
| 1890..... | 1,363,749         |
| 1900..... | 1,627,605         |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Yellow pine.....    | 595,300                | 8,000          | 97,339                    |
| Other conifers..... | 75,800                 | .....          | 37,355                    |
| Hard woods.....     | .....                  | .....          | 85                        |
| Total.....          | 671,100                | .....          | 134,779                   |

*Wyoming.*—The timber of this state is confined mainly to the Yellowstone Park with the mountains east and south thereof, the Big Horn Mountains in the north, and the Medicine Bow Mountains in the south-east. It consists, so far as merchantable species are concerned, almost entirely of yellow pine.

The wooded land covers an area estimated at 12,500 square miles, or 13 per cent of the area of the state. Of this the United States has reserved an area amounting altogether to 5,207 square miles, and an area in Yellowstone National Park of about 3,500 square miles, making altogether a reservation of more than two-thirds of the estimated wooded area of the state.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1870..... | \$268,000         |
| 1880..... | 40,990            |
| 1890..... | 124,462           |
| 1900..... | 831,558           |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Yellow pine.....    | 233,200                | 4,000          | 14,242                    |
| Other conifers..... | 21,100                 | .....          | 3,152                     |
| Total.....          | 254,300                | .....          | 17,394                    |

*Utah.*—Merchantable timber in Utah is found mainly in the Uinta Mountains in the northeastern part of the state, and upon the high plateaus in the southern part. The Wasatch Range, which traverses the middle of the state from north to south, contains very little, if any, timber of merchantable quality.

The wooded area is estimated at 10,000 square miles, or 13 per cent of the area of the state. Of this the United States has reserved, mainly in the Uinta Mountains, an area of 1,606 square miles.

The amount of timber owned by lumber companies, and the amount reported as cut in the census year are very small.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$14,620          |
| 1860..... | 119,145           |
| 1870..... | 661,481           |
| 1880..... | 875,164           |
| 1890..... | 249,940           |
| 1900..... | 214,187           |

*Nevada.*—There is but little timber in Nevada, that little being mainly found in the western part of the state in the regions outlying the Sierra Nevada.

The entire area of wooded land is estimated at only 6,100 square miles, or 6 per cent of the state's area. The amount of timber land owned by lumber companies and the cut in the census year were insignificant.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1870..... | \$432,500         |
| 1880..... | 243,200           |
| 1890..... |                   |
| 1900..... | 7,060             |

*New Mexico.*—Merchantable timber in this territory is confined to the mountains and is composed in the main of yellow pine and spruce, the cut during the census year being composed almost entirely of the first-named species.

The wooded area of the territory is estimated at 23,700 square miles, or 19 per cent of its total area. In the territory the United States has reserved tracts amounting to 4,299 square miles, the principal of these being about the head of Gila River, in the western part of the territory.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$20,000          |
| 1860..... | 45,150            |
| 1870..... | 121,225           |
| 1880..... | 173,930           |
| 1890..... | 339,761           |
| 1900..... | 411,627           |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.         | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|------------------|------------------------|----------------|---------------------------|
| Spruce.....      | 1,003,800              |                | 203                       |
| Yellow pine..... | 1,315,900              | 1,700          | 81,687                    |
| Total.....       | 2,319,700              |                | 81,840                    |

*Arizona.*—Merchantable timber of Arizona is confined almost entirely to the summit and borders of the Colorado plateau. It consists almost entirely of yellow pine, there being no hard woods, and the conifers other than yellow pine are found only upon higher parts of the mountains and in very limited quantities.

The total wooded area of the territory is estimated at 25,000 square miles, or 22 per cent of the area of the territory. Only a small part of this, however, is occupied by yellow-pine forest, the principal portion consisting of piñon and juniper forest, which are of value only for firewood, fencing, etc.

Within the territory the United States has reserved

an area of 9,195 square miles, including most of the yellow-pine country, together with considerable areas of piñon and juniper.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1870..... | \$16,000          |
| 1880..... | 215,918           |
| 1890..... | 248,700           |
| 1900..... | 547,700           |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Yellow pine.....    | 409,200                | 2,000          | 36,048                    |
| Other conifers..... |                        |                | 154                       |
| Total.....          | 409,200                |                | 36,202                    |

*California.*—The timber of California is found upon the Sierra Nevada and the coast ranges north of San Francisco Bay. A little is found in the coast ranges farther south and in those of southern California. The species consist mainly of yellow and sugar pine, redwood, and red fir.

Redwood is found in a narrow strip stretching from the Oregon line southward, closely bordering the coast, nearly to the bay of San Francisco. In this strip, comprising some 2,000 square miles, there is estimated to be 75 billion feet of redwood in a pure forest. This is probably the densest forest, as measured by the amount of lumber per acre, in the world. Lumbering is carried on mainly about Humboldt Bay, at Crescent City near the Oregon line, and at various points in Mendocino county. The cut is almost entirely for domestic and foreign export, the local trade being very small. It is shipped to South America, Australia, and Japan.

Yellow pine is found along the entire length of the Sierra Nevada and in the northern coast ranges. It occupies in the Sierra a well-defined belt, which in the southern part of the range is limited by a contour 3,000 feet above sea level, while northward it gradually descends, coming down to about 1,500 feet in the upper Sacramento valley. Its upper limit is, on an average, about 8,000 feet, above which it is succeeded by species which are fitted to a colder climate. Throughout its range it is accompanied by sugar pine in the average proportion of about three of the former to one of the latter. The forest also contains a notable amount of incense cedar and of red fir. The composition of the forests in the northern part of the coast ranges is quite similar to that of the Sierra, excepting that the proportion of red fir is somewhat greater.

Scattered about in the yellow-pine forest, on the slopes of the Sierra Nevada, at altitudes ranging from 4,000 to 6,000 feet, are ten groves, differing greatly in



magnitude, of *Sequoia gigantea*, the big tree. These trees range in height up to 325 feet, and in diameter to a little over 30 feet. They do not occur in pure growth, but scattered through the yellow-pine forest.

The wooded land of the state is estimated to have an area of 44,700 square miles, or 22 per cent of the total area of the state. The total amount of standing timber in the state is estimated to be at least 200 billion feet, the principal species being redwood and yellow pine, with smaller amounts of sugar pine, red fir, and incense cedar. Of the total estimated stand, about one-sixth is reported as owned by lumbermen, while the cut is less than one-half of 1 per cent of the total stand.

The United States has made a number of forest reserves which include all the ranges of the southern part of the state, and the Sierra Nevada range from its southern end northward to latitude 38° 30'. Besides the reserves, which include a total area of 13,833 square miles, it has also set apart an area of 1,500 square miles, inclosing the Yosemite valley as a national park, making a total reserved area in the state of 15,333 square miles, or more than one-third of the wooded area of the state.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$959,485         |
| 1860..... | 3,943,881         |
| 1870..... | 5,227,064         |
| 1880..... | 4,428,950         |
| 1890..... | 8,794,655         |
| 1900..... | 13,764,647        |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Cedar.....          | 788,000                | 20,600         | 1,211                     |
| Red fir.....        | 1,341,700              | 20,300         | 15,621                    |
| Redwood.....        | 14,245,200             | 58,600         | 486,191                   |
| Sequoia.....        | 600,000                | 37,600         | .....                     |
| Spruce.....         | 1,468,800              | 19,500         | 18,561                    |
| Sugar pine.....     | 3,911,200              | 19,000         | 52,308                    |
| Yellow pine.....    | 13,738,300             | .....          | 289,095                   |
| Other conifers..... | .....                  | .....          | 1,139                     |
| Hard woods.....     | .....                  | .....          | 539                       |
| Total.....          | 36,087,700             | .....          | 864,665                   |

*Oregon.*—The forests of Oregon are found mainly west of the crest of the Cascade range. In this region, taken as a whole, the forests are very heavy, especially near the Pacific coast in the northern part of the state, where stands of 100,000 feet per acre for entire townships have been reported. East of the range the timber is by no means as heavy, and is confined to the eastern slopes of the range, the higher parts of the plateau, and the Blue Mountains in the northeastern part of the state.

In the region east of the range the timber consists almost entirely of yellow pine. West of the range the principal tree is red fir, with some hemlock, cedar, and

spruce. In this part of the state, and near its middle latitude, yellow pine appears and gradually increases in importance southward, so that near the southern boundary of the state it divides the forest with the red fir. A little sugar pine accompanies it.

It is estimated that the woodlands cover 54,300 square miles, or 57 per cent of the area of the state. A careful canvass of the timber resources of the state, as recently made by the United States Geological Survey, shows a total stand of timber of about 225 billion feet, 150 billion feet of which is estimated to consist of red fir and 40 billion feet of yellow pine, the remainder consisting of other species of conifers—mainly cedar, hemlock, and spruce. There were reported by lumbermen as owned in the state a trifle over 20 billion feet, or less than 10 per cent of the total amount of standing timber. The cut in the census year, 740 million feet, was about three-tenths of 1 per cent of the total stand. The principal lumber center is Portland.

The United States has reserved areas amounting to 7,271 square miles, nearly all of which is comprised in the Cascade range reserve, which includes that range throughout its extent within the state. These reserves are estimated, as the result of a careful examination, to contain about 55 billion feet of timber, or one-fourth the supply of the state.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1850..... | \$1,355,500       |
| 1860..... | 690,008           |
| 1870..... | 1,014,211         |
| 1880..... | 2,080,463         |
| 1890..... | 5,530,767         |
| 1900..... | 10,352,167        |

#### TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, E. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Cedar.....          | 2,803,900              | 31,200         | 36,587                    |
| Hemlock.....        | 4,184,300              | .....          | 85                        |
| Red fir.....        | 11,153,100             | 26,500         | 501,491                   |
| Spruce.....         | 680,100                | 9,000          | 63,209                    |
| Yellow pine.....    | 1,530,400              | 16,000         | 134,188                   |
| Other conifers..... | .....                  | .....          | 2,480                     |
| Hard woods.....     | .....                  | .....          | 2,529                     |
| Total.....          | 20,351,800             | .....          | 740,419                   |

*Washington.*—East of the Cascade range the timber of this state consists in the main of yellow pine, which occupies the eastern slope of that range and the country north of the Columbia, with a light forest in the extreme eastern part of the state south of Spokane. In the region north of the Columbia, the yellow pine is interspersed with some tamarack and western white pine, while upon the east slope of the Cascades there is considerable red fir. All these forests east of the mountains are light as compared with those west of the range. In that portion of the state the forests, consisting mainly

of red fir, are very heavy, being exceeded only by the redwood forests of California. Red fir, which is not only the most numerous but the most valuable component of the forest in commercial size and quality, extends from the shores of Puget Sound up the mountains to an altitude of perhaps 4,000 feet. Near the Pacific coast the climate seems to be unfitted to it, and its place is taken by hemlock, cedar, and Sitka spruce.

It is estimated that 47,700 square miles, or 71 per cent of the area of the state, are wooded. Much of this, however, consists of burned and cut lands that are now restocking. The total stand of timber, as obtained from a fairly thorough canvass of the state made by the United States Geological Survey, is estimated at 195,688 million feet. This is distributed among the principal species as follows:

|                  |        |
|------------------|--------|
| Red fir.....     | 90,593 |
| Spruce.....      | 8,221  |
| Cedar.....       | 22,646 |
| Hemlock.....     | 41,571 |
| Yellow pine..... | 13,082 |

Within the limits of the state the United States has reserved areas amounting to 9,500 square miles as forest reserves, besides a small tract about Mount Rainier of 324 square miles, which has been made a national park. All these forest reserves are in mountainous country, mainly in the Cascade range and the Olympics.

Enormous amounts of valuable timber have been destroyed by fire in the state, and large portions of the amount formerly standing have been cut. The lumber industry has been carried on in an extremely wasteful manner, only from a fourth to a third of the wood material having been utilized. When contrasted with the practice in the states bordering on the Great Lakes, where three-fourths of the tree is utilized, the amount of waste becomes apparent. This is unavoidable under present conditions of market and price, but will improve as the demand for this lumber increases.

The lumber industry of Washington is of far greater importance than in either of the other two Pacific coast states; indeed, it is greater than the two combined. It first assumed importance between 1880 and 1890, and increased with tremendous rapidity, so that in 1900 Washington was the fifth state of the Union in the lumber industry, with a cut of 2,300 million feet, while the product was valued at over \$30,000,000.

Lumbering is carried on in this state, mainly for export, by large mills with the most improved machinery and appliances for doing work upon a wholesale scale. In the lumber camps the work is done with donkey engines and wire cables. The sawmills are; in the main, large establishments with band and gang saws and all appliances for the saving of labor in the handling of lumber. The principal centers of the sawmill industry are Tacoma, Port Blakeley, Seattle, Everett, Bellingham Bay, and Grays Harbor.

The preeminence of Washington in the lumber indus-

try over the other states on the coast is due primarily to the fact that much of the timber land has been easily accessible to water transportation, since it borders upon the shores of Puget Sound. The timber accessible to this means of transportation is, however, at present largely cut, and the transportation of logs from the camps is now mainly carried on by means of logging railways.

There was reported as owned by lumbermen 21,700 million feet of lumber, half of which consisted of red fir, and a third of yellow pine. This amount owned is a trifle more than one-tenth of the total amount estimated to be standing in the state.

#### LUMBER INDUSTRY.

| YEARS.    | Value of product. |
|-----------|-------------------|
| 1860..... | \$1,172,520       |
| 1870..... | 1,807,585         |
| 1880..... | 1,734,742         |
| 1890..... | 17,450,301        |
| 1900..... | 30,286,280        |

#### TIMBER OWNED AND CUT BY SPECIES, AND AVERAGE STAND.

| SPECIES.            | Owned (M feet, B. M.). | Average stand. | 1900 cut (M feet, B. M.). |
|---------------------|------------------------|----------------|---------------------------|
| Cedar.....          | 3,472,500              | 23,300         | 899,124                   |
| Red fir.....        | 10,940,000             | 16,300         | 1,197,595                 |
| Spruce.....         | 784,600                | 24,500         | 89,313                    |
| Yellow Pine.....    | 6,449,300              | 22,000         | 95,965                    |
| Other conifers..... | 95,700                 | .....          | 8,094                     |
| Hard woods.....     | 10,000                 | .....          | 5,705                     |
| Total.....          | 21,702,100             | .....          | 2,295,803                 |

#### FOREIGN TRADE IN LUMBER FOR 1900.

TABLE 23.—IMPORTS.

|                                     | Quantity. | Value.      |
|-------------------------------------|-----------|-------------|
| Cabinet woods:                      |           |             |
| Mahogany, M feet.....               | 28,228    | \$1,572,269 |
| All other.....                      | .....     | 858,433     |
| Logs and round timber, M feet.....  | 101,397   | 879,956     |
| Timber, hewn, squared or sided..... | .....     | 46,650      |
| Sawn lumber, M feet.....            | 680,226   | 7,475,509   |
| Shingles, M.....                    | 541,040   | 1,011,234   |
| All other.....                      | .....     | 3,993,391   |
| Total.....                          | .....     | 15,837,342  |

TABLE 24.—EXPORTS:

|                                    | Quantities. | Value.      |
|------------------------------------|-------------|-------------|
| Timber:                            |             |             |
| Sawn, M feet.....                  | 478,542     | \$5,763,390 |
| Hewn, cubic feet.....              | 4,416,741   | 785,395     |
| Logs.....                          | .....       | 3,608,092   |
| Lumber:                            |             |             |
| Boards, deals, planks, M feet..... | 1,046,758   | 17,731,696  |
| Joists and scantling, M feet.....  | 41,043      | 550,495     |
| Shingles, M.....                   | 83,118      | 169,667     |
| Shooks.....                        | .....       | 1,315,800   |
| Staves and headings.....           | .....       | 4,415,584   |
| Total.....                         | .....       | 34,340,119  |

As is seen from the above, the foreign trade in lumber is not of magnitude. The exports are more than double the imports, but the net exports are but little over 3 per cent of the total cut of the country.

Tables 26 to 54 contain detailed statistics of the lumber industry, and these extended tables are summarized in Table 25, which precedes them. The capital invested in logging plants conducted by milling establishments appears as a part of the total capital invested in sawmills, the capital invested in independent logging camps or timber camps being shown separately and under its appropriate heading. The other items of capital are self-explanatory. It will be noticed that "live capital" is reported in two places, the first giving items of live capital for three branches of the industry, namely, dependent logging camps, sawmills, and planing mills, and the second giving items of live capital for timber camps or independent logging camps only.

Under the heading of "wage-earners, including pieceworkers," are shown the greatest and least numbers employed at any one time during the census year, as well as the aggregate average number of wage-earners employed in all four branches of the industry, namely, in dependent logging camps, sawmills, planing mills, and independent logging camps. Wage-earners in the dependent logging camps appearing in this table as such, their wages are accordingly counted as a factor in the aggregate amount of wages paid for the whole industry. Following the summary are the details of employees under logging, saw and planing mills, and timber camps.

Under the heading of "materials used," the "aggregate cost" includes, first, stumpage value of all timber cut and used, whether in dependent or independent logging camps; second, the total cost of all logs, bolts, rough lumber, and other materials purchased; third, the cost of all supplies, power, heat, and freight. These bring the aggregate to the figures shown, namely, \$246,295,101 for the United States. The state aggregates under this head are made from the same factors that enter into the aggregate for the United States.

Under the heading of "products," the aggregate of \$566,832,984 is made up of the three totals: sawmill products, \$422,812,061; planing mill products, \$107,622,519; and the products of independent timber camps, \$36,398,404. In the case of the sawmill total, the amount received for custom work is included as an item in the total value of the sawmill products. The value to the owner (not to the mill) of these products is not included. The same is true in the case of planing mill, the amount received for doing custom work being counted as a part of the total value of products in this branch of the industry. Under "timber camps," the amount received for contract work, which is the same in principle as the amount received for custom work in the mill, is counted as an item in the value of products. These three totals together make the aggregate of

\$566,832,984. The aggregate value of products for each state is made from the same factors that enter into the aggregate for the United States.

The total quantity of sawed lumber and also the total quantity of shingles manufactured in each state and in the United States, arranged according to species of timber used as material, are shown in separate tables numbered 45, 46, and 47. The two value items, however, in these special tables—viz, the one showing the total value of shingles and the other the total value of sawed lumber manufactured in the United States during the census year—do not enter in this form into the total value of the sawmill products for the reason that they include, along with the value of the merchant sawed lumber and shingles, also the value of the custom sawed lumber and shingles. The object of these special tables showing the total quantity of sawed lumber and the total quantity of shingles by states and for the United States, arranged according to species of timber used, was to present these items of the sawmill product solely for the purpose of showing the total amount manufactured without regard to their ownership or value from the standpoint of the mill.

The next item entering into the total value of sawmill products is that of cooperage materials. The quantity and value by states and for the United States of hoops, staves, and heading are shown separately, and the total value of \$20,714,670 of all these cooperage materials is also shown.

The next item under sawmill product is that of "other sawed products." Most of these, such as "bobbin and spool stock," "furniture stock," etc., are reported in M feet, B. M., and only the merchant products are shown in this table. In the bulletin issued about March 1, under the heading of "Sawed lumber," where the object was to present a total for the United States of all products of the sawmill which had been reported in M feet, B. M., the quantity of these items, both merchant and custom, was added to the quantity of "sawed lumber," both merchant and custom, and it was these factors, the total quantity of all sawmill products which were reported in M feet, B. M., that made the aggregate of 35,084,166 M feet, B. M., for the United States. This, of course, excludes such products as shingles, cooperage material, and laths, but includes the total quantity of rough lumber, both merchant and custom, and the total quantity of those items under "other sawed products" which were reported in M feet, B. M., namely, "bobbin and spool stock," "furniture stock," "agricultural implement stock," "carriage and wagon stock," and "pickets and palings." The totals for each state under this heading are made up of the same factors.

The total value of this sawed lumber, namely, \$390,489,873, is not, however, in its entirety, to be considered a part of the total value of products for the industry, namely, \$566,832,984, for the reason that it

includes the value of all custom-sawed lumber instead of the amount received by the mill for sawing it. The sole object in showing this last item of sawed lumber was to present specific information as to the total quantity and value of the leading product of the lumber industry, namely, that part of the sawmill product which is reported in M feet, B. M.

The last of the five items making the \$422,812,061, total value of sawmill products, is that of amount received for "custom work." This item is made up of three factors; namely, the amount received for custom sawing, amount received for custom grinding, and the amount received for custom ginning. The grinding and ginning amounts were shown on the reports of those establishments that operated a sawmill and a gristmill and cotton gin, or a sawmill and gristmill or a cotton gin jointly, and in which combination plant the sawmill product predominated in value over the other or others. The item \$10,682,770, received for custom sawing, when considered in connection with the total quantity of custom-sawed lumber, namely, 3,575,952 M feet, B. M., shows that the average amount charged for custom sawing per thousand feet for the United States was a little less than \$3.

Under the heading of "planing-mill products" the amount received for "custom planing" is in principle the same kind of a product to the mill as "amount received for custom sawing" and was handled accordingly. One difference in the case of the planing mill, however, is that the quantity and value of custom product were not reported and are not shown in any part of the report.

The item of "timber products" is made up of the products, first, of the independent timber camps; second, products of the dependent logging camps, which were gotten out incidentally to the work of supplying logs for the sawmills—i. e., such items as telegraph poles, cross-ties, fence posts, etc.—which were gotten out by crews in dependent logging camps in connection with the other and principal work of supplying saw logs for the establishment conducting such camps; and third, in some cases dependent logging camps reported as cut and logged, a quantity of timber in excess of the quantity reported as sawed; and in such cases, in order to show in the product the disposition of all materials reported, this excess of logs logged over those sawed, was considered as a product and carried to one of two headings under timber products—namely, "hard wood and other logs (cut for export)," or "logs for domestic manufacture (cut for sale)." The total quantity of such products as telegraph poles, cross-ties, fence posts, logs cut for sale or export, etc., turned out by both branches of the logging industry, are therefore combined under the heading, "timber products." The amount received for contract work in the independent logging camps—as, for example, the cutting and delivery of logs to the railroad or drive—has been counted as an item of the product and not the value of the timber or products so handled. This item of "amount received for contract work" being treated just as amounts received for custom work in saw and planing mills were treated. These three totals of sawmill, planing mill, and timber camp make up the aggregate value for the whole industry of \$566,832,984.

TABLE 25.—STATISTICS OF THE LUMBER INDUSTRIES  
OF THE UNITED STATES FOR 1900.

[Summary of the extended tables.]

| NUMBER OF ESTABLISHMENTS.  |               |
|--|---------------|
| Total  | 88,085        |
| Sawmills   | 31,833        |
| Tie and timber camps   | 1,202         |
| Ownership:   |               |
| Individual   | 20,501        |
| Firm and limited partnership   | 10,809        |
| Incorporated company   | 2,225         |
| Commenced in census year   | 7,913         |
| Commenced between 1890 and 1900  | 23,016        |
| CAPITAL.   |               |
| Aggregate  | \$611,611,524 |
| Lumber and sawmills, aggregate   | 590,816,363   |
| Logging plant, conducted by milling establishments, total  | 258,670,937   |
| Timbered land tributary to mill  | 147,601,377   |
| Other timbered land  | 28,583,981    |
| All other land   | 16,801,580    |
| Tools, implements, live stock, etc.  | 16,264,285    |
| Railways and equipment   | 19,770,969    |
| Canals, or chutes, for transportation of logs  | 974,746       |
| River improvements (exclusive of stock in chartered boom companies)  | 1,213,453     |
| Booms, chains, and supplies  | 1,099,334     |
| Vessels used for transportation of lumber or logs, including steam tugs  | 2,277,801     |
| Saw logs, bolts, hewed timber, ties, posts, etc., on hand (not delivered at mill)                                      | 20,551,177    |
| All other capital invested specifically "in logging"   | 3,582,284     |
| Sawmill plant, total   | 113,202,348   |
| Land   | 14,691,561    |
| Buildings, dry kilns, etc.   | 27,057,393    |
| Machinery, tools, and implements   | 71,453,394    |
| Planting-mill plant conducted by milling establishments, total   | 19,600,800    |
| Land   | 2,608,393     |
| Buildings, dry kilns, etc.   | 6,589,056     |
| Machinery, tools, and implements   | 11,342,851    |
| Live capital, total  | 204,842,778   |
| Logs and bolts at mill   | 22,160,911    |
| Lumber of other products (not planed or finished) on hand  | 70,869,824    |
| Dressed lumber, stock in process, and remanufactured goods on hand   | 11,750,900    |
| Cash on hand, bills receivable, unsettled ledger accounts, and all sundries not included in any of the foregoing items | 99,543,143    |
| Timber camps (independent), aggregate  | 20,795,161    |
| Plant, total   | 14,579,363    |
| Timber land, or standing timber  | 9,692,524     |
| Tools and implements, live stock, etc.   | 2,073,806     |
| Logging railways and equipments  | 1,817,822     |
| Canals, or chutes, for transportation of logs  | 194,130       |
| River improvements (exclusive of stock in chartered boom companies)  | 125,098       |
| Vessels used for transportation of products, including steam tugs  | 181,201       |
| All other items of investment in plant   | 494,782       |
| Live capital, total  | 6,215,798     |
| Value of products on hand  | 3,513,495     |
| Cash on hand, bills receivable, unsettled ledger accounts, and all sundries not included in the foregoing items        | 2,702,303     |
| PROPRIETORS, EMPLOYEES, AND WAGES.   |               |
| Summary:   |               |
| Proprietors, number  | 43,322        |
| Salaried employees, number   | 14,838        |
| Amount paid  | \$12,620,143  |
| Wage-earners, including pieceworkers:  |               |
| Greatest number employed at any one time during the year   | 650,601       |
| Least number employed at any one time during the year  | 350,818       |
| Average number   | 382,840       |
| Amount paid  | \$140,327,924 |
| Men, 16 years and over, average number   | 877,480       |
| Amount paid  | \$189,423,499 |
| Women, 16 years and over, average number   | 1,748         |
| Amount paid  | \$333,283     |
| Children, under 16 years, average number   | 3,612         |
| Amount paid  | \$566,142     |
| LOGGING.   |               |
| Salaried employees, number   | 1,803         |
| Amount paid  | \$1,259,535   |
| Wage-earners, including pieceworkers (men, 16 years and over):   |               |
| Greatest number employed at any one time during the year   | 181,189       |
| Least number employed at any one time during the year  | 98,759        |
| Average number   | 99,580        |
| Amount paid  | \$35,687,333  |
| LUMBER AND SAW MILLS.  |               |
| Proprietors and firm members, number   | 43,322        |
| Men, number  | 43,118        |
| Women, number  | 204           |
| Salaried employees, aggregate number   | 11,927        |
| Amount paid  | \$10,734,405  |
| Officers of corporations, number   | 2,117         |
| Amount paid  | \$3,227,147   |
| General superintendents, managers, clerks, etc.:   |               |
| Total number   | 9,810         |
| Amount paid  | \$7,607,253   |
| Men, number  | 9,283         |
| Amount paid  | \$7,292,589   |
| Women, number  | 527           |
| Amount paid  | \$214,669     |

|  |              |
|--|--------------|
| Wage-earners, including pieceworkers, total: |              |
| Greatest number employed at any one time     | 432,908      |
| Least number employed at any one time        | 242,618      |
| Average number                               | 262,718      |
| Amount paid                                  | \$95,888,824 |
| Men, 16 years and over, average number       | 257,558      |
| Amount paid                                  | \$94,989,890 |
| Women, 16 years and over, average number     | 1,748        |
| Amount paid                                  | \$333,283    |
| Children, under 16 years, average number     | 3,612        |
| Amount paid                                  | \$566,142    |

## TIMBER CAMPS.

|  |             |
|--|-------------|
| Salaried employees, aggregate number                           | 603         |
| Amount paid  | \$526,203   |
| Officers of corporations, number                               | 78          |
| Amount paid  | \$122,309   |
| General superintendents, managers, clerks, etc., total number  | 525         |
| Amount paid  | \$403,894   |
| Men, number  | 498         |
| Amount paid  | \$394,727   |
| Women, number  | 27          |
| Amount paid  | \$9,167     |
| Wage-earners, including pieceworkers (men, 16 years and over): |             |
| Greatest number employed at any one time during the year       | 37,409      |
| Least number employed at any one time during the year          | 14,498      |
| Average number   | 20,542      |
| Amount paid  | \$8,751,787 |

## Average number and cost of keep of animals used.

|   |              |
|---|--------------|
| In logging for sawmills, aggregate number | 152,372      |
| Cost of keep                              | \$10,988,079 |
| Total number                              | 141,437      |
| Cost of keep                              | \$10,022,593 |
| Horses, number                            | 70,885       |
| Cost of keep                              | \$5,781,455  |
| Mules, number                             | 31,016       |
| Cost of keep                              | \$2,332,611  |
| Cattle, number                            | 89,436       |
| Cost of keep                              | \$1,908,527  |
| Timber camps, total number animals        | 11,436       |
| Cost of keep                              | \$965,486    |
| Horses, number                            | 8,276        |
| Cost of keep                              | \$769,913    |
| Mules, number                             | 1,240        |
| Cost of keep                              | \$106,200    |
| Cattle, number                            | 1,919        |
| Cost of keep                              | \$89,373     |

## Transportation of logs to mill.

|  |              |
|--|--------------|
| Average number of hands employed during the year | 45,975       |
| Amount paid in wages                             | \$10,885,933 |

## Materials used: Logging.

|                         |               |
|-------------------------|---------------|
| Aggregate cost          | \$246,295,101 |
| Stumpage, total         | \$59,525,480  |
| Quantity, M feet, B. M. | 22,684,623    |
| Cost                    | \$50,395,400  |
| Supplies                | \$7,780,600   |
| All other materials     | \$1,349,480   |

## Materials used: Saw mill.

|                                |              |
|--------------------------------|--------------|
| Total logs and bolts purchased | \$97,003,922 |
| Quantities, M feet, B. M.      | 11,568,508   |
| Cords                          | 2,118,203    |
| Cost                           | \$84,724,380 |
| Supplies                       | \$7,268,061  |
| Power and heat                 | \$81,393     |
| All other materials            | \$2,707,831  |
| Freight                        | \$2,182,252  |

## Materials used: Planting mill and remanufactures.

|                         |              |
|-------------------------|--------------|
| Total lumber (rough)    | \$82,084,685 |
| Quantity, M feet, B. M. | 7,515,645    |
| Cost                    | \$79,491,635 |
| Supplies                | \$1,344,581  |
| Power and heat          | \$2,006      |
| All other materials     | \$879,799    |
| Freight                 | \$366,684    |

## Materials used: Timber camps.

|                                   |             |
|-----------------------------------|-------------|
| Total                             | \$7,681,084 |
| Stumpage, quantity, M feet, B. M. | 3,244,317   |
| Cost                              | \$6,044,074 |
| Supplies                          | \$1,248,673 |
| All other materials               | \$388,287   |

## MISCELLANEOUS EXPENSES.

|  |              |
|--|--------------|
| Total  | \$30,539,086 |
| Amount paid for rent of works  | \$784,768    |
| Amount paid for taxes, not including internal revenue  | \$3,902,584  |
| Amount paid for rent of offices, interest, insurance, internal-revenue tax and stamps, ordinary repairs of buildings and machinery, advertising, and all other sundries not reported under the head of materials | \$12,914,274 |
| Amount paid for contract work:   |              |
| Logging  | \$12,807,517 |
| Sawing   | \$129,893    |

## PRODUCTS.

|   |               |
|---|---------------|
| Aggregate.....                                    | \$566,832,984 |
| Sawmills.....                                     | \$422,812,081 |
| Planing mills, dependent.....                     | \$107,622,519 |
| Timber camps, independent.....                    | \$36,398,404  |
| Saved lumber, all products, quantity, M feet..... | \$5,084,166   |
| Value.....  | \$390,489,873 |
| Merchant, quantity, M feet.....                   | \$1,508,214   |
| Value.....  | \$347,402,903 |
| Custom, quantity, M feet.....                     | \$3,575,952   |
| Value.....  | \$43,086,970  |

*Rough lumber: Merchant and custom sawed.*

|   |               |
|---|---------------|
| Aggregate, quantity, M feet.....          | 34,787,084    |
| Value.....                                | \$385,298,304 |
| Conifers, quantity, M feet.....           | 26,183,068    |
| Value.....                                | \$268,481,112 |
| Yellow pine, quantity, M feet.....        | 10,603,108    |
| Value.....                                | \$90,903,556  |
| White pine, quantity, M feet.....         | 7,483,283     |
| Value.....                                | \$94,979,885  |
| Hemlock, quantity, M feet.....            | 3,420,678     |
| Value.....                                | \$34,136,892  |
| Redwood, quantity, M feet.....            | 360,167       |
| Value.....                                | \$3,645,608   |
| Spruce, quantity, M feet.....             | 1,448,091     |
| Value.....                                | \$16,322,666  |
| Cypress, quantity, M feet.....            | 495,836       |
| Value.....                                | \$6,804,495   |
| Cedar, quantity, M feet.....              | 232,978       |
| Value.....                                | \$2,542,818   |
| Norway pine, quantity, M feet.....        | 259,108       |
| Value.....                                | \$3,022,870   |
| Red fir, quantity, M feet.....            | 1,736,507     |
| Value.....                                | \$15,050,688  |
| Sugar pine, quantity, M feet.....         | 53,558        |
| Value.....                                | \$869,016     |
| Tamarack, quantity, M feet.....           | 50,619        |
| Value.....                                | \$442,016     |
| All other conifers, quantity, M feet..... | 9,135         |
| Value.....                                | \$170,852     |
| Hard woods, quantity, M feet.....         | 8,634,021     |
| Value.....                                | \$116,817,192 |
| Ash, quantity, M feet.....                | 269,120       |
| Value.....                                | \$4,263,599   |
| Birch, quantity, M feet.....              | 182,601       |
| Value.....                                | \$1,657,621   |
| Chestnut, quantity, M feet.....           | 206,638       |
| Value.....                                | \$2,764,089   |
| Cottonwood, quantity, M feet.....         | 415,124       |
| Value.....                                | \$4,303,544   |
| Elm, quantity, M feet.....                | 466,731       |
| Value.....                                | \$5,240,680   |
| Gum, quantity, M feet.....                | 285,417       |
| Value.....                                | \$2,747,680   |
| Hickory, quantity, M feet.....            | 96,835        |
| Value.....                                | \$1,814,500   |
| Basswood, quantity, M feet.....           | 308,069       |
| Value.....                                | \$3,954,625   |
| Oak, quantity, M feet.....                | 4,438,027     |
| Value.....                                | \$61,174,129  |
| Poplar, quantity, M feet.....             | 1,115,242     |
| Value.....                                | \$15,646,331  |
| Black walnut, quantity, M feet.....       | 38,681        |
| Value.....                                | \$1,411,611   |
| Maple, quantity, M feet.....              | 633,466       |
| Value.....                                | \$7,435,052   |
| Sycamore, quantity, M feet.....           | 29,715        |
| Value.....                                | \$327,933     |
| Other hard woods, quantity, M feet.....   | 208,504       |
| Value.....                                | \$4,015,948   |

*Shingles—Merchant and custom sawed.*

|  |              |
|--|--------------|
| Total, quantity, number of 1,000.....          | 12,102,017   |
| Value.....                                     | \$18,869,705 |
| Yellow pine, quantity, number of 1,000.....    | 936,611      |
| Value.....                                     | \$1,492,658  |
| White pine, quantity, number of 1,000.....     | 1,859,440    |
| Value.....                                     | \$2,969,805  |
| Cypress, quantity, number of 1,000.....        | 1,247,161    |
| Value.....                                     | \$2,280,645  |
| Cedar, quantity, number of 1,000.....          | 6,367,845    |
| Value.....                                     | \$9,516,497  |
| Hemlock, quantity, number of 1,000.....        | 391,949      |
| Value.....                                     | \$786,253    |
| Spruce, quantity, number of 1,000.....         | 218,958      |
| Value.....                                     | \$393,245    |
| Red fir, quantity, number of 1,000.....        | 225,887      |
| Value.....                                     | \$269,283    |
| Redwood, quantity, number of 1,000.....        | 630,122      |
| Value.....                                     | \$662,293    |
| Other conifers, quantity, number of 1,000..... | 23,861       |
| Value.....                                     | \$40,244     |
| All hard woods, quantity, number of 1,000..... | 200,683      |
| Value.....                                     | \$458,837    |
| Sawmills: Cooperage materials:                 |              |
| Total.....                                     | \$20,714,670 |
| Hoops, quantity, number of 1,000.....          | 441,327      |
| Value.....                                     | \$2,669,465  |
| Staves, quantity, number of 1,000.....         | 1,664,792    |
| Value.....                                     | \$18,697,621 |
| Headings, quantity, number of sets.....        | 124,089,447  |
| Value.....                                     | \$4,847,584  |

*Other sawed products.*

|   |               |
|---|---------------|
| Total.....  | \$29,399,639  |
| Bobbin and spool stock, quantity, M feet, B. M.....                       | 39,975        |
| Value.....  | \$525,257     |
| Furniture stock, quantity, M feet, B. M.....                              | 103,534       |
| Value.....  | \$1,885,764   |
| Agricultural implement stock, quantity, M feet, B. M.....                 | 32,786        |
| Value.....  | \$589,065     |
| Carriage and wagon stock, quantity, M feet, B. M.....                     | 80,927        |
| Value.....  | \$1,765,087   |
| Pickets and palings, quantity, M feet, B. M.....                          | 35,814        |
| Value.....  | \$334,798     |
| Laths, quantity, number of 1,000.....                                     | 2,523,998     |
| Value.....  | \$4,698,909   |
| All others, value.....  | \$19,600,779  |
| Amount received for custom work:  |               |
| Sawing.....   | \$10,682,770  |
| Grinding.....   | \$608,346     |
| Ginning.....  | \$539,458     |
| Planing mill:   |               |
| Total.....  | \$107,622,519 |
| Gross value of finished lumber.....                                       | \$84,154,420  |
| Gross value of remanufactured products.....                               | \$22,704,805  |
| Amount received for custom planing.....                                   | \$768,287     |
| Timber camp:  |               |
| Total value.....  | \$36,398,404  |
| Basket stock, quantity, cords.....  | 7,443         |
| Value.....  | \$28,301      |
| Cooperage stock, quantity, cords.....                                     | 82,546        |
| Value.....  | \$346,816     |
| Excelsior stock, quantity, cords.....                                     | 12,670        |
| Value.....  | \$48,978      |
| Fence posts, quantity, number.....  | 8,715,661     |
| Value.....  | \$806,115     |
| Hop poles, quantity, number.....  | 1,205,700     |
| Value.....  | \$12,456      |
| Hewed timber, quantity, M feet, B. M.....                                 | 39,759        |
| Value.....  | \$347,743     |
| Hard wood and other logs (cut for export), quantity, M feet, B. M.....    | 85,303        |
| Value.....  | \$580,258     |
| Logs for domestic manufacture (cut for sale), quantity, M feet, B. M..... | 3,382,680     |
| Value.....  | \$20,624,233  |
| Handle stock, quantity, cords.....  | 6,423         |
| Value.....  | \$41,790      |
| Hemlock bark, quantity, cords.....  | 473,222       |
| Value.....  | \$1,945,452   |
| Oak bark, quantity, cords.....  | 39,844        |
| Value.....  | \$228,900     |
| Piles, quantity, number.....  | 396,629       |
| Value.....  | \$753,946     |
| Paving stock, quantity, cords.....  | 554           |
| Value.....  | \$2,087       |
| Railway ties, quantity, number.....                                       | 22,591,894    |
| Value.....  | \$6,298,635   |
| Rived or shaved shingles, quantity, number of 1,000.....                  | 41,433        |
| Value.....  | \$78,226      |
| Masts and spars, quantity, number.....                                    | 2,580         |
| Value.....  | \$28,513      |
| Ship knees, quantity, number.....   | 1,601         |
| Value.....  | \$4,673       |
| Telegraph poles, quantity, number.....                                    | 937,963       |
| Value.....  | \$1,393,576   |
| Wheel stock, quantity, cords.....   | 9,817         |
| Value.....  | \$46,135      |
| Charcoal, quantity, bushels.....  | 6,796,334     |
| Value.....  | \$450,221     |
| All other products, quantity, M feet, B. M.....                           |               |
| Value.....  | \$1,686,558   |
| Amount received for contract work.....                                    | \$350,716     |

*Power.*

|                                       |           |
|---------------------------------------|-----------|
| Total horsepower.....                 | 1,618,992 |
| Owned:                                |           |
| Engines, steam, number.....           | 34,517    |
| Horsepower.....                       | 1,401,883 |
| Engines, gas or gasoline, number..... | 152       |
| Horsepower.....                       | 3,532     |
| Water wheels, number.....             | 6,164     |
| Horsepower.....                       | 200,983   |
| Electric motors, number.....          | 216       |
| Horsepower.....                       | 7,099     |
| Other power, number.....              | 10        |
| Horsepower.....                       | 495       |
| Power supplied:                       |           |
| By establishments, horsepower.....    | 1,177     |
| To establishments, horsepower.....    | 2,130     |

## CLASSIFICATION BY NUMBER OF PERSONS EMPLOYED (NOT INCLUDING PROPRIETORS AND FIRM MEMBERS).

|                                     |        |
|-------------------------------------|--------|
| Mills:                              |        |
| Total number of establishments..... | 83,085 |
| No employees.....                   | 623    |
| Under 5.....                        | 12,798 |
| 5 to 20.....                        | 15,537 |
| 21 to 50.....                       | 2,530  |
| 51 to 100.....                      | 845    |
| 101 to 250.....                     | 554    |
| 251 to 500.....                     | 120    |
| 501 to 1,000.....                   | 28     |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900.

