

U. S. DEPARTMENT OF AGRICULTURE, FOREST SERVICE-Circular 52. GIFFORD PINCHOT, Forester.

THE LUMBER CUT OF THE UNITED STATES IN 1905.

BY

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THE LUMBER CUT OF THE UNITED STATES IN 1905.

By R. S. KELLOGG, Forest Assistant.

During the past year the Forest Service has for the first time attempted to gather detailed statistics of the lumber cut of the United States. This task was undertaken in cooperation with the National Lumber Manufacturers' Association, whose members cut at least onethird of the lumber annually manufactured in the United States. The work was done almost entirely thru correspondence. It was new and unfamiliar both to those who had it in charge and to the reporting manufacturers. The resulting figures, secured in spite of these handicaps, while not complete, are certainly as nearly complete as could have been expected.

The first request for statements of cut was sent to the manufacturers early in January, 1906. To those who failed to report, a second request was sent in March, and a third in April. At the annual meeting of the National Lumber Manufacturers' Association, in St. Louis, May 9, a preliminary tabulation covering 27,738,000,000 feet of lumber, cut by 11,232 firms, was presented. Subsequently other manufacturers reported, and some additional figures for delinquent firms were furnished by the North Carolina Pine Association, the Yellow Pine Manufacturers' Association, the Southern Cypress Association, the Northern Pine Manufacturers' Association, the Western Pine Manufacturers' Association, the Pacific Coast Lumber Manufacturers' Association, and the Forest, Fish, and Game Commission of New York. The information given by the two organizations last named was so full that the data for the States of Washington and New York are practically complete.

The final tabulation shows that 11,666 establishments cut 30,502,-961,000 feet of lumber in 1905. According to these figures both the number of establishments and the total cut are lower than the Census showing for 1899 and for 1904. The Census figures do not cover custom mills, while a few such mills are included in the Forest Service reports. In Table 1 the statements for the three years are printed side by side. In the right-hand column of this table is given the ratio which the figures for 1905 bear to those of 1904.

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$ \begin{array}{c c c c c c c c c c c c c c c c c c c $					
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Product.	Census, 1899 (23,053 estab- lishments).	Census, 1904 (19,127 estab- lishments).	Forest Serv- ice, 1905 (11,666 establish- ments).	Ratio of Serv- ice figures for 1905 to Census figures for 1904 (establish- ments 61.0 per cent).
30, 404, 300 34, 133, 139 30, 502, 961 89, 1	Yellow pine	M feet. 10, 231, 140 7, 349, 108 1, 725, 968 3, 285, 045 3, 348, 363 1, 409, 333 1, 042, 380 492, 761 605, 654 - 3, 475, 098 	<i>M</i> fcet. 12, 812, 307 5, 253, 846 2, 929, 534 3, 268, 787 2, 902, 855 1, 303, 886 853, 554 749, 592 587, 558 3, 473, 220 24, 155, 120	$\begin{array}{c} \textit{M feet.} \\ 9,760,508 \\ 5,106,783 \\ 4,319,449 \\ 2,804,083 \\ 1,833,769 \\ 1,165,940 \\ 582,748 \\ 753,369 \\ 608,746 \\ 3,567,566 \\ \hline \end{array}$	Per cent. 76. 0 97. 3 147. 2 8 63. 2 89. 7 68. 3 100. 5 103. 7 102. 8
		00,404,800	04, 130, 139	30, 502, 961	89.0

 TABLE 1.—Comparison of Census figures upon the lumber cut of the United States in 1899 and 1904 with those of the Forest Service for 1905.

The incompleteness of the returns for 1905 does not wholly explain the lower figures for that year, especially as to the number of establishments. The cut of 1905 in the Forest Service figures is 89.0 per cent of the Census figures for the cut of 1904, but the establishments reporting to the Service numbered but 61.0 per cent of those given in the Census. The establishments which failed to report to the Service were, however, mainly small ones. Thus, tho the failure of many establishments to report has necessarily kept the given total cut below its true figure, the delinquent reports, if obtained, would not raise the given total cut proportionately.

A second fact to be borne in mind is that the actual number of establishments is on the decline. This is borne out by the Census figures of 1899 and 1904, which show a falling off of nearly 4,000 in the number of establishments during the period. During the same period the total cut increased, tho not greatly. Had the number of establishments reporting to the Service in 1905 borne the same relation to those reporting to the Census in 1904 as the latter bore to those reporting to the Census in 1899, the Service figures for total cut would doubtless have shown a similar, perhaps a greater, increase. For the establishments of 1904 numbered 82.9 per cent of those of 1899, while those of 1905, as already noted, numbered only 61.0 per cent of those of 1904.

In other words, there is a clear tendency toward a reduction in number of establishments, together with a gain in individual output. Two causes account for this tendency—the end of supply is being reached in some localities, particularly with white pine stumpage in the Lake States, and the concentration of capital, as in other industries, is resulting in the consolidation of plants in fewer hands.

Not all sections of the country, and, consequently, not all woods, are proportionately represented in the figures. Many of the operators

of rather small hardwood mills in the Central States and of yellowpine mills in the Southern States did not report, and even the aid of association secretaries failed to secure data from them.