TABLE 26.—ESTABLISHMENTS, COMMENCEMENT, AND CHARACTER OF ORGANIZATION.

| STATES AND TERRITORIES. | Total. | Kind.     |                       | Character of organization. |                               |                       |
|-------------------------|--------|-----------|-----------------------|----------------------------|-------------------------------|-----------------------|
|                         |        | Sawmills. | Tie and timber camps. | Individual.                | Firm and limited partnership. | Incorporated company. |
| United States .....     | 33,035 | 31,833    | 1,202                 | 20,501                     | 10,809                        | 2,225                 |
| Alabama .....           | 1,111  | 1,087     | 24                    | 640                        | 391                           | 80                    |
| Alaska .....            | 25     | 17        | 8                     | 6                          | 14                            | 5                     |
| Arizona .....           | 14     | 14        |                       | 9                          | 2                             | 3                     |
| Arkansas .....          | 1,199  | 1,142     | 57                    | 615                        | 431                           | 153                   |
| California .....        | 813    | 285       | 28                    | 151                        | 88                            | 74                    |
| Colorado .....          | 159    | 155       | 4                     | 97                         | 45                            | 17                    |
| Connecticut .....       | 200    | 187       | 13                    | 150                        | 48                            | 2                     |
| Delaware .....          | 76     | 76        |                       | 47                         | 27                            | 2                     |
| Florida .....           | 416    | 368       | 48                    | 247                        | 125                           | 44                    |
| Georgia .....           | 1,254  | 1,201     | 53                    | 746                        | 443                           | 65                    |
| Idaho .....             | 117    | 114       | 3                     | 70                         | 34                            | 13                    |
| Illinois .....          | 837    | 825       | 12                    | 577                        | 244                           | 16                    |
| Indiana .....           | 1,849  | 1,829     | 20                    | 1,204                      | 579                           | 66                    |
| Indian territory .....  | 49     | 48        | 1                     | 32                         | 16                            | 1                     |
| Iowa .....              | 264    | 264       |                       | 174                        | 75                            | 15                    |
| Kansas .....            | 54     | 54        |                       | 42                         | 12                            |                       |
| Kentucky .....          | 1,280  | 1,232     | 48                    | 808                        | 401                           | 71                    |
| Louisiana .....         | 432    | 405       | 27                    | 214                        | 137                           | 81                    |
| Maine .....             | 888    | 832       | 6                     | 540                        | 252                           | 46                    |
| Maryland .....          | 367    | 366       | 1                     | 246                        | 104                           | 17                    |
| Massachusetts .....     | 553    | 534       | 19                    | 416                        | 126                           | 11                    |
| Michigan .....          | 1,705  | 1,613     | 92                    | 1,001                      | 520                           | 184                   |
| Minnesota .....         | 433    | 404       | 34                    | 230                        | 132                           | 76                    |
| Mississippi .....       | 844    | 820       | 24                    | 526                        | 253                           | 65                    |
| Missouri .....          | 1,197  | 1,169     | 28                    | 769                        | 358                           | 40                    |
| Montana .....           | 139    | 127       | 12                    | 81                         | 46                            | 12                    |
| Nebraska .....          | 23     | 23        |                       | 15                         | 8                             |                       |
| Nevada .....            | 4      | 4         |                       | 4                          |                               |                       |
| New Hampshire .....     | 553    | 535       | 18                    | 394                        | 135                           | 24                    |
| New Jersey .....        | 205    | 197       | 8                     | 167                        | 86                            | 2                     |
| New Mexico .....        | 32     | 31        | 1                     | 21                         | 7                             | 4                     |
| New York .....          | 1,765  | 1,742     | 23                    | 1,354                      | 371                           | 40                    |
| North Carolina .....    | 1,770  | 1,751     | 19                    | 1,051                      | 623                           | 96                    |
| North Dakota .....      | 4      | 4         |                       | 2                          | 2                             |                       |
| Ohio .....              | 2,054  | 2,023     | 31                    | 1,324                      | 662                           | 68                    |
| Oklahoma .....          | 33     | 33        |                       | 24                         | 8                             | 1                     |
| Oregon .....            | 436    | 365       | 71                    | 202                        | 168                           | 66                    |
| Pennsylvania .....      | 2,333  | 2,230     | 58                    | 1,602                      | 663                           | 73                    |
| Rhode Island .....      | 35     | 33        | 2                     | 33                         | 2                             |                       |
| South Carolina .....    | 729    | 716       | 13                    | 517                        | 182                           | 30                    |
| South Dakota .....      | 29     | 28        | 1                     | 19                         | 2                             | 8                     |
| Tennessee .....         | 1,732  | 1,694     | 38                    | 1,000                      | 663                           | 69                    |
| Texas .....             | 637    | 601       | 36                    | 354                        | 225                           | 58                    |
| Utah .....              | 31     | 31        |                       | 53                         | 23                            | 5                     |
| Vermont .....           | 658    | 657       | 1                     | 435                        | 151                           | 22                    |
| Virginia .....          | 1,341  | 1,324     | 17                    | 864                        | 429                           | 48                    |
| Washington .....        | 778    | 535       | 243                   | 299                        | 233                           | 196                   |
| West Virginia .....     | 950    | 929       | 21                    | 516                        | 368                           | 66                    |
| Wisconsin .....         | 1,066  | 1,033     | 33                    | 537                        | 342                           | 137                   |
| Wyoming .....           | 52     | 40        | 6                     | 26                         | 23                            | 3                     |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS,

TABLE 27.—CAPITAL.

| 1  | STATES AND TERRITORIES. | Aggregate.    | MILLS.        |   |                                  |                      |                 |                                     |                                 |
|----|-------------------------|---------------|---------------|---|----------------------------------|----------------------|-----------------|-------------------------------------|---------------------------------|
|    |                         |               | Aggregate.    | Logging plants (conducted by milling establishments). |                                  |                      |                 |                                     |                                 |
|    |                         |               |               | Total.  | Timbered land tributary to mill. | Other timbered land. | All other land. | Tools, implements, live stock, etc. | Logging railways and equipment. |
| 1  | United States.....      | \$611,611,524 | \$500,816,363 | \$253,670,937   | \$147,601,377                    | \$23,533,931         | \$16,801,580    | \$16,264,285                        | \$19,770,969                    |
| 2  | Alabama.....            | 13,020,183    | 12,711,054    | 6,274,746   | 3,542,575                        | 321,638              | 691,260         | 567,977                             | 833,454                         |
| 3  | Alaska.....             | 181,950       | 177,050       | 49,100  | .....                            | .....                | .....           | 1,500                               | .....                           |
| 4  | Arizona.....            | 940,698       | 940,698       | 489,026   | 343,941                          | .....                | .....           | 47,546                              | 95,239                          |
| 5  | Arkansas.....           | 21,727,710    | 21,446,432    | 9,291,578   | 5,116,604                        | 895,292              | 551,636         | 712,091                             | 1,452,176                       |
| 6  | California.....         | 28,286,832    | 27,205,852    | 17,204,813  | 9,857,876                        | 1,400,717            | 968,599         | 1,251,985                           | 2,543,553                       |
| 7  | Colorado.....           | 972,098       | 964,429       | 279,187   | 144,827                          | 2,880                | 4,900           | 110,120                             | 2,000                           |
| 8  | Connecticut.....        | 1,188,965     | 1,186,575     | 399,578   | 181,200                          | 62,595               | 47,850          | 72,295                              | 20                              |
| 9  | Delaware.....           | 354,464       | 354,464       | 81,135  | 36,250                           | 8,150                | 1,100           | 26,185                              | .....                           |
| 10 | Florida.....            | 14,937,693    | 14,382,768    | 7,588,786   | 4,635,689                        | 408,014              | 941,615         | 883,253                             | 841,571                         |
| 11 | Georgia.....            | 11,802,716    | 11,595,074    | 5,939,322   | 2,786,423                        | 298,960              | 565,219         | 969,328                             | 1,209,636                       |
| 12 | Idaho.....              | 913,352       | 900,414       | 271,594   | 143,175                          | 25,000               | 13,761          | 49,678                              | 250                             |
| 13 | Illinois.....           | 5,246,277     | 5,035,612     | 1,302,697   | 367,195                          | 370,050              | 96,805          | 142,226                             | 18,515                          |
| 14 | Indiana.....            | 10,947,574    | 10,929,676    | 1,865,628   | 817,730                          | 195,859              | 253,776         | 385,322                             | 4,275                           |
| 15 | Indian Territory.....   | 104,003       | 103,820       | 10,702  | 2,700                            | .....                | .....           | 7,260                               | .....                           |
| 16 | Iowa.....               | 8,762,219     | 8,762,219     | 3,096,092   | 1,496,220                        | 48,835               | 194,614         | 51,844                              | .....                           |
| 17 | Kansas.....             | 85,194        | 85,194        | 27,388  | 13,900                           | 4,000                | 40              | 6,058                               | 800                             |
| 18 | Kentucky.....           | 9,805,404     | 9,727,186     | 3,827,714   | 1,842,268                        | 262,645              | 110,826         | 265,114                             | 39,030                          |
| 19 | Louisiana.....          | 20,093,044    | 19,354,472    | 7,753,967   | 4,701,903                        | 794,564              | 206,213         | 377,260                             | 1,158,089                       |
| 20 | Maine.....              | 15,764,588    | 15,753,280    | 5,167,147   | 3,210,315                        | 250,537              | 171,719         | 310,687                             | 50,735                          |
| 21 | Maryland.....           | 2,622,928     | 2,621,223     | 1,099,941   | 571,589                          | 102,313              | 73,188          | 98,584                              | 156,546                         |
| 22 | Massachusetts.....      | 6,253,171     | 6,103,721     | 1,551,292   | 866,876                          | 364,412              | 113,623         | 158,690                             | 1,700                           |
| 23 | Michigan.....           | 67,379,698    | 62,965,545    | 27,174,636  | 14,818,530                       | 2,835,084            | 2,802,700       | 1,233,852                           | 1,123,156                       |
| 24 | Minnesota.....          | 52,095,923    | 48,696,255    | 22,642,802  | 14,373,944                       | 1,725,174            | 531,678         | 518,222                             | 761,969                         |
| 25 | Mississippi.....        | 17,337,538    | 17,233,108    | 8,721,325   | 5,802,452                        | 504,642              | 427,405         | 589,603                             | 930,354                         |
| 26 | Missouri.....           | 11,089,799    | 10,803,966    | 4,023,227   | 1,953,044                        | 310,728              | 339,809         | 343,072                             | 783,567                         |
| 27 | Montana.....            | 2,590,224     | 2,577,099     | 691,894   | 302,838                          | 56,100               | 4,765           | 162,744                             | 7,739                           |
| 28 | Nebraska.....           | 117,360       | 117,360       | 72,975  | 64,200                           | 825                  | .....           | 6,925                               | 500                             |
| 29 | Nevada.....             | 9,327         | 9,327         | 4,165   | 2,000                            | .....                | .....           | 1,525                               | .....                           |
| 30 | New Hampshire.....      | 11,392,114    | 10,641,765    | 4,653,818   | 2,953,850                        | 650,960              | 121,175         | 391,353                             | 195,600                         |
| 31 | New Jersey.....         | 1,477,930     | 1,449,975     | 377,841   | 141,565                          | 54,814               | 74,498          | 36,344                              | 800                             |
| 32 | New Mexico.....         | 291,599       | 287,199       | 120,591   | 35,470                           | 21,500               | 46,170          | 13,155                              | .....                           |
| 33 | New York.....           | 21,873,203    | 21,523,385    | 9,149,934   | 5,488,775                        | 1,152,370            | 340,887         | 541,373                             | 53,220                          |
| 34 | North Carolina.....     | 13,365,097    | 13,304,918    | 6,162,581   | 3,318,768                        | 705,608              | 232,559         | 652,474                             | 916,532                         |
| 35 | North Dakota.....       | 27,275        | 27,275        | 19,160  | 12,120                           | 5,000                | .....           | 1,040                               | .....                           |
| 36 | Ohio.....               | 13,741,418    | 13,695,133    | 3,206,972   | 386,891                          | 1,663,900            | 209,704         | 359,848                             | 2,370                           |
| 37 | Oklahoma.....           | 186,361       | 136,361       | 89,206  | 84,700                           | .....                | 1,800           | 2,679                               | .....                           |
| 38 | Oregon.....             | 8,167,433     | 7,658,377     | 2,466,988   | 1,456,047                        | 149,425              | 65,120          | 215,988                             | 158,289                         |
| 39 | Pennsylvania.....       | 47,832,548    | 47,582,653    | 22,943,190  | 14,686,809                       | 1,471,588            | 2,089,287       | 961,637                             | 1,753,789                       |
| 40 | Rhode Island.....       | 216,670       | 157,395       | 52,285  | 14,335                           | 17,600               | 5,650           | 10,300                              | .....                           |
| 41 | South Carolina.....     | 5,187,727     | 5,165,757     | 1,968,470   | 1,002,135                        | 149,660              | 113,615         | 347,005                             | 157,950                         |
| 42 | South Dakota.....       | 283,720       | 277,720       | 124,485   | 69,550                           | 12,000               | 3,800           | 23,975                              | .....                           |
| 43 | Tennessee.....          | 12,900,595    | 12,800,746    | 2,790,873   | 1,669,130                        | 166,440              | 214,354         | 385,051                             | 36,170                          |
| 44 | Texas.....              | 19,161,265    | 18,566,652    | 9,000,316   | 5,661,667                        | 912,347              | 296,003         | 405,379                             | 1,259,401                       |
| 45 | Utah.....               | 182,780       | 182,780       | 72,205  | 39,895                           | 95                   | 5,715           | 19,145                              | 2,350                           |
| 46 | Vermont.....            | 7,051,523     | 7,049,023     | 2,133,532   | 1,312,366                        | 290,060              | 137,220         | 253,531                             | 5,825                           |
| 47 | Virginia.....           | 9,299,046     | 9,176,424     | 3,326,491   | 1,721,400                        | 394,585              | 462,365         | 442,076                             | 147,530                         |
| 48 | Washington.....         | 26,041,089    | 21,786,504    | 7,600,414   | 4,618,310                        | 520,363              | 295,025         | 576,310                             | 677,735                         |
| 49 | West Virginia.....      | 10,421,570    | 10,268,094    | 4,604,443   | 2,324,762                        | 489,265              | 78,910          | 323,095                             | 702,354                         |
| 50 | Wisconsin.....          | 77,866,223    | 76,065,993    | 36,120,090  | 22,573,768                       | 3,456,337            | 2,876,204       | 1,466,716                           | 1,624,280                       |
| 51 | Wyoming.....            | 608,956       | 368,406       | 225,300   | 32,800                           | 1,000                | 13,950          | 23,330                              | 1,000                           |



## BY STATES AND TERRITORIES, 1900—Continued.

TABLE 27.—CAPITAL.

| MILLS—continued.  |  |                                    |  |   |  |                 |              |                                  |   |
|---|--|------------------------------------|--|---|--|-----------------|--------------|----------------------------------|---|
| Logging plants (conducted by milling establishments)—continued. |  |                                    |  |   |  | Sawmill plants. |              |                                  |   |
| Canals or<br>chutes for<br>transporta-<br>tion of logs.         | River improve-<br>ments (exclu-<br>sive of stock in<br>chartered boom<br>companies). | Booms,<br>chains, and<br>supplies. | Vessels used for<br>transportation<br>of lumber or<br>logs, including<br>steam tugs. | Saw logs, bolts,<br>hewed timber,<br>ties, posts,<br>etc., on hand<br>(not delivered<br>at mill). | All other capi-<br>tal invested<br>in "logging." | Total.          | Land.        | Buildings,<br>dry kilns,<br>etc. | Machinery,<br>tools, and<br>implements. |
| \$974,746   | \$1,213,453  | \$1,099,834                        | \$2,277,301  | \$20,551,177  | \$3,582,284                                      | \$118,202,348   | \$14,691,561 | \$27,057,393                     | \$71,453,394                            |
| 89,173  | 100  | 17,733                             | 36,964   | 98,440  | 75,432   | 3,483,229       | 350,074      | 737,798                          | 2,305,357                               |
| 2,300   | 28,200   | .....                              | 17,100   | .....   | .....  | 99,300          | 5,100        | 37,190                           | 57,010                                  |
| .....   | 1,300  | .....                              | .....  | .....   | 1,000  | 148,816         | 3,755        | 66,869                           | 78,192                                  |
| 1,750   | 11,865   | 13,723                             | 84,025   | 278,470   | 223,441  | 4,510,350       | 354,626      | 1,106,581                        | 3,049,243                               |
| 458,752   | 100,000  | 28,055                             | 94,626   | 327,401   | 288,329  | 3,624,664       | 359,144      | 857,427                          | 2,408,093                               |
| .....   | .....  | 400                                | .....  | 11,070  | 2,990  | 299,141         | 21,734       | 46,840                           | 230,567                                 |
| .....   | 400  | 685                                | 1,250  | 24,728  | 9,055  | 340,753         | 47,430       | 94,918                           | 198,405                                 |
| .....   | 150  | 200                                | .....  | 8,100   | 1,000  | 121,990         | 11,795       | 22,225                           | 87,970                                  |
| 72,900  | 2,560  | 21,997                             | 60,213   | 151,662   | 69,262   | 2,839,166       | 377,677      | 740,651                          | 1,720,838                               |
| 2,200   | 3,200  | 8,558                              | 13,315   | 33,451  | 49,032   | 3,180,036       | 261,811      | 652,737                          | 2,265,488                               |
| 9,600   | 550  | 7,860                              | 3,000  | 14,070  | 4,650  | 257,078         | 16,883       | 59,745                           | 181,050                                 |
| 2,525   | 10   | 5,556                              | 50,910   | 237,016   | 11,889   | 1,340,970       | 136,317      | 213,725                          | 990,928                                 |
| .....   | 2,600  | 5,327                              | 23,261   | 208,321   | 19,158   | 3,437,382       | 525,163      | 647,356                          | 2,264,863                               |
| .....   | .....  | 52                                 | .....  | 565   | 125  | 69,330          | 2,608        | 9,457                            | 57,265                                  |
| .....   | 6,000  | 6,671                              | 15,010   | 1,272,583   | 4,315  | 988,888         | 197,183      | 195,552                          | 596,153                                 |
| .....   | 10   | 195                                | .....  | 1,625   | 160  | 46,976          | 1,901        | 4,780                            | 40,815                                  |
| 1,070   | 4,100  | 110,768                            | 14,423   | 615,452   | 62,019   | 2,403,353       | 333,508      | 471,869                          | 1,598,476                               |
| 28,600  | 7,250  | 23,227                             | 128,098  | 225,317   | 103,506  | 3,013,904       | 406,375      | 1,047,772                        | 2,159,757                               |
| 4,490   | 47,000   | 62,895                             | 67,050   | 960,029   | 31,690   | 3,927,041       | 723,102      | 1,201,226                        | 1,912,713                               |
| .....   | 800  | 1,230                              | 3,725  | 66,765  | 25,701   | 648,051         | 74,965       | 110,327                          | 453,759                                 |
| .....   | 2,532  | 599                                | 112  | 32,073  | 10,675   | 1,533,754       | 264,898      | 505,605                          | 763,251                                 |
| 13,400  | 79,925   | 200,543                            | 480,481  | 8,063,162   | 523,753  | 10,033,922      | 1,609,546    | 2,530,790                        | 5,863,586                               |
| 8,100   | 112,603  | 79,188                             | 43,350   | 4,255,417   | 233,177  | 5,168,659       | 755,285      | 1,233,085                        | 3,179,689                               |
| 15,230  | 10,006   | 20,824                             | 178,934  | 230,053   | 61,822   | 3,576,177       | 394,973      | 732,647                          | 2,448,557                               |
| 2,449   | 3,500  | 20,980                             | 31,875   | 159,764   | 69,439   | 3,086,118       | 203,521      | 685,153                          | 2,147,442                               |
| 7,600   | 9,695  | 983                                | .....  | 123,744   | 15,686   | 609,128         | 77,742       | 198,597                          | 332,789                                 |
| .....   | 400  | 25                                 | .....  | 100   | .....  | 31,025          | 5,780        | 5,270                            | 19,975                                  |
| .....   | .....  | .....                              | .....  | 640   | .....  | 2,762           | 82           | 300                              | 2,380                                   |
| 1,025   | 86,300   | 41,830                             | 31,000   | 90,470  | 90,255   | 1,967,797       | 244,280      | 663,915                          | 1,059,602                               |
| .....   | .....  | 515                                | .....  | 15,605  | 3,700  | 440,519         | 80,265       | 113,765                          | 246,489                                 |
| .....   | .....  | 131                                | .....  | 3,340   | 825  | 69,763          | 9,220        | 8,900                            | 51,643                                  |
| 10,860  | 77,670   | 37,259                             | 96,420   | 1,216,422   | 129,678  | 4,407,770       | 670,870      | 1,264,252                        | 2,472,648                               |
| 43,755  | 163  | 32,285                             | 90,857   | 80,509  | 89,021   | 3,448,845       | 327,578      | 756,918                          | 2,394,349                               |
| .....   | .....  | .....                              | .....  | 1,000   | .....  | 6,000           | 525          | 675                              | 4,800                                   |
| 60  | 31,000   | 5,611                              | 22,025   | 488,752   | 38,211   | 3,923,681       | 705,766      | 742,583                          | 2,476,342                               |
| .....   | .....  | 17                                 | .....  | 10  | .....  | 42,255          | 2,415        | 4,665                            | 85,175                                  |
| 33,310  | 22,600   | 23,798                             | 223,596  | 85,875  | 32,945   | 2,252,333       | 343,523      | 392,707                          | 1,516,103                               |
| 18,145  | 35,000   | 52,725                             | 38,815   | 1,602,061   | 232,784  | 6,911,349       | 809,192      | 1,609,298                        | 4,492,359                               |
| .....   | .....  | 50                                 | .....  | 3,850   | .....  | 50,832          | 6,062        | 7,985                            | 36,735                                  |
| 43,350  | 5,800  | 2,888                              | 13,900   | 105,782   | 21,885   | 1,538,056       | 115,415      | 332,426                          | 1,040,215                               |
| 500   | .....  | 710                                | .....  | 6,350   | 2,600  | 57,685          | 4,930        | 11,700                           | 41,055                                  |
| 12,305  | 406  | 19,891                             | 57,418   | 153,303   | 26,405   | 3,564,710       | 496,157      | 585,584                          | 2,482,969                               |
| 26,365  | 18,165   | 16,056                             | 13,205   | 224,516   | 107,212  | 2,951,061       | 220,370      | 787,992                          | 1,942,699                               |
| 75  | 500  | 355                                | 200  | 2,375   | 1,500  | 76,192          | 5,615        | 3,485                            | 62,092                                  |
| 2,200   | 5,580  | 7,625                              | 460  | 72,150  | 46,515   | 1,944,183       | 262,702      | 597,170                          | 1,084,316                               |
| 7,210   | 9,675  | 16,774                             | 26,885   | 64,649  | 33,342   | 2,670,824       | 300,225      | 540,221                          | 1,830,378                               |
| 39,825  | 33,742   | 39,250                             | 246,350  | 183,731   | 364,773  | 6,535,073       | 1,025,026    | 1,520,771                        | 4,019,276                               |
| 4,743   | 107,091  | 11,440                             | 62,200   | 395,163   | 100,420  | 2,236,422       | 173,235      | 338,137                          | 1,677,050                               |
| 10,879  | 341,005  | 116,445                            | 55,698   | 3,241,151   | 357,607  | 8,640,420       | 1,360,342    | 2,344,265                        | 4,935,813                               |
| .....   | .....  | 36,425                             | .....  | 115,495   | 800  | 94,010          | 4,930        | 11,405                           | 77,625                                  |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 28.—CAPITAL.

| STATES AND TERRITORIES. | MILLS—continued.  |             |                            |                                   |               |                         |  |   |  |
|-------------------------|---|-------------|----------------------------|-----------------------------------|---------------|-------------------------|--|---|--|
|                         | Planing-mill plants, conducted by milling establishments; |             |                            |                                   | Live capital. |                         |  |   |  |
|                         | Total.  | Land.       | Buildings, dry kilns, etc. | Machinery, tools, and implements. | Total.        | Logs and bolts at mill. | Lumber or other products (not planed or finished) on hand. | Dressed lumber, stock in process, and remanufactured goods on hand. | Cash on hand, bills receivable, unsettled ledger accounts, and all sundries not included in the foregoing items. |
| United States.....      | \$19,600,300  | \$2,668,893 | \$5,589,056                | \$11,342,851                      | \$204,342,778 | \$22,169,911            | \$70,869,824   | \$11,759,900  | \$90,543,148   |
| Alabama.....            | 514,427   | 31,645      | 137,191                    | 345,591                           | 2,438,652     | 155,958                 | 620,455  | 213,569   | 1,448,670  |
| Alaska.....             | 28,650  | 2,125       | 13,800                     | 12,725                            |               |                         |  |   |  |
| Arizona.....            | 79,664  | 2,915       | 37,005                     | 39,744                            | 223,192       | 28                      | 88,791   | 8,132   | 126,241  |
| Arkansas.....           | 937,584   | 45,538      | 227,252                    | 664,744                           | 6,706,975     | 464,566                 | 2,421,478  | 683,083   | 3,137,853  |
| California.....         | 845,558   | 73,968      | 229,886                    | 541,704                           | 5,470,817     | 196,226                 | 1,590,205  | 743,938   | 2,940,448  |
| Colorado.....           | 55,775  | 8,545       | 15,550                     | 31,680                            | 330,325       | 13,218                  | 75,817   | 27,595  | 213,696  |
| Connecticut.....        | 50,965  | 6,420       | 13,170                     | 31,375                            | 345,279       | 14,725                  | 91,475   | 18,985  | 220,094  |
| Delaware.....           | 13,975  | 1,450       | 2,700                      | 9,825                             | 137,364       | 2,695                   | 5,782  | 11,987  | 116,950  |
| Florida.....            | 581,126   | 46,913      | 175,456                    | 358,757                           | 3,373,740     | 179,605                 | 959,895  | 108,554   | 2,125,636  |
| Georgia.....            | 372,186   | 26,796      | 98,810                     | 246,580                           | 2,103,530     | 85,980                  | 433,824  | 149,936   | 1,383,790  |
| Idaho.....              | 57,210  | 5,665       | 12,570                     | 38,975                            | 313,932       | 50,004                  | 102,714  | 29,105  | 132,109  |
| Illinois.....           | 204,865   | 25,090      | 56,275                     | 123,500                           | 2,187,080     | 120,307                 | 740,122  | 380,457   | 946,194  |
| Indiana.....            | 427,798   | 67,672      | 125,265                    | 234,861                           | 5,198,868     | 421,882                 | 1,863,423  | 342,817   | 2,570,746  |
| Indian Territory.....   | 1,400   | 50          | 300                        | 1,050                             | 22,388        | 1,999                   | 2,547  |   | 17,842   |
| Iowa.....               | 257,501   | 41,433      | 78,414                     | 137,604                           | 4,419,738     | 377,078                 | 1,522,896  | 422,900   | 2,096,864  |
| Kansas.....             |   |             |                            |                                   | 10,830        | 1,518                   | 1,495  |   | 7,817  |
| Kentucky.....           | 421,989   | 33,415      | 113,728                    | 224,796                           | 3,674,180     | 348,923                 | 1,233,424  | 239,072   | 1,747,761  |
| Louisiana.....          | 888,702   | 82,205      | 261,808                    | 544,689                           | 7,097,899     | 415,081                 | 2,335,339  | 258,090   | 4,039,339  |
| Maine.....              | 465,095   | 70,940      | 159,005                    | 225,150                           | 6,203,997     | 1,716,303               | 1,255,257  | 351,625   | 2,880,812  |
| Maryland.....           | 116,453   | 16,933      | 27,722                     | 71,798                            | 756,783       | 27,780                  | 184,560  | 71,605  | 472,333  |
| Massachusetts.....      | 424,756   | 62,445      | 191,393                    | 170,918                           | 2,593,919     | 196,824                 | 1,075,171  | 112,836   | 1,209,038  |
| Michigan.....           | 1,118,059   | 164,167     | 336,490                    | 617,402                           | 24,669,028    | 2,395,881               | 9,327,889  | 912,658   | 12,032,709   |
| Minnesota.....          | 1,034,509   | 232,972     | 313,806                    | 487,731                           | 19,850,285    | 2,268,867               | 8,697,254  | 436,448   | 8,447,716  |
| Mississippi.....        | 600,842   | 44,018      | 157,220                    | 399,609                           | 4,334,704     | 585,464                 | 1,333,780  | 214,762   | 2,150,753  |
| Missouri.....           | 273,637   | 22,115      | 70,024                     | 181,548                           | 3,470,934     | 886,403                 | 1,093,035  | 269,303   | 1,717,193  |
| Montana.....            | 75,079  | 8,960       | 25,505                     | 40,614                            | 1,200,998     | 94,172                  | 436,953  | 98,805  | 571,063  |
| Nebraska.....           |   |             |                            |                                   | 13,860        | 2,675                   | 2,750  |   | 7,935  |
| Nevada.....             |   |             |                            |                                   | 2,400         | 370                     | 790  |   | 1,240  |
| New Hampshire.....      | 344,725   | 32,630      | 125,795                    | 186,300                           | 3,675,925     | 1,142,028               | 997,376  | 183,017   | 1,353,504  |
| New Jersey.....         | 82,870  | 28,210      | 22,325                     | 32,335                            | 548,745       | 20,755                  | 105,240  | 180,913   | 291,837  |
| New Mexico.....         | 3,585   | 155         | 635                        | 2,795                             | 93,260        | 6,700                   | 14,425   | 2,225   | 69,910   |
| New York.....           | 1,121,816   | 196,850     | 384,734                    | 540,732                           | 6,843,815     | 1,285,355               | 1,995,862  | 515,035   | 3,047,563  |
| North Carolina.....     | 633,534   | 65,957      | 133,349                    | 334,233                           | 3,060,008     | 223,566                 | 1,335,833  | 253,853   | 1,191,756  |
| North Dakota.....       | 165   | 15          | 50                         | 100                               | 1,950         |                         | 1,900  |   | 50   |
| Ohio.....               | 653,297   | 102,507     | 197,048                    | 353,742                           | 5,906,183     | 639,664                 | 1,639,007  | 443,075   | 3,123,437  |
| Oklahoma.....           |   |             |                            |                                   | 4,900         | 805                     | 1,080  | 200   | 2,815  |
| Oregon.....             | 510,536   | 76,311      | 101,800                    | 332,475                           | 2,423,470     | 263,511                 | 613,289  | 199,537   | 1,342,103  |
| Pennsylvania.....       | 1,005,024   | 167,364     | 253,547                    | 584,113                           | 16,673,090    | 1,756,923               | 5,420,853  | 594,578   | 8,900,736  |
| Rhode Island.....       | 733   | 48          | 200                        | 485                               | 53,545        | 612                     | 31,820   | 1,038   | 20,075   |
| South Carolina.....     | 208,650   | 18,925      | 51,650                     | 138,075                           | 1,450,531     | 93,096                  | 303,400  | 55,162  | 993,923  |
| South Dakota.....       | 13,220  | 490         | 2,305                      | 10,425                            | 82,330        | 4,470                   | 45,200   | 1,900   | 30,760   |
| Tennessee.....          | 619,816   | 143,332     | 117,994                    | 358,490                           | 5,825,347     | 545,507                 | 1,924,754  | 433,259   | 2,921,327  |
| Texas.....              | 884,672   | 31,359      | 232,963                    | 570,350                           | 5,730,603     | 123,378                 | 1,602,109  | 299,936   | 3,700,130  |
| Utah.....               | 10,652  | 507         | 1,845                      | 8,300                             | 23,731        | 945                     | 9,795  | 775   | 12,216   |
| Vermont.....            | 522,077   | 61,052      | 153,040                    | 302,985                           | 2,449,226     | 453,857                 | 739,034  | 251,572   | 949,763  |
| Virginia.....           | 391,903   | 39,978      | 90,395                     | 211,535                           | 2,737,201     | 34,834                  | 909,636  | 249,474   | 1,548,257  |
| Washington.....         | 933,147   | 174,732     | 244,648                    | 513,717                           | 6,637,870     | 1,171,233               | 1,633,602  | 660,420   | 3,317,565  |
| West Virginia.....      | 273,660   | 32,613      | 82,729                     | 168,318                           | 3,143,569     | 363,907                 | 1,032,278  | 91,016  | 1,611,363  |
| Wisconsin.....          | 1,527,602   | 220,297     | 454,454                    | 852,851                           | 29,777,831    | 3,433,223               | 12,723,773   | 1,272,253   | 12,333,622   |
| Wyoming.....            | 10,806  | 1,071       | 2,205                      | 7,530                             | 33,230        | 6,005                   | 12,492   | 9,365   | 10,423   |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 29.—CAPITAL.

| STATES AND TERRITORIES. | TIMBER CAMPS (INDEPENDENT). |              |                |                                     |                                 |  |  |  |   |               |                            |  |
|-------------------------|-----------------------------|--------------|----------------|-------------------------------------|---------------------------------|--|--|--|---|---------------|----------------------------|--|
|                         | Aggregate.                  | Plants.      |                |                                     |                                 |  |  |  |   | Live capital. |                            |  |
|                         |                             | Total.       | Timbered land. | Tools, implements, live stock, etc. | Logging railways and equipment. | Canals or chutes for transportation of logs. | River improvements (exclusive of stock in chartered boom companies). | Vessels used for transportation of products, including steam tugs. | All other capital invested in timber camps. | Total.        | Value of products on hand. | Cash on hand, bills receivable, unsettled ledger accounts, and all sundries not included in the foregoing items. |
| United States.....      | \$20,795,161                | \$14,579,368 | \$9,692,524    | \$2,073,806                         | \$1,817,822                     | \$194,130                                    | \$125,098  | \$181,201  | \$494,782                                   | \$6,215,798   | \$3,513,495                | \$2,702,303  |
| Alabama .....           | 309,129                     | 277,730      | 218,820        | 20,060                              | 30,010                          | .....  | 1,500  | 1,000  | 6,340                                       | 31,899        | 15,970                     | 15,429   |
| Alaska .....            | 4,900                       | 4,900        | .....          | 4,900                               | .....                           | .....  | .....  | .....  | .....                                       | .....         | .....                      | .....  |
| Arizona .....           | .....                       | .....        | .....          | .....                               | .....                           | .....  | .....  | .....  | .....                                       | .....         | .....                      | .....  |
| Arkansas .....          | 281,278                     | 152,598      | 97,211         | 32,472                              | 18,100                          | 1,750  | 1,000  | .....  | 2,065                                       | 128,680       | 88,760                     | 44,930   |
| California .....        | 1,030,480                   | 886,385      | 743,050        | 71,935                              | 57,000                          | 4,000  | .....  | .....  | 10,350                                      | 144,145       | 97,400                     | 46,745   |
| Colorado .....          | 7,669                       | 8,675        | 1,250          | 2,375                               | .....                           | .....  | .....  | .....  | 50  | 3,994         | 994                        | 3,000  |
| Connecticut .....       | 52,390                      | 15,427       | 10,107         | 5,210                               | .....                           | .....  | .....  | .....  | 110   | 36,963        | 20,543                     | 16,420   |
| Delaware .....          | .....                       | .....        | .....          | .....                               | .....                           | .....  | .....  | .....  | .....                                       | .....         | .....                      | .....  |
| Florida .....           | 554,925                     | 431,445      | 307,684        | 70,769                              | 45,972                          | 1,080  | 200  | 2,500  | 3,250                                       | 128,480       | 50,291                     | 73,189   |
| Georgia .....           | 207,642                     | 161,978      | 105,038        | 25,875                              | 28,970                          | .....  | 200  | 400  | 1,495                                       | 45,664        | 6,133                      | 39,531   |
| Idaho .....             | 12,938                      | 9,711        | 6,000          | 2,800                               | 800                             | .....  | 100  | .....  | 11  | 3,227         | 2,727                      | 500  |
| Illinois .....          | 210,665                     | 181,106      | 114,605        | 6,001                               | .....                           | .....  | .....  | 60,000   | 500   | 29,559        | 21,919                     | 7,640  |
| Indiana .....           | 17,898                      | 7,806        | 3,862          | 3,409                               | .....                           | .....  | .....  | .....  | 535   | 10,092        | 4,181                      | 5,911  |
| Indian Territory .....  | 183                         | 150          | .....          | 150                                 | .....                           | .....  | .....  | .....  | .....                                       | 83            | 8                          | 25   |
| Iowa .....              | .....                       | .....        | .....          | .....                               | .....                           | .....  | .....  | .....  | .....                                       | .....         | .....                      | .....  |
| Kansas .....            | .....                       | .....        | .....          | .....                               | .....                           | .....  | .....  | .....  | .....                                       | .....         | .....                      | .....  |
| Kentucky .....          | 78,218                      | 32,098       | 11,345         | 13,733                              | 800                             | .....  | .....  | .....  | 6,220                                       | 46,120        | 25,645                     | 20,475   |
| Louisiana .....         | 788,572                     | 523,463      | 434,362        | 46,364                              | 36,968                          | .....  | .....  | 5,919  | 4,850                                       | 210,109       | 22,385                     | 187,724  |
| Maine .....             | 11,253                      | 1,700        | 900            | 800                                 | .....                           | .....  | .....  | .....  | .....                                       | 9,558         | 5,950                      | 3,608  |
| Maryland .....          | 1,700                       | 1,700        | .....          | 1,700                               | .....                           | .....  | .....  | .....  | .....                                       | .....         | .....                      | .....  |
| Massachusetts .....     | 149,450                     | 58,580       | 43,205         | 13,775                              | .....                           | .....  | .....  | .....  | 1,600                                       | 90,870        | 44,395                     | 46,475   |
| Michigan .....          | 4,414,153                   | 3,053,470    | 2,749,963      | 133,356                             | 31,850                          | .....  | 3,400  | 32,900   | 102,001                                     | 1,860,683     | 718,748                    | 641,935  |
| Minnesota .....         | 3,399,668                   | 2,625,876    | 1,676,006      | 309,656                             | 517,000                         | .....  | 73,500   | 14,500   | 85,214                                      | 773,792       | 541,810                    | 232,482  |
| Mississippi .....       | 104,430                     | 87,012       | 56,350         | 15,492                              | 12,000                          | .....  | .....  | .....  | 3,170                                       | 17,418        | 10,853                     | 6,565  |
| Missouri .....          | 285,838                     | 233,376      | 131,996        | 53,635                              | 36,335                          | .....  | .....  | .....  | 11,510                                      | 52,457        | 17,634                     | 34,823   |
| Montana .....           | 13,125                      | 3,160        | 1,700          | 6,000                               | .....                           | .....  | .....  | .....  | 450   | 4,975         | 4,175                      | 800  |
| Nebraska .....          | .....                       | .....        | .....          | .....                               | .....                           | .....  | .....  | .....  | .....                                       | .....         | .....                      | .....  |
| Nevada .....            | .....                       | .....        | .....          | .....                               | .....                           | .....  | .....  | .....  | .....                                       | .....         | .....                      | .....  |
| New Hampshire .....     | 740,349                     | 333,755      | 197,233        | 71,054                              | 111,168                         | .....  | 1,250  | .....  | 3,050                                       | 356,594       | 57,621                     | 298,973  |
| New Jersey .....        | 27,955                      | 14,885       | 11,325         | 2,930                               | .....                           | .....  | .....  | .....  | 630   | 13,070        | 2,000                      | 11,070   |
| New Mexico .....        | 4,400                       | 400          | .....          | 400                                 | .....                           | .....  | .....  | .....  | .....                                       | 4,000         | 2,000                      | 2,000  |
| New York .....          | 349,868                     | 267,043      | 248,588        | 17,770                              | .....                           | .....  | 500  | .....  | 185   | 82,825        | 31,950                     | 50,875   |
| North Carolina .....    | 80,179                      | 76,076       | 29,865         | 15,876                              | 30,100                          | .....  | .....  | 700  | 35  | 4,108         | 635                        | 3,468  |
| North Dakota .....      | .....                       | .....        | .....          | .....                               | .....                           | .....  | .....  | .....  | .....                                       | .....         | .....                      | .....  |
| Ohio .....              | 46,285                      | 16,071       | 2,819          | 10,560                              | 1,100                           | .....  | 25   | .....  | 1,567                                       | 30,214        | 10,058                     | 20,156   |
| Oklahoma .....          | .....                       | .....        | .....          | .....                               | .....                           | .....  | .....  | .....  | .....                                       | .....         | .....                      | .....  |
| Oregon .....            | 509,056                     | 330,913      | 95,745         | 103,150                             | 79,900                          | 10,120                                       | 3,575  | 15,560   | 22,863                                      | 173,148       | 124,623                    | 53,517   |
| Pennsylvania .....      | 299,895                     | 182,854      | 115,057        | 28,482                              | 32,355                          | 440  | .....  | .....  | 6,520                                       | 117,041       | 12,940                     | 104,101  |
| Rhode Island .....      | 59,275                      | 9,060        | 7,300          | 1,335                               | .....                           | .....  | .....  | .....  | 425   | 50,215        | 23,750                     | 26,465   |
| South Carolina .....    | 21,970                      | 11,730       | 5,300          | 5,625                               | .....                           | .....  | .....  | .....  | 805   | 10,240        | 7,540                      | 2,700  |
| South Dakota .....      | 6,000                       | 6,000        | .....          | 6,000                               | .....                           | .....  | .....  | .....  | .....                                       | .....         | .....                      | .....  |
| Tennessee .....         | 99,849                      | 44,294       | 23,560         | 13,584                              | 1,275                           | .....  | 250  | .....  | 625   | 55,555        | 26,633                     | 28,917   |
| Texas .....             | 594,613                     | 454,156      | 115,595        | 33,742                              | 266,171                         | .....  | 1,200  | 10,000   | 27,448                                      | 140,457       | 101,996                    | 38,461   |
| Utah .....              | .....                       | .....        | .....          | .....                               | .....                           | .....  | .....  | .....  | .....                                       | .....         | .....                      | .....  |
| Vermont .....           | 2,500                       | 2,500        | 1,400          | 500                                 | .....                           | .....  | .....  | .....  | 600   | .....         | .....                      | .....  |
| Virginia .....          | 122,622                     | 32,785       | 17,938         | 10,147                              | .....                           | .....  | .....  | 1,000  | 3,700                                       | 89,337        | 32,720                     | 57,117   |
| Washington .....        | 4,254,585                   | 3,063,664    | 1,561,548      | 752,223                             | 423,348                         | 66,390                                       | 34,195   | 32,572   | 188,388                                     | 1,190,921     | 825,521                    | 365,400  |
| West Virginia .....     | 153,476                     | 103,814      | 59,757         | 17,834                              | 26,600                          | .....  | 2,203  | 150  | 2,220                                       | 44,662        | 36,675                     | 8,087  |
| Wisconsin .....         | 1,300,230                   | 601,027      | 422,840        | 103,037                             | 25,000                          | 350  | 2,000  | 4,000  | 39,000                                      | 699,203       | 496,414                    | 202,789  |
| Wyoming .....           | 235,550                     | 210,050      | 53,500         | 34,550                              | .....                           | 110,000                                      | .....  | .....  | 7,000                                       | 25,500        | 25,500                     | .....  |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS BY STATES AND TERRITORIES, 1900—Continued.

TABLE 30.—PROPRIETORS AND FIRM MEMBERS, SALARIED EMPLOYEES, WAGE-EARNERS, AND WAGES.

| STATES AND TERRITORIES. | SUMMARY.     |                                  |              |                                       |               |                         |               |                           |           |                           |           |   |  |
|-------------------------|--------------|----------------------------------|--------------|---------------------------------------|---------------|-------------------------|---------------|---------------------------|-----------|---------------------------|-----------|---|--|
|                         | Proprietors. | Salaried officials, clerks, etc. |              | Wage-earners, including pieceworkers. |               |                         |               |                           |           |                           |           |   |  |
|                         |              | Number.                          | Salaries.    | Total.                                |               | Men, 16 years and over. |               | Women, 16 years and over. |           | Children, under 16 years. |           | Greatest number employed at any one time during the year. | Least number employed at any one time during the year. |
|                         |              |                                  |              | Average number.                       | Wages.        | Average number.         | Wages.        | Average number.           | Wages.    | Average number.           | Wages.    |   |  |
| United States.....      | 48,322       | 14,388                           | \$12,520,148 | 882,840                               | \$140,327,924 | 377,480                 | \$130,428,499 | 1,748                     | \$983,288 | 3,612                     | \$560,142 | 650,001   | 350,818  |
| Alabama.....            | 1,516        | 494                              | 367,229      | 12,638                                | 3,091,821     | 12,216                  | 3,088,800     | 67                        | 11,757    | 355                       | 46,264    | 10,853  | 12,830   |
| Alaska.....             | 35           | 14                               | 7,810        | 93                                    | 85,252        | 93                      | 85,252        |                           |           |                           |           | 218   | 187  |
| Arizona.....            | 18           | 22                               | 38,560       | 342                                   | 244,850       | 330                     | 240,850       |                           |           | 12                        | 4,000     | 474   | 312  |
| Arkansas.....           | 1,565        | 873                              | 682,645      | 21,302                                | 6,410,843     | 21,077                  | 6,371,454     | 9                         | 1,485     | 216                       | 37,904    | 32,278  | 20,042   |
| California.....         | 385          | 387                              | 427,242      | 9,822                                 | 4,620,912     | 9,222                   | 4,596,982     | 41                        | 13,527    | 59                        | 10,403    | 14,317  | 6,866  |
| Colorado.....           | 201          | 47                               | 38,487       | 970                                   | 441,135       | 958                     | 436,725       | 11                        | 4,230     | 1                         | 180       | 1,802   | 1,056  |
| Connecticut.....        | 249          | 38                               | 20,396       | 1,074                                 | 416,290       | 1,074                   | 416,290       |                           |           |                           |           | 1,770   | 989  |
| Delaware.....           | 105          | 2                                | 900          | 581                                   | 127,158       | 496                     | 122,385       | 23                        | 3,113     | 12                        | 1,655     | 998   | 560  |
| Florida.....            | 537          | 416                              | 337,405      | 9,041                                 | 2,793,279     | 8,896                   | 2,776,844     | 38                        | 6,999     | 107                       | 14,936    | 13,240  | 7,646  |
| Georgia.....            | 1,697        | 468                              | 297,402      | 14,720                                | 3,404,972     | 14,588                  | 3,391,071     | 11                        | 1,800     | 121                       | 12,101    | 28,362  | 16,176   |
| Idaho.....              | 141          | 23                               | 14,240       | 594                                   | 262,815       | 586                     | 261,415       | 8                         | 1,400     |                           |           | 1,466   | 647  |
| Illinois.....           | 1,106        | 138                              | 116,034      | 4,173                                 | 1,570,472     | 4,012                   | 1,541,625     | 33                        | 8,040     | 128                       | 20,807    | 8,045   | 4,825  |
| Indiana.....            | 2,471        | 423                              | 329,547      | 11,808                                | 4,465,113     | 11,708                  | 4,448,153     | 17                        | 3,886     | 83                        | 18,074    | 19,521  | 12,248   |
| Indian Territory.....   | 65           | 4                                | 957          | 209                                   | 55,643        | 207                     | 55,253        | 1                         | 120       | 1                         | 270       | 368   | 159  |
| Iowa.....               | 327          | 147                              | 175,768      | 2,919                                 | 1,088,717     | 2,803                   | 1,081,294     | 5                         | 1,229     | 111                       | 16,194    | 5,115   | 1,810  |
| Kansas.....             | 68           |                                  |              | 98                                    | 28,172        | 92                      | 28,022        |                           |           | 1                         | 150       | 248   | 187  |
| Kentucky.....           | 1,099        | 355                              | 266,879      | 9,277                                 | 3,015,656     | 9,113                   | 2,989,550     | 4                         | 887       | 160                       | 25,219    | 17,222  | 9,826  |
| Louisiana.....          | 522          | 636                              | 617,759      | 13,186                                | 4,825,882     | 13,077                  | 4,806,829     | 1                         | 400       | 108                       | 18,653    | 18,216  | 12,190   |
| Maine.....              | 1,112        | 312                              | 252,344      | 9,049                                 | 3,391,444     | 8,990                   | 3,378,783     | 54                        | 11,674    | 5                         | 987       | 20,710  | 8,488  |
| Maryland.....           | 474          | 87                               | 44,437       | 2,481                                 | 622,874       | 2,235                   | 602,918       | 143                       | 13,778    | 103                       | 6,178     | 4,620   | 2,590  |
| Massachusetts.....      | 685          | 97                               | 82,596       | 3,463                                 | 1,499,661     | 3,408                   | 1,484,740     | 50                        | 14,046    | 5                         | 875       | 5,996   | 3,209  |
| Michigan.....           | 2,161        | 1,467                            | 1,413,518    | 86,900                                | 15,805,722    | 36,386                  | 15,196,768    | 252                       | 54,384    | 262                       | 54,570    | 68,169  | 30,039   |
| Minnesota.....          | 543          | 715                              | 834,222      | 20,081                                | 9,451,787     | 20,028                  | 9,439,116     | 15                        | 2,985     | 38                        | 9,686     | 36,242  | 12,457   |
| Mississippi.....        | 1,099        | 538                              | 453,244      | 13,713                                | 3,967,030     | 13,634                  | 3,954,765     | 11                        | 2,465     | 68                        | 9,800     | 19,823  | 13,591   |
| Missouri.....           | 1,614        | 275                              | 235,431      | 8,389                                 | 2,809,551     | 8,232                   | 2,782,115     | 51                        | 8,010     | 106                       | 19,426    | 13,975  | 8,071  |
| Montana.....            | 178          | 49                               | 60,906       | 1,949                                 | 1,037,291     | 1,948                   | 1,037,051     | 1                         | 240       |                           |           | 3,781   | 1,713  |
| Nebraska.....           | 30           |                                  |              | 39                                    | 13,917        | 36                      | 13,386        | 1                         | 156       | 2                         | 375       | 132   | 47   |
| Nevada.....             | 4            |                                  |              | 6                                     | 2,225         | 6                       | 2,225         |                           |           |                           |           | 18  | 13   |
| New Hampshire.....      | 681          | 141                              | 104,937      | 6,382                                 | 2,383,074     | 6,300                   | 2,365,418     | 70                        | 15,961    | 12                        | 1,695     | 12,235  | 4,665  |
| New Jersey.....         | 246          | 32                               | 23,334       | 978                                   | 409,282       | 976                     | 408,982       |                           |           | 2                         | 300       | 1,648   | 860  |
| New Mexico.....         | 36           | 12                               | 8,200        | 557                                   | 170,230       | 556                     | 170,165       | 1                         | 125       |                           |           | 834   | 455  |
| New York.....           | 2,161        | 387                              | 303,104      | 9,243                                 | 3,653,383     | 9,144                   | 3,635,988     | 77                        | 12,985    | 22                        | 4,410     | 18,406  | 9,160  |
| North Carolina.....     | 2,426        | 482                              | 328,729      | 16,149                                | 3,443,805     | 15,919                  | 3,416,631     | 35                        | 4,447     | 195                       | 22,727    | 25,078  | 16,515   |
| North Dakota.....       | 6            | 1                                | 300          | 17                                    | 4,400         | 17                      | 4,400         |                           |           |                           |           | 38  | 10   |
| Ohio.....               | 2,800        | 375                              | 309,686      | 10,459                                | 4,023,596     | 10,322                  | 3,999,610     | 79                        | 16,306    | 58                        | 7,680     | 18,521  | 10,641   |
| Oklahoma.....           | 46           | 1                                | 600          | 49                                    | 10,725        | 49                      | 10,725        |                           |           |                           |           | 142   | 37   |
| Oregon.....             | 596          | 250                              | 229,101      | 5,130                                 | 2,558,667     | 5,037                   | 2,537,650     | 73                        | 15,532    | 20                        | 5,485     | 9,188   | 4,495  |
| Pennsylvania.....       | 3,078        | 579                              | 481,405      | 20,359                                | 8,312,776     | 20,186                  | 8,284,082     | 42                        | 7,756     | 131                       | 20,938    | 33,868  | 19,544   |
| Rhode Island.....       | 38           | 4                                | 1,325        | 182                                   | 64,367        | 181                     | 64,249        |                           |           | 1                         | 118       | 336   | 209  |
| South Carolina.....     | 913          | 252                              | 150,999      | 6,559                                 | 1,314,592     | 6,519                   | 1,310,379     | 4                         | 300       | 36                        | 3,613     | 10,055  | 6,799  |
| South Dakota.....       | 24           | 16                               | 13,820       | 295                                   | 146,356       | 295                     | 146,356       |                           |           |                           |           | 561   | 312  |
| Tennessee.....          | 2,486        | 447                              | 370,543      | 12,980                                | 3,950,524     | 12,620                  | 3,898,129     | 118                       | 25,767    | 242                       | 31,628    | 23,605  | 13,050   |
| Texas.....              | 845          | 426                              | 409,118      | 10,962                                | 4,233,096     | 10,921                  | 4,225,577     | 8                         | 296       | 38                        | 7,223     | 15,711  | 10,793   |
| Utah.....               | 106          | 7                                | 1,850        | 202                                   | 66,323        | 192                     | 65,203        | 5                         | 635       | 5                         | 488       | 595   | 369  |
| Vermont.....            | 815          | 91                               | 56,198       | 4,743                                 | 1,582,957     | 4,604                   | 1,514,280     | 99                        | 13,411    | 40                        | 5,266     | 9,640   | 4,650  |
| Virginia.....           | 1,789        | 415                              | 280,088      | 11,031                                | 3,137,853     | 10,664                  | 3,103,050     | 157                       | 17,384    | 210                       | 17,419    | 18,108  | 11,732   |
| Washington.....         | 978          | 743                              | 743,918      | 19,143                                | 10,444,731    | 19,050                  | 10,416,710    | 50                        | 16,412    | 43                        | 11,609    | 27,212  | 17,194   |
| West Virginia.....      | 1,334        | 296                              | 233,044      | 7,924                                 | 2,665,084     | 7,863                   | 2,654,210     | 5                         | 869       | 56                        | 10,005    | 18,406  | 8,257  |
| Wisconsin.....          | 1,284        | 1,326                            | 1,348,501    | 30,497                                | 12,947,544    | 29,977                  | 12,837,527    | 83                        | 18,486    | 437                       | 91,531    | 58,821  | 22,185   |
| Wyoming.....            | 77           | 18                               | 10,495       | 637                                   | 289,017       | 637                     | 289,017       |                           |           |                           |           | 1,029   | 612  |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 31.—SALARIED EMPLOYEES AND WAGE-EARNERS, AND SALARIES AND WAGES PAID.

| STATES AND TERRITORIES. | IN LOGGING PLANTS (CONDUCTED BY MILLING ESTABLISHMENTS.) |              |  |              |                                |                             |
|-------------------------|--|--------------|--|--------------|--------------------------------|-----------------------------|
|                         | Salaried officials, clerks, etc.                         |              | Wage-earners, including pieceworkers (men, 16 years and over). |              |                                |                             |
|                         | Number.  | Amount paid. | Average number.  | Wages.       | Greatest number employed, etc. | Least number employed, etc. |
| United States.....      | 1,803  | \$1,259,535  | 99,580   | \$36,687,833 | 181,189                        | 93,750                      |
| Alabama.....            | 95   | 53,657       | 3,365  | 826,803      | 5,136                          | 3,432                       |
| Alaska.....             | 1  | 560          | 12   | 8,264        | 29                             | 26                          |
| Arizona.....            | 6  | 8,360        | 145  | 107,040      | 178                            | 139                         |
| Arkansas.....           | 104  | 72,740       | 5,407  | 1,630,430    | 8,184                          | 5,120                       |
| California.....         | 52   | 58,805       | 3,516  | 1,771,455    | 5,437                          | 2,530                       |
| Colorado.....           | 2  | 425          | 238  | 110,097      | 487                            | 292                         |
| Connecticut.....        | 8  | 4,100        | 286  | 109,375      | 494                            | 290                         |
| Delaware.....           | 1  | 700          | 98   | 22,060       | 169                            | 111                         |
| Florida.....            | 51   | 33,469       | 1,960  | 600,404      | 2,834                          | 1,767                       |
| Georgia.....            | 54   | 28,756       | 4,480  | 1,060,449    | 6,806                          | 4,909                       |
| Idaho.....              | 2  | 500          | 188  | 82,636       | 456                            | 216                         |
| Illinois.....           | 8  | 1,250        | 647  | 226,832      | 1,466                          | 790                         |
| Indiana.....            | 20   | 12,875       | 2,305  | 356,181      | 3,843                          | 2,321                       |
| Indian Territory.....   |  |              | 36   | 7,145        | 70                             | 51                          |
| Iowa.....               | 2  | 2,000        | 126  | 52,536       | 388                            | 165                         |
| Kansas.....             |  |              | 17   | 5,275        | 57                             | 26                          |
| Kentucky.....           | 18   | 7,969        | 1,728  | 537,960      | 3,377                          | 1,841                       |
| Louisiana.....          | 68   | 52,636       | 3,015  | 993,862      | 4,415                          | 2,885                       |
| Maine.....              | 55   | 23,787       | 2,215  | 757,673      | 3,787                          | 2,756                       |
| Maryland.....           | 14   | 5,750        | 517  | 146,098      | 1,015                          | 578                         |
| Massachusetts.....      | 4  | 700          | 695  | 284,573      | 1,709                          | 687                         |
| Michigan.....           | 260  | 206,758      | 10,701   | 4,183,692    | 22,448                         | 8,768                       |
| Minnesota.....          | 121  | 83,165       | 4,941  | 2,311,216    | 9,468                          | 3,982                       |
| Mississippi.....        | 73   | 46,942       | 4,037  | 1,176,250    | 5,597                          | 4,084                       |
| Missouri.....           | 38   | 24,071       | 2,346  | 796,892      | 3,763                          | 2,268                       |
| Montana.....            | 14   | 16,490       | 758  | 399,367      | 1,518                          | 648                         |
| Nebraska.....           |  |              | 8  | 3,190        | 31                             | 12                          |
| Nevada.....             |  |              | 2  | 850          | 6                              | 5                           |
| New Hampshire.....      | 29   | 13,770       | 2,194  | 723,109      | 4,717                          | 1,628                       |
| New Jersey.....         | 2  | 1,248        | 272  | 103,796      | 491                            | 239                         |
| New Mexico.....         | 3  | 2,200        | 217  | 57,333       | 379                            | 160                         |
| New York.....           | 54   | 32,213       | 2,393  | 916,022      | 5,564                          | 2,476                       |
| North Carolina.....     | 60   | 31,325       | 4,398  | 952,716      | 7,032                          | 4,448                       |
| North Dakota.....       |  |              | 5  | 1,400        | 14                             | 4                           |
| Ohio.....               | 10   | 6,265        | 1,920  | 724,028      | 3,537                          | 1,962                       |
| Oklahoma.....           |  |              | 6  | 1,250        | 23                             | 14                          |
| Oregon.....             | 27   | 20,285       | 1,046  | 534,758      | 2,095                          | 896                         |
| Pennsylvania.....       | 73   | 52,361       | 6,849  | 2,762,613    | 11,254                         | 6,063                       |
| Rhode Island.....       | 1  | 600          | 69   | 21,087       | 96                             | 66                          |
| South Carolina.....     | 85   | 16,550       | 1,974  | 416,693      | 2,879                          | 2,006                       |
| South Dakota.....       | 1  | 800          | 114  | 53,931       | 193                            | 123                         |
| Tennessee.....          | 29   | 14,835       | 1,788  | 526,014      | 3,840                          | 2,012                       |
| Texas.....              | 38   | 27,745       | 3,038  | 1,138,179    | 4,368                          | 3,049                       |
| Utah.....               |  |              | 62   | 22,822       | 197                            | 131                         |
| Vermont.....            | 7  | 2,950        | 1,118  | 348,053      | 3,039                          | 1,341                       |
| Virginia.....           | 64   | 37,542       | 3,420  | 993,471      | 5,472                          | 3,574                       |
| Washington.....         | 69   | 75,663       | 3,447  | 1,933,507    | 5,117                          | 3,273                       |
| West Virginia.....      | 36   | 22,067       | 2,597  | 886,526      | 4,256                          | 2,624                       |
| Wisconsin.....          | 195  | 149,806      | 8,796  | 3,467,533    | 20,284                         | 6,934                       |
| Wyoming.....            | 4  | 1,300        | 78   | 82,992       | 199                            | 138                         |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS,

TABLE 32.—PROPRIETORS AND FIRM MEMBERS, SALARIED EMPLOYEES, AND WAGE-EARNERS, AND SALARIES AND WAGES PAID.

| STATES AND TERRITORIES. |                        | MILLS.                        |        |        |                                  |              |                           |             |   |             |
|-------------------------|------------------------|-------------------------------|--------|--------|----------------------------------|--------------|---------------------------|-------------|---|-------------|
|                         |                        | Proprietors and firm members. |        |        | Salaried officials, clerks, etc. |              |                           |             |   |             |
|                         |                        | Total.                        | Men.   | Women. | Aggregate.                       |              | Officers of corporations. |             | General superintendents, managers, clerks, etc. |             |
|                         |                        |                               |        |        | Number.                          | Salaries.    | Number.                   | Salaries.   | Total.  |             |
|                         |                        |                               |        |        |                                  |              |                           |             | Number.   | Salaries.   |
| 1                       | United States.....     | 43,322                        | 43,118 | 204    | 11,927                           | \$10,734,405 | 2,117                     | \$3,227,147 | 9,810   | \$7,507,258 |
| 2                       | Alabama .....          | 1,516                         | 1,514  | 2      | 383                              | 304,772      | 94                        | 128,778     | 289   | 175,994     |
| 3                       | Alaska .....           | 35                            | 35     | .....  | 13                               | 7,250        | .....                     | .....       | 13  | 7,250       |
| 4                       | Arizona .....          | 13                            | 13     | .....  | 16                               | 25,200       | 4                         | 5,900       | 12  | 19,300      |
| 5                       | Arkansas .....         | 1,565                         | 1,555  | 10     | 752                              | 598,529      | 127                       | 164,550     | 625   | 433,979     |
| 6                       | California .....       | 335                           | 329    | 6      | 312                              | 340,437      | 61                        | 105,064     | 251   | 235,373     |
| 7                       | Colorado .....         | 201                           | 198    | 3      | 44                               | 38,002       | 9                         | 9,100       | 35  | 28,902      |
| 8                       | Connecticut .....      | 249                           | 246    | 3      | 80                               | 16,296       | 1                         | 200         | 29  | 16,095      |
| 9                       | Delaware .....         | 105                           | 102    | 3      | 1                                | 200          | .....                     | .....       | 1   | 200         |
| 10                      | Florida .....          | 537                           | 531    | 6      | 349                              | 291,132      | 48                        | 82,700      | 301   | 208,432     |
| 11                      | Georgia .....          | 1,697                         | 1,688  | 9      | 391                              | 258,521      | 62                        | 68,860      | 329   | 189,661     |
| 12                      | Idaho .....            | 141                           | 141    | .....  | 20                               | 13,690       | 2                         | 2,400       | 18  | 11,290      |
| 13                      | Illinois .....         | 1,106                         | 1,103  | 3      | 128                              | 106,584      | 14                        | 24,950      | 114   | 81,634      |
| 14                      | Indiana .....          | 2,471                         | 2,452  | 19     | 402                              | 313,422      | 56                        | 79,494      | 346   | 233,928     |
| 15                      | Indian Territory ..... | 65                            | 64     | 1      | 4                                | 957          | 1                         | 500         | 3   | 457         |
| 16                      | Iowa .....             | 327                           | 326    | 1      | 145                              | 173,768      | 30                        | 68,720      | 115   | 105,048     |
| 17                      | Kansas .....           | 68                            | 68     | .....  | .....                            | .....        | .....                     | .....       | .....   | .....       |
| 18                      | Kentucky .....         | 1,699                         | 1,696  | 3      | 329                              | 256,615      | 53                        | 63,580      | 276   | 193,035     |
| 19                      | Louisiana .....        | 522                           | 513    | 9      | 552                              | 544,763      | 129                       | 197,623     | 423   | 347,140     |
| 20                      | Maine .....            | 1,112                         | 1,109  | 3      | 257                              | 228,607      | 45                        | 76,163      | 212   | 152,444     |
| 21                      | Maryland .....         | 474                           | 473    | 1      | 73                               | 33,687       | 10                        | 8,240       | 63  | 30,447      |
| 22                      | Massachusetts .....    | 685                           | 684    | 1      | 93                               | 81,896       | 5                         | 8,800       | 88  | 73,096      |
| 23                      | Michigan .....         | 2,161                         | 2,154  | 7      | 1,118                            | 1,111,624    | 197                       | 314,069     | 921   | 797,555     |
| 24                      | Minnesota .....        | 543                           | 540    | 3      | 492                              | 664,087      | 86                        | 228,690     | 406   | 435,397     |
| 25                      | Mississippi .....      | 1,099                         | 1,091  | 3      | 461                              | 403,902      | 85                        | 126,056     | 376   | 277,846     |
| 26                      | Missouri .....         | 1,614                         | 1,610  | 4      | 227                              | 205,193      | 51                        | 90,909      | 176   | 114,234     |
| 27                      | Montana .....          | 178                           | 177    | 1      | 35                               | 44,416       | 5                         | 10,100      | 30  | 34,316      |
| 28                      | Nebraska .....         | 30                            | 30     | .....  | .....                            | .....        | .....                     | .....       | .....   | .....       |
| 29                      | Nevada .....           | 4                             | 4      | .....  | .....                            | .....        | .....                     | .....       | .....   | .....       |
| 30                      | New Hampshire .....    | 681                           | 674    | 7      | 99                               | 84,838       | 15                        | 17,130      | 84  | 67,658      |
| 31                      | New Jersey .....       | 246                           | 244    | 2      | 30                               | 22,136       | 1                         | 1,000       | 29  | 21,136      |
| 32                      | New Mexico .....       | 36                            | 36     | .....  | 9                                | 6,000        | 2                         | 1,500       | 7   | 4,500       |
| 33                      | New York .....         | 2,161                         | 2,141  | 20     | 330                              | 269,431      | 38                        | 40,938      | 292   | 228,443     |
| 34                      | North Carolina .....   | 2,426                         | 2,420  | 6      | 412                              | 291,414      | 77                        | 102,150     | 335   | 189,264     |
| 35                      | North Dakota .....     | 6                             | 6      | .....  | 1                                | 300          | .....                     | .....       | 1   | 300         |
| 36                      | Ohio .....             | 2,300                         | 2,295  | 5      | 362                              | 302,091      | 58                        | 84,123      | 304   | 217,968     |
| 37                      | Oklahoma .....         | 46                            | 46     | .....  | 1                                | 600          | .....                     | .....       | 1   | 600         |
| 38                      | Oregon .....           | 596                           | 591    | 5      | 209                              | 200,030      | 56                        | 81,344      | 153   | 113,136     |
| 39                      | Pennsylvania .....     | 3,078                         | 3,072  | 6      | 502                              | 426,568      | 51                        | 76,199      | 451   | 350,369     |
| 40                      | Rhode Island .....     | 38                            | 38     | .....  | 3                                | 725          | .....                     | .....       | 3   | 725         |
| 41                      | South Carolina .....   | 913                           | 916    | 2      | 216                              | 134,199      | 30                        | 41,000      | 136   | 93,199      |
| 42                      | South Dakota .....     | 24                            | 24     | .....  | 14                               | 12,020       | 6                         | 7,740       | 8   | 4,280       |
| 43                      | Tennessee .....        | 2,436                         | 2,478  | 8      | 409                              | 352,578      | 57                        | 89,630      | 352   | 262,948     |
| 44                      | Texas .....            | 845                           | 841    | 4      | 374                              | 371,868      | 73                        | 106,235     | 301   | 265,533     |
| 45                      | Utah .....             | 106                           | 106    | .....  | 7                                | 1,350        | .....                     | .....       | 7   | 1,350       |
| 46                      | Vermont .....          | 315                           | 303    | 7      | 34                               | 53,243       | 11                        | 12,060      | 73  | 41,133      |
| 47                      | Virginia .....         | 1,739                         | 1,730  | 9      | 340                              | 229,073      | 36                        | 52,860      | 304   | 176,213     |
| 48                      | Washington .....       | 978                           | 976    | 2      | 541                              | 525,787      | 126                       | 143,635     | 415   | 377,102     |
| 49                      | West Virginia .....    | 1,334                         | 1,324  | 10     | 251                              | 203,560      | 52                        | 66,498      | 199   | 137,062     |
| 50                      | Wisconsin .....        | 1,234                         | 1,279  | 5      | 1,100                            | 1,175,049    | 252                       | 431,359     | 343   | 743,690     |
| 51                      | Wyoming .....          | 77                            | 77     | .....  | 6                                | 2,495        | 1                         | 600         | 5   | 1,395       |

## BY STATES AND TERRITORIES, 1900—Continued.

TABLE 32.—PROPRIETORS AND FIRM MEMBERS, SALARIED EMPLOYEES, AND WAGE-EARNERS, AND SALARIES AND WAGES PAID.

| MILLS—continued.   |             |         |           |                                       |              |                         |              |                           |           |                           |           |   |  |    |
|--|-------------|---------|-----------|---------------------------------------|--------------|-------------------------|--------------|---------------------------|-----------|---------------------------|-----------|---|--|----|
| Salaried officials, etc.—continued.                        |             |         |           | Wage-earners, including pieceworkers. |              |                         |              |                           |           |                           |           |   |  |    |
| General superintendents, managers, clerks, etc.—continued. |             |         |           | Total.                                |              | Men, 16 years and over. |              | Women, 16 years and over. |           | Children, under 16 years. |           | Greatest number employed at any one time during the year. | Least number employed at any one time during the year. |    |
| Men.   |             | Women.  |           | Average number.                       | Wages.       | Average number.         | Wages.       | Average number.           | Wages.    | Average number.           | Wages.    |   |  |    |
| Number.  | Salaries.   | Number. | Salaries. |                                       |              |                         |              |                           |           |                           |           |   |  |    |
| 9,283  | \$7,292,589 | 527     | \$214,669 | 262,718                               | \$95,888,824 | 257,353                 | \$94,989,399 | 1,748                     | \$333,283 | 3,612                     | \$566,142 | 432,003   | 242,618  | 1  |
| 282  | 178,179     | 7       | 2,815     | 8,935                                 | 2,198,999    | 8,513                   | 2,140,978    | 67                        | 11,757    | 855                       | 46,264    | 13,626  | 9,133  | 2  |
| 13   | 7,250       |         |           | 70                                    | 65,809       | 70                      | 65,809       |                           |           |                           |           | 142   | 118  | 3  |
| 11   | 18,400      | 1       | 900       | 197                                   | 137,810      | 185                     | 133,810      |                           |           | 12                        | 4,000     | 296   | 173  | 4  |
| 612  | 429,349     | 13      | 4,630     | 15,523                                | 4,601,477    | 15,298                  | 4,562,088    | 9                         | 1,485     | 216                       | 37,904    | 22,988  | 14,548   | 5  |
| 233  | 226,863     | 18      | 8,510     | 5,259                                 | 2,542,405    | 5,159                   | 2,518,475    | 41                        | 13,527    | 59                        | 10,403    | 7,844   | 3,888  | 6  |
| 35   | 28,902      |         |           | 701                                   | 317,038      | 689                     | 312,628      | 11                        | 4,230     | 1                         | 180       | 1,275   | 747  | 7  |
| 24   | 14,900      | 5       | 1,196     | 723                                   | 283,834      | 723                     | 283,834      |                           |           |                           |           | 1,146   | 615  | 8  |
| 1  | 200         |         |           | 433                                   | 105,093      | 398                     | 100,325      | 23                        | 3,113     | 12                        | 1,655     | 829   | 449  | 9  |
| 294  | 206,012     | 7       | 2,420     | 6,365                                 | 1,983,606    | 6,220                   | 1,961,671    | 38                        | 6,999     | 107                       | 14,936    | 9,136   | 5,343  | 10 |
| 326  | 189,193     | 3       | 468       | 9,625                                 | 2,232,904    | 9,493                   | 2,219,003    | 11                        | 1,800     | 121                       | 12,101    | 15,305  | 10,705   | 11 |
| 13   | 9,440       | 5       | 1,850     | 403                                   | 173,719      | 395                     | 177,319      | 8                         | 1,400     |                           |           | 979   | 419  | 12 |
| 105  | 76,509      | 9       | 5,125     | 3,413                                 | 1,302,080    | 3,252                   | 1,273,233    | 33                        | 8,040     | 128                       | 20,807    | 6,285   | 3,443  | 13 |
| 321  | 224,244     | 25      | 9,684     | 9,378                                 | 3,666,617    | 9,278                   | 3,549,657    | 17                        | 3,886     | 83                        | 18,074    | 15,437  | 9,302  | 14 |
| 3  | 457         |         |           | 170                                   | 47,734       | 168                     | 47,344       | 1                         | 120       | 1                         | 270       | 295   | 107  | 15 |
| 104  | 101,168     | 11      | 3,880     | 2,793                                 | 1,046,181    | 2,677                   | 1,028,758    | 5                         | 1,229     | 111                       | 16,194    | 4,727   | 1,645  | 16 |
|  |             |         |           | 76                                    | 22,897       | 75                      | 22,747       |                           |           | 1                         | 150       | 191   | 111  | 17 |
| 257  | 187,445     | 19      | 5,590     | 7,362                                 | 2,426,749    | 7,198                   | 2,400,643    | 4                         | 887       | 160                       | 25,219    | 13,359  | 7,792  | 18 |
| 410  | 339,260     | 13      | 7,880     | 9,354                                 | 3,114,150    | 9,245                   | 3,095,097    | 1                         | 400       | 103                       | 18,653    | 12,847  | 8,603  | 19 |
| 195  | 145,862     | 17      | 6,582     | 6,817                                 | 2,628,615    | 6,768                   | 2,615,954    | 54                        | 11,674    | 5                         | 987       | 13,861  | 5,706  | 20 |
| 63   | 30,447      |         |           | 1,960                                 | 475,661      | 1,714                   | 455,705      | 143                       | 13,778    | 103                       | 6,178     | 3,592   | 2,011  | 21 |
| 71   | 65,992      | 17      | 7,104     | 2,674                                 | 1,176,758    | 2,619                   | 1,161,887    | 50                        | 14,046    | 5                         | 375       | 4,083   | 2,453  | 22 |
| 843  | 764,639     | 78      | 32,916    | 23,793                                | 9,959,842    | 23,279                  | 9,850,888    | 252                       | 54,384    | 262                       | 54,570    | 41,200  | 19,919   | 23 |
| 384  | 423,267     | 22      | 12,130    | 11,192                                | 5,549,566    | 11,139                  | 5,536,885    | 15                        | 2,985     | 38                        | 9,686     | 18,951  | 6,793  | 24 |
| 366  | 273,087     | 10      | 4,759     | 9,452                                 | 2,743,733    | 9,373                   | 2,731,463    | 11                        | 2,465     | 68                        | 9,800     | 13,816  | 9,318  | 25 |
| 167  | 111,354     | 9       | 2,930     | 5,823                                 | 1,945,442    | 5,666                   | 1,918,006    | 51                        | 8,010     | 106                       | 19,426    | 9,746   | 5,649  | 26 |
| 28   | 33,976      | 2       | 340       | 1,171                                 | 627,474      | 1,170                   | 627,234      | 1                         | 240       |                           |           | 2,218   | 1,032  | 27 |
|  |             |         |           | 31                                    | 10,727       | 28                      | 10,196       | 1                         | 156       | 2                         | 375       | 101   | 35   | 28 |
|  |             |         |           | 4                                     | 1,375        | 4                       | 1,375        |                           |           |                           |           | 12  | 8  | 29 |
| 76   | 64,764      | 8       | 2,894     | 3,609                                 | 1,476,964    | 3,527                   | 1,469,308    | 70                        | 15,961    | 12                        | 1,695     | 6,424   | 2,993  | 30 |
| 29   | 21,136      |         |           | 681                                   | 296,137      | 679                     | 295,837      |                           |           | 2                         | 300       | 1,094   | 598  | 31 |
| 7  | 4,500       |         |           | 240                                   | 82,957       | 239                     | 82,832       | 1                         | 125       |                           |           | 355   | 195  | 32 |
| 282  | 225,751     | 10      | 2,692     | 6,559                                 | 2,617,026    | 6,460                   | 2,599,631    | 77                        | 12,985    | 22                        | 4,410     | 12,383  | 6,426  | 33 |
| 323  | 186,480     | 12      | 2,784     | 11,337                                | 2,384,476    | 11,107                  | 2,357,302    | 35                        | 4,447     | 195                       | 22,727    | 17,509  | 11,673   | 34 |
| 1  | 300         |         |           | 12                                    | 3,000        | 12                      | 3,000        |                           |           |                           |           | 24  | 6  | 35 |
| 280  | 208,766     | 24      | 9,202     | 8,366                                 | 3,233,296    | 8,229                   | 3,209,310    | 79                        | 16,306    | 58                        | 7,680     | 14,653  | 8,509  | 36 |
| 1  | 600         |         |           | 43                                    | 9,475        | 43                      | 9,475        |                           |           |                           |           | 119   | 73   | 37 |
| 134  | 107,636     | 19      | 10,550    | 3,473                                 | 1,752,276    | 3,380                   | 1,731,259    | 73                        | 15,532    | 20                        | 5,485     | 5,875   | 3,174  | 38 |
| 430  | 343,270     | 21      | 7,099     | 13,174                                | 5,416,872    | 13,001                  | 5,388,178    | 42                        | 7,756     | 131                       | 20,938    | 21,912  | 13,231   | 39 |
| 3  | 725         |         |           | 116                                   | 40,830       | 115                     | 40,712       |                           |           | 1                         | 118       | 220   | 132  | 40 |
| 186  | 93,199      |         |           | 4,456                                 | 877,159      | 4,416                   | 872,946      | 4                         | 300       | 36                        | 3,913     | 6,856   | 4,704  | 41 |
| 8  | 4,280       |         |           | 151                                   | 77,010       | 151                     | 77,010       |                           |           |                           |           | 303   | 169  | 42 |
| 339  | 257,048     | 13      | 5,900     | 11,021                                | 3,378,667    | 10,661                  | 3,321,272    | 118                       | 25,767    | 242                       | 31,623    | 19,839  | 10,835   | 43 |
| 296  | 263,003     | 5       | 2,580     | 7,541                                 | 2,951,291    | 7,500                   | 2,943,772    | 3                         | 296       | 38                        | 7,223     | 10,561  | 7,223  | 44 |
| 5  | 1,625       | 2       | 225       | 140                                   | 43,504       | 130                     | 42,381       | 5                         | 635       | 5                         | 488       | 398   | 238  | 45 |
| 66   | 39,278      | 7       | 1,905     | 3,617                                 | 1,182,404    | 3,478                   | 1,163,727    | 99                        | 18,411    | 40                        | 5,266     | 6,581   | 3,306  | 46 |
| 300  | 175,123     | 4       | 1,085     | 7,451                                 | 2,098,148    | 7,084                   | 2,063,346    | 157                       | 17,384    | 210                       | 17,419    | 12,316  | 8,018  | 47 |
| 394  | 367,350     | 21      | 9,752     | 10,937                                | 5,728,002    | 10,844                  | 5,700,581    | 50                        | 16,412    | 43                        | 11,609    | 15,135  | 10,127   | 48 |
| 182  | 132,646     | 17      | 4,416     | 5,140                                 | 1,766,697    | 5,079                   | 1,755,823    | 5                         | 869       | 56                        | 10,005    | 8,744   | 5,472  | 49 |
| 777  | 711,949     | 71      | 31,741    | 20,841                                | 9,129,290    | 20,321                  | 9,019,273    | 83                        | 18,486    | 437                       | 91,531    | 36,591  | 14,734   | 50 |
| 3  | 1,760       | 2       | 135       | 116                                   | 49,458       | 116                     | 49,458       |                           |           |                           |           | 269   | 167  | 51 |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 33.—SALARIED EMPLOYEES, AND SALARIES, WAGE-EARNERS, AND WAGES PAID.

| STATES AND TERRITORIES. | TIMBER CAMPS.                    |            |                                |            |   |            |              |            |              |           |   |             |   |   |
|-------------------------|----------------------------------|------------|--------------------------------|------------|---|------------|--------------|------------|--------------|-----------|---|-------------|---|---|
|                         | Salaried officials, clerks, etc. |            |                                |            |   |            |              |            |              |           | Wage-earners, including pieceworkers<br>(men, 16 years and over). |             |   |   |
|                         | Aggregate.                       |            | Officers of cor-<br>porations. |            | General superintendents, managers, clerks, etc. |            |              |            |              |           |   |             |   |   |
|                         |                                  |            |                                |            | Total.  |            | Men.         |            | Women.       |           |   |             |   |   |
|                         | Num-<br>ber.                     | Salaries.  | Num-<br>ber.                   | Salaries.  | Num-<br>ber.                                    | Salaries.  | Num-<br>ber. | Salaries.  | Num-<br>ber. | Salaries. | Average<br>number.  | Wages.      | Greatest<br>number<br>employed,<br>etc. | Least<br>number<br>em-<br>ployed,<br>etc. |
| United States.....      | 603                              | \$526, 203 | 78                             | \$122, 309 | 525   | \$403, 894 | 498          | \$394, 727 | 27           | \$9, 167  | 20, 542   | \$8,751,767 | 37, 409                                 | 14, 498                                   |
| Alabama .....           | 16                               | 5, 800     | 2                              | 1, 200     | 14  | 4, 600     | 14           | 4, 600     |              |           | 338   | 66, 019     | 591                                     | 265                                       |
| Alaska .....            |                                  |            |                                |            |   |            |              |            |              |           | 11  | 11, 179     | 47                                      | 43  |
| Arizona .....           |                                  |            |                                |            |   |            |              |            |              |           |   |             |   |   |
| Arkansas.....           | 17                               | 11, 276    | 3                              | 2, 520     | 14  | 8, 756     | 14           | 8, 756     |              |           | 372   | 128, 936    | 1, 101                                  | 374                                       |
| California.....         | 23                               | 28, 000    | 3                              | 4, 600     | 20  | 23, 400    | 20           | 23, 400    |              |           | 547   | 307, 052    | 1, 036                                  | 453                                       |
| Colorado .....          | 1                                | 60         |                                |            | 1   | 60         | 1            | 60         |              |           | 31  | 14, 000     | 40                                      | 17  |
| Connecticut.....        |                                  |            |                                |            |   |            |              |            |              |           | 65  | 23, 081     | 130                                     | 84  |
| Delaware.....           |                                  |            |                                |            |   |            |              |            |              |           |   |             |   |   |
| Florida.....            | 16                               | 12, 804    | 1                              | 5, 000     | 15  | 7, 804     | 15           | 7, 804     |              |           | 716   | 214, 269    | 1, 270                                  | 546                                       |
| Georgia.....            | 23                               | 10, 125    |                                |            | 23  | 10, 125    | 23           | 10, 125    |              |           | 615   | 111, 619    | 1, 251                                  | 562                                       |
| Idaho .....             | 1                                | 50         |                                |            | 1   | 50         | 1            | 50         |              |           | 3   | 1, 460      | 31                                      | 12  |
| Illinois.....           | 7                                | 8, 200     | 1                              | 3, 000     | 6   | 5, 200     | 5            | 4, 600     | 1            | 600       | 113   | 41, 560     | 304                                     | 83  |
| Indiana.....            | 6                                | 3, 250     |                                |            | 6   | 3, 250     | 6            | 3, 250     |              |           | 125   | 42, 815     | 241                                     | 125                                       |
| Indian Territory .....  |                                  |            |                                |            |   |            |              |            |              |           | 3   | 764         | 3                                       | 1   |
| Iowa .....              |                                  |            |                                |            |   |            |              |            |              |           |   |             |   |   |
| Kansas.....             |                                  |            |                                |            |   |            |              |            |              |           |   |             |   |   |
| Kentucky.....           | 8                                | 2, 295     |                                |            | 8   | 2, 295     | 8            | 2, 295     |              |           | 137   | 50, 947     | 486                                     | 193                                       |
| Louisiana.....          | 16                               | 20, 360    | 6                              | 9, 900     | 10  | 10, 460    | 10           | 10, 460    |              |           | 817   | 222, 870    | 954                                     | 697                                       |
| Maine.....              |                                  |            |                                |            |   |            |              |            |              |           | 17  | 5, 156      | 62                                      | 26  |
| Maryland.....           |                                  |            |                                |            |   |            |              |            |              |           | 4   | 1, 115      | 13                                      | 1   |
| Massachusetts.....      |                                  |            |                                |            |   |            |              |            |              |           | 94  | 33, 330     | 204                                     | 69  |
| Michigan.....           | 89                               | 95, 141    | 6                              | 25, 167    | 83  | 69, 974    | 79           | 68, 334    | 4            | 1, 640    | 2, 406  | 1, 162, 188 | 4, 521                                  | 1, 352                                    |
| Minnesota.....          | 102                              | 86, 970    | 10                             | 7, 820     | 92  | 79, 150    | 92           | 79, 150    |              |           | 3, 948  | 1, 591, 015 | 7, 828                                  | 1, 632                                    |
| Mississippi.....        | 4                                | 2, 400     |                                |            | 4   | 2, 400     | 4            | 2, 400     |              |           | 224   | 47, 047     | 410                                     | 139                                       |
| Missouri.....           | 10                               | 6, 167     |                                |            | 10  | 6, 167     | 10           | 6, 167     |              |           | 220   | 67, 217     | 476                                     | 154                                       |
| Montana.....            |                                  |            |                                |            |   |            |              |            |              |           | 20  | 10, 450     | 45                                      | 33  |
| Nebraska.....           |                                  |            |                                |            |   |            |              |            |              |           |   |             |   |   |
| Nevada.....             |                                  |            |                                |            |   |            |              |            |              |           |   |             |   |   |
| New Hampshire.....      | 13                               | 6, 329     |                                |            | 13  | 6, 329     | 13           | 6, 329     |              |           | 579   | 178, 001    | 1, 094                                  | 144                                       |
| New Jersey.....         |                                  |            |                                |            |   |            |              |            |              |           | 25  | 9, 349      | 63                                      | 23  |
| New Mexico.....         |                                  |            |                                |            |   |            |              |            |              |           | 100   | 30, 000     | 100                                     | 100                                       |
| New York.....           | 3                                | 1, 460     |                                |            | 3   | 1, 460     | 3            | 1, 460     |              |           | 291   | 120, 335    | 549                                     | 253                                       |
| North Carolina.....     | 10                               | 5, 990     | 1                              | 1, 800     | 9   | 4, 190     | 9            | 4, 190     |              |           | 414   | 106, 613    | 537                                     | 394                                       |
| North Dakota.....       |                                  |            |                                |            |   |            |              |            |              |           |   |             |   |   |
| Ohio.....               | 3                                | 1, 330     |                                |            | 3   | 1, 330     | 2            | 1, 186     | 1            | 144       | 173   | 65, 372     | 331                                     | 170                                       |
| Oklahoma.....           |                                  |            |                                |            |   |            |              |            |              |           |   |             |   |   |
| Oregon.....             | 14                               | 8, 786     | 2                              | 2, 224     | 12  | 6, 562     | 12           | 6, 562     |              |           | 611   | 271, 638    | 1, 218                                  | 425                                       |
| Pennsylvania.....       | 4                                | 2, 476     |                                |            | 4   | 2, 476     | 4            | 2, 476     |              |           | 336   | 133, 291    | 702                                     | 307                                       |
| Rhode Island.....       |                                  |            |                                |            |   |            |              |            |              |           | 7   | 2, 450      | 20                                      | 11  |
| South Carolina.....     | 1                                | 250        |                                |            | 1   | 250        | 1            | 250        |              |           | 129   | 20, 740     | 320                                     | 89  |
| South Dakota.....       | 1                                | 1, 000     |                                |            | 1   | 1, 000     | 1            | 1, 000     |              |           | 30  | 15, 415     | 60                                      | 20  |
| Tennessee.....          | 9                                | 3, 130     |                                |            | 9   | 3, 130     | 9            | 3, 130     |              |           | 171   | 45, 843     | 376                                     | 153                                       |
| Texas.....              | 14                               | 9, 500     | 5                              | 3, 100     | 9   | 6, 400     | 9            | 6, 400     |              |           | 383   | 143, 626    | 782                                     | 521                                       |
| Utah.....               |                                  |            |                                |            |   |            |              |            |              |           |   |             |   |   |
| Vermont.....            |                                  |            |                                |            |   |            |              |            |              |           | 8   | 2, 500      | 20                                      | 3   |
| Virginia.....           | 11                               | 13, 423    | 4                              | 10, 000    | 7   | 3, 423     | 6            | 3, 023     | 1            | 400       | 160   | 46, 234     | 320                                     | 140                                       |
| Washington.....         | 133                              | 142, 468   | 28                             | 39, 378    | 105   | 103, 090   | 92           | 93, 770    | 13           | 4, 320    | 4, 759  | 2, 732, 622 | 6, 960                                  | 3, 794                                    |
| West Virginia.....      | 9                                | 6, 817     | 1                              | 1, 500     | 8   | 5, 317     | 6            | 5, 200     | 2            | 117       | 187   | 61, 861     | 406                                     | 161                                       |
| Wisconsin.....          | 31                               | 23, 646    | 5                              | 5, 100     | 26  | 18, 546    | 21           | 16, 600    | 5            | 1, 946    | 860   | 350, 721    | 1, 946                                  | 517                                       |
| Wyoming.....            | 8                                | 6, 700     |                                |            | 8   | 6, 700     | 8            | 6, 700     |              |           | 443   | 206, 567    | 561                                     | 307                                       |



## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 34.—PERSONS EMPLOYED, WAGE-EARNERS, INCLUDING PIECEWORKERS.

| STATES AND TERRITORIES. | AVERAGE NUMBER EMPLOYED DURING EACH MONTH.               |           |         |        |        |        |        |         |            |          |           |           |
|-------------------------|--|-----------|---------|--------|--------|--------|--------|---------|------------|----------|-----------|-----------|
|                         | IN LOGGING PLANTS (CONDUCTED BY MILLING ESTABLISHMENTS). |           |         |        |        |        |        |         |            |          |           |           |
|                         | Men, 16 years and over.                                  |           |         |        |        |        |        |         |            |          |           |           |
|                         | January.   | February. | March.  | April. | May.   | June.  | July.  | August. | September. | October. | November. | December. |
| United States.....      | 128,908  | 129,055   | 123,358 | 99,903 | 96,023 | 88,294 | 75,054 | 75,874  | 81,031     | 90,753   | 102,137   | 109,568   |
| Alabama.....            | 3,955  | 3,864     | 3,789   | 3,626  | 3,500  | 3,013  | 2,886  | 3,017   | 3,001      | 3,186    | 3,280     | 3,221     |
| Alaska.....             |  |           |         | 27     | 27     | 27     | 27     | 17      | 17         |          |           |           |
| Arizona.....            | 147  | 144       | 143     | 151    | 148    | 147    | 144    | 144     | 144        | 142      | 141       | 141       |
| Arkansas.....           | 5,460  | 5,483     | 5,813   | 5,844  | 5,905  | 5,198  | 5,119  | 5,153   | 5,214      | 5,363    | 5,222     | 5,104     |
| California.....         | 2,004  | 2,223     | 2,588   | 3,752  | 4,421  | 4,538  | 4,477  | 4,492   | 4,413      | 4,049    | 3,043     | 2,190     |
| Colorado.....           | 237  | 229       | 205     | 221    | 274    | 233    | 232    | 231     | 252        | 244      | 254       | 237       |
| Connecticut.....        | 348  | 369       | 336     | 329    | 298    | 258    | 166    | 190     | 242        | 278      | 300       | 320       |
| Delaware.....           | 107  | 105       | 114     | 127    | 109    | 90     | 87     | 66      | 80         | 90       | 104       | 99        |
| Florida.....            | 2,231  | 2,277     | 2,236   | 2,053  | 2,014  | 1,799  | 1,663  | 1,651   | 1,791      | 1,918    | 1,927     | 1,958     |
| Georgia.....            | 5,267  | 5,297     | 5,864   | 5,481  | 5,202  | 4,470  | 3,512  | 3,548   | 3,695      | 3,903    | 4,012     | 4,058     |
| Idaho.....              | 285  | 268       | 204     | 202    | 197    | 136    | 136    | 124     | 141        | 148      | 182       | 226       |
| Illinois.....           | 874  | 823       | 759     | 732    | 709    | 582    | 470    | 483     | 535        | 592      | 617       | 587       |
| Indiana.....            | 2,589  | 2,582     | 2,395   | 2,341  | 2,451  | 2,257  | 2,060  | 2,045   | 2,192      | 2,299    | 2,291     | 2,159     |
| Indian Territory.....   | 46   | 46        | 50      | 46     | 32     | 25     | 27     | 33      | 35         | 35       | 33        | 30        |
| Iowa.....               | 263  | 253       | 195     | 141    | 84     | 45     | 34     | 33      | 78         | 89       | 129       | 163       |
| Kansas.....             | 30   | 28        | 24      | 15     | 18     | 9      | 6      | 6       | 15         | 17       | 22        | 18        |
| Kentucky.....           | 1,810  | 1,886     | 2,100   | 2,008  | 1,967  | 1,573  | 1,505  | 1,515   | 1,557      | 1,650    | 1,684     | 1,532     |
| Louisiana.....          | 2,941  | 2,928     | 3,013   | 3,213  | 3,330  | 3,126  | 2,397  | 2,978   | 2,984      | 2,923    | 2,889     | 2,954     |
| Maine.....              | 5,858  | 4,901     | 3,818   | 1,704  | 950    | 461    | 327    | 429     | 564        | 1,393    | 2,582     | 4,095     |
| Maryland.....           | 544  | 565       | 592     | 588    | 536    | 491    | 431    | 471     | 501        | 484      | 517       | 489       |
| Massachusetts.....      | 1,233  | 1,184     | 1,141   | 885    | 649    | 410    | 262    | 249     | 375        | 501      | 656       | 841       |
| Michigan.....           | 17,431   | 17,252    | 15,623  | 9,417  | 7,713  | 6,531  | 5,672  | 6,055   | 7,081      | 8,940    | 12,210    | 14,488    |
| Minnesota.....          | 8,185  | 8,180     | 7,464   | 3,808  | 3,107  | 2,782  | 2,515  | 2,401   | 2,647      | 3,975    | 6,384     | 7,867     |
| Mississippi.....        | 4,405  | 4,367     | 4,432   | 4,329  | 4,449  | 3,894  | 3,643  | 3,762   | 3,838      | 3,966    | 3,749     | 3,612     |
| Missouri.....           | 2,484  | 2,425     | 2,672   | 2,579  | 2,577  | 2,032  | 2,072  | 2,066   | 2,225      | 2,323    | 2,440     | 2,245     |
| Montana.....            | 998  | 942       | 636     | 642    | 689    | 638    | 550    | 609     | 745        | 846      | 875       | 881       |
| Nebraska.....           | 15   | 19        | 12      | 10     | 9      | 7      | 3      | 3       | 6          | 5        | 7         | 5         |
| Nevada.....             |  |           | 3       | 4      |        | 1      | 1      | 3       | 3          | 3        | 3         | 2         |
| New Hampshire.....      | 3,820  | 3,714     | 3,175   | 1,622  | 1,238  | 1,277  | 840    | 923     | 1,766      | 2,014    | 2,727     | 3,213     |
| New Jersey.....         | 368  | 357       | 327     | 270    | 249    | 197    | 177    | 177     | 270        | 303      | 285       | 233       |
| New Mexico.....         | 287  | 298       | 243     | 171    | 176    | 171    | 170    | 170     | 166        | 214      | 270       | 267       |
| New York.....           | 3,761  | 3,733     | 3,443   | 2,374  | 2,031  | 1,557  | 1,176  | 1,306   | 1,714      | 2,303    | 2,593     | 2,728     |
| North Carolina.....     | 5,005  | 4,987     | 5,148   | 5,042  | 5,096  | 4,114  | 3,828  | 3,749   | 3,889      | 4,033    | 3,940     | 3,939     |
| North Dakota.....       | 5  | 7         | 7       | 11     | 11     | 7      | 2      | 2       | 2          | 2        |           |           |
| Ohio.....               | 2,172  | 2,273     | 2,293   | 2,239  | 2,188  | 1,899  | 1,664  | 1,633   | 1,620      | 1,678    | 1,694     | 1,677     |
| Oklahoma.....           | 14   | 15        | 15      | 12     | 5      | 1      | 1      | 1       | 1          | 1        | 1         | 2         |
| Oregon.....             | 806  | 860       | 1,046   | 1,193  | 1,302  | 1,345  | 1,175  | 1,133   | 1,072      | 1,056    | 812       | 759       |
| Pennsylvania.....       | 7,021  | 6,974     | 6,952   | 7,025  | 8,059  | 7,495  | 6,735  | 6,262   | 6,329      | 6,447    | 6,466     | 6,372     |
| Rhode Island.....       | 61   | 61        | 50      | 61     | 62     | 53     | 50     | 52      | 64         | 70       | 65        | 57        |
| South Carolina.....     | 2,195  | 2,270     | 2,363   | 2,285  | 2,190  | 1,734  | 1,627  | 1,760   | 1,728      | 1,814    | 1,831     | 1,896     |
| South Dakota.....       | 131  | 125       | 119     | 113    | 113    | 101    | 108    | 106     | 101        | 118      | 105       | 122       |
| Tennessee.....          | 1,975  | 2,046     | 2,147   | 2,250  | 2,241  | 1,651  | 1,523  | 1,537   | 1,671      | 1,595    | 1,490     | 1,379     |
| Texas.....              | 3,122  | 3,222     | 3,314   | 3,343  | 3,509  | 2,999  | 2,849  | 2,873   | 2,782      | 2,897    | 2,857     | 2,633     |
| Utah.....               | 50   | 48        | 42      | 39     | 52     | 31     | 97     | 97      | 100        | 58       | 29        | 53        |
| Vermont.....            | 2,174  | 2,108     | 1,737   | 843    | 617    | 522    | 425    | 463     | 636        | 933      | 1,262     | 1,691     |
| Virginia.....           | 3,566  | 3,794     | 3,911   | 4,006  | 3,930  | 3,411  | 3,053  | 2,992   | 3,037      | 3,107    | 3,129     | 3,002     |
| Washington.....         | 3,126  | 3,532     | 3,807   | 3,987  | 4,115  | 3,623  | 3,347  | 3,356   | 3,342      | 3,320    | 3,059     | 2,750     |
| West Virginia.....      | 2,300  | 2,316     | 3,026   | 3,120  | 3,142  | 2,530  | 2,321  | 2,330   | 2,227      | 2,274    | 2,275     | 2,258     |
| Wisconsin.....          | 17,055   | 17,050    | 14,289  | 5,694  | 4,157  | 3,662  | 2,916  | 3,071   | 4,068      | 7,106    | 11,709    | 14,871    |
| Wyoming.....            | 142  | 145       | 127     | 132    | 125    | 41     | 45     | 42      | 35         | 33       | 35        | 34        |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS,

TABLE 35.—AVERAGE NUMBER OF WAGE-EARNERS EMPLOYED DURING EACH MONTH.

| STATES AND TERRITORIES. |                       | IN MILLS.               |           |         |         |         |         |         |         |            |          |           |           |
|-------------------------|-----------------------|-------------------------|-----------|---------|---------|---------|---------|---------|---------|------------|----------|-----------|-----------|
|                         |                       | Men, 16 years and over. |           |         |         |         |         |         |         |            |          |           |           |
|                         |                       | January.                | February. | March.  | April.  | May.    | June.   | July.   | August. | September. | October. | November. | December. |
| 1                       | United States.....    | 237,946                 | 245,963   | 264,811 | 292,727 | 309,393 | 276,496 | 253,053 | 252,447 | 254,883    | 252,688  | 236,342   | 212,050   |
| 2                       | Alabama.....          | 9,323                   | 9,466     | 9,435   | 9,442   | 9,168   | 7,880   | 7,247   | 7,366   | 7,343      | 8,222    | 8,558     | 8,211     |
| 3                       | Alaska.....           | 4                       | 31        | 65      | 91      | 120     | 114     | 108     | 94      | 73         | 71       | 62        | 4         |
| 4                       | Arizona.....          | 173                     | 174       | 184     | 191     | 187     | 191     | 197     | 189     | 192        | 187      | 180       | 176       |
| 5                       | Arkansas.....         | 15,878                  | 15,555    | 16,125  | 16,578  | 16,986  | 14,515  | 14,321  | 14,212  | 14,725     | 15,022   | 15,357    | 14,811    |
| 6                       | California.....       | 3,395                   | 3,373     | 3,903   | 4,883   | 6,224   | 6,308   | 6,490   | 6,540   | 6,343      | 5,937    | 4,924     | 3,592     |
| 7                       | Colorado.....         | 713                     | 741       | 691     | 700     | 775     | 717     | 650     | 680     | 641        | 661      | 660       | 643       |
| 8                       | Connecticut.....      | 878                     | 876       | 906     | 864     | 751     | 644     | 496     | 496     | 612        | 605      | 744       | 740       |
| 9                       | Delaware.....         | 332                     | 360       | 454     | 522     | 509     | 461     | 390     | 356     | 331        | 366      | 372       | 829       |
| 10                      | Florida.....          | 6,721                   | 6,806     | 6,944   | 6,819   | 6,886   | 5,978   | 5,490   | 5,401   | 5,764      | 5,941    | 5,953     | 5,988     |
| 11                      | Georgia.....          | 11,014                  | 10,960    | 11,286  | 10,957  | 10,689  | 8,872   | 7,559   | 7,856   | 8,127      | 8,582    | 8,967     | 9,046     |
| 12                      | Idaho.....            | 254                     | 294       | 378     | 538     | 592     | 498     | 482     | 421     | 362        | 353      | 325       | 246       |
| 13                      | Illinois.....         | 8,323                   | 8,303     | 8,456   | 8,778   | 8,935   | 8,312   | 2,922   | 2,951   | 3,176      | 3,541    | 2,753     | 2,574     |
| 14                      | Indiana.....          | 9,904                   | 10,084    | 10,456  | 10,385  | 10,269  | 9,149   | 8,301   | 8,321   | 8,588      | 8,746    | 8,726     | 8,407     |
| 15                      | Indian Territory..... | 217                     | 219       | 219     | 190     | 177     | 126     | 133     | 103     | 136        | 164      | 169       | 162       |
| 16                      | Iowa.....             | 1,366                   | 1,556     | 1,644   | 2,787   | 3,380   | 3,557   | 3,454   | 3,412   | 3,467      | 3,587    | 2,648     | 1,320     |
| 17                      | Kansas.....           | 108                     | 108       | 94      | 104     | 77      | 50      | 29      | 36      | 52         | 67       | 86        | 87        |
| 18                      | Kentucky.....         | 7,061                   | 7,257     | 8,142   | 8,869   | 8,820   | 7,274   | 6,701   | 6,561   | 6,628      | 6,622    | 6,454     | 5,984     |
| 19                      | Louisiana.....        | 8,799                   | 9,117     | 9,461   | 9,878   | 10,076  | 9,542   | 8,878   | 8,999   | 9,001      | 9,154    | 8,900     | 9,188     |
| 20                      | Maine.....            | 4,867                   | 5,494     | 6,262   | 7,775   | 9,440   | 8,559   | 7,474   | 7,233   | 7,229      | 7,132    | 5,683     | 3,902     |
| 21                      | Maryland.....         | 1,706                   | 1,820     | 2,005   | 2,080   | 2,165   | 1,749   | 1,458   | 1,446   | 1,494      | 1,580    | 1,542     | 1,623     |
| 22                      | Massachusetts.....    | 2,919                   | 3,014     | 3,211   | 3,103   | 2,788   | 2,463   | 2,071   | 2,007   | 2,255      | 2,399    | 2,532     | 2,659     |
| 23                      | Michigan.....         | 17,747                  | 18,896    | 21,018  | 26,639  | 30,637  | 28,791  | 26,234  | 26,598  | 24,461     | 22,975   | 20,894    | 15,465    |
| 24                      | Minnesota.....        | 5,136                   | 5,588     | 6,327   | 10,929  | 15,498  | 15,787  | 15,120  | 15,267  | 15,093     | 14,536   | 9,415     | 4,924     |
| 25                      | Mississippi.....      | 9,631                   | 9,870     | 10,048  | 10,047  | 10,494  | 9,293   | 8,682   | 8,918   | 9,150      | 9,022    | 8,646     | 8,671     |
| 26                      | Missouri.....         | 5,956                   | 5,941     | 6,522   | 6,534   | 6,396   | 5,283   | 4,964   | 5,092   | 5,224      | 5,484    | 5,502     | 5,097     |
| 27                      | Montana.....          | 988                     | 941       | 1,147   | 1,452   | 1,466   | 1,139   | 1,227   | 1,235   | 1,180      | 1,181    | 1,082     | 998       |
| 28                      | Nebraska.....         | 42                      | 49        | 47      | 45      | 30      | 21      | 11      | 14      | 15         | 19       | 25        | 22        |
| 29                      | Nevada.....           |                         | 3         | 3       | 3       | 4       | 6       | 7       | 3       | 4          | 5        | 3         | 8         |
| 30                      | New Hampshire.....    | 3,924                   | 4,044     | 4,160   | 4,367   | 3,922   | 3,589   | 2,570   | 2,730   | 3,118      | 3,235    | 3,288     | 3,372     |
| 31                      | New Jersey.....       | 730                     | 739       | 741     | 874     | 788     | 642     | 584     | 595     | 656        | 631      | 609       | 607       |
| 32                      | New Mexico.....       | 271                     | 278       | 301     | 258     | 265     | 249     | 245     | 231     | 217        | 193      | 190       | 173       |
| 33                      | New York.....         | 5,699                   | 5,983     | 6,773   | 8,260   | 8,394   | 7,463   | 6,346   | 5,981   | 5,987      | 5,797    | 5,710     | 5,123     |
| 34                      | North Carolina.....   | 12,046                  | 12,173    | 12,721  | 12,488  | 12,292  | 10,347  | 9,579   | 9,659   | 10,297     | 10,516   | 10,654    | 10,603    |
| 35                      | North Dakota.....     | 14                      | 15        | 15      | 19      | 21      | 15      | 7       | 7       | 7          | 10       | 6         | 6         |
| 36                      | Ohio.....             | 8,823                   | 8,604     | 8,953   | 9,567   | 9,611   | 8,586   | 7,492   | 7,443   | 7,683      | 7,803    | 7,440     | 7,246     |
| 37                      | Oklahoma.....         | 59                      | 64        | 60      | 60      | 47      | 25      | 19      | 28      | 36         | 35       | 40        | 37        |
| 38                      | Oregon.....           | 2,807                   | 2,322     | 3,221   | 3,781   | 4,115   | 3,998   | 3,675   | 3,618   | 3,593      | 3,324    | 2,833     | 2,720     |
| 39                      | Pennsylvania.....     | 11,804                  | 11,911    | 14,046  | 16,043  | 16,078  | 13,756  | 12,482  | 12,471  | 12,270     | 11,895   | 11,988    | 11,263    |
| 40                      | Rhode Island.....     | 119                     | 128       | 140     | 163     | 148     | 137     | 108     | 83      | 87         | 79       | 94        | 88        |
| 41                      | South Carolina.....   | 5,019                   | 5,198     | 5,096   | 4,714   | 4,478   | 3,855   | 3,470   | 3,886   | 4,036      | 4,288    | 4,411     | 4,548     |
| 42                      | South Dakota.....     | 180                     | 181       | 127     | 163     | 180     | 166     | 137     | 134     | 152        | 151      | 176       | 163       |
| 43                      | Tennessee.....        | 10,771                  | 11,246    | 11,986  | 12,381  | 12,215  | 10,752  | 9,950   | 9,880   | 9,918      | 9,790    | 9,510     | 9,529     |
| 44                      | Texas.....            | 7,326                   | 7,970     | 8,207   | 8,274   | 8,394   | 7,286   | 7,002   | 7,167   | 7,168      | 7,026    | 6,896     | 6,793     |
| 45                      | Utah.....             | 74                      | 72        | 98      | 129     | 151     | 196     | 199     | 207     | 185        | 129      | 64        | 58        |
| 46                      | Vermont.....          | 3,350                   | 3,592     | 3,986   | 4,623   | 4,521   | 3,743   | 3,022   | 2,848   | 3,023      | 3,038    | 3,006     | 2,979     |
| 47                      | Virginia.....         | 7,357                   | 7,504     | 7,943   | 8,124   | 8,277   | 7,092   | 6,393   | 6,229   | 6,579      | 6,566    | 6,648     | 6,298     |
| 48                      | Washington.....       | 9,474                   | 10,199    | 11,385  | 12,334  | 12,967  | 11,279  | 10,488  | 10,858  | 10,861     | 10,707   | 10,186    | 9,390     |
| 49                      | West Virginia.....    | 5,209                   | 5,488     | 6,042   | 6,178   | 6,202   | 5,069   | 4,588   | 4,369   | 4,401      | 4,531    | 4,476     | 4,401     |
| 50                      | Wisconsin.....        | 14,306                  | 15,785    | 17,752  | 23,665  | 27,707  | 25,867  | 23,484  | 23,114  | 22,388     | 20,591   | 16,836    | 12,366    |
| 51                      | Wyoming.....          | 129                     | 126       | 130     | 169     | 181     | 110     | 117     | 112     | 95         | 82       | 69        | 65        |

## BY STATES AND TERRITORIES, 1900—Continued.

TABLE 35.—AVERAGE NUMBER OF WAGE-EARNERS EMPLOYED DURING EACH MONTH.

| IN MILLS—continued.       |       |       |       |       |       |       |       |       |       |       |       |                           |       |       |       |       |       |       |       |       |       |       |       |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Women, 16 years and over. |       |       |       |       |       |       |       |       |       |       |       | Children, under 16 years. |       |       |       |       |       |       |       |       |       |       |       |
| Jan.                      | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Jan.                      | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Aug.  | Sept. | Oct.  | Nov.  | Dec.  |
| 1,738                     | 1,880 | 1,908 | 2,040 | 2,129 | 1,979 | 1,696 | 1,629 | 1,556 | 1,520 | 1,495 | 1,498 | 3,512                     | 3,534 | 3,818 | 4,142 | 4,278 | 3,791 | 3,483 | 3,427 | 3,433 | 3,883 | 3,308 | 3,204 |
| 64                        | 64    | 64    | 67    | 68    | 69    | 66    | 71    | 71    | 70    | 70    | 63    | 385                       | 385   | 410   | 421   | 440   | 396   | 263   | 264   | 319   | 336   | 326   | 313   |
| 8                         | 11    | 10    | 10    | 10    | 10    | 7     | 7     | 10    | 10    | 10    | 11    | 12                        | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    |
| 32                        | 32    | 34    | 46    | 55    | 48    | 47    | 46    | 44    | 43    | 37    | 32    | 50                        | 53    | 42    | 48    | 61    | 72    | 74    | 73    | 73    | 58    | 54    | 48    |
| 10                        | 9     | 10    | 11    | 12    | 11    | 12    | 11    | 12    | 11    | 12    | 11    |                           |       |       |       |       | 2     | 2     | 2     | 2     | 2     | 2     |       |
| 50                        | 50    | 50    | 50    | 58    | 8     | 6     |       |       |       |       |       | 20                        | 21    | 21    | 26    | 26    | 11    | 11    | 7     |       |       |       |       |
| 47                        | 49    | 49    | 53    | 53    | 23    | 23    | 13    | 13    | 43    | 43    | 51    | 110                       | 113   | 115   | 116   | 120   | 110   | 99    | 88    | 94    | 101   | 108   | 114   |
| 13                        | 14    | 13    | 13    | 13    | 4     | 3     | 5     | 14    | 14    | 14    | 11    | 123                       | 117   | 132   | 137   | 138   | 117   | 110   | 108   | 120   | 123   | 116   | 112   |
| 2                         | 6     | 6     | 14    | 14    | 12    | 8     | 8     | 7     | 7     | 4     | 4     |                           |       |       |       |       |       |       |       |       |       |       |       |
| 34                        | 37    | 34    | 36    | 41    | 44    | 44    | 40    | 36    | 32    | 10    | 10    | 125                       | 123   | 127   | 130   | 137   | 133   | 130   | 122   | 130   | 129   | 128   | 120   |
| 12                        | 14    | 15    | 32    | 22    | 22    | 14    | 15    | 17    | 17    | 17    | 10    | 70                        | 70    | 85    | 105   | 107   | 99    | 76    | 79    | 83    | 73    | 71    | 71    |
| 2                         | 2     | 2     | 2     | 2     | 2     | 2     |       |       |       |       |       | 2                         | 2     | 2     | 2     | 2     | 2     | 2     |       |       |       |       |       |
|                           | 3     | 3     | 9     | 9     | 9     | 9     | 6     | 6     | 6     | 4     |       | 75                        | 79    | 82    | 98    | 138   | 140   | 133   | 136   | 135   | 136   | 112   | 65    |
| 3                         | 3     | 3     | 4     | 8     | 6     | 3     | 3     | 4     | 6     | 6     | 3     | 148                       | 149   | 166   | 182   | 194   | 175   | 141   | 151   | 156   | 157   | 151   | 148   |
| 1                         | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 108                       | 105   | 99    | 104   | 110   | 109   | 108   | 107   | 117   | 114   | 107   | 103   |
| 61                        | 68    | 72    | 75    | 83    | 73    | 45    | 42    | 30    | 32    | 30    | 34    | 3                         | 6     | 11    | 13    | 11    | 5     | 3     | 1     | 1     | 4     | 3     | 1     |
| 101                       | 103   | 228   | 228   | 228   | 188   | 101   | 52    | 21    | 57    | 88    | 143   | 167                       | 165   | 177   | 169   | 174   | 93    | 56    | 40    | 20    | 26    | 45    | 100   |
| 58                        | 58    | 57    | 57    | 52    | 45    | 43    | 42    | 42    | 44    | 52    | 54    | 5                         | 5     | 5     | 5     | 6     | 3     | 5     | 5     | 5     | 5     | 5     | 5     |
| 265                       | 266   | 257   | 254   | 267   | 314   | 259   | 250   | 253   | 174   | 231   | 237   | 212                       | 209   | 249   | 239   | 356   | 273   | 292   | 295   | 234   | 237   | 223   | 220   |
| 14                        | 13    | 17    | 16    | 19    | 21    | 10    | 23    | 10    | 11    | 10    | 11    | 15                        | 15    | 16    | 50    | 60    | 51    | 50    | 50    | 45    | 49    | 43    | 14    |
| 13                        | 14    | 13    | 13    | 13    | 13    | 9     | 9     | 9     | 9     | 12    | 10    | 64                        | 65    | 76    | 75    | 78    | 70    | 69    | 71    | 62    | 61    | 63    | 62    |
| 35                        | 45    | 45    | 58    | 58    | 60    | 61    | 58    | 57    | 56    | 46    | 37    | 103                       | 100   | 103   | 112   | 111   | 105   | 101   | 106   | 106   | 112   | 106   | 109   |
| 1                         | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |                           |       |       |       |       |       |       |       |       |       |       |       |
| 1                         |       |       | 1     | 1     | 1     | 1     | 1     |       |       | 1     | 1     | 4                         | 3     | 3     | 2     | 1     |       |       |       | 1     | 2     | 3     | 3     |
| 81                        | 84    | 83    | 87    | 79    | 81    | 58    | 56    | 55    | 55    | 56    | 68    | 17                        | 17    | 14    | 14    | 10    | 8     | 8     | 6     | 10    | 9     | 10    | 15    |
|                           |       |       |       |       |       |       |       |       |       |       |       | 2                         | 1     | 1     | 2     | 2     | 2     | 2     | 2     | 6     | 3     | 1     | 1     |
| 1                         | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |                           |       |       |       |       |       |       |       |       |       |       |       |
| 65                        | 65    | 67    | 65    | 85    | 103   | 90    | 97    | 93    | 88    | 67    | 35    | 16                        | 16    | 19    | 26    | 34    | 32    | 30    | 26    | 19    | 19    | 16    | 15    |
| 67                        | 67    | 67    | 67    | 71    | 14    | 8     | 12    | 10    | 12    | 14    | 14    | 235                       | 253   | 259   | 248   | 243   | 184   | 162   | 153   | 154   | 149   | 145   | 151   |
| 65                        | 70    | 87    | 87    | 101   | 90    | 39    | 82    | 76    | 68    | 66    | 66    | 37                        | 29    | 59    | 33    | 85    | 74    | 75    | 71    | 67    | 43    | 37    | 37    |
| 46                        | 50    | 56    | 69    | 81    | 82    | 30    | 76    | 89    | 89    | 31    | 78    | 21                        | 19    | 20    | 19    | 23    | 26    | 24    | 23    | 19    | 21    | 15    | 15    |
| 29                        | 29    | 28    | 33    | 52    | 49    | 47    | 55    | 57    | 56    | 36    | 36    | 122                       | 120   | 126   | 155   | 134   | 121   | 129   | 124   | 113   | 149   | 147   | 130   |
| 1                         | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 11    | 11    | 11    | 2                         | 2     |       | 2     | 2     |       |       |       |       |       |       |       |
|                           |       |       |       |       |       |       |       |       |       |       |       | 33                        | 41    | 42    | 53    | 41    | 38    | 28    | 33    | 33    | 32    | 30    | 30    |
| 94                        | 124   | 125   | 127   | 103   | 104   | 133   | 128   | 118   | 118   | 123   | 123   | 271                       | 255   | 264   | 277   | 278   | 248   | 222   | 203   | 204   | 206   | 234   | 244   |
| 3                         | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 37                        | 39    | 39    | 43    | 44    | 34    | 36    | 41    | 40    | 36    | 36    | 31    |
| 2                         | 2     | 3     | 5     | 5     | 9     | 10    | 10    | 9     | 4     | 2     | 4     |                           |       |       | 7     | 7     | 6     | 7     | 12    | 11    | 3     | 1     |       |
| 106                       | 107   | 108   | 105   | 93    | 97    | 93    | 94    | 92    | 96    | 96    | 100   | 36                        | 39    | 50    | 51    | 44    | 40    | 43    | 45    | 33    | 31    | 30    | 32    |
| 159                       | 158   | 157   | 161   | 164   | 183   | 150   | 150   | 151   | 151   | 150   | 150   | 230                       | 234   | 223   | 223   | 219   | 202   | 193   | 197   | 198   | 201   | 201   | 199   |
| 41                        | 48    | 56    | 65    | 71    | 64    | 54    | 54    | 44    | 43    | 34    | 32    | 25                        | 32    | 43    | 50    | 63    | 52    | 58    | 57    | 45    | 36    | 28    |       |
| 5                         | 5     | 5     | 6     | 7     | 6     | 5     | 5     | 5     | 4     | 4     | 4     | 63                        | 63    | 64    | 69    | 65    | 51    | 46    | 46    | 46    | 42    | 52    |       |
| 56                        | 63    | 77    | 107   | 124   | 107   | 99    | 101   | 94    | 77    | 52    | 33    | 338                       | 349   | 441   | 500   | 484   | 490   | 477   | 462   | 460   | 460   | 415   | 382   |
|                           |       |       |       |       |       |       |       |       |       |       |       |                           |       |       |       |       |       |       |       |       |       |       |       |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 36.—AVERAGE NUMBER OF WAGE-EARNERS EMPLOYED DURING EACH MONTH.

| STATES AND TERRITORIES. | IN TIMBER CAMPS.        |           |        |        |        |        |        |         |            |          |           |           |
|-------------------------|-------------------------|-----------|--------|--------|--------|--------|--------|---------|------------|----------|-----------|-----------|
|                         | Men, 16 years and over. |           |        |        |        |        |        |         |            |          |           |           |
|                         | January.                | February. | March. | April. | May.   | June.  | July.  | August. | September. | October. | November. | December. |
| United States.....      | 27,244                  | 27,148    | 25,957 | 21,278 | 19,018 | 16,568 | 14,829 | 14,987  | 16,079     | 18,905   | 21,376    | 23,123    |
| Alabama.....            | 349                     | 347       | 343    | 389    | 310    | 415    | 305    | 319     | 369        | 349      | 290       | 315       |
| Alaska.....             |                         |           | 3      | 17     | 27     | 22     | 29     | 24      | 14         |          |           | 1         |
| Arizona.....            |                         |           |        |        |        |        |        |         |            |          |           |           |
| Arkansas.....           | 537                     | 529       | 489    | 469    | 462    | 308    | 211    | 223     | 248        | 284      | 366       | 392       |
| California.....         | 445                     | 490       | 509    | 487    | 557    | 618    | 641    | 622     | 596        | 584      | 571       | 489       |
| Colorado.....           | 39                      | 44        | 38     | 35     | 29     | 29     | 29     | 30      | 31         | 31       | 34        | 6         |
| Connecticut.....        | 91                      | 91        | 79     | 72     | 68     | 51     | 43     | 43      | 46         | 54       | 71        | 79        |
| Delaware.....           |                         |           |        |        |        |        |        |         |            |          |           |           |
| Florida.....            | 917                     | 878       | 831    | 792    | 709    | 579    | 569    | 512     | 584        | 670      | 781       | 775       |
| Georgia.....            | 716                     | 756       | 730    | 717    | 710    | 447    | 375    | 413     | 599        | 612      | 640       | 662       |
| Idaho.....              | 3                       | 3         | 8      | 5      | 21     |        |        |         |            |          |           |           |
| Illinois.....           | 114                     | 116       | 116    | 118    | 118    | 115    | 109    | 112     | 112        | 112      | 107       | 109       |
| Indiana.....            | 98                      | 104       | 116    | 157    | 151    | 188    | 132    | 133     | 140        | 157      | 92        | 98        |
| Indian Territory.....   | 3                       | 2         | 3      | 2      | 3      | 3      | 3      | 2       | 3          | 3        | 3         | 3         |
| Iowa.....               |                         |           |        |        |        |        |        |         |            |          |           |           |
| Kansas.....             |                         |           |        |        |        |        |        |         |            |          |           |           |
| Kentucky.....           | 178                     | 172       | 223    | 233    | 210    | 139    | 140    | 158     | 157        | 204      | 220       | 214       |
| Louisiana.....          | 801                     | 805       | 817    | 805    | 805    | 871    | 808    | 842     | 841        | 884      | 765       | 809       |
| Maine.....              | 29                      | 29        | 25     | 5      | 6      | 10     | 8      | 10      | 15         | 15       | 23        | 23        |
| Maryland.....           | 5                       | 5         | 5      | 5      |        |        |        | 5       | 5          | 5        | 5         | 5         |
| Massachusetts.....      | 138                     | 132       | 123    | 86     | 89     | 64     | 54     | 43      | 68         | 95       | 102       | 141       |
| Michigan.....           | 3,951                   | 3,791     | 3,307  | 2,360  | 1,616  | 1,521  | 1,259  | 1,246   | 1,427      | 1,968    | 2,904     | 3,517     |
| Minnesota.....          | 7,713                   | 7,557     | 6,750  | 3,572  | 2,288  | 2,032  | 1,544  | 1,344   | 1,526      | 3,020    | 4,337     | 5,653     |
| Mississippi.....        | 312                     | 279       | 272    | 219    | 221    | 196    | 157    | 242     | 177        | 178      | 178       | 259       |
| Missouri.....           | 156                     | 162       | 185    | 249    | 302    | 207    | 206    | 211     | 225        | 252      | 234       | 248       |
| Montana.....            | 25                      | 25        | 25     | 25     | 32     | 20     | 14     | 12      | 15         | 17       | 16        | 20        |
| Nebraska.....           |                         |           |        |        |        |        |        |         |            |          |           |           |
| Nevada.....             |                         |           |        |        |        |        |        |         |            |          |           |           |
| New Hampshire.....      | 978                     | 985       | 945    | 395    | 188    | 188    | 134    | 337     | 442        | 649      | 809       | 850       |
| New Jersey.....         | 26                      | 33        | 33     | 37     | 33     | 27     | 18     | 17      | 17         | 20       | 16        | 24        |
| New Mexico.....         | 100                     | 100       | 100    | 100    | 100    | 100    | 100    | 100     | 100        | 100      | 100       | 100       |
| New York.....           | 419                     | 429       | 380    | 316    | 199    | 207    | 169    | 143     | 143        | 342      | 366       | 374       |
| North Carolina.....     | 444                     | 441       | 423    | 414    | 396    | 394    | 394    | 408     | 413        | 415      | 412       | 412       |
| North Dakota.....       |                         |           |        |        |        |        |        |         |            |          |           |           |
| Ohio.....               | 195                     | 195       | 180    | 178    | 169    | 149    | 143    | 149     | 166        | 154      | 182       | 214       |
| Oklahoma.....           |                         |           |        |        |        |        |        |         |            |          |           |           |
| Oregon.....             | 438                     | 448       | 598    | 790    | 857    | 842    | 641    | 654     | 629        | 584      | 478       | 377       |
| Pennsylvania.....       | 370                     | 367       | 356    | 354    | 415    | 365    | 269    | 293     | 284        | 300      | 331       | 329       |
| Rhode Island.....       | 16                      | 16        | 15     | 14     |        |        |        |         |            | 3        | 11        | 10        |
| South Carolina.....     | 150                     | 154       | 140    | 107    | 105    | 97     | 127    | 139     | 121        | 124      | 128       | 150       |
| South Dakota.....       | 30                      | 30        | 30     | 30     | 30     | 30     | 30     | 30      | 30         | 30       | 30        | 30        |
| Tennessee.....          | 183                     | 186       | 200    | 191    | 191    | 178    | 165    | 166     | 159        | 159      | 146       | 130       |
| Texas.....              | 850                     | 864       | 362    | 520    | 528    | 266    | 292    | 294     | 305        | 377      | 489       | 446       |
| Utah.....               |                         |           |        |        |        |        |        |         |            |          |           |           |
| Vermont.....            | 10                      | 10        | 10     | 10     | 10     | 10     | 12     | 10      | 10         | 3        | 3         | 3         |
| Virginia.....           | 190                     | 222       | 205    | 190    | 180    | 139    | 111    | 122     | 142        | 135      | 140       | 144       |
| Washington.....         | 4,374                   | 4,631     | 5,201  | 5,636  | 5,812  | 4,825  | 4,570  | 4,621   | 4,648      | 4,554    | 4,268     | 3,917     |
| West Virginia.....      | 198                     | 226       | 220    | 192    | 210    | 143    | 143    | 153     | 174        | 186      | 207       | 193       |
| Wisconsin.....          | 1,615                   | 1,451     | 1,132  | 659    | 505    | 402    | 399    | 379     | 667        | 870      | 1,007     | 1,221     |
| Wyoming.....            | 543                     | 483       | 430    | 376    | 361    | 421    | 426    | 426     | 431        | 456      | 481       | 486       |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 37.—AVERAGE NUMBER AND COST OF KEEP OF ANIMALS USED.

| STATES AND TERRITORIES. | AGGREGATE. |                | IN LOGGING FOR SAWMILLS. |                |         |               |         |               |         |               |
|-------------------------|------------|----------------|--------------------------|----------------|---------|---------------|---------|---------------|---------|---------------|
|                         |            |                | Total.                   |                | Horses. |               | Mules.  |               | Cattle. |               |
|                         | Number.    | Cost of keep.  | Number.                  | Cost of keep.  | Number. | Cost of keep. | Number. | Cost of keep. | Number. | Cost of keep. |
| United States.....      | 152, 872   | \$10, 988, 079 | 141, 437                 | \$10, 022, 593 | 70, 985 | \$5, 781, 455 | 31, 016 | \$2, 332, 611 | 39, 486 | \$1, 908, 527 |
| Alabama.....            | 8, 709     | 483, 888       | 8, 404                   | 419, 250       | 670     | 45, 219       | 1, 334  | 87, 550       | 6, 460  | 286, 481      |
| Alaska.....             | 8          | 1, 725         |                          |                |         |               |         |               |         |               |
| Arizona.....            | 111        | 14, 650        | 111                      | 14, 650        | 111     | 14, 650       |         |               |         |               |
| Arkansas.....           | 9, 130     | 539, 985       | 8, 948                   | 532, 910       | 1, 991  | 134, 640      | 3, 210  | 216, 182      | 3, 747  | 182, 088      |
| California.....         | 3, 784     | 316, 246       | 3, 413                   | 281, 721       | 2, 248  | 206, 610      | 369     | 27, 038       | 796     | 47, 173       |
| Colorado.....           | 672        | 58, 221        | 651                      | 56, 351        | 508     | 42, 982       | 129     | 12, 394       | 14      | 975           |
| Connecticut.....        | 567        | 54, 848        | 514                      | 51, 088        | 462     | 47, 633       |         |               | 52      | 3, 450        |
| Delaware.....           | 198        | 10, 984        | 198                      | 10, 984        | 62      | 3, 401        | 116     | 7, 008        | 20      | 515           |
| Florida.....            | 3, 342     | 279, 978       | 2, 981                   | 243, 300       | 195     | 19, 397       | 1, 496  | 151, 138      | 1, 290  | 72, 765       |
| Georgia.....            | 9, 651     | 637, 931       | 9, 368                   | 614, 757       | 416     | 31, 328       | 5, 223  | 431, 989      | 3, 729  | 151, 490      |
| Idaho.....              | 493        | 32, 955        | 478                      | 32, 490        | 423     | 29, 830       | 24      | 2, 000        | 26      | 660           |
| Illinois.....           | 1, 480     | 90, 244        | 1, 472                   | 89, 894        | 1, 166  | 70, 603       | 225     | 15, 604       | 80      | 3, 687        |
| Indiana.....            | 3, 623     | 286, 938       | 3, 616                   | 286, 388       | 3, 211  | 253, 723      | 379     | 31, 400       | 26      | 1, 260        |
| Indian Territory.....   | 88         | 3, 508         | 86                       | 3, 443         | 60      | 2, 608        | 20      | 562           | 6       | 273           |
| Iowa.....               | 357        | 22, 739        | 357                      | 22, 739        | 341     | 21, 984       | 12      | 665           | 4       | 90            |
| Kansas.....             | 65         | 2, 554         | 65                       | 2, 554         | 56      | 2, 220        | 9       | 334           |         |               |
| Kentucky.....           | 4, 033     | 222, 015       | 3, 908                   | 215, 009       | 1, 285  | 82, 253       | 1, 372  | 85, 243       | 1, 251  | 43, 108       |
| Louisiana.....          | 5, 009     | 263, 942       | 4, 786                   | 255, 195       | 263     | 18, 434       | 639     | 47, 661       | 3, 879  | 139, 100      |
| Maine.....              | 3, 133     | 217, 923       | 3, 177                   | 217, 659       | 2, 973  | 205, 722      | 76      | 6, 120        | 128     | 5, 817        |
| Maryland.....           | 965        | 60, 755        | 956                      | 60, 205        | 412     | 28, 049       | 333     | 22, 683       | 211     | 9, 473        |
| Massachusetts.....      | 1, 232     | 101, 360       | 1, 169                   | 95, 295        | 1, 105  | 91, 614       | 5       | 500           | 59      | 3, 181        |
| Michigan.....           | 8, 469     | 845, 221       | 7, 495                   | 741, 704       | 7, 306  | 730, 610      | 61      | 4, 793        | 128     | 6, 301        |
| Minnesota.....          | 7, 431     | 633, 752       | 4, 715                   | 378, 114       | 4, 575  | 366, 871      | 17      | 916           | 123     | 10, 327       |
| Mississippi.....        | 8, 773     | 499, 261       | 8, 637                   | 492, 561       | 561     | 35, 281       | 1, 334  | 115, 011      | 6, 692  | 342, 269      |
| Missouri.....           | 3, 468     | 224, 071       | 3, 243                   | 210, 556       | 1, 397  | 80, 479       | 1, 429  | 106, 442      | 417     | 23, 635       |
| Montana.....            | 1, 418     | 142, 696       | 1, 370                   | 140, 846       | 1, 309  | 133, 866      | 43      | 5, 230        | 18      | 1, 750        |
| Nebraska.....           | 28         | 1, 244         | 28                       | 1, 244         | 28      | 1, 244        |         |               |         |               |
| Nevada.....             | 19         | 618            | 19                       | 618            | 15      | 378           |         |               | 4       | 240           |
| New Hampshire.....      | 3, 215     | 250, 063       | 2, 792                   | 213, 813       | 2, 591  | 203, 244      | 20      | 988           | 181     | 9, 536        |
| New Jersey.....         | 352        | 31, 655        | 339                      | 30, 525        | 284     | 24, 798       | 47      | 4, 836        | 8       | 891           |
| New Mexico.....         | 244        | 16, 248        | 204                      | 12, 748        | 105     | 6, 312        | 24      | 1, 842        | 75      | 4, 094        |
| New York.....           | 3, 884     | 293, 357       | 3, 708                   | 281, 506       | 3, 579  | 274, 007      | 28      | 1, 990        | 101     | 5, 509        |
| North Carolina.....     | 6, 281     | 421, 595       | 6, 140                   | 403, 920       | 1, 503  | 113, 495      | 3, 152  | 227, 335      | 1, 435  | 68, 090       |
| North Dakota.....       | 24         | 1, 175         | 24                       | 1, 175         | 20      | 1, 100        | 4       | 75            |         |               |
| Ohio.....               | 4, 287     | 242, 821       | 4, 170                   | 233, 481       | 3, 688  | 205, 425      | 213     | 14, 789       | 264     | 13, 237       |
| Oklahoma.....           | 24         | 665            | 24                       | 665            | 13      | 415           | 7       | 200           | 4       | 50            |
| Oregon.....             | 1, 668     | 110, 346       | 1, 237                   | 82, 766        | 860     | 64, 131       | 56      | 3, 960        | 321     | 14, 675       |
| Pennsylvania.....       | 7, 514     | 711, 132       | 7, 129                   | 630, 200       | 6, 529  | 627, 917      | 543     | 48, 269       | 57      | 4, 014        |
| Rhode Island.....       | 90         | 8, 847         | 80                       | 7, 606         | 74      | 7, 281        |         |               | 6       | 325           |
| South Carolina.....     | 2, 921     | 197, 609       | 2, 894                   | 195, 889       | 296     | 20, 689       | 1, 994  | 146, 168      | 604     | 29, 032       |
| South Dakota.....       | 342        | 21, 949        | 282                      | 15, 949        | 261     | 14, 374       | 1       | 75            | 20      | 1, 500        |
| Tennessee.....          | 4, 439     | 258, 813       | 4, 309                   | 249, 756       | 1, 119  | 69, 839       | 2, 126  | 136, 842      | 1, 064  | 43, 075       |
| Texas.....              | 6, 439     | 386, 567       | 5, 905                   | 359, 699       | 905     | 71, 821       | 1, 412  | 96, 653       | 3, 588  | 191, 225      |
| Utah.....               | 247        | 8, 969         | 247                      | 8, 969         | 236     | 8, 664        | 10      | 250           | 1       | 55            |
| Vermont.....            | 2, 420     | 152, 602       | 2, 413                   | 151, 973       | 2, 075  | 133, 859      | 34      | 1, 870        | 304     | 16, 249       |
| Virginia.....           | 5, 006     | 351, 889       | 4, 941                   | 343, 269       | 1, 789  | 131, 078      | 2, 241  | 179, 741      | 911     | 37, 452       |
| Washington.....         | 4, 350     | 441, 072       | 2, 543                   | 268, 256       | 2, 069  | 237, 930      | 105     | 8, 080        | 309     | 22, 246       |
| West Virginia.....      | 3, 501     | 271, 459       | 3, 235                   | 255, 148       | 1, 970  | 169, 504      | 847     | 63, 991       | 413     | 21, 653       |
| Wisconsin.....          | 8, 885     | 773, 024       | 8, 347                   | 725, 275       | 7, 641  | 677, 175      | 213     | 13, 719       | 493     | 34, 331       |
| Wyoming.....            | 433        | 31, 515        | 249                      | 12, 875        | 219     | 11, 265       | 28      | 1, 560        | 2       | 50            |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 38.—ANIMALS USED: TRANSPORTATION OF LOGS TO MILL.

| STATES AND TERRITORIES. | AVERAGE NUMBER AND COST OF KEEP OF ANIMALS USED. |               |         |               |         |               |         |               | TRANSPORTATION OF LOGS TO MILL.                          |                       |
|-------------------------|--|---------------|---------|---------------|---------|---------------|---------|---------------|--|-----------------------|
|                         | IN TIMBER CAMPS.                                 |               |         |               |         |               |         |               | Average number of wage-earners employed during the year. | Amount paid in wages. |
|                         | Total.   |               | Horses. |               | Mules.  |               | Cattle. |               |  |                       |
|                         | Number.  | Cost of keep. | Number. | Cost of keep. | Number. | Cost of keep. | Number. | Cost of keep. |  |                       |
| United States.....      | 11,435   | \$965,486     | 8,276   | \$769,913     | 1,240   | \$106,200     | 1,919   | \$89,373      | 45,975   | \$10,885,933          |
| Alabama.....            | 245  | 14,088        | 17      | 1,131         | 38      | 4,388         | 190     | 8,569         | 2,558  | 475,088               |
| Alaska.....             | 8  | 1,725         | 8       | 1,725         |         |               |         |               |  |                       |
| Arizona.....            |  |               |         |               |         |               |         |               | 26   | 12,620                |
| Arkansas.....           | 182  | 7,075         | 37      | 1,399         | 93      | 4,426         | 52      | 1,250         | 3,146  | 724,393               |
| California.....         | 371  | 34,525        | 294     | 28,700        | 77      | 5,825         |         |               | 1,401  | 540,485               |
| Colorado.....           | 21   | 1,870         | 8       | 690           | 13      | 1,180         |         |               | 175  | 50,081                |
| Connecticut.....        | 53   | 3,765         | 47      | 3,665         |         |               | 6       | 100           | 198  | 51,186                |
| Delaware.....           |  |               |         |               |         |               |         |               | 72   | 9,964                 |
| Florida.....            | 361  | 36,678        | 25      | 2,112         | 300     | 33,866        | 36      | 700           | 843  | 253,513               |
| Georgia.....            | 283  | 23,174        | 23      | 1,765         | 181     | 17,344        | 79      | 4,065         | 3,430  | 657,358               |
| Idaho.....              | 15   | 465           | 15      | 465           |         |               |         |               | 164  | 36,015                |
| Illinois.....           | 8  | 350           | 8       | 350           |         |               |         |               | 277  | 45,432                |
| Indiana.....            | 7  | 550           | 7       | 550           |         |               |         |               | 766  | 205,466               |
| Indian Territory.....   | 2  | 65            |         |               | 2       | 65            |         |               | 34   | 4,058                 |
| Iowa.....               |  |               |         |               |         |               |         |               | 225  | 46,602                |
| Kansas.....             |  |               |         |               |         |               |         |               | 14   | 1,395                 |
| Kentucky.....           | 125  | 6,406         | 32      | 1,826         | 60      | 2,900         | 33      | 1,680         | 850  | 144,032               |
| Louisiana.....          | 223  | 3,747         | 11      | 820           | 8       | 300           | 204     | 7,627         | 1,349  | 362,847               |
| Maine.....              | 6  | 254           | 6       | 254           |         |               |         |               | 847  | 110,050               |
| Maryland.....           | 9  | 550           | 3       | 300           |         |               | 6       | 250           | 386  | 68,690                |
| Massachusetts.....      | 63   | 6,065         | 59      | 6,020         |         |               | 4       | 45            | 313  | 78,864                |
| Michigan.....           | 974  | 103,517       | 963     | 103,247       |         |               | 11      | 270           | 3,130  | 899,903               |
| Minnesota.....          | 2,716  | 255,638       | 2,700   | 255,054       |         |               | 16      | 584           | 1,324  | 353,097               |
| Mississippi.....        | 136  | 6,700         | 9       | 595           | 21      | 1,500         | 106     | 4,605         | 1,931  | 435,030               |
| Missouri.....           | 225  | 13,515        | 83      | 7,400         | 25      | 1,915         | 117     | 4,200         | 810  | 176,561               |
| Montana.....            | 48   | 1,850         | 48      | 1,850         |         |               |         |               | 516  | 132,315               |
| Nebraska.....           |  |               |         |               |         |               |         |               | 11   | 2,350                 |
| Nevada.....             |  |               |         |               |         |               |         |               | 8  | 700                   |
| New Hampshire.....      | 423  | 31,250        | 410     | 30,004        | 2       | 175           | 11      | 1,071         | 1,317  | 319,054               |
| New Jersey.....         | 13   | 1,130         | 12      | 1,065         | 1       | 65            |         |               | 120  | 24,332                |
| New Mexico.....         | 40   | 3,500         | 40      | 3,500         |         |               |         |               | 61   | 14,066                |
| New York.....           | 173  | 16,851        | 176     | 16,851        |         |               |         |               | 1,776  | 326,218               |
| North Carolina.....     | 141  | 12,675        | 18      | 1,655         | 101     | 9,900         | 22      | 1,120         | 2,628  | 398,893               |
| North Dakota.....       |  |               |         |               |         |               |         |               | 14   | 1,920                 |
| Ohio.....               | 117  | 9,340         | 111     | 9,175         | 2       | 60            | 4       | 105           | 1,144  | 241,060               |
| Oklahoma.....           |  |               |         |               |         |               |         |               | 12   | 575                   |
| Oregon.....             | 431  | 27,580        | 117     | 10,295        | 3       | 100           | 311     | 17,185        | 514  | 133,417               |
| Pennsylvania.....       | 385  | 30,932        | 357     | 28,567        | 27      | 2,340         | 1       | 25            | 2,992  | 1,031,023             |
| Rhode Island.....       | 10   | 1,241         | 10      | 1,241         |         |               |         |               | 45   | 3,430                 |
| South Carolina.....     | 27   | 1,720         | 1       | 50            | 26      | 1,670         |         |               | 787  | 103,625               |
| South Dakota.....       | 60   | 6,000         | 60      | 6,000         |         |               |         |               | 61   | 17,075                |
| Tennessee.....          | 130  | 9,057         | 39      | 2,511         | 71      | 5,026         | 20      | 1,520         | 1,397  | 245,091               |
| Texas.....              | 534  | 26,868        | 253     | 6,456         | 67      | 6,281         | 214     | 14,131        | 1,005  | 322,629               |
| Utah.....               |  |               |         |               |         |               |         |               | 87   | 12,174                |
| Vermont.....            | 7  | 624           | 3       | 312           |         |               | 4       | 312           | 314  | 147,626               |
| Virginia.....           | 65   | 3,820         | 37      | 2,320         | 28      | 1,300         |         |               | 1,532  | 234,411               |
| Washington.....         | 1,307  | 172,816       | 1,400   | 153,469       | 68      | 4,390         | 339     | 14,957        | 707  | 239,225               |
| West Virginia.....      | 266  | 16,311        | 112     | 10,325        | 26      | 1,184         | 123     | 4,302         | 758  | 178,061               |
| Wisconsin.....          | 538  | 47,749        | 533     | 47,549        |         |               | 5       | 200           | 3,318  | 841,486               |
| Wyoming.....            | 184  | 18,640        | 184     | 18,640        |         |               |         |               | 32   | 17,367                |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 39.—MATERIALS USED.

| STATES AND TERRITORIES. | Aggregate cost. | FOR LOGGING PLANTS (CONDUCTED BY MILLING ESTABLISHMENTS). |                            |              |             |                      |
|-------------------------|-----------------|---|----------------------------|--------------|-------------|----------------------|
|                         |                 | Total.  | Stumpage.                  |              | Supplies.   | All other materials. |
|                         |                 |   | Quantity,<br>M feet, B. M. | Cost.        |             |                      |
| United States .....     | \$246,295,101   | \$59,525,460  | 22,684,623                 | \$50,395,400 | \$7,780,000 | \$1,349,460          |
| Alabama.....            | 4,660,648       | 1,260,782   | 784,044                    | 937,800      | 278,250     | 50,212               |
| Alaska.....             | 80,134          | 3,199   | 2,186                      | 2,114        | 1,085       | .....                |
| Arizona.....            | 156,035         | 39,065  | 35,975                     | 37,150       | 1,915       | .....                |
| Arkansas.....           | 9,424,347       | 1,882,420   | 1,413,952                  | 1,529,599    | 328,558     | 24,263               |
| California.....         | 4,642,942       | 1,256,709   | 811,996                    | 963,011      | 266,749     | 26,949               |
| Colorado.....           | 582,695         | 122,863   | 90,547                     | 101,531      | 20,127      | 1,205                |
| Connecticut.....        | 572,960         | 242,598   | 75,660                     | 219,021      | 28,007      | 570                  |
| Delaware.....           | 190,365         | 49,277  | 18,260                     | 46,775       | 2,502       | .....                |
| Florida.....            | 4,196,771       | 813,605   | 510,162                    | 633,051      | 144,410     | 36,144               |
| Georgia.....            | 4,249,555       | 1,236,115   | 993,319                    | 1,001,696    | 224,342     | 10,077               |
| Idaho.....              | 318,249         | 102,827   | 54,293                     | 59,195       | 41,212      | 1,920                |
| Illinois.....           | 4,194,014       | 421,003   | 132,536                    | 361,453      | 56,881      | 2,669                |
| Indiana.....            | 9,822,024       | 2,410,441   | 406,978                    | 2,222,052    | 176,539     | 11,850               |
| Indian Territory.....   | 66,781          | 5,957   | 4,237                      | 5,112        | 825         | 20                   |
| Iowa.....               | 5,848,218       | 572,094   | 107,735                    | 532,871      | 39,173      | 50                   |
| Kansas.....             | 34,027          | 5,845   | 2,170                      | 4,710        | 865         | 270                  |
| Kentucky.....           | 6,201,921       | 1,082,698   | 353,273                    | 950,640      | 122,754     | 9,304                |
| Louisiana.....          | 7,285,674       | 1,869,633   | 853,805                    | 1,023,885    | 330,511     | 15,237               |
| Maine.....              | 6,660,817       | 1,134,075   | 370,637                    | 931,074      | 195,781     | 7,220                |
| Maryland.....           | 1,008,690       | 386,497   | 117,276                    | 343,262      | 33,900      | 9,335                |
| Massachusetts.....      | 3,034,828       | 491,816   | 153,213                    | 401,330      | 68,736      | 21,700               |
| Michigan.....           | 22,367,102      | 7,640,809   | 2,044,923                  | 6,328,676    | 977,671     | 334,462              |
| Minnesota.....          | 2,345,651       | 4,923,949   | 1,324,413                  | 4,361,918    | 470,131     | 91,900               |
| Mississippi.....        | 6,077,422       | 1,428,532   | 855,000                    | 1,129,467    | 237,425     | 11,640               |
| Missouri.....           | 3,495,425       | 926,455   | 415,562                    | 782,577      | 137,093     | 6,785                |
| Montana.....            | 4,082,654       | 340,095   | 234,929                    | 277,667      | 61,853      | 575                  |
| Nebraska.....           | 910,013         | 5,774   | 1,855                      | 4,250        | 1,524       | .....                |
| Nevada.....             | 20,339          | 960   | 725                        | 755          | 180         | 25                   |
| New Hampshire.....      | 1,066           | 1,312,945   | 455,416                    | 1,212,241    | 98,304      | 2,400                |
| New Jersey.....         | 330,655         | 132,419   | 33,034                     | 149,772      | 10,847      | 21,800               |
| New Mexico.....         | 121,724         | 31,674  | 21,088                     | 24,617       | 6,057       | 1,000                |
| New York.....           | 7,153,902       | 1,835,681   | 433,625                    | 1,516,604    | 227,335     | 91,692               |
| North Carolina.....     | 5,626,605       | 1,336,377   | 833,463                    | 1,127,121    | 240,458     | 18,798               |
| North Dakota.....       | 7,037           | 3,150   | 1,700                      | 1,700        | 1,460       | .....                |
| Ohio.....               | 9,650,823       | 2,262,913   | 401,987                    | 1,999,249    | 186,499     | 77,165               |
| Oklahoma.....           | 25,131          | 2,430   | 805                        | 2,045        | 385         | .....                |
| Oregon.....             | 4,814,196       | 273,693   | 311,205                    | 215,304      | 48,059      | 10,330               |
| Pennsylvania.....       | 14,403,076      | 5,931,050   | 1,707,774                  | 5,044,438    | 607,033     | 269,529              |
| Rhode Island.....       | 70,861          | 48,199  | 15,658                     | 48,109       | 90          | .....                |
| South Carolina.....     | 1,880,865       | 438,253   | 316,314                    | 391,605      | 90,113      | 6,535                |
| South Dakota.....       | 165,025         | 47,717  | 23,436                     | 42,902       | 4,315       | .....                |
| Tennessee.....          | 8,636,752       | 373,165   | 303,246                    | 736,238      | 33,025      | 3,852                |
| Texas.....              | 7,543,680       | 1,239,795   | 819,832                    | 961,777      | 270,047     | 7,971                |
| Utah.....               | 57,867          | 21,524  | 12,078                     | 15,399       | 5,335       | 290                  |
| Vermont.....            | 2,633,050       | 499,448   | 211,875                    | 441,461      | 50,690      | 7,357                |
| Virginia.....           | 4,379,077       | 1,343,357   | 630,210                    | 1,092,921    | 223,322     | 27,114               |
| Washington.....         | 13,043,512      | 1,132,564   | 1,084,390                  | 797,016      | 321,154     | 14,394               |
| West Virginia.....      | 3,959,909       | 1,237,296   | 477,709                    | 1,124,629    | 165,412     | 7,255                |
| Wisconsin.....          | 28,124,015      | 9,074,761   | 2,294,510                  | 8,185,033    | 732,232     | 107,446              |
| Wyoming.....            | 213,907         | 31,476  | 15,552                     | 22,537       | 8,739       | 150                  |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 40.—MATERIALS USED.

| STATES AND TERRITORIES. | FOR SAWMILLS. |                           |           |              |             |                 |                      |             |
|-------------------------|---------------|---------------------------|-----------|--------------|-------------|-----------------|----------------------|-------------|
|                         | Total.        | Logs and bolts purchased. |           |              | Supplies.   | Power and heat. | All other materials. | Freight.    |
|                         |               | Quantity.                 |           | Cost.        |             |                 |                      |             |
|                         |               | M feet, B. M.             | Cords.    |              |             |                 |                      |             |
| United States.....      | \$97,008,922  | 11,568,508                | 2,118,208 | \$84,724,380 | \$7,268,061 | \$81,398        | \$2,767,831          | \$2,162,252 |
| Alabama .....           | 1,736,836     | 287,747                   | 35,323    | 1,480,730    | 193,813     | 1,217           | 46,487               | 14,589      |
| Alaska .....            | 23,530        | 4,285                     | .....     | 26,000       | 1,180       | .....           | 1,400                | .....       |
| Arizona .....           | 43,610        | 1,272                     | .....     | 9,510        | 4,059       | .....           | 47                   | 30,000      |
| Arkansas .....          | 2,887,871     | 328,321                   | 109,555   | 2,333,550    | 347,807     | 299             | 83,514               | 72,701      |
| California .....        | 647,812       | 44,532                    | 25,888    | 314,645      | 218,274     | 1,539           | 60,027               | 53,827      |
| Colorado .....          | 240,480       | 45,473                    | .....     | 209,427      | 22,553      | .....           | 6,805                | 1,695       |
| Connecticut .....       | 209,405       | 23,020                    | 318       | 192,771      | 14,083      | .....           | 2,531                | 20          |
| Delaware .....          | 109,014       | 17,449                    | 3,010     | 98,954       | 5,118       | 645             | 3,790                | 507         |
| Florida .....           | 1,915,983     | 304,726                   | 4,275     | 1,652,368    | 182,441     | 1,050           | 40,971               | 39,153      |
| Georgia .....           | 1,622,218     | 323,538                   | 1,420     | 1,398,425    | 175,853     | 460             | 18,561               | 23,919      |
| Idaho .....             | 99,200        | 22,067                    | 100       | 86,698       | 11,279      | .....           | 1,223                | .....       |
| Illinois .....          | 2,485,757     | 232,975                   | 18,945    | 2,354,475    | 86,276      | 2,307           | 27,580               | 15,119      |
| Indiana .....           | 6,234,856     | 541,275                   | 173,243   | 5,675,119    | 266,723     | 7,788           | 181,261              | 153,965     |
| Indian Territory .....  | 57,679        | 10,541                    | 400       | 51,613       | 3,463       | .....           | 1,791                | 812         |
| Iowa .....              | 2,384,488     | 186,078                   | 2,220     | 2,274,415    | 68,727      | 50              | 12,921               | 28,375      |
| Kansas .....            | 28,182        | 4,233                     | .....     | 24,337       | 3,305       | 75              | 465                  | .....       |
| Kentucky .....          | 3,849,808     | 414,184                   | 93,487    | 3,540,816    | 192,610     | 882             | 81,000               | 34,500      |
| Louisiana .....         | 2,193,190     | 316,835                   | 7,249     | 1,810,134    | 283,338     | 75              | 73,033               | 26,610      |
| Maine .....             | 4,249,975     | 455,610                   | 66,105    | 3,985,786    | 194,118     | 3,566           | 62,680               | 3,825       |
| Maryland .....          | 415,892       | 64,823                    | 7,475     | 345,187      | 44,685      | 200             | 21,054               | 4,766       |
| Massachusetts .....     | 1,835,118     | 149,608                   | 14,030    | 1,670,196    | 83,403      | 4,376           | 70,868               | 6,275       |
| Michigan .....          | 9,339,534     | 1,066,413                 | 360,219   | 8,200,373    | 584,864     | 3,342           | 245,579              | 300,376     |
| Minnesota .....         | 4,706,351     | 490,573                   | 10,884    | 3,886,787    | 342,809     | 6,592           | 102,221              | 367,942     |
| Mississippi .....       | 1,966,610     | 334,751                   | 15,363    | 1,620,720    | 268,846     | 50              | 41,244               | 35,750      |
| Missouri .....          | 2,377,301     | 267,788                   | 54,581    | 2,084,812    | 173,615     | 3,498           | 89,955               | 25,421      |
| Montana .....           | 280,574       | 45,171                    | 305       | 178,114      | 41,200      | .....           | 11,260               | .....       |
| Nebraska .....          | 14,565        | 2,299                     | .....     | 13,055       | 1,180       | .....           | 50                   | 250         |
| Nevada .....            | 106           | .....                     | .....     | .....        | 31          | .....           | 75                   | .....       |
| New Hampshire.....      | 1,019,859     | 137,660                   | 7,859     | 884,698      | 74,862      | 905             | 33,292               | 26,102      |
| New Jersey.....         | 338,510       | 29,335                    | 6,260     | 312,768      | 18,467      | 895             | 5,982                | 398         |
| New Mexico.....         | 72,284        | 13,423                    | .....     | 65,699       | 5,725       | .....           | 860                  | .....       |
| New York .....          | 2,774,848     | 265,176                   | 67,879    | 2,487,775    | 182,408     | 7,771           | 76,667               | 20,167      |
| North Carolina .....    | 2,358,553     | 399,856                   | 27,130    | 1,945,031    | 287,258     | 857             | 123,639              | 51,768      |
| North Dakota .....      | 1,862         | 300                       | .....     | 1,500        | 352         | .....           | 10                   | .....       |
| Ohio.....               | 5,226,840     | 478,040                   | 92,752    | 4,475,324    | 259,376     | 9,162           | 416,337              | 66,591      |
| Oklahoma .....          | 22,701        | 3,778                     | .....     | 21,250       | 1,351       | 30              | 70                   | .....       |
| Oregon .....            | 2,461,692     | 445,595                   | 1,612     | 2,251,068    | 157,555     | 1,595           | 50,830               | 644         |
| Pennsylvania .....      | 5,283,578     | 536,012                   | 107,613   | 4,611,858    | 463,583     | 7,023           | 124,979              | 76,135      |
| Rhode Island.....       | 17,491        | 1,503                     | 230       | 11,800       | 4,811       | 180             | 700                  | .....       |
| South Carolina .....    | 753,824       | 156,853                   | 2,905     | 654,593      | 85,152      | 1,280           | 12,702               | 97          |
| South Dakota.....       | 16,046        | 1,945                     | .....     | 10,701       | 4,545       | .....           | 800                  | .....       |
| Tennessee .....         | 5,738,058     | 540,647                   | 227,265   | 5,359,595    | 246,584     | 2,599           | 106,030              | 23,250      |
| Texas.....              | 2,108,218     | 392,273                   | 5,409     | 1,769,173    | 236,972     | 1,480           | 42,334               | 53,209      |
| Utah.....               | 26,169        | 4,030                     | .....     | 22,321       | 3,468       | .....           | 330                  | .....       |
| Vermont .....           | 364,892       | 113,842                   | 4,787     | 756,291      | 78,811      | 595             | 81,844               | 2,351       |
| Virginia .....          | 1,906,098     | 278,339                   | 39,276    | 1,592,242    | 169,223     | 337             | 71,845               | 72,451      |
| Washington .....        | 6,473,015     | 916,292                   | 255,125   | 5,727,642    | 493,884     | 1,896           | 163,596              | 85,997      |
| West Virginia .....     | 1,891,994     | 249,563                   | 21,930    | 1,704,999    | 159,871     | 397             | 20,417               | 6,310       |
| Wisconsin.....          | 5,716,483     | 575,617                   | 245,776   | 4,522,930    | 569,504     | 1,385           | 195,809              | 426,855     |
| Wyoming.....            | 20,462        | 2,827                     | .....     | 16,105       | 4,142       | .....           | 215                  | .....       |



## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS BY STATES AND TERRITORIES, 1900—Continued.

TABLE 41.—MATERIALS USED—Continued.

| STATES AND TERRITORIES. | FOR PLANING MILLS AND REMANUFACTURES. |                            |              |             |                 |                      |           |
|-------------------------|---------------------------------------|----------------------------|--------------|-------------|-----------------|----------------------|-----------|
|                         | Total.                                | Lumber (rough).            |              | Supplies.   | Power and heat. | All other materials. | Freight.  |
|                         |                                       | Quantity, M. feet<br>B. M. | Cost.        |             |                 |                      |           |
| United States.....      | \$82,084,685                          | 7,515,645                  | \$79,491,635 | \$1,344,561 | \$2,006         | \$879,799            | \$366,684 |
| Alabama.....            | 1,611,888                             | 183,277                    | 1,565,543    | 83,247      |                 | 11,698               | 1,400     |
| Alaska.....             | 40,680                                | 3,532                      | 33,860       | 795         |                 | 975                  |           |
| Arizona.....            | 73,360                                | 7,532                      | 70,450       | 2,910       |                 |                      |           |
| Arkansas.....           | 4,034,659                             | 625,426                    | 4,616,586    | 75,277      |                 | 16,831               | 25,965    |
| California.....         | 2,638,273                             | 222,347                    | 2,457,019    | 56,798      |                 | 75,318               | 49,138    |
| Colorado.....           | 215,132                               | 19,157                     | 195,960      | 3,492       |                 | 1,390                | 14,290    |
| Connecticut.....        | 98,920                                | 7,156                      | 97,135       | 1,365       |                 | 20                   | 400       |
| Delaware.....           | 32,074                                | 3,862                      | 29,497       | 427         |                 | 1,500                | 650       |
| Florida.....            | 1,334,976                             | 162,112                    | 1,290,711    | 33,134      | 38              | 10,973               | 120       |
| Georgia.....            | 1,334,031                             | 156,935                    | 1,310,671    | 21,061      |                 | 2,195                | 104       |
| Idaho.....              | 115,895                               | 11,669                     | 110,639      | 3,171       | 50              | 1,185                | 850       |
| Illinois.....           | 1,249,659                             | 93,297                     | 1,207,022    | 17,437      | 350             | 24,730               | 120       |
| Indiana.....            | 1,078,191                             | 67,086                     | 1,024,679    | 23,132      |                 | 12,475               | 17,905    |
| Indian Territory.....   | 3,100                                 | 300                        | 3,000        | 100         |                 |                      |           |
| Iowa.....               | 2,891,636                             | 192,957                    | 2,829,973    | 24,309      |                 | 7,364                | 29,990    |
| Kansas.....             |                                       |                            |              |             |                 |                      |           |
| Kentucky.....           | 1,223,204                             | 73,244                     | 1,169,387    | 30,172      |                 | 9,365                | 14,280    |
| Louisiana.....          | 3,592,147                             | 332,752                    | 3,458,473    | 111,263     | 497             | 17,482               | 4,482     |
| Maine.....              | 1,269,942                             | 109,147                    | 1,242,701    | 23,967      |                 | 2,709                | 565       |
| Maryland.....           | 205,461                               | 18,512                     | 194,720      | 5,756       |                 | 4,335                | 650       |
| Massachusetts.....      | 647,925                               | 52,096                     | 567,825      | 13,197      |                 | 58,043               | 8,860     |
| Michigan.....           | 4,411,566                             | 305,295                    | 4,107,897    | 74,429      | 20              | 197,337              | 31,383    |
| Minnesota.....          | 9,207,892                             | 735,673                    | 9,023,290    | 70,586      |                 | 107,486              | 1,530     |
| Mississippi.....        | 2,641,602                             | 297,174                    | 2,583,396    | 48,603      |                 | 8,964                | 639       |
| Missouri.....           | 1,614,911                             | 155,665                    | 1,580,460    | 16,589      |                 | 10,565               | 7,297     |
| Montana.....            | 340,357                               | 37,646                     | 332,846      | 5,161       |                 | 2,350                |           |
| Nebraska.....           |                                       |                            |              |             |                 |                      |           |
| Nevada.....             |                                       |                            |              |             |                 |                      |           |
| New Hampshire.....      | 950,532                               | 84,135                     | 900,011      | 11,673      | 36              | 23,667               | 10,145    |
| New Jersey.....         | 294,061                               | 18,129                     | 290,495      | 2,806       |                 | 260                  | 500       |
| New Mexico.....         | 12,766                                | 1,115                      | 12,100       | 466         |                 | 200                  |           |
| New York.....           | 2,447,771                             | 170,962                    | 2,370,467    | 35,036      | 35              | 16,094               | 26,139    |
| North Carolina.....     | 1,817,125                             | 202,669                    | 1,743,071    | 51,023      |                 | 8,486                | 14,545    |
| North Dakota.....       | 2,025                                 | 200                        | 2,000        | 25          |                 |                      |           |
| Ohio.....               | 2,072,011                             | 110,914                    | 1,982,577    | 31,676      | 960             | 34,430               | 22,363    |
| Oklahoma.....           |                                       |                            |              |             |                 |                      |           |
| Oregon.....             | 1,925,716                             | 216,556                    | 1,871,174    | 36,064      |                 | 18,253               | 225       |
| Pennsylvania.....       | 2,974,334                             | 243,891                    | 2,896,909    | 46,180      | 20              | 24,894               | 6,331     |
| Rhode Island.....       | 1,391                                 | 125                        | 1,290        | 101         |                 |                      |           |
| South Carolina.....     | 629,886                               | 65,163                     | 611,216      | 14,420      |                 | 3,000                | 1,250     |
| South Dakota.....       | 93,942                                | 8,650                      | 92,614       | 1,320       |                 | 8                    |           |
| Tennessee.....          | 1,945,971                             | 139,918                    | 1,853,734    | 50,411      |                 | 34,113               | 7,708     |
| Texas.....              | 4,091,730                             | 503,515                    | 3,983,145    | 95,440      |                 | 10,145               | 3,000     |
| Utah.....               | 10,174                                | 715                        | 9,985        | 189         |                 |                      |           |
| Vermont.....            | 1,271,210                             | 115,643                    | 1,214,563    | 25,035      |                 | 13,337               | 13,270    |
| Virginia.....           | 1,534,537                             | 121,676                    | 1,493,093    | 18,860      |                 | 10,234               | 12,400    |
| Washington.....         | 4,021,536                             | 464,616                    | 3,892,106    | 112,194     |                 | 15,811               | 1,425     |
| West Virginia.....      | 632,876                               | 57,457                     | 666,074      | 12,608      |                 | 3,314                | 830       |
| Wisconsin.....          | 12,769,216                            | 1,063,493                  | 12,563,922   | 101,756     |                 | 67,733               | 35,805    |
| Wyoming.....            | 23,394                                | 2,239                      | 27,344       | 900         |                 | 75                   | 75        |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS BY STATES AND TERRITORIES, 1900—Continued.

TABLE 42.—MATERIALS USED.

| STATES AND TERRITORIES. | FOR TIMBER CAMPS. |                            |             |             |                      |
|-------------------------|-------------------|----------------------------|-------------|-------------|----------------------|
|                         | Total.            | Stumpage.                  |             | Supplies.   | All other materials. |
|                         |                   | Quantity, M feet,<br>B. M. | Cost.       |             |                      |
| United States.....      | \$7,681,034       | 3,244,817                  | \$6,044,074 | \$1,248,673 | \$388,287            |
| Alabama.....            | 51,662            | 34,541                     | 41,016      | 9,935       | 711                  |
| Alaska.....             | 7,775             |                            |             | 2,550       | 5,225                |
| Arizona.....            |                   |                            |             |             |                      |
| Arkansas.....           | 69,397            | 46,402                     | 60,303      | 7,479       | 1,615                |
| California.....         | 100,148           | 90,880                     | 80,233      | 15,915      | 4,000                |
| Colorado.....           | 4,220             | 3,690                      | 3,630       | 590         |                      |
| Connecticut.....        | 22,037            | 6,751                      | 19,877      | 1,060       | 1,100                |
| Delaware.....           |                   |                            |             |             |                      |
| Florida.....            | 132,207           | 87,767                     | 98,988      | 31,735      | 1,434                |
| Georgia.....            | 57,191            | 47,970                     | 50,898      | 5,621       | 672                  |
| Idaho.....              | 827               | 712                        | 802         | 25          |                      |
| Illinois.....           | 37,595            | 12,180                     | 20,780      | 16,815      |                      |
| Indiana.....            | 48,636            | 13,650                     | 44,954      | 2,542       | 1,040                |
| Indian Territory.....   | 45                | 30                         | 45          |             |                      |
| Iowa.....               |                   |                            |             |             |                      |
| Kansas.....             |                   |                            |             |             |                      |
| Kentucky.....           | 46,211            | 17,975                     | 39,278      | 4,165       | 2,778                |
| Louisiana.....          | 130,704           | 74,764                     | 105,247     | 25,070      | 337                  |
| Maine.....              | 6,825             | 1,520                      | 5,490       | 235         | 1,100                |
| Maryland.....           | 840               | 820                        | 640         | 200         |                      |
| Massachusetts.....      | 59,969            | 10,630                     | 31,870      | 7,291       | 20,808               |
| Michigan.....           | 975,193           | 262,890                    | 739,117     | 111,056     | 125,020              |
| Minnesota.....          | 2,507,459         | 609,744                    | 2,223,386   | 269,043     | 15,030               |
| Mississippi.....        | 40,678            | 36,903                     | 32,663      | 4,065       | 3,950                |
| Missouri.....           | 63,987            | 24,676                     | 48,521      | 10,011      | 5,455                |
| Montana.....            | 4,992             | 4,427                      | 4,027       | 315         | 50                   |
| Nebraska.....           |                   |                            |             |             |                      |
| Nevada.....             |                   |                            |             |             |                      |
| New Hampshire.....      | 213,089           | 65,398                     | 182,643     | 28,266      | 2,180                |
| New Jersey.....         | 15,665            | 1,205                      | 4,450       | 650         | 10,565               |
| New Mexico.....         | 5,000             | 4,000                      | 4,000       | 1,000       |                      |
| New York.....           | 95,662            | 14,111                     | 37,411      | 10,581      | 47,670               |
| North Carolina.....     | 64,550            | 50,045                     | 53,765      | 10,400      | 385                  |
| North Dakota.....       |                   |                            |             |             |                      |
| Ohio.....               | 89,059            | 19,929                     | 78,165      | 6,306       | 4,588                |
| Oklahoma.....           |                   |                            |             |             |                      |
| Oregon.....             | 153,095           | 172,518                    | 104,734     | 43,724      | 4,637                |
| Pennsylvania.....       | 169,114           | 51,733                     | 129,006     | 23,768      | 16,340               |
| Rhode Island.....       | 3,780             | 1,552                      | 3,780       |             |                      |
| South Carolina.....     | 8,902             | 7,562                      | 7,042       | 1,780       | 80                   |
| South Dakota.....       | 7,320             | 3,860                      | 6,320       | 1,000       |                      |
| Tennessee.....          | 70,558            | 24,710                     | 59,858      | 4,355       | 15,345               |
| Texas.....              | 108,937           | 77,488                     | 88,009      | 18,805      | 2,123                |
| Utah.....               |                   |                            |             |             |                      |
| Vermont.....            | 2,500             | 800                        | 2,500       |             |                      |
| Virginia.....           | 95,085            | 21,377                     | 75,024      | 5,726       | 14,285               |
| Washington.....         | 1,416,397         | 1,067,043                  | 919,026     | 444,617     | 52,751               |
| West Virginia.....      | 87,743            | 31,308                     | 77,732      | 10,011      |                      |
| Wisconsin.....          | 563,555           | 163,391                    | 468,549     | 33,091      | 11,915               |
| Wyoming.....            | 133,576           | 72,865                     | 89,700      | 28,875      | 15,000               |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 43.—MISCELLANEOUS EXPENSES.

| STATES AND TERRITORIES. | Total.       | Rent of works. | Taxes, not including internal revenue. | Rent of offices, interest, insurance, internal-revenue tax and stamps, ordinary repairs of buildings and machinery, advertising, and all other sundries not reported under the head of materials. | Contract work. |           |
|-------------------------|--------------|----------------|--|---|----------------|-----------|
|                         |              |                |  |   | Logging.       | Sawing.   |
| United States.....      | \$90,589,086 | \$784,768      | \$3,902,584                            | \$12,914,274  | \$12,807,517   | \$120,893 |
| Alabama.....            | 471,111      | 21,921         | 59,093                                 | 196,507   | 193,590        | .....     |
| Alaska.....             | 12,280       | .....          | .....                                  | 12,280  | .....          | .....     |
| Arizona.....            | 18,322       | .....          | 5,358                                  | 7,464   | 5,500          | .....     |
| Arkansas.....           | 1,149,025    | 12,401         | 130,828                                | 369,252   | 626,372        | 10,172    |
| California.....         | 771,329      | 12,608         | 168,645                                | 391,794   | 198,282        | .....     |
| Colorado.....           | 80,257       | 6,891          | 8,725                                  | 11,306  | 52,935         | 400       |
| Connecticut.....        | 146,721      | 2,664          | 5,693                                  | 24,342  | 109,922        | 4,100     |
| Delaware.....           | 6,315        | 795            | 1,442                                  | 3,958   | 120            | .....     |
| Florida.....            | 848,458      | 3,803          | 76,983                                 | 405,920   | 361,752        | .....     |
| Georgia.....            | 281,504      | 15,476         | 53,942                                 | 170,568   | 31,868         | 9,650     |
| Idaho.....              | 20,787       | 1,510          | 6,529                                  | 9,903   | 11,845         | .....     |
| Illinois.....           | 321,956      | 17,501         | 30,466                                 | 212,106   | 61,883         | .....     |
| Indiana.....            | 601,823      | 35,106         | 83,454                                 | 350,746   | 182,517        | .....     |
| Indian Territory.....   | 2,778        | 75             | 577                                    | 1,826   | 300            | .....     |
| Iowa.....               | 694,325      | 7,102          | 65,549                                 | 269,735   | 351,989        | .....     |
| Kansas.....             | 3,827        | 1,685          | 678                                    | 1,514   | .....          | .....     |
| Kentucky.....           | 644,275      | 18,821         | 50,505                                 | 309,748   | 265,201        | .....     |
| Louisiana.....          | 1,000,742    | 13,878         | 82,199                                 | 403,953   | 495,717        | .....     |
| Maine.....              | 738,455      | 45,520         | 93,287                                 | 344,776   | 224,396        | 25,526    |
| Maryland.....           | 163,378      | 3,571          | 12,285                                 | 47,148  | 100,374        | .....     |
| Massachusetts.....      | 371,852      | 18,029         | 43,380                                 | 228,580   | 74,093         | 7,820     |
| Michigan.....           | 3,266,221    | 41,114         | 645,059                                | 1,629,188   | 937,260        | 13,600    |
| Minnesota.....          | 3,103,389    | 45,051         | 339,448                                | 1,397,887   | 1,820,900      | .....     |
| Mississippi.....        | 686,058      | 7,042          | 82,068                                 | 359,605   | 187,348        | .....     |
| Missouri.....           | 527,207      | 15,476         | 63,631                                 | 242,193   | 205,967        | .....     |
| Montana.....            | 66,688       | 1,214          | 19,669                                 | 37,155  | 8,650          | .....     |
| Nebraska.....           | 830          | 15             | 335                                    | 480   | .....          | .....     |
| Nevada.....             | 269          | 160            | 78                                     | 31  | .....          | .....     |
| New Hampshire.....      | 358,102      | 10,410         | 57,513                                 | 158,931   | 119,973        | 11,275    |
| New Jersey.....         | 57,712       | 7,498          | 10,330                                 | 33,409  | 6,475          | .....     |
| New Mexico.....         | 8,188        | 740            | 2,030                                  | 4,418   | 1,000          | .....     |
| New York.....           | 835,060      | 60,151         | 94,294                                 | 367,402   | 311,653        | 1,560     |
| North Carolina.....     | 633,149      | 30,329         | 56,906                                 | 233,813   | 312,101        | .....     |
| North Dakota.....       | 86           | .....          | 56                                     | 30  | .....          | .....     |
| Ohio.....               | 938,710      | 57,272         | 81,052                                 | 370,238   | 430,148        | .....     |
| Oklahoma.....           | 1,459        | 353            | 520                                    | 581   | .....          | .....     |
| Oregon.....             | 376,640      | 101,871        | 42,051                                 | 117,995   | 114,723        | .....     |
| Pennsylvania.....       | 2,743,351    | 44,783         | 207,053                                | 666,336   | 1,812,604      | 12,515    |
| Rhode Island.....       | 20,981       | 315            | 860                                    | 3,518   | 15,098         | 1,190     |
| South Carolina.....     | 121,908      | 5,732          | 22,354                                 | 79,259  | 14,463         | 100       |
| South Dakota.....       | 8,035        | 870            | 4,565                                  | 2,425   | 175            | .....     |
| Tennessee.....          | 729,179      | 23,526         | 53,417                                 | 319,746   | 326,770        | 720       |
| Texas.....              | 612,980      | 5,114          | 70,168                                 | 293,155   | 244,543        | .....     |
| Utah.....               | 3,293        | 44             | 1,066                                  | 1,083   | 1,100          | .....     |
| Vermont.....            | 263,876      | 9,444          | 40,001                                 | 126,581   | 87,850         | .....     |
| Virginia.....           | 545,056      | 16,229         | 42,734                                 | 264,787   | 217,441        | 3,865     |
| Washington.....         | 1,421,520    | 25,932         | 144,748                                | 578,266   | 672,574        | .....     |
| West Virginia.....      | 630,206      | 8,448          | 56,135                                 | 249,328   | 316,095        | .....     |
| Wisconsin.....          | 4,263,605    | 25,724         | 770,083                                | 1,597,053   | 1,843,545      | 27,200    |
| Wyoming.....            | 6,698        | 1              | 4,797                                  | 1,505   | 895            | .....     |

## LUMBER AND TIMBER PRODUCTS- DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 44.—PRODUCTS.

| STATES AND TERRITORIES. | Total.        | Sawmill. <sup>1</sup> | Planing mill. | Timber camp. | SAWED LUMBER (INCLUDES ALL PRODUCTS GIVEN IN M FEET, B. M.). |               |                         |               |                                     |                    |
|-------------------------|---------------|-----------------------|---------------|--------------|--|---------------|-------------------------|---------------|-------------------------------------|--------------------|
|                         |               |                       |               |              | Total.   |               | Merchant. <sup>2</sup>  |               | Custom.                             |                    |
|                         |               |                       |               |              | Quantity, M feet, B. M.                                      | Value.        | Quantity, M feet, B. M. | Value.        | Quantity (estimated), M feet, B. M. | Value (estimated). |
| United States.....      | \$566,832,948 | \$422,812,061         | \$107,622,519 | \$36,398,404 | 35,084,166   | \$890,489,873 | 31,508,214              | \$347,402,903 | 3,575,952                           | \$43,086,970       |
| Alabama.....            | 12,867,551    | 10,514,349            | 2,080,427     | 272,775      | 1,101,386  | 9,838,239     | 1,036,841               | 9,262,377     | 64,545                              | 570,882            |
| Alaska.....             | 211,229       | 95,449                | 69,462        | 46,818       | 6,571  | 89,249        | 6,571                   | 89,249        | .....                               | .....              |
| Arizona.....            | 547,790       | 411,833               | 105,557       | 30,400       | 36,182   | 407,308       | 36,122                  | 403,588       | 60                                  | 720                |
| Arkansas.....           | 23,959,983    | 17,806,562            | 6,205,410     | 448,011      | 1,623,987  | 14,160,571    | 1,601,510               | 13,951,546    | 22,477                              | 209,025            |
| California.....         | 13,764,647    | 8,729,654             | 3,916,512     | 1,118,481    | 737,035  | 7,823,897     | 729,850                 | 7,754,872     | 7,185                               | 69,025             |
| Colorado.....           | 1,627,605     | 1,290,000             | 289,521       | 48,084       | 133,746  | 1,269,306     | 132,746                 | 1,258,522     | 1,000                               | 10,784             |
| Connecticut.....        | 1,318,643     | 1,304,304             | 162,997       | 361,342      | 108,093  | 1,614,701     | 78,983                  | 1,152,140     | 29,110                              | 462,561            |
| Delaware.....           | 471,482       | 401,042               | 56,700        | 13,740       | 35,955   | 395,828       | 27,556                  | 316,707       | 8,899                               | 79,121             |
| Florida.....            | 10,848,403    | 8,493,424             | 1,758,738     | 596,241      | 790,373  | 7,853,462     | 782,677                 | 7,786,452     | 7,696                               | 67,010             |
| Georgia.....            | 13,704,923    | 11,601,361            | 1,650,032     | 453,500      | 1,811,917  | 11,355,532    | 1,257,468               | 10,932,272    | 54,449                              | 423,260            |
| Idaho.....              | 937,665       | 641,863               | 172,257       | 123,540      | 65,363   | 614,188       | 62,238                  | 581,934       | 3,125                               | 32,254             |
| Illinois.....           | 7,652,118     | 5,624,331             | 1,774,933     | 252,804      | 333,469  | 5,049,663     | 336,891                 | 4,434,282     | 51,678                              | 615,331            |
| Indiana.....            | 20,613,724    | 18,745,545            | 1,556,243     | 311,936      | 1,036,999  | 16,813,041    | 853,479                 | 14,154,157    | 133,520                             | 2,663,334          |
| Indian Territory.....   | 199,379       | 194,504               | 4,375         | 1,000        | 15,985   | 167,480       | 14,559                  | 149,328       | 1,426                               | 13,152             |
| Iowa.....               | 8,677,953     | 5,264,931             | 3,339,020     | 23,107       | 352,411  | 5,146,785     | 323,168                 | 4,789,059     | 24,243                              | 357,726            |
| Kansas.....             | 104,182       | 101,264               | .....         | 2,918        | 10,665   | 146,180       | 5,826                   | 74,540        | 4,839                               | 71,640             |
| Kentucky.....           | 13,774,911    | 11,846,565            | 1,577,636     | 350,710      | 774,651  | 10,045,547    | 632,691                 | 8,994,720     | 91,960                              | 1,050,327          |
| Louisiana.....          | 17,403,513    | 12,074,055            | 4,664,832     | 669,626      | 1,115,366  | 10,916,954    | 1,107,876               | 10,859,901    | 7,490                               | 57,053             |
| Maine.....              | 13,489,401    | 11,476,563            | 1,704,702     | 308,136      | 784,647  | 9,256,158     | 701,737                 | 8,347,900     | 82,860                              | 908,249            |
| Maryland.....           | 2,650,082     | 2,286,243             | 284,453       | 79,381       | 183,711  | 2,036,716     | 159,523                 | 1,774,001     | 24,138                              | 262,715            |
| Massachusetts.....      | 6,526,230     | 5,057,433             | 1,243,408     | 225,339      | 344,190  | 4,005,345     | 273,853                 | 3,180,402     | 70,332                              | 325,443            |
| Michigan.....           | 54,290,520    | 42,517,495            | 5,822,481     | 5,950,544    | 3,013,333  | 35,865,616    | 2,643,247               | 31,612,301    | 370,091                             | 4,253,315          |
| Minnesota.....          | 43,585,161    | 25,891,210            | 12,009,993    | 5,623,958    | 2,342,333  | 28,637,300    | 1,858,612               | 22,731,823    | 433,726                             | 5,905,972          |
| Mississippi.....        | 15,656,110    | 12,136,433            | 3,305,365     | 214,257      | 1,206,265  | 11,665,152    | 1,173,109               | 11,852,144    | 33,156                              | 313,003            |
| Missouri.....           | 11,177,529    | 8,832,000             | 1,977,243     | 313,281      | 723,754  | 8,011,022     | 643,137                 | 7,113,585     | 80,567                              | 397,437            |
| Montana.....            | 2,949,992     | 2,291,289             | 450,723       | 207,975      | 255,635  | 2,297,800     | 247,666                 | 2,221,496     | 8,019                               | 76,334             |
| Nebraska.....           | 51,773        | 51,373                | .....         | 400          | 4,655  | 54,331        | 4,220                   | 49,511        | 435                                 | 5,320              |
| Nevada.....             | 7,060         | 7,060                 | .....         | .....        | 725  | 7,000         | 725                     | 7,060         | .....                               | .....              |
| New Hampshire.....      | 9,213,310     | 6,726,754             | 1,423,563     | 1,067,993    | 572,447  | 6,544,136     | 495,753                 | 5,730,163     | 76,639                              | 313,973            |
| New Jersey.....         | 1,859,014     | 1,276,014             | 423,788       | 159,212      | 74,113   | 1,233,323     | 57,549                  | 945,533       | 16,569                              | 237,700            |
| New Mexico.....         | 411,627       | 290,527               | 17,950        | 103,150      | 30,880   | 239,401       | 27,802                  | 260,915       | 3,078                               | 23,436             |
| New York.....           | 15,766,977    | 11,676,620            | 3,393,544     | 696,313      | 373,443  | 12,364,362    | 635,373                 | 8,907,359     | 193,075                             | 3,457,003          |
| North Carolina.....     | 14,362,593    | 11,732,101            | 2,700,410     | 320,032      | 1,236,633  | 11,067,909    | 1,195,023               | 10,371,773    | 91,610                              | 696,131            |
| North Dakota.....       | 24,200        | 21,300                | 2,400         | .....        | 2,030  | 22,060        | 2,000                   | 21,700        | 30                                  | 360                |
| Ohio.....               | 20,790,354    | 17,306,294            | 2,354,510     | 630,050      | 990,497  | 15,820,939    | 763,903                 | 12,756,863    | 221,594                             | 3,064,071          |
| Oklahoma.....           | 63,569        | 63,569                | .....         | .....        | 6,119  | 69,374        | 4,626                   | 53,688        | 1,493                               | 15,656             |
| Oregon.....             | 10,352,167    | 6,833,234             | 2,733,466     | 735,467      | 734,533  | 6,691,214     | 732,906                 | 6,675,623     | 1,632                               | 15,591             |
| Pennsylvania.....       | 35,749,905    | 28,516,776            | 3,860,539     | 3,372,600    | 2,333,273  | 27,476,411    | 2,125,513               | 24,940,209    | 207,760                             | 2,530,202          |
| Rhode Island.....       | 233,579       | 135,313               | 1,733         | 46,633       | 13,523   | 226,919       | 13,737                  | 165,951       | 4,791                               | 60,963             |
| South Carolina.....     | 5,207,134     | 4,253,670             | 326,331       | 127,133      | 466,429  | 3,933,009     | 446,416                 | 3,731,460     | 20,013                              | 151,549            |
| South Dakota.....       | 445,361       | 292,933               | 113,733       | 39,140       | 31,704   | 299,133       | 29,133                  | 275,273       | 2,571                               | 23,910             |
| Tennessee.....          | 13,127,734    | 15,223,933            | 2,324,535     | 273,266      | 950,953  | 11,332,596    | 825,196                 | 10,372,323    | 125,762                             | 1,460,263          |
| Texas.....              | 16,236,473    | 10,533,433            | 5,196,349     | 566,136      | 1,232,404  | 10,197,575    | 1,214,013               | 10,041,932    | 13,391                              | 155,643            |
| Utah.....               | 214,137       | 139,562               | 15,225        | 9,400        | 17,543   | 209,303       | 14,133                  | 170,333       | 3,365                               | 33,425             |
| Vermont.....            | 6,131,303     | 4,206,936             | 1,345,156     | 79,716       | 375,309  | 4,294,276     | 307,370                 | 3,503,219     | 63,439                              | 736,057            |
| Virginia.....           | 12,137,177    | 9,900,057             | 1,317,534     | 419,536      | 959,119  | 9,379,639     | 833,571                 | 8,642,277     | 75,543                              | 737,412            |
| Washington.....         | 30,236,230    | 13,617,179            | 5,130,545     | 6,433,556    | 1,429,032  | 12,291,046    | 1,411,030               | 12,142,933    | 17,952                              | 143,143            |
| West Virginia.....      | 10,612,337    | 9,390,313             | 733,336       | 453,633      | 773,051  | 9,135,416     | 632,921                 | 8,141,940     | 95,130                              | 1,043,476          |
| Wisconsin.....          | 57,634,316    | 39,944,711            | 15,449,096    | 2,241,009    | 3,339,166  | 41,302,531    | 2,776,662               | 33,956,433    | 612,504                             | 7,346,033          |
| Wyoming.....            | 331,553       | 235,567               | 34,966        | 511,025      | 16,963   | 213,200       | 15,433                  | 194,530       | 1,430                               | 13,620             |

<sup>1</sup> Includes the value of merchant products and the amount received for custom work, but excludes the value of custom products.<sup>2</sup> Includes 292,536 M feet, B. M., valued at \$5,099,951, made up of all items reported in M feet, B. M., under "other sawed products." (See Table 49.)

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS,

TABLE 45.—PRODUCTS.

| 1  | STATES AND TERRITORIES. | ROUGH LUMBER (MERCHANT AND CUSTOM COMBINED). |               |                         |               |                         |              |                         |              |                         |              |                         |             |
|----|-------------------------|--|---------------|-------------------------|---------------|-------------------------|--------------|-------------------------|--------------|-------------------------|--------------|-------------------------|-------------|
|    |                         | AGGREGATE.                                   |               | Conifers.               |               |                         |              |                         |              |                         |              |                         |             |
|    |                         |  |               | Total.                  |               | Yellow pine.            |              | White pine.             |              | Hemlock.                |              | Redwood.                |             |
|    |                         | Quantity, M feet, B. M.                      | Value.        |                         |               |                         |              |                         |              |                         |              |                         |             |
|    |                         |  |               | Quantity, M feet, B. M. | Value.        | Quantity, M feet, B. M. | Value.       | Quantity, M feet, B. M. | Value.       | Quantity, M feet, B. M. | Value.       | Quantity, M feet, B. M. | Value.      |
| 1  | United States.          | 34,787,084                                   | \$385,298,304 | 26,153,063              | \$268,481,112 | 10,603,108              | \$90,903,556 | 7,483,283               | \$94,979,885 | 3,420,678               | \$34,136,892 | 360,167                 | \$3,645,608 |
| 2  | Alabama .....           | 1,096,539                                    | 9,771,908     | 991,048                 | 8,431,801     | 990,039                 | 8,418,019    |                         |              |                         |              |                         |             |
| 3  | Alaska .....            | 6,571  | 89,249        | 6,571                   | 89,249        |                         |              |                         |              | 15                      | 180          |                         |             |
| 4  | Arizona .....           | 36,182                                       | 407,308       | 36,182                  | 407,308       | 36,028                  | 404,368      |                         |              |                         |              |                         |             |
| 5  | Arkansas .....          | 1,595,933                                    | 13,665,163    | 1,151,831               | 8,823,530     | 1,106,252               | 8,345,819    |                         |              |                         |              |                         |             |
| 6  | California .....        | 734,232                                      | 7,795,277     | 733,693                 | 7,786,690     | 285,306                 | 3,100,844    |                         |              | 310                     | 3,100        | 360,167                 | 3,645,608   |
| 7  | Colorado .....          | 133,746                                      | 1,269,306     | 133,671                 | 1,268,406     | 96,354                  | 880,881      |                         |              |                         |              |                         |             |
| 8  | Connecticut .....       | 107,594                                      | 1,598,515     | 30,000                  | 387,393       | 2,575                   | 51,125       | 23,797                  | 281,548      | 3,308                   | 46,920       |                         |             |
| 9  | Delaware .....          | 35,395                                       | 385,693       | 29,076                  | 270,446       | 29,076                  | 270,446      |                         |              |                         |              |                         |             |
| 10 | Florida .....           | 788,905                                      | 7,839,134     | 788,705                 | 7,802,214     | 701,677                 | 6,583,125    |                         |              |                         |              |                         |             |
| 11 | Georgia .....           | 1,308,610                                    | 11,324,211    | 1,265,811               | 10,874,190    | 1,251,266               | 10,600,576   |                         |              |                         |              |                         |             |
| 12 | Idaho .....             | 65,331                                       | 613,728       | 65,331                  | 613,728       | 52,790                  | 501,881      | 1,990                   | 18,200       |                         |              |                         |             |
| 13 | Illinois .....          | 881,684                                      | 4,916,919     | 131,223                 | 1,866,413     |                         |              | 129,786                 | 1,851,853    | 2                       | 25           |                         |             |
| 14 | Indiana .....           | 977,878                                      | 15,642,971    | 2,099                   | 29,678        | 392                     | 6,075        | 890                     | 11,812       | 489                     | 5,808        |                         |             |
| 15 | Indian Territory ..     | 15,980                                       | 167,355       | 6,602                   | 62,145        | 6,602                   | 62,145       |                         |              |                         |              |                         |             |
| 16 | Iowa .....              | 351,769                                      | 5,135,892     | 290,741                 | 4,165,316     |                         |              | 288,581                 | 4,147,506    | 2,160                   | 17,810       |                         |             |
| 17 | Kansas .....            | 10,645                                       | 145,795       |                         |               |                         |              |                         |              |                         |              |                         |             |
| 18 | Kentucky .....          | 765,343                                      | 9,851,555     | 30,957                  | 315,725       | 20,781                  | 209,483      | 3,940                   | 37,167       | 4,557                   | 41,251       |                         |             |
| 19 | Louisiana .....         | 1,113,423                                    | 10,888,747    | 1,041,225               | 9,705,329     | 792,693                 | 6,389,054    |                         |              |                         |              |                         |             |
| 20 | Maine .....             | 756,515                                      | 8,926,737     | 727,785                 | 8,572,632     |                         |              | 214,196                 | 2,516,222    | 85,400                  | 925,029      |                         |             |
| 21 | Maryland .....          | 183,893                                      | 2,030,740     | 105,812                 | 972,107       | 79,365                  | 743,690      | 1,611                   | 21,820       | 21,186                  | 108,987      |                         |             |
| 22 | Massachusetts .....     | 342,058                                      | 3,968,325     | 299,911                 | 3,204,906     |                         |              | 258,214                 | 2,695,876    | 12,234                  | 144,910      |                         |             |
| 23 | Michigan .....          | 3,012,057                                    | 35,784,606    | 2,200,408               | 26,168,885    |                         |              | 1,232,080               | 17,235,569   | 841,695                 | 7,571,570    |                         |             |
| 24 | Minnesota .....         | 2,341,619                                    | 28,026,985    | 2,279,663               | 27,863,684    |                         |              | 2,157,866               | 26,588,882   | 1,576                   | 18,360       |                         |             |
| 25 | Mississippi .....       | 1,202,334                                    | 11,614,390    | 995,012                 | 8,974,808     | 960,877                 | 8,535,587    |                         |              |                         |              |                         |             |
| 26 | Missouri .....          | 715,968                                      | 7,859,509     | 273,732                 | 2,584,875     | 158,051                 | 1,423,964    | 106,599                 | 1,069,397    |                         |              |                         |             |
| 27 | Montana .....           | 255,685                                      | 2,297,860     | 254,385                 | 2,276,360     | 153,467                 | 1,376,000    | 4,375                   | 54,820       |                         |              |                         |             |
| 28 | Nebraska .....          | 4,655  | 54,831        | 872                     | 11,130        | 872                     | 11,130       |                         |              |                         |              |                         |             |
| 29 | Nevada .....            | 725  | 7,060         | 725                     | 7,060         | 375                     | 4,610        |                         |              |                         |              |                         |             |
| 30 | New Hampshire ..        | 562,258                                      | 6,381,929     | 538,790                 | 5,994,371     |                         |              | 307,131                 | 3,278,893    | 45,115                  | 482,865      |                         |             |
| 31 | New Jersey .....        | 72,660                                       | 1,195,409     | 40,789                  | 592,312       | 26,712                  | 381,053      | 1,700                   | 22,500       | 996                     | 12,600       |                         |             |
| 32 | New Mexico .....        | 30,880                                       | 289,401       | 30,880                  | 289,401       | 30,677                  | 285,096      |                         |              |                         |              |                         |             |
| 33 | New York .....          | 874,754                                      | 12,286,346    | 667,523                 | 7,969,931     | 310                     | 5,590        | 116,947                 | 1,677,364    | 303,621                 | 3,370,250    |                         |             |
| 34 | North Carolina ..       | 1,278,399                                    | 10,951,145    | 1,132,742               | 9,430,631     | 1,109,172               | 9,182,590    |                         |              | 1,150                   | 11,845       |                         |             |
| 35 | North Dakota .....      | 2,030  | 22,060        |                         |               |                         |              |                         |              |                         |              |                         |             |
| 36 | Ohio .....              | 957,239                                      | 14,996,419    | 39,003                  | 700,299       | 540                     | 6,740        | 24,697                  | 455,584      | 8,416                   | 106,075      |                         |             |
| 37 | Oklahoma .....          | 6,075  | 68,664        | 10                      | 250           |                         |              |                         |              |                         |              |                         |             |
| 38 | Oregon .....            | 784,181                                      | 6,686,601     | 731,652                 | 6,647,223     | 133,428                 | 1,176,977    |                         |              | 35                      | 280          |                         |             |
| 39 | Pennsylvania .....      | 2,321,284                                    | 27,303,863    | 1,801,122               | 19,905,286    | 17,901                  | 217,975      | 221,047                 | 3,274,183    | 1,558,188               | 16,299,753   |                         |             |
| 40 | Rhode Island .....      | 18,265                                       | 220,719       | 14,277                  | 155,724       |                         |              | 14,277                  | 155,724      |                         |              |                         |             |
| 41 | South Carolina ..       | 466,109                                      | 3,929,629     | 443,626                 | 3,732,688     | 422,590                 | 3,375,136    |                         |              |                         |              |                         |             |
| 42 | South Dakota .....      | 31,704                                       | 299,183       | 31,146                  | 293,203       | 30,003                  | 280,118      | 1,143                   | 13,090       |                         |              |                         |             |
| 43 | Tennessee .....         | 989,463                                      | 11,595,991    | 77,539                  | 721,716       | 68,479                  | 600,220      | 4,103                   | 41,100       | 565                     | 5,070        |                         |             |
| 44 | Texas .....             | 1,230,904                                    | 10,177,509    | 1,192,848               | 9,735,873     | 1,188,069               | 9,664,400    |                         |              |                         |              |                         |             |
| 45 | Utah .....              | 17,484                                       | 203,603       | 17,484                  | 203,603       | 16,890                  | 201,163      |                         |              |                         |              |                         |             |
| 46 | Vermont .....           | 365,869                                      | 4,124,436     | 315,446                 | 3,467,344     | 100                     | 1,000        | 18,878                  | 209,428      | 41,444                  | 422,153      |                         |             |
| 47 | Virginia .....          | 956,169                                      | 9,345,422     | 716,309                 | 6,602,488     | 706,961                 | 6,482,158    | 4,189                   | 33,521       | 1,364                   | 13,570       |                         |             |
| 48 | Washington .....        | 1,423,205                                    | 12,284,737    | 1,422,502               | 12,192,601    | 95,367                  | 777,279      | 3,920                   | 43,500       | 204                     | 1,975        |                         |             |
| 49 | West Virginia .....     | 773,583                                      | 9,103,551     | 203,375                 | 1,895,923     | 17,196                  | 172,635      | 4,940                   | 45,623       | 87,072                  | 722,112      |                         |             |
| 50 | Wisconsin .....         | 3,361,943                                    | 40,933,690    | 2,842,912               | 34,196,109    |                         |              | 2,836,386               | 29,199,203   | 399,571                 | 3,744,884    |                         |             |
| 51 | Wyoming .....           | 16,957                                       | 213,113       | 16,957                  | 213,113       | 13,875                  | 173,489      |                         |              |                         |              |                         |             |

## BY STATES AND TERRITORIES, 1900—Continued.

TABLE 45.—PRODUCTS.

| ROUGH LUMBER (MERCHANT AND CUSTOM COMBINED)—continued. |              |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
|--|--------------|-------------------------|-------------|-------------------------|-------------|-------------------------|-------------|-------------------------|--------------|-------------------------|-----------|-------------------------|-----------|-------------------------|-----------|
| Conifers—continued.                                    |              |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
| Spruce.  |              | Cypress.                |             | Cedar.                  |             | Norway pine.            |             | Red fir.                |              | Sugar pine.             |           | Tamarack.               |           | All other conifers.     |           |
| Quantity, M feet, B. M.                                | Value.       | Quantity, M feet, B. M. | Value.      | Quantity, M feet, B. M. | Value.      | Quantity, M feet, B. M. | Value.      | Quantity, M feet, B. M. | Value.       | Quantity, M feet, B. M. | Value.    | Quantity, M feet, B. M. | Value.    | Quantity, M feet, B. M. | Value.    |
| 1,448,091  | \$16,322,666 | 495,836                 | \$6,604,495 | 232,978                 | \$2,542,818 | 259,108                 | \$3,022,670 | 1,736,507               | \$15,050,638 | 53,558                  | \$659,016 | 50,610                  | \$442,016 | 9,185                   | \$170,852 |
|  |              | 851                     | 12,222      | 158                     | 1,560       |                         |             |                         |              |                         |           |                         |           |                         |           |
| 6,056  | 88,569       |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           | 500                     | 5,500     |
| 104  | 2,340        |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           | 60                      | 600       |
|  |              | 45,559                  | 477,311     | 20                      | 400         |                         |             |                         |              |                         |           |                         |           |                         |           |
| 18,557   | 203,218      |                         |             | 1,211                   | 18,980      |                         |             | 15,021                  | 156,545      | 52,108                  | 646,810   |                         |           | 413                     | 16,685    |
| 37,317   | 387,525      |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
| 100  | 1,200        | 100                     | 3,000       | 120                     | 3,600       |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              | 85,028                  | 1,219,089   |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              | 14,545                  | 278,614     |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              |                         |             | 2,100                   | 16,000      |                         |             | 4,966                   | 49,032       |                         |           | 3,350                   | 26,790    | 135                     | 1,875     |
|  |              | 1,435                   | 15,035      |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              | 313                     | 5,135       | 15                      | 248         |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
| 10   | 100          | 1,077                   | 13,099      | 592                     | 14,025      |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              | 248,532                 | 3,316,275   |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
| 409,533  | 4,933,535    |                         |             | 7,354                   | 57,815      | 2,400                   | 22,800      |                         |              |                         |           | 2,500                   | 50,000    | 6,402                   | 67,231    |
| 3,500  | 35,000       | 130                     | 2,110       | 20                      | 500         |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              |                         |             | 175                     | 1,975       |                         |             |                         |              |                         |           |                         |           | 72                      | 5,750     |
| 29,216   | 356,395      |                         |             | 66,481                  | 615,742     | 50,719                  | 659,603     |                         |              |                         |           | 2,984                   | 26,010    | 115                     | 1,200     |
| 3,334  | 59,191       |                         |             | 11,875                  | 137,000     | 106,911                 | 1,104,050   |                         |              |                         |           | 230                     | 2,342     |                         |           |
| 1,205  | 13,050       | 34,135                  | 439,251     |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              | 9,082                   | 91,514      |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
| 415  | 4,525        |                         |             |                         |             |                         |             | 61,931                  | 566,352      |                         |           | 34,197                  | 274,663   |                         |           |
|  |              |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
| 350  | 2,450        |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
| 185,422  | 2,201,118    | 1,000                   | 30,000      |                         |             | 80                      | 920         |                         |              |                         |           |                         |           | 42                      | 575       |
| 1,000  | 20,000       | 3                       | 90          | 10,378                  | 156,069     |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
| 203  | 3,705        |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
| 244,966  | 2,837,297    |                         |             | 1,538                   | 77,940      |                         |             |                         |              |                         |           | 131                     | 1,310     | 15                      | 170       |
| 1,300  | 8,127        | 18,650                  | 198,737     | 2,470                   | 29,832      |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              |                         |             | 155                     | 1,900       | 5,200                   | 180,000     |                         |              |                         |           |                         |           |                         |           |
|  |              |                         |             | 10                      | 250         |                         |             |                         |              |                         |           |                         |           |                         |           |
| 63,209   | 594,327      |                         |             | 31,313                  | 340,492     |                         |             | 501,237                 | 4,514,312    | 1,450                   | 12,206    | 877                     | 7,885     | 103                     | 744       |
| 3,423  | 51,375       |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           | 563                     | 62,000    |
|  |              |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
| 50   | 400          | 25,666                  | 353,922     | 320                     | 3,230       |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
| 330  | 1,950        | 1,791                   | 20,210      | 2,321                   | 53,166      |                         |             |                         |              |                         |           |                         |           |                         |           |
|  |              | 4,699                   | 71,073      | 80                      | 400         |                         |             |                         |              |                         |           |                         |           |                         |           |
| 40   | 560          |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           | 554                     | 6,880     |
| 254,853  | 2,833,021    |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           | 171                     | 1,742     |
|  |              |                         |             |                         |             |                         |             |                         |              |                         |           |                         |           |                         |           |
| 50   | 350          | 3,240                   | 62,808      | 505                     | 10,086      |                         |             |                         |              |                         |           |                         |           |                         |           |
| 82,699   | 686,601      |                         |             | 83,670                  | 889,959     |                         |             | 1,152,672               | 9,763,297    |                         |           | 3,970                   | 29,990    |                         |           |
| 94,067   | 954,558      |                         |             | 100                     | 1,000       |                         |             |                         |              |                         |           |                         |           |                         |           |
| 780  | 8,050        |                         |             | 9,997                   | 115,049     | 93,798                  | 1,105,297   |                         |              |                         |           | 2,480                   | 23,026    |                         |           |
| 3,002  | 38,529       |                         |             |                         |             |                         |             | 80                      | 1,100        |                         |           |                         |           |                         |           |

LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS,  
TABLE 46.—PRODUCTS.

| STATES AND TERRITORIES. |                       | ROUGH LUMBER (MERCHANT AND CUSTOM COMBINED)—continued. |               |                               |             |                               |             |                               |             |
|-------------------------|-----------------------|--|---------------|-------------------------------|-------------|-------------------------------|-------------|-------------------------------|-------------|
|                         |                       | Hard woods.  |               |                               |             |                               |             |                               |             |
|                         |                       | Total.   |               | Ash.                          |             | Birch.                        |             | Chestnut.                     |             |
|                         |                       | Quantity.  | Value.        | Quantity,<br>M feet,<br>B. M. | Value.      | Quantity,<br>M feet,<br>B. M. | Value.      | Quantity,<br>M feet,<br>B. M. | Value.      |
| 1                       | United States.....    | 8,684,021  | \$116,817,192 | 269,120                       | \$4,268,599 | 132,601                       | \$1,657,621 | 206,688                       | \$2,764,089 |
| 2                       | Alabama.....          | 105,491  | 1,340,107     | 5,782                         | 93,645      | 1                             | 15          | 65                            | 683         |
| 3                       | Alaska.....           |  |               |                               |             |                               |             |                               |             |
| 4                       | Arizona.....          |  |               |                               |             |                               |             |                               |             |
| 5                       | Arkansas.....         | 444,102  | 4,841,633     | 15,624                        | 230,370     |                               |             |                               |             |
| 6                       | California.....       | 539  | 8,587         |                               |             |                               |             |                               |             |
| 7                       | Colorado.....         | 75   | 900           |                               |             |                               |             |                               |             |
| 8                       | Connecticut.....      | 77,594   | 1,211,122     | 158                           | 4,470       | 460                           | 6,780       | 64,506                        | 954,337     |
| 9                       | Delaware.....         | 6,319  | 115,247       |                               |             |                               |             | 81                            | 1,270       |
| 10                      | Florida.....          | 2,200  | 36,920        | 462                           | 7,820       |                               |             |                               |             |
| 11                      | Georgia.....          | 42,799   | 450,021       | 992                           | 17,911      |                               |             | 75                            | 1,500       |
| 12                      | Idaho.....            |  |               |                               |             |                               |             |                               |             |
| 13                      | Illinois.....         | 250,861  | 3,050,506     | 1,075                         | 14,236      | 110                           | 1,110       |                               |             |
| 14                      | Indiana.....          | 975,779  | 15,613,298    | 27,603                        | 519,435     | 50                            | 625         | 107                           | 1,870       |
| 15                      | Indian Territory..... | 9,378  | 105,210       |                               |             |                               |             |                               |             |
| 16                      | Iowa.....             | 61,028   | 970,576       | 347                           | 8,010       | 56                            | 745         |                               |             |
| 17                      | Kansas.....           | 10,645   | 145,795       | 25                            | 290         |                               |             |                               |             |
| 18                      | Kentucky.....         | 734,886  | 9,535,830     | 4,877                         | 67,496      | 81                            | 312         | 7,885                         | 83,141      |
| 19                      | Louisiana.....        | 72,198   | 1,183,418     | 4,979                         | 105,825     |                               |             |                               |             |
| 20                      | Maine.....            | 28,730   | 354,105       | 1,259                         | 16,019      | 14,061                        | 164,748     |                               |             |
| 21                      | Maryland.....         | 77,581   | 1,058,633     | 3                             | 60          | 305                           | 3,100       | 4,867                         | 57,682      |
| 22                      | Massachusetts.....    | 42,147   | 763,419       | 120                           | 2,145       | 1,000                         | 13,305      | 19,488                        | 251,843     |
| 23                      | Michigan.....         | 311,649  | 9,615,721     | 85,753                        | 1,206,412   | 12,423                        | 154,465     | 123                           | 2,460       |
| 24                      | Minnesota.....        | 61,956   | 763,251       | 3,690                         | 44,928      | 1,000                         | 12,000      |                               |             |
| 25                      | Mississippi.....      | 207,322  | 2,639,582     | 10,144                        | 156,035     |                               |             |                               |             |
| 26                      | Missouri.....         | 442,236  | 5,274,034     | 10,458                        | 240,851     | 263                           | 2,628       |                               |             |
| 27                      | Montana.....          | 1,300  | 21,500        |                               |             |                               |             |                               |             |
| 28                      | Nebraska.....         | 3,733  | 43,701        | 1                             | 40          |                               |             |                               |             |
| 29                      | Nevada.....           |  |               |                               |             |                               |             |                               |             |
| 30                      | New Hampshire.....    | 23,468   | 387,558       | 1,248                         | 20,316      | 2,639                         | 33,564      | 3,430                         | 52,080      |
| 31                      | New Jersey.....       | 31,871   | 603,097       | 11                            | 340         |                               |             | 10,418                        | 163,895     |
| 32                      | New Mexico.....       |  |               |                               |             |                               |             |                               |             |
| 33                      | New York.....         | 207,226  | 4,316,415     | 8,956                         | 151,429     | 12,909                        | 195,091     | 13,942                        | 185,745     |
| 34                      | North Carolina.....   | 145,657  | 1,520,514     | 3,617                         | 46,217      | 20                            | 240         | 2,660                         | 37,843      |
| 35                      | North Dakota.....     | 2,030  | 22,060        |                               |             |                               |             |                               |             |
| 36                      | Ohio.....             | 913,231  | 14,296,120    | 28,934                        | 506,675     |                               |             | 4,403                         | 58,476      |
| 37                      | Oklahoma.....         | 6,065  | 68,414        | 100                           | 1,000       |                               |             |                               |             |
| 38                      | Oregon.....           | 2,529  | 39,378        | 610                           | 10,650      |                               |             |                               |             |
| 39                      | Pennsylvania.....     | 520,162  | 7,398,532     | 4,677                         | 80,021      | 10,266                        | 123,186     | 44,614                        | 569,764     |
| 40                      | Rhode Island.....     | 3,983  | 64,995        | 34                            | 729         | 30                            | 350         | 2,815                         | 41,430      |
| 41                      | South Carolina.....   | 17,453   | 196,941       | 1,371                         | 23,910      |                               |             |                               |             |
| 42                      | South Dakota.....     | 558  | 5,980         |                               |             |                               |             |                               |             |
| 43                      | Tennessee.....        | 861,874  | 10,874,275    | 13,100                        | 292,568     | 50                            | 750         | 10,849                        | 127,570     |
| 44                      | Texas.....            | 33,056   | 441,736       | 6,793                         | 83,933      |                               |             |                               |             |
| 45                      | Utah.....             |  |               |                               |             |                               |             |                               |             |
| 46                      | Vermont.....          | 50,423   | 657,142       | 1,200                         | 19,307      | 16,251                        | 197,944     | 347                           | 4,840       |
| 47                      | Virginia.....         | 239,860  | 2,742,934     | 1,060                         | 16,233      |                               |             | 3,467                         | 36,007      |
| 48                      | Washington.....       | 5,703  | 92,136        | 3,203                         | 53,036      |                               |             |                               |             |
| 49                      | West Virginia.....    | 570,208  | 7,207,623     | 2,207                         | 35,494      | 353                           | 5,280       | 12,546                        | 131,653     |
| 50                      | Wisconsin.....        | 519,031  | 6,737,531     | 13,647                        | 135,733     | 60,313                        | 736,833     |                               |             |
| 51                      | Wyoming.....          |  |               |                               |             |                               |             |                               |             |

## BY STATES AND TERRITORIES, 1900—Continued.

TABLE 46.—PRODUCTS.

| ROUGH LUMBER (MERCHANT AND CUSTOM COMBINED)—continued. |             |                               |             |                               |             |                               |             |                               |             |                               |              |                               |              |
|--|-------------|-------------------------------|-------------|-------------------------------|-------------|-------------------------------|-------------|-------------------------------|-------------|-------------------------------|--------------|-------------------------------|--------------|
| Hard woods—continued.                                  |             |                               |             |                               |             |                               |             |                               |             |                               |              |                               |              |
| Cottonwood.  |             | Elm.                          |             | Gum.                          |             | Hickory                       |             | Basswood.                     |             | Oak.                          |              | Poplar.                       |              |
| Quantity,<br>M feet,<br>B. M.                          | Value.      | Quantity,<br>M feet,<br>B. M. | Value.      | Quantity,<br>M feet,<br>B. M. | Value.      | Quantity,<br>M feet,<br>B. M. | Value.      | Quantity,<br>M feet,<br>B. M. | Value.      | Quantity,<br>M feet,<br>B. M. | Value.       | Quantity,<br>M feet,<br>B. M. | Value.       |
| 415, 124   | \$4,303,544 | 456,781                       | \$5,240,530 | 285,417                       | \$2,747,680 | 96,636                        | \$1,814,500 | 303,069                       | \$3,954,625 | 4,438,027                     | \$61,174,129 | 1,115,242                     | \$15,646,331 |
| 6,042  | 75,005      | 568                           | 9,766       | 10,607                        | 131,815     | 824                           | 12,119      |                               |             | 63,925                        | 314,644      | 17,484                        | 197,144      |
| 116,825  | 1,141,244   | 3,228                         | 35,204      | 60,656                        | 539,540     | 3,321                         | 57,888      | 10                            | 100         | 234,998                       | 2,737,488    | 8,713                         | 90,362       |
|  |             |                               |             | 100                           | 2,000       |                               |             |                               |             | 379                           | 4,337        |                               |              |
| 25   | 1,000       | 3                             | 75          |                               |             | 270                           | 7,848       | 78                            | 2,050       | 10,814                        | 210,071      | 75                            | 900          |
|  |             |                               |             | 326                           | 3,945       |                               |             |                               |             | 5,856                         | 107,772      | 80                            | 1,215        |
|  |             |                               |             | 129                           | 2,312       | 377                           | 7,405       |                               |             | 1,172                         | 17,823       | 35                            | 1,000        |
|  |             |                               |             | 1,882                         | 20,464      | 163                           | 1,685       | 35                            | 375         | 28,942                        | 291,375      | 60                            | 1,560        |
|  |             |                               |             |                               |             |                               |             |                               |             |                               |              | 10,447                        | 113,751      |
| 18,937   | 219,654     | 16,667                        | 190,159     | 17,938                        | 167,035     | 9,424                         | 232,529     | 243                           | 3,205       | 171,839                       | 2,017,665    | 6,164                         | 69,275       |
| 1,793  | 24,217      | 74,669                        | 822,644     | 30,675                        | 294,400     | 32,520                        | 616,196     | 7,292                         | 107,469     | 649,794                       | 10,909,754   | 56,633                        | 916,663      |
| 3,278  | 33,010      |                               |             |                               |             |                               |             |                               |             | 5,887                         | 63,700       |                               |              |
| 3,663  | 48,495      | 13,873                        | 174,394     |                               |             | 188                           | 4,565       | 4,302                         | 56,443      | 33,722                        | 513,332      | 55                            | 610          |
| 3,186  | 40,208      | 2,519                         | 32,115      |                               |             | 82                            | 1,065       |                               |             | 4,214                         | 62,179       |                               |              |
| 225  | 2,000       | 3,213                         | 41,021      | 28,599                        | 237,839     | 5,053                         | 79,501      | 1,453                         | 14,223      | 399,300                       | 4,906,852    | 272,641                       | 3,892,344    |
| 53,097   | 624,280     | 83                            | 830         | 2,597                         | 25,549      | 257                           | 6,832       |                               |             | 5,781                         | 77,352       | 2,342                         | 37,760       |
|  |             | 68                            | 683         |                               |             | 100                           | 1,800       | 901                           | 9,994       | 7,008                         | 107,148      | 578                           | 5,875        |
|  |             |                               |             | 1,055                         | 13,270      | 51                            | 906         | 140                           | 1,620       | 65,842                        | 924,104      | 4,845                         | 53,180       |
| 704  | 8,449       | 109,443                       | 1,197,439   | 80                            | 890         | 466                           | 7,866       | 45,796                        | 593,791     | 16,091                        | 294,151      | 225                           | 5,927        |
| 772  | 10,225      | 8,354                         | 75,551      |                               |             |                               |             | 593,791                       | 135,390     | 1,861,669                     | 1,861,669    | 518                           | 9,284        |
| 39,714   | 407,560     |                               |             | 23,270                        | 223,180     | 1,313                         | 19,120      | 7,941                         | 84,426      | 37,638                        | 493,804      | 373                           | 4,249        |
| 75,750   | 658,260     | 28,124                        | 290,189     | 51,498                        | 479,749     | 5,289                         | 94,471      |                               |             | 104,506                       | 1,500,249    | 28,810                        | 327,788      |
|  |             |                               |             |                               |             |                               |             | 1,332                         | 14,390      | 252,439                       | 3,085,918    | 1,843                         | 49,275       |
|  |             |                               |             |                               |             |                               |             |                               |             | 1,300                         | 21,500       |                               |              |
| 3,190  | 36,595      | 440                           | 4,580       |                               |             |                               |             |                               |             | 143                           | 1,886        |                               |              |
|  |             |                               |             |                               |             |                               |             |                               |             |                               |              |                               |              |
| 260  | 2,600       | 22                            | 250         | 156                           | 2,333       | 859                           | 20,660      | 162                           | 1,563       | 12,606                        | 234,595      | 90                            | 1,000        |
|  |             |                               |             |                               |             |                               |             |                               |             | 19,178                        | 395,834      | 665                           | 9,875        |
|  |             |                               |             |                               |             |                               |             |                               |             |                               |              |                               |              |
|  |             | 16,157                        | 213,034     |                               |             | 1,073                         | 21,075      | 29,867                        | 425,187     | 44,750                        | 874,965      | 1,249                         | 26,638       |
|  |             |                               |             | 551                           | 5,180       | 434                           | 4,765       | 273                           | 3,370       | 86,251                        | 833,366      | 51,636                        | 536,123      |
| 2,030  | 22,080      |                               |             |                               |             |                               |             |                               |             |                               |              |                               |              |
| 4,077  | 50,864      | 93,413                        | 1,146,724   | 100                           | 952         | 20,282                        | 367,400     | 12,512                        | 152,790     | 596,618                       | 9,314,424    | 87,175                        | 1,598,053    |
| 2,494  | 27,466      | 230                           | 2,830       |                               |             |                               |             |                               |             | 3,182                         | 36,863       |                               |              |
| 87   | 700         |                               |             |                               |             |                               |             |                               |             | 967                           | 15,905       |                               |              |
| 40   | 600         | 2,619                         | 32,205      | 50                            | 455         | 4,273                         | 79,317      | 10,073                        | 134,334     | 842,268                       | 5,001,313    | 10,304                        | 165,472      |
|  |             |                               |             |                               |             | 6                             | 250         |                               |             | 1,077                         | 21,716       |                               |              |
| 3,050  | 35,600      |                               |             | 1                             | 10          | 8                             | 80          |                               |             | 11,844                        | 120,871      | 1,709                         | 16,470       |
| 558  | 5,980       |                               |             |                               |             |                               |             |                               |             |                               |              |                               |              |
| 74,233   | 817,008     | 3,493                         | 30,751      | 52,357                        | 515,236     | 7,848                         | 142,099     | 2,331                         | 23,526      | 412,116                       | 5,200,068    | 269,862                       | 3,530,396    |
| 796  | 8,364       | 2,013                         | 24,146      | 555                           | 5,925       | 469                           | 5,460       |                               |             | 27,212                        | 311,143      |                               |              |
|  |             |                               |             |                               |             |                               |             |                               |             |                               |              |                               |              |
|  |             | 623                           | 7,114       |                               |             | 25                            | 500         | 2,352                         | 36,039      | 7,489                         | 100,103      | 271                           | 3,642        |
|  |             |                               |             |                               |             |                               |             |                               |             |                               |              |                               |              |
|  |             | 2                             | 20          | 2,110                         | 19,341      | 566                           | 7,120       | 401                           | 4,095       | 144,904                       | 1,590,005    | 86,142                        | 1,049,892    |
| 390  | 2,100       |                               |             |                               |             |                               |             |                               |             | 200                           | 3,000        |                               |              |
|  |             |                               |             | 25                            | 100         | 1,070                         | 13,413      | 1,872                         | 22,653      | 854,443                       | 4,133,265    | 193,119                       | 2,304,706    |
|  |             | 76,897                        | 903,746     | 100                           | 1,000       | 25                            | 500         | 177,903                       | 2,254,452   | 136,902                       | 1,957,920    | 2,489                         | 25,902       |



## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 46.—PRODUCTS.

| STATES AND TERRITORIES. | ROUGH LUMBER (MERCHANT AND CUSTOM COMBINED)—continued. |             |                            |             |                            |           |                            |             |
|-------------------------|--|-------------|----------------------------|-------------|----------------------------|-----------|----------------------------|-------------|
|                         | Hard woods—continued.                                  |             |                            |             |                            |           |                            |             |
|                         | Black walnut.  |             | Maple.                     |             | Sycamore.                  |           | Other hard woods.          |             |
|                         | Quantity,<br>M feet, B. M.                             | Value.      | Quantity,<br>M feet, B. M. | Value.      | Quantity,<br>M feet, B. M. | Value.    | Quantity,<br>M feet, B. M. | Value.      |
| United States.....      | 38,681   | \$1,411,611 | 633,466                    | \$7,495,052 | 29,715                     | \$327,933 | 208,504                    | \$4,015,948 |
| Alabama.....            | 198  | 5,271       |                            |             |                            |           |                            |             |
| Alaska.....             |  |             |                            |             |                            |           |                            |             |
| Arizona.....            |  |             |                            |             |                            |           |                            |             |
| Arkansas.....           | 175  | 3,641       | 66                         | 1,060       | 455                        | 4,316     | 31                         | 420         |
| California.....         | 60   | 2,200       |                            |             |                            |           |                            |             |
| Colorado.....           |  |             |                            |             |                            |           |                            |             |
| Connecticut.....        | 62   | 1,600       | 413                        | 8,326       |                            |           | 725                        | 13,350      |
| Delaware.....           | 21   | 1,260       |                            |             |                            |           |                            |             |
| Florida.....            |  |             |                            |             |                            |           |                            |             |
| Georgia.....            | 100  | 1,200       | 55                         | 688         |                            |           | 108                        | 1,122       |
| Idaho.....              |  |             |                            |             |                            |           |                            |             |
| Illinois.....           | 958  | 32,022      | 3,076                      | 34,213      | 4,412                      | 44,947    | 518                        | 24,456      |
| Indiana.....            | 10,637   | 416,770     | 21,082                     | 268,057     | 8,733                      | 105,220   | 54,191                     | 609,918     |
| Indian Territory.....   | 215  | 8,500       |                            |             |                            |           |                            |             |
| Iowa.....               | 4,313  | 154,745     | 428                        | 6,972       | 5                          | 75        | 76                         | 2,140       |
| Kansas.....             | 426  | 7,323       | 53                         | 730         | 125                        | 1,660     | 15                         | 225         |
| Kentucky.....           | 2,113  | 63,902      | 2,080                      | 27,021      | 1,880                      | 21,050    | 5,036                      | 49,128      |
| Louisiana.....          | 60   | 4,800       |                            |             |                            |           | 3,002                      | 300,140     |
| Maine.....              |  |             | 3,427                      | 39,314      |                            |           | 728                        | 8,524       |
| Maryland.....           | 23   | 636         | 210                        | 1,875       |                            |           | 240                        | 2,200       |
| Massachusetts.....      | 45   | 1,875       | 2,397                      | 32,780      |                            |           | 2,481                      | 108,398     |
| Michigan.....           | 451  | 21,350      | 398,165                    | 4,319,238   | 504                        | 5,710     | 21,888                     | 221,698     |
| Minnesota.....          | 5  | 100         | 2,139                      | 32,060      |                            |           | 44                         | 908         |
| Mississippi.....        |  |             |                            |             | 10                         | 100       | 55                         | 550         |
| Missouri.....           | 6,285  | 267,632     | 2,597                      | 26,583      | 5,706                      | 55,578    | 652                        | 8,595       |
| Montana.....            |  |             |                            |             |                            |           |                            |             |
| Nebraska.....           | 9  | 600         |                            |             |                            |           |                            |             |
| Nevada.....             |  |             |                            |             |                            |           |                            |             |
| New Hampshire.....      |  |             | 2,438                      | 32,340      |                            |           | 855                        | 11,505      |
| New Jersey.....         | 69   | 2,280       | 100                        | 2,000       |                            |           | 133                        | 2,980       |
| New Mexico.....         |  |             |                            |             |                            |           |                            |             |
| New York.....           | 141  | 5,185       | 51,436                     | 757,156     | 70                         | 1,075     | 26,676                     | 1,460,435   |
| North Carolina.....     | 100  | 2,785       | 20                         | 200         |                            |           | 45                         | 425         |
| North Dakota.....       |  |             |                            |             |                            |           |                            |             |
| Ohio.....               | 6,857  | 292,676     | 20,916                     | 277,450     | 4,134                      | 51,882    | 38,810                     | 477,694     |
| Oklahoma.....           | 13   | 231         |                            |             | 1                          | 14        | 45                         | 519         |
| Oregon.....             |  |             | 852                        | 11,925      |                            |           | 13                         | 198         |
| Pennsylvania.....       | 376  | 14,019      | 49,650                     | 624,516     |                            |           | 40,892                     | 568,320     |
| Rhode Island.....       | 10   | 280         | 16                         | 240         |                            |           |                            |             |
| South Carolina.....     |  |             |                            |             |                            |           |                            |             |
| South Dakota.....       |  |             |                            |             |                            |           |                            |             |
| Tennessee.....          | 4,315  | 83,166      | 445                        | 3,994       | 3,437                      | 33,516    | 2,438                      | 23,577      |
| Texas.....              | 63   | 1,010       | 50                         | 750         |                            |           | 100                        | 1,000       |
| Utah.....               |  |             |                            |             |                            |           |                            |             |
| Vermont.....            |  |             | 16,292                     | 220,508     |                            |           | 5,038                      | 67,115      |
| Virginia.....           | 296  | 3,996       | 55                         | 1,030       | 233                        | 2,735     | 619                        | 7,460       |
| Washington.....         |  |             | 2,000                      | 34,000      |                            |           |                            |             |
| West Virginia.....      | 150  | 3,819       | 2,581                      | 30,244      | 5                          | 60        | 1,837                      | 23,931      |
| Wisconsin.....          | 140  | 1,717       | 50,427                     | 649,282     |                            |           | 1,183                      | 15,941      |
| Wyoming.....            |  |             |                            |             |                            |           |                            |             |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS,

TABLE 47.—PRODUCTS.

| STATES AND TERRITORIES. |                     | SHINGLES (MERCHANT AND CUSTOM COMBINED). |              |                      |             |                      |             |                      |             |
|-------------------------|---------------------|--|--------------|----------------------|-------------|----------------------|-------------|----------------------|-------------|
|                         |                     | Total. <sup>1</sup>                      |              | Yellow pine.         |             | White pine.          |             | Cypress.             |             |
|                         |                     | Number of thousands.                     | Value.       | Number of thousands. | Value.      | Number of thousands. | Value.      | Number of thousands. | Value.      |
| 1                       | United States.....  | 12,102,017                               | \$18,869,705 | 936,611              | \$1,492,658 | 1,859,440            | \$2,969,805 | 1,247,161            | \$2,280,645 |
| 2                       | Alabama.....        | 267,278                                  | 468,357      | 111,234              | 172,785     |                      |             | 155,509              | 289,652     |
| 3                       | Arizona.....        | 350                                      | 895          | 350                  | 895         |                      |             |                      |             |
| 4                       | Arkansas.....       | 349,522                                  | 597,855      | 35,226               | 64,446      |                      |             | 314,196              | 533,224     |
| 5                       | California.....     | 650,090                                  | 693,115      | 18,948               | 28,742      |                      |             |                      |             |
| 6                       | Colorado.....       | 5,165                                    | 8,902        | 4,925                | 8,272       |                      |             |                      |             |
| 7                       | Connecticut.....    | 3,214                                    | 8,593        |                      |             | 968                  | 2,350       |                      |             |
| 8                       | Delaware.....       | 80                                       | 150          | 30                   | 150         |                      |             |                      |             |
| 9                       | Florida.....        | 177,123                                  | 356,333      | 50,426               | 75,720      |                      |             | 126,697              | 280,613     |
| 10                      | Georgia.....        | 243,797                                  | 379,957      | 221,991              | 334,110     |                      |             | 20,894               | 44,772      |
| 11                      | Idaho.....          | 15,806                                   | 24,344       | 1,481                | 3,745       |                      |             |                      |             |
| 12                      | Illinois.....       | 42,825                                   | 73,378       |                      |             | 34,865               | 61,692      | 550                  | 1,025       |
| 13                      | Indiana.....        | 34,198                                   | 92,877       |                      |             | 1,920                | 3,890       |                      |             |
| 14                      | Iowa.....           | 66,140                                   | 137,712      |                      |             | 66,140               | 137,712     |                      |             |
| 15                      | Kentucky.....       | 59,375                                   | 115,468      | 2,225                | 4,200       |                      |             | 16,000               | 31,325      |
| 16                      | Louisiana.....      | 504,819                                  | 785,901      | 49,165               | 62,670      |                      |             | 455,654              | 723,281     |
| 17                      | Maine.....          | 465,862                                  | 908,499      |                      |             | 30,196               | 55,052      |                      |             |
| 18                      | Maryland.....       | 22,824                                   | 66,328       | 8,796                | 20,482      | 9,200                | 28,475      | 450                  | 2,300       |
| 19                      | Massachusetts.....  | 20,500                                   | 46,694       |                      |             | 14,596               | 33,174      |                      |             |
| 20                      | Michigan.....       | 1,926,110                                | 3,219,610    |                      |             | 369,613              | 699,294     |                      |             |
| 21                      | Minnesota.....      | 498,800                                  | 683,207      |                      |             | 464,576              | 638,531     |                      |             |
| 22                      | Mississippi.....    | 32,027                                   | 64,006       | 17,417               | 32,061      |                      |             | 14,610               | 31,945      |
| 23                      | Missouri.....       | 28,227                                   | 45,292       | 3,764                | 10,614      | 14,955               | 24,702      | 3,830                | 8,190       |
| 24                      | Montana.....        | 6,880                                    | 11,518       | 3,520                | 6,268       | 60                   | 150         |                      |             |
| 25                      | New Hampshire.....  | 40,499                                   | 75,417       |                      |             | 16,468               | 33,225      |                      |             |
| 26                      | New Jersey.....     | 33,835                                   | 146,231      | 582                  | 3,105       |                      |             |                      |             |
| 27                      | New Mexico.....     | 4,800                                    | 8,950        | 4,800                | 8,950       |                      |             |                      |             |
| 28                      | New York.....       | 160,294                                  | 342,414      |                      |             | 29,045               | 69,582      | 150                  | 525         |
| 29                      | North Carolina..... | 212,467                                  | 513,320      | 118,850              | 224,301     |                      |             | 68,476               | 179,703     |
| 30                      | Ohio.....           | 13,605                                   | 33,888       |                      |             | 3,130                | 9,006       |                      |             |
| 31                      | Oklahoma.....       | 103                                      | 255          |                      |             |                      |             |                      |             |
| 32                      | Oregon.....         | 31,139                                   | 45,959       | 3,800                | 9,025       |                      |             |                      |             |
| 33                      | Pennsylvania.....   | 369,858                                  | 866,435      |                      |             | 84,872               | 225,591     |                      |             |
| 34                      | Rhode Island.....   | 2,267                                    | 6,156        |                      |             | 120                  | 335         |                      |             |
| 35                      | South Carolina..... | 88,878                                   | 155,177      | 54,033               | 80,188      |                      |             | 32,445               | 71,739      |
| 36                      | South Dakota.....   | 800                                      | 1,575        | 800                  | 1,575       |                      |             |                      |             |
| 37                      | Tennessee.....      | 59,735                                   | 107,193      | 3,611                | 7,825       | 4,085                | 5,205       | 13,315               | 26,700      |
| 38                      | Texas.....          | 210,633                                  | 315,143      | 186,376              | 275,204     |                      |             | 23,307               | 39,039      |
| 39                      | Utah.....           | 2,460                                    | 3,600        | 2,450                | 3,580       |                      |             |                      |             |
| 40                      | Vermont.....        | 52,899                                   | 106,659      |                      |             | 2,715                | 5,768       |                      |             |
| 41                      | Virginia.....       | 27,784                                   | 62,299       | 18,232               | 36,412      |                      |             | 5,578                | 16,659      |
| 42                      | Washington.....     | 4,337,992                                | 5,853,437    | 3,004                | 4,481       |                      |             |                      |             |
| 43                      | West Virginia.....  | 34,350                                   | 58,299       | 3,790                | 7,287       | 70                   | 150         |                      |             |
| 44                      | Wisconsin.....      | 994,427                                  | 1,882,262    |                      |             | 712,046              | 940,912     |                      |             |
| 45                      | Wyoming.....        | 2,185                                    | 6,045        | 1,835                | 4,870       |                      |             |                      |             |

<sup>1</sup> Includes 147,695 M custom shingles, valued at \$300,479.



## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS BY STATES AND TERRITORIES, 1900—Continued.

TABLE 48.—PRODUCTS.

| STATES AND TERRITORIES. | SAWMILL PRODUCTS.    |                      |             |                      |              |                 |             |
|-------------------------|----------------------|----------------------|-------------|----------------------|--------------|-----------------|-------------|
|                         | Cooperage materials. |                      |             |                      |              |                 |             |
|                         | Total value.         | Hoops.               |             | Staves.              |              | Headings.       |             |
|                         |                      | Number of thousands. | Value.      | Number of thousands. | Value.       | Number of sets. | Value.      |
| United States.....      | \$20,714,670         | 441,327              | \$2,669,465 | 1,664,792            | \$13,697,621 | 124,089,447     | \$4,347,584 |
| Alabama.....            |                      |                      |             | 25,776               | 174,296      | 1,243,000       | 26,736      |
| Alaska.....             |                      |                      |             |                      |              |                 |             |
| Arizona.....            |                      |                      |             |                      |              |                 |             |
| Arkansas.....           |                      | 8,220                | 90,100      | 109,056              | 1,853,401    | 4,887,650       | 305,625     |
| California.....         |                      |                      |             |                      |              | 45,000          | 1,826       |
| Colorado.....           |                      |                      |             |                      |              |                 |             |
| Connecticut.....        |                      |                      |             |                      |              |                 |             |
| Delaware.....           |                      |                      |             | 12,000               | 30,000       | 700,000         | 7,000       |
| Florida.....            |                      | 120                  | 600         | 4,126                | 21,972       | 46,170          | 1,828       |
| Georgia.....            |                      |                      |             | 3,309                | 17,656       | 226,760         | 3,681       |
| Idaho.....              |                      |                      |             |                      |              |                 |             |
| Illinois.....           |                      | 7,200                | 47,700      | 54,508               | 385,804      | 2,720,000       | 85,830      |
| Indiana.....            |                      | 88,310               | 617,710     | 160,084              | 1,244,266    | 13,081,947      | 526,221     |
| Indian Territory.....   |                      |                      |             |                      |              |                 |             |
| Iowa.....               |                      |                      |             | 1,300                | 6,500        | 332,000         | 12,910      |
| Kansas.....             |                      |                      |             |                      |              |                 |             |
| Kentucky.....           |                      |                      |             | 63,346               | 1,042,523    | 3,522,504       | 234,045     |
| Louisiana.....          |                      |                      |             | 21,255               | 171,078      | 725,960         | 34,155      |
| Maine.....              |                      | 670                  | 2,945       | 70,489               | 298,171      | 3,911,950       | 116,212     |
| Maryland.....           |                      |                      |             | 330                  | 4,600        | 330,000         | 10,000      |
| Massachusetts.....      |                      | 180                  | 1,080       | 8,255                | 49,890       | 398,000         | 11,015      |
| Michigan.....           |                      | 120,225              | 684,078     | 310,648              | 1,631,132    | 33,969,223      | 962,721     |
| Minnesota.....          |                      | 7,611                | 55,200      | 7,012                | 38,780       | 1,316,583       | 48,470      |
| Mississippi.....        |                      |                      |             | 17,657               | 355,504      | 1,980,000       | 61,880      |
| Missouri.....           |                      | 8,760                | 49,175      | 67,706               | 463,467      | 2,527,116       | 203,888     |
| Montana.....            |                      |                      |             |                      |              |                 |             |
| Nebraska.....           |                      |                      |             |                      |              |                 |             |
| Nevada.....             |                      |                      |             |                      |              |                 |             |
| New Hampshire.....      |                      |                      |             | 8,419                | 34,120       | 318,000         | 5,040       |
| New Jersey.....         |                      |                      |             |                      |              |                 |             |
| New Mexico.....         |                      |                      |             |                      |              |                 |             |
| New York.....           |                      | 12,371               | 94,746      | 42,585               | 259,008      | 8,534,260       | 284,986     |
| North Carolina.....     |                      |                      |             | 4,543                | 26,368       | 83,300          | 3,312       |
| North Dakota.....       |                      |                      |             |                      |              |                 |             |
| Ohio.....               |                      | 115,901              | 668,346     | 200,376              | 1,176,222    | 5,208,692       | 264,444     |
| Oklahoma.....           |                      |                      |             |                      |              |                 |             |
| Oregon.....             |                      |                      |             |                      |              |                 |             |
| Pennsylvania.....       |                      | 75                   | 430         | 145,353              | 589,606      | 7,243,044       | 173,517     |
| Rhode Island.....       |                      |                      |             | 20                   | 100          |                 |             |
| South Carolina.....     |                      | 300                  | 2,400       | 3,813                | 21,807       | 278,000         | 7,800       |
| South Dakota.....       |                      |                      |             |                      |              |                 |             |
| Tennessee.....          |                      | 64,184               | 297,955     | 181,071              | 2,541,587    | 16,915,700      | 441,772     |
| Texas.....              |                      |                      |             | 7,236                | 21,222       | 100,000         | 3,000       |
| Utah.....               |                      |                      |             |                      |              |                 |             |
| Vermont.....            |                      |                      |             | 2,050                | 21,285       |                 |             |
| Virginia.....           |                      | 700                  | 5,000       | 47,735               | 389,777      | 3,762,650       | 167,034     |
| Washington.....         |                      | 500                  | 3,000       | 3,684                | 41,974       | 334,600         | 17,525      |
| West Virginia.....      |                      | 200                  | 1,000       | 32,795               | 361,784      | 918,839         | 30,866      |
| Wisconsin.....          |                      | 5,800                | 48,000      | 48,255               | 433,721      | 8,408,499       | 235,745     |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS,

TABLE 49.—PRODUCTS.

| STATES AND TERRITORIES. |                       | SAWMILL PRODUCTS—continued. |                           |           |                           |             |                               |           |
|-------------------------|-----------------------|-----------------------------|---------------------------|-----------|---------------------------|-------------|-------------------------------|-----------|
|                         |                       | Other sawed products.       |                           |           |                           |             |                               |           |
|                         |                       | Total value.                | Bobbin and spool stock.   |           | Furniture stock.          |             | Agricultural implement stock. |           |
|                         |                       |                             | Quantity,<br>M feet, B.M. | Value.    | Quantity,<br>M feet, B.M. | Value.      | Quantity,<br>M feet, B.M.     | Value.    |
| 1                       | United States.....    | \$29,399,639                | 39,975                    | \$525,257 | 103,534                   | \$1,885,764 | 32,736                        | \$589,065 |
| 2                       | Alabama.....          | 402,161                     |                           |           | 876                       | 9,915       | 613                           | 8,789     |
| 3                       | Alaska.....           | 6,200                       |                           |           |                           |             |                               |           |
| 4                       | Arizona.....          | 4,200                       |                           |           |                           |             |                               |           |
| 5                       | Arkansas.....         | 873,728                     |                           |           | 6,740                     | 124,996     | 4,271                         | 75,712    |
| 6                       | California.....       | 283,980                     |                           |           | 3                         | 45          | 12                            | 300       |
| 7                       | Colorado.....         | 18,314                      |                           |           |                           |             |                               |           |
| 8                       | Connecticut.....      | 55,392                      | 40                        | 400       | 133                       | 4,455       | 62                            | 1,935     |
| 9                       | Delaware.....         | 84,318                      |                           |           |                           |             |                               |           |
| 10                      | Florida.....          | 299,935                     |                           |           | 300                       | 4,000       | 4                             | 64        |
| 11                      | Georgia.....          | 120,582                     | 100                       | 1,000     | 1,968                     | 19,312      | 339                           | 3,559     |
| 12                      | Idaho.....            | 20,840                      |                           |           | 2                         | 60          |                               |           |
| 13                      | Illinois.....         | 497,982                     |                           |           | 1,094                     | 14,262      | 968                           | 19,218    |
| 14                      | Indiana.....          | 2,541,223                   |                           |           | 17,919                    | 340,608     | 15,505                        | 277,396   |
| 15                      | Indian Territory..... | 35,500                      |                           |           |                           |             |                               |           |
| 16                      | Iowa.....             | 210,520                     |                           |           | 95                        | 1,580       | 77                            | 1,229     |
| 17                      | Kansas.....           | 12,392                      |                           |           | 3                         | 100         |                               |           |
| 18                      | Kentucky.....         | 1,358,602                   |                           |           | 3,078                     | 73,119      | 562                           | 10,335    |
| 19                      | Louisiana.....        | 210,639                     |                           |           |                           |             | 1                             | 12        |
| 20                      | Maine.....            | 1,873,084                   | 26,254                    | 294,705   | 605                       | 9,580       | 20                            | 280       |
| 21                      | Maryland.....         | 357,826                     |                           |           |                           |             |                               |           |
| 22                      | Massachusetts.....    | 1,596,805                   | 827                       | 14,640    | 753                       | 10,250      | 227                           | 4,540     |
| 23                      | Michigan.....         | 3,421,716                   | 268                       | 3,740     | 1,600                     | 22,750      | 929                           | 13,027    |
| 24                      | Minnesota.....        | 1,149,360                   |                           |           | 496                       | 6,740       | 80                            | 1,150     |
| 25                      | Mississippi.....      | 159,286                     |                           |           | 2,998                     | 39,290      | 479                           | 6,244     |
| 26                      | Missouri.....         | 822,481                     |                           |           | 1,712                     | 26,853      | 1,227                         | 28,259    |
| 27                      | Montana.....          | 27,653                      |                           |           |                           |             |                               |           |
| 28                      | Nebraska.....         | 312                         |                           |           |                           |             |                               |           |
| 29                      | Nevada.....           |                             |                           |           |                           |             |                               |           |
| 30                      | New Hampshire.....    | 861,866                     | 7,689                     | 113,976   | 1,475                     | 25,836      | 30                            | 1,100     |
| 31                      | New Jersey.....       | 156,956                     |                           |           | 99                        | 1,315       | 10                            | 400       |
| 32                      | New Mexico.....       | 13,950                      |                           |           |                           |             |                               |           |
| 33                      | New York.....         | 1,101,109                   | 352                       | 5,632     | 1,593                     | 40,037      | 503                           | 7,306     |
| 34                      | North Carolina.....   | 644,676                     | 500                       | 7,888     | 4,198                     | 40,178      | 226                           | 3,614     |
| 35                      | North Dakota.....     |                             |                           |           |                           |             |                               |           |
| 36                      | Ohio.....             | 2,401,015                   | 100                       | 2,500     | 17,155                    | 462,702     | 2,486                         | 54,251    |
| 37                      | Oklahoma.....         | 980                         |                           |           | 10                        | 350         |                               |           |
| 38                      | Oregon.....           | 159,867                     |                           |           |                           |             |                               |           |
| 39                      | Pennsylvania.....     | 1,443,419                   | 50                        | 774       | 4,652                     | 77,086      | 725                           | 13,900    |
| 40                      | Rhode Island.....     | 6,788                       |                           |           |                           |             |                               |           |
| 41                      | South Carolina.....   | 168,531                     | 1                         | 40        |                           |             | 1                             | 20        |
| 42                      | South Dakota.....     | 7,070                       |                           |           |                           |             |                               |           |
| 43                      | Tennessee.....        | 1,246,084                   | 1,310                     | 34,660    | 2,542                     | 49,550      | 1,478                         | 24,295    |
| 44                      | Texas.....            | 46,971                      |                           |           | 168                       | 1,522       | 286                           | 7,560     |
| 45                      | Utah.....             | 6,403                       |                           |           |                           |             |                               |           |
| 46                      | Vermont.....          | 540,112                     | 2,484                     | 45,352    | 7,002                     | 115,189     |                               |           |
| 47                      | Virginia.....         | 436,489                     |                           |           | 250                       | 3,854       | 1,000                         | 13,280    |
| 48                      | Washington.....       | 510,824                     |                           |           |                           |             |                               |           |
| 49                      | West Virginia.....    | 581,913                     |                           |           | 2,744                     | 54,002      | 11                            | 130       |
| 50                      | Wisconsin.....        | 2,588,681                   |                           |           | 21,266                    | 305,728     | 654                           | 11,100    |
| 51                      | Wyoming.....          | 77,909                      |                           |           |                           |             |                               |           |

## BY STATES AND TERRITORIES, 1900—Continued.

TABLE 49.—PRODUCTS—continued.

| SAWMILLS—continued.             |             |                         |           |                     |             |                                  |              |           |           |
|---------------------------------|-------------|-------------------------|-----------|---------------------|-------------|----------------------------------|--------------|-----------|-----------|
| Other sawed products—continued. |             |                         |           |                     |             | Amount received for custom work. |              |           |           |
| Carriage and wagon stock.       |             | Pickets and palings.    |           | Laths.              |             | All other sawed products.        | Sawing.      | Grinding. | Ginning.  |
| Quantity, M feet, B. M.         | Value.      | Quantity, M feet, B. M. | Value.    | Number of thousand. | Value.      |                                  |              |           |           |
| 80,927                          | \$1,765,067 | 35,814                  | \$334,798 | 2,523,098           | \$4,698,909 | \$19,600,779                     | \$10,682,770 | \$603,346 | \$539,458 |
| 2,170                           | 35,464      | 1,188                   | 7,163     | 28,721              | 35,113      | 805,717                          | 146,528      | 33,765    | 66,460    |
|                                 |             |                         |           |                     |             | 6,200                            |              |           |           |
|                                 |             |                         |           | 2,040               | 4,200       |                                  | 150          |           |           |
| 16,546                          | 290,985     | 497                     | 3,915     | 21,164              | 37,531      | 840,589                          | 57,044       | 22,915    | 57,877    |
| 445                             | 6,575       | 2,343                   | 21,640    | 11,507              | 22,903      | 237,457                          | 19,481       |           |           |
|                                 |             |                         |           | 5,558               | 9,851       | 8,963                            | 4,262        |           |           |
| 251                             | 9,221       | 13                      | 175       | 418                 | 643         | 38,563                           | 94,087       | 11,084    |           |
| 554                             | 10,090      | 6                       | 45        | 1,130               | 2,097       | 22,086                           | 21,457       | 1,545     |           |
| 556                             | 8,450       | 608                     | 1,814     | 21,761              | 43,051      | 242,556                          | 19,485       | 9,920     | 11,227    |
| 528                             | 5,190       | 370                     | 2,240     | 31,496              | 37,786      | 51,495                           | 124,256      | 15,664    | 39,224    |
|                                 |             | 30                      | 400       | 3,220               | 8,940       | 11,440                           | 15,440       |           |           |
| 3,819                           | 87,318      | 859                     | 9,246     | 30,674              | 72,889      | 295,549                          | 221,785      | 7,614     |           |
| 21,240                          | 495,299     | 3,073                   | 34,482    | 10,138              | 28,603      | 1,864,835                        | 700,487      | 16,354    | 500       |
| 5                               | 125         |                         |           |                     |             | 35,375                           | 6,380        | 536       | 2,885     |
| 163                             | 3,784       | 169                     | 2,520     | 58,638              | 136,150     | 65,257                           | 115,289      | 2,054     |           |
| 14                              | 260         | 3                       | 25        | 4                   | 10          | 11,997                           | 14,712       | 5         |           |
| 3,499                           | 78,146      | 1,534                   | 15,942    | 17,091              | 41,537      | 1,139,523                        | 274,993      | 28,956    |           |
| 102                             | 3,020       | 1,840                   | 25,175    | 99,852              | 156,532     | 25,900                           | 17,457       | 3,542     | 19,589    |
| 584                             | 17,520      | 669                     | 7,336     | 217,376             | 364,654     | 1,179,009                        | 264,100      | 19,408    | 2,000     |
| 152                             | 4,530       | 166                     | 1,446     | 5,369               | 9,063       | 342,787                          | 73,224       | 7,805     |           |
|                                 |             |                         |           | 8,807               | 23,483      | 1,535,802                        | 197,953      | 13,789    |           |
| 325                             | 8,090       |                         |           | 259,917             | 493,395     | 2,847,311                        | 1,087,731    | 26,568    |           |
| 1,550                           | 29,676      | 1,934                   | 11,817    | 387,064             | 766,040     | 872,925                          | 1,213,027    | 4,613     |           |
| 122                             | 2,505       |                         |           | 6,083               | 10,554      | 97,970                           | 72,348       | 24,623    | 97,959    |
| 44                              | 415         | 410                     | 4,813     | 24,835              | 38,236      | 636,155                          | 301,632      | 27,330    | 3,415     |
| 3,809                           | 85,242      | 806                     | 7,786     | 14,281              | 22,878      | 5,275                            | 30,022       |           |           |
|                                 |             |                         |           | 1                   | 2           | 810                              | 1,550        |           |           |
|                                 |             |                         |           |                     |             |                                  |              |           |           |
| 475                             | 9,950       | 190                     | 1,920     | 74,221              | 155,491     | 553,593                          | 172,525      | 7,141     |           |
| 821                             | 30,338      | 523                     | 5,336     | 3,559               | 12,342      | 106,725                          | 67,204       | 5,539     |           |
|                                 |             |                         |           | 2,165               | 5,650       | 8,300                            | 6,712        |           |           |
| 852                             | 19,718      | 290                     | 3,368     | 66,468              | 124,262     | 900,796                          | 723,946      | 70,356    |           |
| 2,307                           | 57,028      | 988                     | 7,901     | 48,782              | 74,919      | 453,198                          | 216,205      | 43,772    | 79,324    |
|                                 |             |                         |           |                     |             |                                  | 100          |           |           |
| 9,458                           | 249,936     | 2,985                   | 35,247    | 18,519              | 54,135      | 1,542,244                        | 778,587      | 32,985    |           |
|                                 |             | 34                      | 360       | 75                  | 150         | 120                              | 6,515        | 652       | 2,189     |
|                                 |             | 357                     | 4,613     | 41,779              | 60,498      | 94,756                           | 5,798        | 600       |           |
| 1,568                           | 30,936      | 4,845                   | 47,854    | 266,949             | 584,353     | 688,516                          | 701,949      | 39,445    |           |
| 233                             | 6,200       |                         |           | 16                  | 18          | 565                              | 12,498       | 25        |           |
| 16                              | 195         | 302                     | 3,125     | 26,811              | 36,772      | 128,379                          | 46,518       | 18,073    | 56,204    |
|                                 |             |                         |           | 1,853               | 5,340       | 1,730                            | 9,015        |           |           |
| 5,880                           | 117,529     | 673                     | 8,365     | 33,199              | 81,991      | 923,694                          | 384,436      | 35,610    | 39,832    |
| 143                             | 1,944       | 893                     | 8,640     | 4,181               | 4,858       | 21,447                           | 51,246       | 16,127    | 59,923    |
|                                 |             | 64                      | 705       | 793                 | 2,163       | 3,535                            | 9,381        |           |           |
| 406                             | 7,905       |                         |           | 9,314               | 18,684      | 352,982                          | 136,277      | 19,375    |           |
|                                 |             |                         |           | 36,502              | 64,578      | 337,807                          | 212,163      | 18,730    | 850       |
| 790                             | 10,698      | 822                     | 6,234     | 145,134             | 176,925     | 327,665                          | 52,494       | 2,740     |           |
|                                 |             | 684                     | 6,133     | 58,440              | 107,132     | 394,766                          | 233,163      | 7,414     |           |
| 919                             | 19,700      | 4,242                   | 30,728    | 413,011             | 761,435     | 1,458,605                        | 1,643,333    | 11,672    |           |
| 1,051                           | 21,085      | 6                       | 82        | 629                 | 2,577       | 75,250                           | 7,115        |           |           |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 50.—PRODUCTS.

| STATES AND TERRITORIES. | PLANING MILL PRODUCTS. |                                 |   |                                     |
|-------------------------|------------------------|---------------------------------|---|-------------------------------------|
|                         | Total.                 | Gross value of finished lumber. | Gross value of remanufactured products. | Amount received for custom planing. |
| United States .....     | \$107,622,519          | \$84,154,426                    | \$22,704,806                            | \$763,287                           |
| Alabama.....            | 2,080,427              | 1,870,292                       | 201,442                                 | 8,693                               |
| Alaska.....             | 69,462                 | 34,792                          | 34,670                                  | .....                               |
| Arizona.....            | 105,557                | 23,546                          | 82,011                                  | .....                               |
| Arkansas.....           | 6,205,410              | 5,604,251                       | 595,649                                 | 5,510                               |
| California.....         | 3,916,512              | 2,215,149                       | 1,694,749                               | 6,614                               |
| Colorado.....           | 289,521                | 199,775                         | 88,396                                  | 1,350                               |
| Connecticut.....        | 152,997                | 81,630                          | 69,270                                  | 2,097                               |
| Delaware.....           | 56,700                 | 9,270                           | 46,350                                  | 1,080                               |
| Florida.....            | 1,753,738              | 1,633,843                       | 121,900                                 | 2,995                               |
| Georgia.....            | 1,650,062              | 1,610,164                       | 29,300                                  | 10,598                              |
| Idaho.....              | 172,257                | 142,449                         | 27,625                                  | 2,133                               |
| Illinois.....           | 1,774,983              | 830,078                         | 944,380                                 | 525                                 |
| Indiana.....            | 1,556,243              | 920,944                         | 600,333                                 | 34,961                              |
| Indian Territory.....   | 4,375                  | 4,000                           | .....                                   | 375                                 |
| Iowa.....               | 3,389,020              | 2,658,944                       | 728,461                                 | 1,615                               |
| Kansas.....             | .....                  | .....                           | .....                                   | .....                               |
| Kentucky.....           | 1,577,636              | 1,151,021                       | 417,675                                 | 8,940                               |
| Louisiana.....          | 4,664,832              | 4,167,844                       | 493,746                                 | 3,242                               |
| Maine.....              | 1,704,702              | 953,864                         | 731,075                                 | 19,763                              |
| Maryland.....           | 284,453                | 119,185                         | 163,610                                 | 1,658                               |
| Massachusetts.....      | 1,243,408              | 359,089                         | 846,039                                 | 33,280                              |
| Michigan.....           | 5,822,481              | 4,323,306                       | 1,387,586                               | 111,589                             |
| Minnesota.....          | 12,069,993             | 9,853,133                       | 2,165,045                               | 51,815                              |
| Mississippi.....        | 3,305,365              | 3,127,857                       | 168,008                                 | 9,500                               |
| Missouri.....           | 1,977,243              | 1,890,264                       | 85,499                                  | 1,485                               |
| Montana.....            | 450,728                | 390,238                         | 56,400                                  | 4,090                               |
| Nebraska.....           | .....                  | .....                           | .....                                   | .....                               |
| Nevada.....             | .....                  | .....                           | .....                                   | .....                               |
| New Hampshire.....      | 1,423,563              | 789,653                         | 619,580                                 | 14,330                              |
| New Jersey.....         | 423,788                | 297,934                         | 121,178                                 | 4,681                               |
| New Mexico.....         | 17,950                 | 15,750                          | 2,000                                   | 200                                 |
| New York.....           | 3,393,544              | 2,252,092                       | 1,066,644                               | 74,808                              |
| North Carolina.....     | 2,760,410              | 2,259,706                       | 480,021                                 | 20,683                              |
| North Dakota.....       | 2,400                  | 2,400                           | .....                                   | .....                               |
| Ohio.....               | 2,854,510              | 2,069,307                       | 723,837                                 | 61,366                              |
| Oklahoma.....           | .....                  | .....                           | .....                                   | .....                               |
| Oregon.....             | 2,733,466              | 2,186,636                       | 545,052                                 | 1,778                               |
| Pennsylvania.....       | 3,860,689              | 3,199,041                       | 599,677                                 | 61,871                              |
| Rhode Island.....       | 1,733                  | 475                             | 1,023                                   | 235                                 |
| South Carolina.....     | 826,881                | 759,093                         | 61,468                                  | 5,820                               |
| South Dakota.....       | 113,783                | 111,483                         | 1,800                                   | 500                                 |
| Tennessee.....          | 2,624,585              | 1,226,780                       | 1,380,467                               | 17,333                              |
| Texas.....              | 5,196,849              | 4,645,194                       | 543,255                                 | 8,400                               |
| Utah.....               | 15,225                 | 13,740                          | .....                                   | 1,485                               |
| Vermont.....            | 1,845,156              | 1,457,692                       | 365,240                                 | 22,224                              |
| Virginia.....           | 1,817,534              | 1,410,221                       | 397,312                                 | 10,001                              |
| Washington.....         | 5,180,545              | 4,238,877                       | 895,109                                 | 46,559                              |
| West Virginia.....      | 763,336                | 540,933                         | 206,625                                 | 15,778                              |
| Wisconsin.....          | 15,449,096             | 12,469,615                      | 2,913,899                               | 65,532                              |
| Wyoming.....            | 34,966                 | 32,876                          | 1,400                                   | 690                                 |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS,

TABLE 51.—PRODUCTS.

| STATES AND TERRITORIES. |                       | TIMBER CAMP PRODUCTS. |               |          |                  |           |                  |          |
|-------------------------|-----------------------|-----------------------|---------------|----------|------------------|-----------|------------------|----------|
|                         |                       | Total value.          | Basket stock. |          | Cooperage stock. |           | Excelsior stock. |          |
|                         |                       |                       | Cords.        | Value.   | Cords.           | Value.    | Cords.           | Value.   |
| 1                       | United States.....    | \$36,398,404          | 7,443         | \$28,301 | 82,546           | \$846,816 | 12,670           | \$48,978 |
| 2                       | Alabama.....          | 272,776               |               |          | 2,100            | 8,500     | 25               | 250      |
| 3                       | Alaska.....           | 46,318                |               |          |                  |           |                  |          |
| 4                       | Arizona.....          | 30,400                |               |          |                  |           |                  |          |
| 5                       | Arkansas.....         | 448,011               | 4,078         | 14,684   | 14,903           | 51,212    |                  |          |
| 6                       | California.....       | 1,118,481             |               |          | 1,612            | 6,640     |                  |          |
| 7                       | Colorado.....         | 48,084                |               |          |                  |           |                  |          |
| 8                       | Connecticut.....      | 361,342               |               |          |                  |           |                  |          |
| 9                       | Delaware.....         | 13,740                | 50            | 250      |                  |           |                  |          |
| 10                      | Florida.....          | 596,241               |               |          | 200              | 1,400     |                  |          |
| 11                      | Georgia.....          | 453,500               |               |          | 5,570            | 18,710    |                  |          |
| 12                      | Idaho.....            | 123,540               |               |          |                  |           |                  |          |
| 13                      | Illinois.....         | 252,804               | 14            | 50       |                  |           |                  |          |
| 14                      | Indiana.....          | 311,936               |               |          | 150              | 550       |                  |          |
| 15                      | Indian Territory..... | 1,000                 |               |          |                  |           |                  |          |
| 16                      | Iowa.....             | 23,107                |               |          |                  |           |                  |          |
| 17                      | Kansas.....           | 2,918                 |               |          |                  |           |                  |          |
| 18                      | Kentucky.....         | 350,710               |               |          | 4,100            | 28,000    | 4                | 24       |
| 19                      | Louisiana.....        | 669,626               |               |          | 100              | 400       |                  |          |
| 20                      | Maine.....            | 308,136               |               |          | 2,370            | 13,000    | 1,000            | 4,000    |
| 21                      | Maryland.....         | 79,381                | 183           | 717      |                  |           | 500              | 1,000    |
| 22                      | Massachusetts.....    | 225,339               | 2             | 20       |                  |           |                  |          |
| 23                      | Michigan.....         | 5,950,544             | 35            | 300      | 9,725            | 35,850    |                  |          |
| 24                      | Minnesota.....        | 5,623,958             |               |          | 2,400            | 4,800     |                  |          |
| 25                      | Mississippi.....      | 214,257               |               |          | 5,130            | 40,150    |                  |          |
| 26                      | Missouri.....         | 318,281               |               |          | 297              | 3,872     |                  |          |
| 27                      | Montana.....          | 207,975               |               |          |                  |           |                  |          |
| 28                      | Nebraska.....         | 400                   |               |          |                  |           |                  |          |
| 29                      | Nevada.....           |                       |               |          |                  |           |                  |          |
| 30                      | New Hampshire.....    | 1,067,993             |               |          | 13,000           | 61,200    | 205              | 720      |
| 31                      | New Jersey.....       | 159,212               | 656           | 2,330    |                  |           | 50               | 50       |
| 32                      | New Mexico.....       | 103,150               |               |          |                  |           |                  |          |
| 33                      | New York.....         | 690,813               | 100           | 300      | 1,374            | 11,100    | 190              | 1,042    |
| 34                      | North Carolina.....   | 320,082               | 400           | 1,600    | 2,000            | 6,500     |                  |          |
| 35                      | North Dakota.....     |                       |               |          |                  |           |                  |          |
| 36                      | Ohio.....             | 630,050               | 400           | 700      | 1,333            | 9,600     | 110              | 434      |
| 37                      | Oklahoma.....         |                       |               |          |                  |           |                  |          |
| 38                      | Oregon.....           | 735,467               |               |          |                  |           |                  |          |
| 39                      | Pennsylvania.....     | 3,372,600             | 100           | 250      | 6,335            | 12,122    | 1,950            | 6,607    |
| 40                      | Rhode Island.....     | 46,533                |               |          |                  |           |                  |          |
| 41                      | South Carolina.....   | 127,133               | 1,400         | 7,000    | 1,155            | 1,200     |                  |          |
| 42                      | South Dakota.....     | 89,140                |               |          |                  |           |                  |          |
| 43                      | Tennessee.....        | 273,236               |               |          | 2,080            | 7,925     |                  |          |
| 44                      | Texas.....            | 566,186               |               |          |                  |           |                  |          |
| 45                      | Utah.....             | 9,400                 |               |          |                  |           |                  |          |
| 46                      | Vermont.....          | 79,716                |               |          | 10               | 200       |                  |          |
| 47                      | Virginia.....         | 419,586               |               |          | 4,552            | 19,235    | 530              | 1,540    |
| 48                      | Washington.....       | 6,488,556             |               |          |                  |           |                  |          |
| 49                      | West Virginia.....    | 458,683               |               |          | 50               | 150       |                  |          |
| 50                      | Wisconsin.....        | 2,241,009             | 25            | 100      | 2,000            | 5,000     | 8,106            | 33,311   |
| 51                      | Wyoming.....          | 511,025               |               |          |                  |           |                  |          |



BY STATES AND TERRITORIES, 1900—Continued.

BY STATES AND TERRITORIES, 1900—Continued.

TIMBER CAMP PRODUCTS—continued.

| STATES AND TERRITORIES. |                       | TIMBER CAMP PRODUCTS—continued. |          |               |             |           |           |         |           |               |         |
|-------------------------|-----------------------|---------------------------------|----------|---------------|-------------|-----------|-----------|---------|-----------|---------------|---------|
|                         |                       | Handle stock.                   |          | Hemlock bark. |             | Oak bark. |           | Piles.  |           | Paving stock. |         |
|                         |                       | Cords.                          | Value.   | Cords.        | Value.      | Cords.    | Value.    | Number. | Value.    | Cords.        | Value.  |
| 1                       | United States.....    | 6,423                           | \$41,790 | 473,222       | \$1,945,452 | 39,844    | \$228,900 | 396,629 | \$758,945 | 554           | \$2,067 |
| 2                       | Alabama.....          | 300                             | 600      |               |             | 49        | 275       | 1,745   | 1,880     |               |         |
| 3                       | Alaska.....           |                                 |          |               |             |           |           |         |           |               |         |
| 4                       | Arizona.....          |                                 |          |               |             |           |           |         |           |               |         |
| 5                       | Arkansas.....         |                                 |          |               |             |           |           | 20,500  | 17,580    | 50            | 250     |
| 6                       | California.....       |                                 |          |               |             | 5,376     | 52,058    | 1,364   | 6,594     |               |         |
| 7                       | Colorado.....         |                                 |          |               |             |           |           |         |           |               |         |
| 8                       | Connecticut.....      | 555                             | 4,535    | 25            | 100         |           |           | 7,380   | 16,503    |               |         |
| 9                       | Delaware.....         |                                 |          |               |             |           |           | 750     | 1,775     | 10            | 50      |
| 10                      | Florida.....          |                                 |          |               |             |           |           |         |           |               |         |
| 11                      | Georgia.....          | 2                               | 10       |               |             | 2,000     | 10,000    | 5,500   | 3,980     |               |         |
| 12                      | Idaho.....            |                                 |          |               |             |           |           | 6,000   | 12,000    |               |         |
| 13                      | Illinois.....         |                                 |          |               |             |           |           | 14,375  | 9,809     |               |         |
| 14                      | Indiana.....          | 257                             | 2,347    |               |             |           |           | 10,113  | 19,154    |               |         |
| 15                      | Indian Territory..... |                                 |          |               |             |           |           |         |           |               |         |
| 16                      | Iowa.....             |                                 |          |               |             |           |           | 5,450   | 6,200     |               |         |
| 17                      | Kansas.....           | 15                              | 105      |               |             |           |           |         |           |               |         |
| 18                      | Kentucky.....         | 100                             | 250      |               |             | 2,175     | 17,060    | 250     | 425       |               |         |
| 19                      | Louisiana.....        | 25                              | 400      |               |             |           |           | 400     | 500       |               |         |
| 20                      | Maine.....            | 100                             | 600      | 4,497         | 13,952      |           |           |         |           |               |         |
| 21                      | Maryland.....         |                                 |          | 1,158         | 4,803       | 1,195     | 4,631     | 2,500   | 5,800     |               |         |
| 22                      | Massachusetts.....    | 40                              | 200      | 188           | 724         |           |           | 1,080   | 2,065     |               |         |
| 23                      | Michigan.....         | 40                              | 80       | 78,201        | 341,974     | 300       | 1,400     | 8,474   | 14,818    | 394           | 817     |
| 24                      | Minnesota.....        |                                 |          |               |             |           |           | 57,800  | 83,980    | 100           | 950     |
| 25                      | Mississippi.....      | 80                              | 1,000    |               |             |           |           | 936     | 4,492     |               |         |
| 26                      | Missouri.....         | 5                               | 30       |               |             |           |           | 5,283   | 6,307     |               |         |
| 27                      | Montana.....          |                                 |          |               |             |           |           | 2,000   | 3,000     |               |         |
| 28                      | Nebraska.....         |                                 |          |               |             |           |           |         |           |               |         |
| 29                      | Nevada.....           |                                 |          |               |             |           |           |         |           |               |         |
| 30                      | New Hampshire.....    | 35                              | 215      | 4,202         | 21,835      |           |           | 3,820   | 16,900    |               |         |
| 31                      | New Jersey.....       | 100                             | 720      |               |             |           |           | 6,460   | 23,478    |               |         |
| 32                      | New Mexico.....       |                                 |          |               |             |           |           | 1,500   | 1,300     |               |         |
| 33                      | New York.....         | 655                             | 2,685    | 32,048        | 139,197     | 144       | 478       | 4,054   | 7,946     |               |         |
| 34                      | North Carolina.....   |                                 |          | 40            | 120         | 85        | 424       | 460     | 1,315     |               |         |
| 35                      | North Dakota.....     |                                 |          |               |             |           |           |         |           |               |         |
| 36                      | Ohio.....             | 479                             | 2,712    | 158           | 973         | 1,575     | 8,773     | 8,970   | 29,939    |               |         |
| 37                      | Oklahoma.....         |                                 |          |               |             |           |           |         |           |               |         |
| 38                      | Oregon.....           |                                 |          |               |             |           |           | 17,829  | 14,277    |               |         |
| 39                      | Pennsylvania.....     | 203                             | 3,076    | 330,633       | 1,341,767   | 14,384    | 69,805    | 36,564  | 61,902    |               |         |
| 40                      | Rhode Island.....     |                                 |          |               |             |           |           | 1,110   | 2,655     |               |         |
| 41                      | South Carolina.....   |                                 |          |               |             |           |           | 400     | 200       |               |         |
| 42                      | South Dakota.....     |                                 |          |               |             |           |           |         |           |               |         |
| 43                      | Tennessee.....        | 660                             | 5,475    | 653           | 2,592       | 5,869     | 34,337    | 13,000  | 36,000    |               |         |
| 44                      | Texas.....            |                                 |          |               |             |           |           | 3,060   | 3,660     |               |         |
| 45                      | Utah.....             |                                 |          |               |             |           |           |         |           |               |         |
| 46                      | Vermont.....          | 307                             | 2,550    | 1,967         | 8,553       | 75        | 400       |         |           |               |         |
| 47                      | Virginia.....         | 45                              | 340      | 107           | 416         | 3,108     | 12,982    | 47,400  | 123,498   |               |         |
| 48                      | Washington.....       | 2,000                           | 11,300   |               |             |           |           | 54,579  | 135,591   |               |         |
| 49                      | West Virginia.....    | 20                              | 160      | 8,141         | 32,819      | 3,459     | 16,142    | 200     | 100       |               |         |
| 50                      | Wisconsin.....        | 400                             | 2,400    | 11,204        | 35,627      | 50        | 75        | 40,823  | 83,322    |               |         |
| 51                      | Wyoming.....          |                                 |          |               |             |           |           |         |           |               |         |

| TIMBER CAMPS—continued. |             |                           |          |                  |          |             |         |                  |             |              |          |           |           |                            |                                    |
|-------------------------|-------------|---------------------------|----------|------------------|----------|-------------|---------|------------------|-------------|--------------|----------|-----------|-----------|----------------------------|------------------------------------|
| Railway ties.           |             | Rived or shaved shingles. |          | Masts and spars. |          | Ship knees. |         | Telegraph poles. |             | Wheel stock. |          | Charcoal. |           | All other products, value. | Amount received for contract work. |
| Number.                 | Value.      | Number of thousand.       | Value.   | Number.          | Value.   | Number.     | Value.  | Number.          | Value.      | Cords.       | Value.   | Bushels.  | Value.    |                            |                                    |
| 22,501,894              | \$6,298,633 | 41,433                    | \$78,326 | 2,580            | \$28,513 | 1,601       | \$4,678 | 937,933          | \$1,393,576 | 9,317        | \$46,135 | 6,796,334 | \$450,221 | \$1,608,553                | \$850,715                          |
| 262,100                 | 66,909      | 302                       | 505      |                  |          |             |         | 1,754            | 2,183       | 25           | 100      | 522,000   | 20,495    | 2,197                      | 645                                |
| 25,000                  | 10,000      |                           |          |                  |          |             |         |                  |             |              |          |           |           | 46,318                     | 8                                  |
| 444,379                 | 110,018     | 4,781                     | 6,324    |                  |          |             |         | 2,380            | 775         |              |          |           |           | 20,000                     | 4                                  |
| 1,576,274               | 399,327     | 2,157                     | 9,080    |                  |          |             |         | 400              | 1,600       |              |          | 1,200     | 200       | 4,386                      | 200                                |
| 97,600                  | 29,074      |                           |          |                  |          |             |         |                  |             |              |          |           |           | 127,666                    | 85,200                             |
| 464,225                 | 160,122     | 150                       | 300      |                  |          |             |         |                  |             |              |          |           |           | 9,455                      | 7                                  |
| 15,200                  | 5,340       |                           |          |                  |          | 386         | 672     | 31,910           | 86,690      | 468          | 3,380    | 91,200    | 8,562     | 48,009                     | 10,124                             |
| 980,709                 | 238,280     |                           |          |                  |          |             |         | 1,200            | 2,780       |              |          |           |           | 3,300                      | 500                                |
| 822,265                 | 204,586     | 2,000                     | 5,000    | 3                | 150      |             |         | 2,150            | 10,305      |              |          | 500       | 25        | 20,175                     | 1,590                              |
| 61,700                  | 15,305      |                           |          |                  |          |             |         |                  |             |              |          |           |           | 38,345                     | 1,585                              |
| 470,714                 | 141,851     | 250                       | 550      |                  |          |             |         | 84,240           | 54,240      |              |          | 100,100   | 10,050    |                            |                                    |
| 388,659                 | 132,842     | 4,210                     | 7,755    |                  |          |             |         | 1,408            | 3,018       |              |          |           |           | 4,610                      | 870                                |
|                         |             | 300                       | 500      |                  |          |             |         | 700              | 450         | 5,938        | 29,420   | 60,000    | 2,880     | 28,230                     | 5,503                              |
| 85,243                  | 13,347      |                           |          |                  |          |             |         |                  |             |              |          | 1,500     | 225       | 500                        |                                    |
|                         |             |                           |          |                  |          |             |         |                  |             |              |          |           |           | 2,250                      |                                    |
| 343,254                 | 89,712      | 8,988                     | 10,627   |                  |          |             |         |                  |             |              |          | 200       | 40        | 400                        |                                    |
| 674,537                 | 187,065     | 290                       | 897      |                  |          |             |         | 1,000            | 2,000       |              |          |           |           | 22,081                     | 1,000                              |
| 84,500                  | 17,025      |                           |          | 40               | 450      | 50          | 100     |                  |             | 207          | 2,475    |           |           | 2,507                      |                                    |
| 129,822                 | 45,450      | 100                       | 400      | 110              | 415      | 40          | 20      | 4,285            | 5,185       |              |          |           |           | 42,129                     | 10,800                             |
| 149,479                 | 54,474      | 706                       | 1,368    |                  |          | 35          | 1,050   | 3,300            | 4,300       | 27           | 350      |           |           | 5,330                      |                                    |
| 4,588,820               | 1,360,058   | 250                       | 500      | 15               | 1,000    |             |         |                  |             |              |          |           |           |                            |                                    |
| 742,315                 | 171,267     | 5,000                     | 7,500    |                  |          |             |         | 16,640           | 26,658      | 1            | 30       | 64,886    | 7,140     | 30,387                     | 42,925                             |
| 37,411                  | 13,668      | 1,690                     | 4,653    |                  |          |             |         | 514,161          | 762,979     |              |          | 3,892,122 | 293,804   | 163,128                    | 314,743                            |
| 559,822                 | 151,481     | 1,875                     | 2,280    |                  |          |             |         | 32,600           | 42,040      |              |          |           |           | 400                        | 186,190                            |
| 851,500                 | 81,405      |                           |          |                  |          |             |         |                  |             | 650          | 2,300    |           |           | 64,308                     | 95                                 |
|                         |             |                           |          |                  |          |             |         |                  |             |              |          | 7,100     | 426       | 9,370                      | 5,085                              |
|                         |             |                           |          |                  |          |             |         |                  |             |              |          |           |           | 1,550                      |                                    |
| 107,962                 | 29,443      | 100                       | 200      | 31               | 305      |             |         |                  |             |              |          | 1,200     | 100       |                            |                                    |
| 64,193                  | 26,853      |                           |          |                  |          | 50          | 36      |                  |             |              |          |           |           |                            |                                    |
| 340,722                 | 81,900      |                           |          |                  |          |             |         | 2,275            | 5,325       |              |          | 77,000    | 4,700     | 190,306                    | 52,171                             |
| 225,115                 | 86,145      | 6                         | 18       | 13               | 300      |             |         | 11,938           | 42,221      | 105          | 610      | 13,400    | 1,405     | 23,086                     | 16,245                             |
| 37,123                  | 10,239      | 1,880                     | 5,050    |                  |          |             |         |                  |             |              |          |           |           |                            |                                    |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 52.—POWER.

| STATES AND TERRITORIES. | OWNED.             |          |              |                  |              |               |              |                  |              |              | RENTED.      | Furnished to other establishments, horse-power. |              |
|-------------------------|--------------------|----------|--------------|------------------|--------------|---------------|--------------|------------------|--------------|--------------|--------------|---|--------------|
|                         | Total horse-power. | Engines. |              |                  |              | Water wheels. |              | Electric motors. |              | Other power. |              |   | Horse-power. |
|                         |                    | Steam.   |              | Gas or gasoline. |              |               |              |                  |              |              |              |   |              |
|                         |                    | Number.  | Horse-power. | Number.          | Horse-power. | Number.       | Horse-power. | Number.          | Horse-power. | Number.      | Horse-power. |   |              |
| United States ...       | 1,613,992          | 34,517   | 1,401,883    | 152              | 3,532        | 6,164         | 200,988      | 216              | 7,099        | 10           | 495          | 1,177   | 2,130        |
| Alabama.....            | 46,842             | 1,197    | 43,933       | 3                | 72           | 137           | 2,817        | 8                | 20           |              |              | 35  | 167          |
| Alaska.....             | 1,340              | 16       | 456          |                  |              | 14            | 597          | 11               | 237          |              |              |   |              |
| Arizona.....            | 851                | 19       | 821          |                  |              | 2             | 30           |                  |              |              |              |   |              |
| Arkansas.....           | 61,549             | 1,433    | 61,345       | 1                | 4            | 18            | 120          | 4                | 80           |              |              | 62  | 47           |
| California.....         | 37,476             | 520      | 35,531       | 2                | 40           | 59            | 1,772        | 11               | 118          | 1            | 15           |   | 500          |
| Colorado.....           | 5,523              | 188      | 5,399        |                  |              | 7             | 127          |                  |              |              |              |   |              |
| Connecticut.....        | 6,552              | 112      | 3,421        | 2                | 26           | 130           | 3,105        |                  |              |              |              |   |              |
| Delaware.....           | 2,323              | 79       | 2,201        |                  |              | 4             | 115          | 1                | 7            |              |              |   |              |
| Florida.....            | 27,637             | 584      | 26,987       | 3                | 15           | 22            | 245          | 8                | 140          | 1            | 250          | 20  | 50           |
| Georgia.....            | 47,374             | 1,475    | 45,892       | 1                | 18           | 61            | 1,279        |                  |              | 6            | 190          | 23  | 90           |
| Idaho.....              | 3,971              | 95       | 2,929        | 2                | 35           | 32            | 1,007        |                  |              |              |              |   |              |
| Illinois.....           | 22,829             | 885      | 22,619       | 2                | 32           | 4             | 128          | 1                | 50           |              |              | 10  | 230          |
| Indiana.....            | 65,211             | 1,966    | 64,276       | 2                | 29           | 29            | 663          | 16               | 238          |              |              | 52  |              |
| Indian Territory.....   | 1,269              | 46       | 1,219        |                  |              | 2             | 50           |                  |              |              |              |   |              |
| Iowa.....               | 13,074             | 801      | 12,825       |                  |              | 12            | 249          |                  |              |              |              |   |              |
| Kansas.....             | 920                | 55       | 900          |                  |              | 1             | 20           |                  |              |              |              |   | 15           |
| Kentucky.....           | 43,133             | 1,352    | 42,283       | 5                | 118          | 32            | 556          | 7                | 176          |              |              |   | 12           |
| Louisiana.....          | 38,432             | 592      | 38,206       |                  |              | 8             | 147          | 3                | 49           | 1            | 30           |   |              |
| Maine.....              | 69,906             | 451      | 27,871       | 19               | 505          | 1,034         | 41,113       | 19               | 417          |              |              |   | 80           |
| Maryland.....           | 10,743             | 390      | 10,305       |                  |              | 26            | 438          |                  |              |              |              |   |              |
| Massachusetts.....      | 26,385             | 341      | 15,074       | 11               | 244          | 415           | 10,965       | 8                | 102          |              |              | 5   |              |
| Michigan.....           | 135,503            | 2,059    | 127,372      | 7                | 131          | 124           | 6,430        | 23               | 1,020        |              |              | 10  |              |
| Minnesota.....          | 58,661             | 604      | 56,970       | 2                | 90           | 13            | 879          | 10               | 752          |              |              |   |              |
| Mississippi.....        | 46,078             | 989      | 45,399       | 2                | 70           | 31            | 609          |                  |              |              |              |   |              |
| Missouri.....           | 34,942             | 1,249    | 34,703       | 2                | 15           | 17            | 214          | 1                | 10           |              |              |   |              |
| Montana.....            | 5,003              | 143      | 4,766        |                  |              | 11            | 237          |                  |              |              |              |   |              |
| Nebraska.....           | 516                | 25       | 516          |                  |              |               |              |                  |              |              |              |   |              |
| Nevada.....             | 68                 | 4        | 68           |                  |              |               |              |                  |              |              |              |   |              |
| New Hampshire.....      | 35,494             | 346      | 18,169       | 6                | 136          | 475           | 16,961       | 9                | 223          |              |              | 370   | 464          |
| New Jersey.....         | 6,497              | 162      | 5,005        | 2                | 40           | 61            | 1,452        |                  |              |              |              |   |              |
| New Mexico.....         | 1,153              | 31       | 1,111        | 1                | 12           | 1             | 30           |                  |              |              |              |   |              |
| New York.....           | 92,988             | 1,311    | 48,328       | 10               | 236          | 1,201         | 44,324       | 2                | 90           | 1            | 10           | 150   | 40           |
| North Carolina.....     | 63,721             | 1,826    | 58,378       | 1                | 4            | 294           | 5,304        | 2                | 35           |              |              |   |              |
| North Dakota.....       | 100                | 5        | 100          |                  |              |               |              |                  |              |              |              |   |              |
| Ohio.....               | 63,352             | 2,268    | 67,019       | 7                | 147          | 42            | 1,018        | 8                | 168          |              |              |   | 35           |
| Oklahoma.....           | 791                | 33       | 791          |                  |              |               |              |                  |              |              |              |   |              |
| Oregon.....             | 29,490             | 444      | 25,494       | 1                | 20           | 99            | 3,783        | 7                | 188          |              |              | 35  | 75           |
| Pennsylvania.....       | 99,612             | 2,403    | 88,910       | 27               | 733          | 399           | 9,482        | 12               | 482          |              |              |   |              |
| Rhode Island.....       | 1,152              | 22       | 656          |                  |              | 19            | 496          |                  |              |              |              |   |              |
| South Carolina.....     | 21,612             | 785      | 20,631       | 2                | 35           | 57            | 346          | 2                | 50           |              |              |   | 30           |
| South Dakota.....       | 1,053              | 32       | 1,025        |                  |              | 1             | 28           |                  |              |              |              |   |              |
| Tennessee.....          | 57,112             | 1,809    | 53,956       | 5                | 78           | 151           | 2,929        | 9                | 149          |              |              | 63  | 65           |
| Texas.....              | 35,456             | 791      | 35,256       | 1                | 15           | 9             | 154          | 2                | 31           |              |              |   |              |
| Utah.....               | 1,736              | 56       | 1,219        | 1                | 50           | 28            | 467          |                  |              |              |              |   |              |
| Vermont.....            | 41,821             | 315      | 16,281       | 9                | 399          | 700           | 25,122       | 3                | 19           |              |              | 37  | 195          |
| Virginia.....           | 37,394             | 1,363    | 35,439       | 7                | 60           | 126           | 1,860        | 2                | 35           |              |              |   |              |
| Washington.....         | 62,504             | 929      | 59,708       | 1                | 30           | 57            | 2,510        | 15               | 196          |              |              | 225   |              |
| West Virginia.....      | 31,316             | 1,042    | 30,372       | 2                | 30           | 28            | 364          | 2                | 50           |              |              |   | 25           |
| Wisconsin.....          | 109,175            | 1,335    | 97,634       | 3                | 63           | 160           | 9,566        | 15               | 1,912        |              |              | 80  | 10           |
| Wyoming.....            | 1,319              | 41       | 1,004        |                  |              | 11            | 315          |                  |              |              |              |   |              |

## LUMBER AND TIMBER PRODUCTS—DETAILED STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 53.—CLASSIFICATION, BY NUMBER, OF PERSONS EMPLOYED (NOT INCLUDING PROPRIETORS AND FIRM MEMBERS).

| STATES AND TERRITORIES. | Total number of establishments. | ESTABLISHMENTS. |          |          |           |            |             |             |               |
|-------------------------|---------------------------------|-----------------|----------|----------|-----------|------------|-------------|-------------|---------------|
|                         |                                 | No employees.   | Under 5. | 5 to 20. | 21 to 50. | 51 to 100. | 101 to 250. | 251 to 500. | 501 to 1,000. |
| United States .....     | 33,035                          | 623             | 12,798   | 15,537   | 2,530     | 845        | 554         | 120         | 28            |
| Alabama .....           | 1,111                           | 16              | 360      | 612      | 72        | 33         | 18          |             |               |
| Alaska .....            | 25                              | 1               | 10       | 12       | 2         |            |             |             |               |
| Arizona .....           | 14                              |                 | 8        | 4        |           | 1          | 1           |             |               |
| Arkansas .....          | 1,199                           | 9               | 234      | 720      | 140       | 60         | 30          | 6           |               |
| California .....        | 313                             | 6               | 50       | 166      | 51        | 22         | 14          | 4           |               |
| Colorado .....          | 159                             | 4               | 59       | 81       | 13        | 2          |             |             |               |
| Connecticut .....       | 200                             | 12              | 98       | 80       | 10        |            |             |             |               |
| Delaware .....          | 76                              |                 | 29       | 37       | 8         | 2          |             |             |               |
| Florida .....           | 416                             | 8               | 66       | 231      | 68        | 33         | 11          | 4           |               |
| Georgia .....           | 1,254                           | 4               | 292      | 815      | 93        | 32         | 18          |             |               |
| Idaho .....             | 117                             | 6               | 38       | 78       | 5         |            |             |             |               |
| Illinois .....          | 837                             | 17              | 574      | 210      | 16        | 11         | 6           | 2           | 1             |
| Indiana .....           | 1,849                           | 17              | 941      | 751      | 104       | 29         | 7           |             |               |
| Indian Territory .....  | 49                              | 1               | 19       | 28       | 1         |            |             |             |               |
| Iowa .....              | 264                             | 10              | 141      | 95       | 2         | 1          | 9           | 5           | 1             |
| Kansas .....            | 54                              | 1               | 41       | 12       |           |            |             |             |               |
| Kentucky .....          | 1,280                           | 29              | 522      | 609      | 82        | 26         | 9           | 2           | 1             |
| Louisiana .....         | 432                             | 3               | 73       | 226      | 59        | 31         | 33          | 7           |               |
| Maine .....             | 838                             | 21              | 263      | 421      | 75        | 40         | 15          | 3           |               |
| Maryland .....          | 367                             | 7               | 154      | 178      | 17        | 5          | 6           |             |               |
| Massachusetts .....     | 553                             | 12              | 299      | 208      | 26        | 5          | 3           |             |               |
| Michigan .....          | 1,705                           | 11              | 358      | 879      | 253       | 113        | 67          | 19          | 5             |
| Minnesota .....         | 438                             | 8               | 104      | 199      | 88        | 16         | 44          | 18          | 11            |
| Mississippi .....       | 844                             | 7               | 249      | 455      | 83        | 27         | 18          | 5           |               |
| Missouri .....          | 1,197                           | 53              | 723      | 348      | 45        | 14         | 12          | 1           | 1             |
| Montana .....           | 139                             | 3               | 53       | 52       | 25        | 3          | 3           |             |               |
| Nebraska .....          | 28                              | 2               | 15       | 6        |           |            |             |             |               |
| Nevada .....            | 4                               |                 | 2        | 2        |           |            |             |             |               |
| New Hampshire .....     | 553                             | 8               | 169      | 310      | 49        | 10         | 6           | 1           |               |
| New Jersey .....        | 205                             | 9               | 122      | 64       | 9         | 1          |             |             |               |
| New Mexico .....        | 32                              |                 | 7        | 20       | 5         |            |             |             |               |
| New York .....          | 1,765                           | 50              | 1,003    | 608      | 80        | 16         | 8           |             |               |
| North Carolina .....    | 1,770                           | 35              | 594      | 1,004    | 99        | 25         | 10          | 3           |               |
| North Dakota .....      | 4                               |                 | 1        | 3        |           |            |             |             |               |
| Ohio .....              | 2,054                           | 72              | 1,180    | 673      | 96        | 13         | 7           | 2           |               |
| Oklahoma .....          | 33                              | 3               | 21       | 9        |           |            |             |             |               |
| Oregon .....            | 436                             | 8               | 112      | 239      | 51        | 16         | 10          |             |               |
| Pennsylvania .....      | 2,338                           | 40              | 1,171    | 937      | 120       | 7          | 20          | 2           | 1             |
| Rhode Island .....      | 35                              |                 | 15       | 13       | 7         |            |             |             |               |
| South Carolina .....    | 729                             | 5               | 201      | 466      | 43        | 12         | 2           |             |               |
| South Dakota .....      | 29                              |                 | 5        | 22       | 2         |            |             |             |               |
| Tennessee .....         | 1,732                           | 33              | 633      | 913      | 96        | 33         | 13          | 6           |               |
| Texas .....             | 637                             | 11              | 197      | 323      | 43        | 31         | 25          | 1           |               |
| Utah .....              | 31                              | 4               | 43       | 33       | 1         |            |             |             |               |
| Vermont .....           | 653                             | 8               | 224      | 363      | 50        | 7          | 1           |             |               |
| Virginia .....          | 1,341                           | 36              | 578      | 644      | 60        | 10         | 10          | 3           |               |
| Washington .....        | 773                             | 7               | 94       | 427      | 173       | 38         | 25          | 5           | 4             |
| West Virginia .....     | 950                             | 13              | 433      | 412      | 60        | 12         | 9           | 1           |               |
| Wisconsin .....         | 1,068                           | 12              | 190      | 501      | 192       | 66         | 32          | 20          | 3             |
| Wyoming .....           | 52                              | 1               | 24       | 22       | 1         | 2          | 2           |             |               |

## LUMBER AND TIMBER PRODUCTS, DETAILED

TABLE 54.—ESTABLISHMENTS WITH A PRODUCT OF LESS THAN \$500.

|    | STATES AND TERRITORIES.             | Number of establishments. | Capital.    | Proprietors and firm members. | WAGE-EARNERS.   |              | Miscellaneous expenses. | COST OF MATERIALS USED. |                         |   |                     |
|----|-------------------------------------|---------------------------|-------------|-------------------------------|-----------------|--------------|-------------------------|-------------------------|-------------------------|---|---------------------|
|    |                                     |                           |             |                               | Average number. | Total wages. |                         | Total.                  | Purchased in raw state. | Purchased in partially manufactured form. | Fuel, freight, etc. |
| 1  | The United States .....             | 5,605                     | \$5,060,602 | 7,217                         | 1,764           | \$379,950    | \$63,109                | \$342,437               | \$46,776                | \$234,487                                 | \$61,174            |
| 2  | Alabama .....                       | 182                       | 131,698     | 224                           | 88              | 3,765        | 1,658                   | 13,420                  | 2,162                   | 9,726                                     | 1,532               |
| 3  | Arkansas .....                      | 240                       | 90,468      | 271                           | 91              | 7,528        | 851                     | 11,602                  | 4,811                   | 5,735                                     | 1,056               |
| 4  | California .....                    | 18                        | 20,016      | 21                            | 1               | 500          | 186                     | 2,048                   | 902                     | 1,036                                     | 110                 |
| 5  | Colorado .....                      | 6                         | 9,525       | 6                             | 2               | 507          | 54                      | 630                     | 115                     | 460                                       | 55                  |
| 6  | Connecticut .....                   | 68                        | 44,018      | 76                            | 13              | 3,065        | 884                     | 2,571                   | .....                   | 1,898                                     | 673                 |
| 7  | Delaware .....                      | 6                         | 6,255       | 7                             | 7               | 497          | 69                      | 288                     | .....                   | 208                                       | 80                  |
| 8  | Florida .....                       | 15                        | 23,288      | 18                            | 5               | 959          | 168                     | 1,903                   | 225                     | 1,508                                     | 170                 |
| 9  | Georgia .....                       | 161                       | 210,317     | 220                           | 111             | 10,880       | 1,550                   | 14,684                  | 1,831                   | 11,029                                    | 1,824               |
| 10 | Idaho .....                         | 7                         | 4,271       | 12                            | 1               | 260          | 52                      | 906                     | 84                      | 732                                       | 90                  |
| 11 | Illinois .....                      | 215                       | 197,338     | 278                           | 53              | 15,569       | 2,318                   | 12,278                  | 2,286                   | 7,617                                     | 2,375               |
| 12 | Indiana .....                       | 376                       | 281,342     | 505                           | 99              | 28,892       | 4,247                   | 16,794                  | 1,598                   | 10,996                                    | 4,200               |
| 13 | Indian Territory .....              | 7                         | 8,555       | 12                            | 5               | 600          | 133                     | 750                     | 664                     | .....                                     | 80                  |
| 14 | Iowa .....                          | 61                        | 70,721      | 78                            | 15              | 4,190        | 661                     | 3,489                   | 229                     | 2,334                                     | 896                 |
| 15 | Kansas .....                        | 19                        | 19,250      | 23                            | 4               | 1,245        | 215                     | 1,889                   | 183                     | 971                                       | 235                 |
| 16 | Kentucky .....                      | 227                       | 138,743     | 306                           | 67              | 17,280       | 1,375                   | 14,900                  | 2,355                   | 9,476                                     | 3,069               |
| 17 | Louisiana .....                     | 23                        | 23,526      | 26                            | 13              | 1,563        | 192                     | 2,956                   | 601                     | 1,838                                     | 517                 |
| 18 | Maine .....                         | 107                       | 118,282     | 129                           | 23              | 6,971        | 2,048                   | 5,358                   | 275                     | 3,944                                     | 1,139               |
| 19 | Maryland .....                      | 64                        | 55,168      | 74                            | 33              | 3,824        | 764                     | 3,298                   | 102                     | 2,488                                     | 708                 |
| 20 | Massachusetts .....                 | 80                        | 81,786      | 92                            | 16              | 5,413        | 1,264                   | 3,407                   | 74                      | 2,597                                     | 736                 |
| 21 | Michigan .....                      | 194                       | 199,332     | 247                           | 61              | 19,049       | 3,087                   | 9,338                   | 468                     | 6,249                                     | 2,621               |
| 22 | Minnesota .....                     | 84                        | 88,600      | 148                           | 18              | 5,797        | 1,274                   | 3,221                   | 350                     | 1,843                                     | 1,028               |
| 23 | Mississippi .....                   | 65                        | 50,523      | 79                            | 31              | 3,760        | 310                     | 6,066                   | 724                     | 4,802                                     | 540                 |
| 24 | Missouri .....                      | 335                       | 255,591     | 450                           | 85              | 22,345       | 3,167                   | 18,898                  | 1,929                   | 13,202                                    | 3,767               |
| 25 | Montana .....                       | 9                         | 10,580      | 10                            | 2               | 515          | 92                      | 1,133                   | 373                     | 600                                       | 160                 |
| 26 | Nebraska .....                      | 9                         | 10,110      | 10                            | 1               | 325          | 82                      | 1,014                   | 120                     | 745                                       | 149                 |
| 27 | New Hampshire .....                 | 67                        | 99,638      | 77                            | 19              | 4,017        | 1,188                   | 4,326                   | 70                      | 3,839                                     | 867                 |
| 28 | New Jersey .....                    | 28                        | 40,370      | 29                            | 8               | 2,710        | 490                     | 1,875                   | 163                     | 1,395                                     | 312                 |
| 29 | New Mexico .....                    | 4                         | 17,365      | 7                             | 1               | 115          | 79                      | 677                     | 60                      | 582                                       | 35                  |
| 30 | New York .....                      | 501                       | 570,132     | 553                           | 107             | 33,943       | 7,653                   | 20,410                  | 1,917                   | 13,799                                    | 4,694               |
| 31 | North Carolina .....                | 324                       | 288,032     | 469                           | 174             | 16,568       | 2,372                   | 26,497                  | 1,972                   | 20,564                                    | 3,961               |
| 32 | Ohio .....                          | 392                       | 316,350     | 518                           | 103             | 33,227       | 5,023                   | 16,638                  | 3,650                   | 8,251                                     | 4,737               |
| 33 | Oklahoma .....                      | 8                         | 4,535       | 14                            | 3               | 477          | 205                     | 535                     | .....                   | 455                                       | 80                  |
| 34 | Oregon .....                        | 33                        | 54,857      | 46                            | 5               | 1,850        | 824                     | 4,537                   | 693                     | 3,351                                     | 493                 |
| 35 | Pennsylvania .....                  | 545                       | 566,896     | 652                           | 119             | 39,175       | 6,890                   | 29,336                  | 2,373                   | 21,634                                    | 4,829               |
| 36 | Rhode Island .....                  | 7                         | 9,185       | 7                             | 2               | 545          | 198                     | 486                     | .....                   | 346                                       | 140                 |
| 37 | South Carolina .....                | 132                       | 117,404     | 166                           | 115             | 9,899        | 1,145                   | 10,935                  | 807                     | 8,349                                     | 1,779               |
| 38 | Tennessee .....                     | 341                       | 234,848     | 488                           | 90              | 21,733       | 2,577                   | 21,500                  | 3,245                   | 14,090                                    | 4,165               |
| 39 | Texas .....                         | 86                        | 42,171      | 96                            | 11              | 2,738        | 320                     | 7,112                   | 824                     | 5,878                                     | 410                 |
| 40 | Utah .....                          | 10                        | 8,402       | 16                            | 3               | 720          | 98                      | 803                     | 100                     | 575                                       | 128                 |
| 41 | Vermont .....                       | 80                        | 99,358      | 89                            | 26              | 5,471        | 1,339                   | 5,532                   | 510                     | 4,097                                     | 925                 |
| 42 | Virginia .....                      | 228                       | 177,718     | 299                           | 65              | 15,050       | 1,957                   | 17,868                  | 1,800                   | 13,616                                    | 2,452               |
| 43 | Washington .....                    | 13                        | 22,505      | 19                            | 3               | 1,125        | 154                     | 2,185                   | 399                     | 1,450                                     | 336                 |
| 44 | West Virginia .....                 | 126                       | 90,605      | 176                           | 34              | 8,406        | 1,045                   | 6,999                   | 1,102                   | 4,774                                     | 1,123               |
| 45 | Wisconsin .....                     | 116                       | 138,033     | 169                           | 33              | 10,613       | 2,850                   | 11,366                  | 4,045                   | 5,508                                     | 1,313               |
| 46 | Wyoming .....                       | 4                         | 1,545       | 3                             | 2               | 614          | 21                      | 96                      | 40                      | .....                                     | 56                  |
| 47 | All other states <sup>1</sup> ..... | 2                         | 5,405       | 2                             | 1               | 50           | 40                      | 383                     | 40                      | 320                                       | 23                  |

<sup>1</sup>Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. The establishments are distributed as follows: Nevada, 1; South Dakota, 1.

## STATISTICS, BY STATES AND TERRITORIES, 1900—Continued.

TABLE 54.—ESTABLISHMENTS WITH A PRODUCT OF LESS THAN \$500.

| Value of products. | POWER (OWNED).                      |            |             |          |             |         |             |                  |             |               |             |
|--------------------|-------------------------------------|------------|-------------|----------|-------------|---------|-------------|------------------|-------------|---------------|-------------|
|                    | Number of establishments reporting. | Aggregate. |             | Engines. |             |         |             |                  |             | Water wheels. |             |
|                    |                                     | Number.    | Horsepower. | Total.   |             | Steam.  |             | Gas or gasoline. |             | Number.       | Horsepower. |
|                    |                                     |            |             | Number.  | Horsepower. | Number. | Horsepower. | Number.          | Horsepower. |               |             |
| \$1,474,601        | 4,916                               | 5,253      | 97,239      | 3,508    | 66,132      | 3,486   | 65,832      | 22               | 300         | 1,745         | 31,107      |
| 40,751             | 127                                 | 132        | 2,104       | 86       | 1,592       | 86      | 1,592       |                  |             | 46            | 512         |
| 34,548             | 76                                  | 76         | 1,400       | 59       | 1,199       | 59      | 1,199       |                  |             | 17            | 201         |
| 4,777              | 10                                  | 10         | 183         | 2        | 28          | 2       | 28          |                  |             | 8             | 155         |
| 1,567              | 6                                   | 6          | 111         | 5        | 96          | 5       | 96          |                  |             | 1             | 15          |
| 13,959             | 68                                  | 79         | 1,575       | 11       | 196         | 11      | 196         |                  |             | 68            | 1,379       |
| 1,638              | 6                                   | 7          | 136         | 4        | 76          | 4       | 76          |                  |             | 3             | 60          |
| 4,535              | 14                                  | 14         | 213         | 9        | 169         | 9       | 169         |                  |             | 5             | 44          |
| 44,652             | 152                                 | 154        | 2,443       | 121      | 2,003       | 120     | 1,993       | 1                | 10          | 33            | 440         |
| 1,692              | 7                                   | 7          | 76          | 3        | 45          | 3       | 45          |                  |             | 4             | 31          |
| 58,000             | 177                                 | 181        | 2,660       | 181      | 2,660       | 181     | 2,660       |                  |             |               |             |
| 98,560             | 343                                 | 345        | 6,457       | 336      | 6,262       | 336     | 6,262       |                  |             | 9             | 195         |
| 2,555              | 7                                   | 7          | 195         | 7        | 195         | 7       | 195         |                  |             |               |             |
| 17,080             | 61                                  | 64         | 1,192       | 57       | 1,038       | 57      | 1,038       |                  |             | 7             | 154         |
| 5,388              | 17                                  | 18         | 232         | 17       | 212         | 17      | 212         |                  |             | 1             | 20          |
| 61,000             | 184                                 | 188        | 3,077       | 177      | 2,969       | 177     | 2,969       |                  |             | 11            | 108         |
| 7,169              | 17                                  | 18         | 412         | 18       | 412         | 18      | 412         |                  |             |               |             |
| 27,614             | 101                                 | 125        | 3,209       | 18       | 466         | 17      | 426         | 1                | 40          | 107           | 2,743       |
| 15,388             | 63                                  | 67         | 891         | 37       | 540         | 36      | 525         | 1                | 15          | 30            | 351         |
| 19,439             | 62                                  | 78         | 1,811       | 10       | 224         | 10      | 224         |                  |             | 68            | 1,587       |
| 55,696             | 189                                 | 198        | 6,080       | 173      | 5,591       | 171     | 5,561       | 2                | 30          | 25            | 489         |
| 23,004             | 82                                  | 87         | 1,642       | 83       | 1,584       | 82      | 1,579       | 1                | 5           | 4             | 63          |
| 15,233             | 30                                  | 34         | 684         | 23       | 641         | 23      | 641         |                  |             | 6             | 43          |
| 91,363             | 305                                 | 310        | 4,831       | 301      | 4,733       | 300     | 4,727       | 1                | 6           | 9             | 98          |
| 2,420              | 6                                   | 6          | 128         | 5        | 108         | 5       | 108         |                  |             | 1             | 20          |
| 2,042              | 9                                   | 9          | 127         | 8        | 115         | 8       | 115         |                  |             | 1             | 12          |
| 18,009             | 67                                  | 81         | 1,931       | 17       | 360         | 16      | 352         | 1                | 8           | 64            | 1,571       |
| 8,322              | 27                                  | 29         | 657         | 11       | 233         | 11      | 233         |                  |             | 18            | 424         |
| 1,290              | 4                                   | 4          | 69          |          |             |         |             |                  |             | 4             | 69          |
| 125,930            | 454                                 | 536        | 11,576      | 208      | 4,568       | 207     | 4,548       | 1                | 20          | 328           | 7,003       |
| 86,982             | 309                                 | 332        | 5,463       | 157      | 2,949       | 157     | 2,949       |                  |             | 175           | 2,514       |
| 110,442            | 359                                 | 370        | 7,277       | 350      | 6,986       | 350     | 6,986       |                  |             | 20            | 291         |
| 2,308              | 8                                   | 8          | 102         | 6        | 86          | 6       | 86          |                  |             | 2             | 16          |
| 9,273              | 30                                  | 31         | 689         | 15       | 357         | 15      | 357         |                  |             | 16            | 332         |
| 143,321            | 532                                 | 590        | 9,834       | 326      | 6,130       | 323     | 6,094       | 3                | 16          | 264           | 3,724       |
| 2,160              | 7                                   | 7          | 173         |          |             |         |             |                  |             | 7             | 173         |
| 35,816             | 121                                 | 126        | 1,991       | 105      | 1,594       | 103     | 1,549       | 2                | 45          | 21            | 397         |
| 89,608             | 309                                 | 309        | 4,769       | 179      | 3,079       | 178     | 3,073       | 1                | 6           | 130           | 1,690       |
| 18,838             | 31                                  | 31         | 673         | 29       | 658         | 29      | 658         |                  |             | 2             | 15          |
| 3,003              | 10                                  | 10         | 173         | 4        | 71          | 4       | 71          |                  |             | 6             | 102         |
| 22,194             | 76                                  | 94         | 2,459       | 15       | 423         | 11      | 357         | 4                | 66          | 79            | 2,036       |
| 64,862             | 217                                 | 223        | 2,921       | 137      | 1,929       | 137     | 1,929       |                  |             | 86            | 992         |
| 4,632              | 9                                   | 11         | 215         | 7        | 139         | 7       | 139         |                  |             | 4             | 76          |
| 31,593             | 107                                 | 108        | 1,817       | 86       | 1,586       | 83      | 1,553       | 3                | 33          | 22            | 231         |
| 43,350             | 115                                 | 123        | 2,494       | 98       | 1,813       | 98      | 1,813       |                  |             | 30            | 676         |
| 1,220              | 3                                   | 3          | 57          | 1        | 12          | 1       | 12          |                  |             | 2             | 45          |
| 330                | 2                                   | 2          | 30          | 1        | 20          | 1       | 20          |                  |             | 1             | 10          |