The Census gives the total value of the lumber cut of the United States in 1904 as \$435,708,084. There was a marked rise in lumber prices in 1905, however; so it is safe to say that the value at the mills of the cut for that year was between \$475,000,000 and \$500,000,000.

SUMMARY OF PRODUCTION.

The total cut of yellow pine was probably little, if any, greater in 1905 than in 1904. The cut of white pine was certainly no greater. The cut of Douglas fir increased remarkably, because the capacity of old mills was increased and many new ones were added. The cut of fir in 1904 was also below normal, owing to unfavorable market There was probably a small decrease in hemlock. There conditions. was probably a slight decrease in the cut of spruce. The Census shows a decrease of 34 per cent in oak from 1899 to 1904, and this decrease is undoubtedly continuing. There was also some decrease in poplar, a continuation of the decrease of 18 per cent shown in the Census returns between 1899 and 1904. There was evidently an increase in cypress, maple, and the miscellaneous group, including a large number of species of minor importance, many of which are being substituted for those which are obtained with increasing difficulty.

Table 2 gives the kind and quantity of lumber cut by the 11,666 establishments from which the Forest Service received reports. Yellow pine is far in the lead, with 8,771,966,000 feet, or 28.8 per cent of the total cut; and this lead would have been increased to at least 34 per cent if full reports had been secured. White pine follows, with 4,868,020,000 feet, or 16 per cent; next Douglas fir, with 4,319,479,000 feet, or 14.2 per cent; then hemlock, with 2,804,083,000 feet, or 9.3 per cent. The relative rank of the various species is shown graphically in figure 1.

Kind. Yellow pine White pine Douglas fir Hemlock	M feet. 8,771,966 4,868,020 4,319,479 2,804,083 1,210,216	Per cent. 28.8 16.0 14.2 9.3 4.0	Kind. Cottonwood Elm. Chestnut. Beech. Ash	M feet. 236,000 227,038 224,413 219,000 159,634 192,085	Per cent. 0.8 .7 .7 .7 .5 .4
w nite oak Spruce. Jypress Red oak Maple. Poplar. Redwood. Cedar. Red yood. Basswood.	$\begin{array}{c} 1, 165, 940 \\ 988, 542 \\ 753, 369 \\ 603, 553 \\ 608, 746 \\ 582, 748 \\ 411, 689 \\ 363, 900 \\ 316, 588 \\ 258, 390 \\ 240, 704 \end{array}$	3.8 3.2 2.5 2.0 1.8 1.3 1.2 1.0 .9	Sugar pine	123,085 115,678 95,803 294,512 519,865 24,914,618 5,588,343 30,502,961	.44 .4 .3 .1.0 1.7 .7 .81.3 .18.7 .100.0

TABLE 2.—Kind and quantity of lumber cut in the United States in 1905 by 11,666 mills.

The rapid reversal which is taking place in the positions of white pine and Douglas fir is shown by the fact that in 1899 the former produced 21.5 per cent of the lumber cut and in 1905 only 16 per cent, while the latter, which produced only 5 per cent in 1899, in 1905 produced 14.2 per cent. The other species are given in order of importance. The kinds not specified include larch, tamarack, tupelo, balsam, and walnut, which are cut in relatively small amounts. The detailed figures for them will be found in Tables 28 and 29. The heading "Mixt" includes all reports which did not give the kind of timber cut



Fig. 1.—Lumber production, by species, 1905.

or which gave it in such a way that the amounts of the several species could not be determined. It may, however, be safely assumed to be practically all hardwood. The table shows that the amount of softwood reported was 24,914,618,000 feet, or 81.3 per cent of the total cut, and that the amount of hardwood reported was 5,588,343,000 feet, or 18.7 per cent of the total cut. In 1899 the softwoods furnished about 75 per cent of the total and the hardwoods about 25 per cent. The changed ratio is due mostly to the increased cut of yellow pine and Douglas fir and the falling off in oak and poplar.



FIG. 2.-Lumber production, by States, 1905

[Cir. 52]

State.	M feet.	Per cent.	State.	M feet.	Percent.
Washington Wisconsin Louisiana. Minnesota Michigan Arkansas. Pennsylvania. Mississippi Oregon North Carolina. California. Texas. Alabama New York Maine. Virginia. Georgia. West Virginia.	$\begin{array}{c} 3, 917, 166\\ 2, 543, 503\\ 2, 293, 809\\ 1, 925, 804\\ 1, 719, 687\\ 1, 488, 589\\ 1, 397, 164\\ 1, 299, 390\\ 1, 262, 610\\ 1, 080, 602\\ 1, 061, 608\\ 929, 863\\ 843, 897\\ 750, 298\\ 745, 705\\ 715, 197\\ 712, 604\\ 672, 902\\ \end{array}$	$12.8 \\ 8.3 \\ 7.5 \\ 6.3 \\ 5.6 \\ 4.9 \\ 4.6 \\ 4.3 \\ 4.1 \\ 3.5 \\ 3.5 \\ 3.5 \\ 3.5 \\ 2.5 \\ 2.4 \\ 2.3 \\ 2.2 \\ 2.2 \\ 100$	Florida. Tennessee. South Carolina. Kentucky Missouri Indiana New Hampshire. Ohio. Vermont. Massachusetts. Idaho. Maryland. Iowa. Illinois. All others. Total.	658, 007 540, 920 466, 478 464, 676 362, 17 352, 362 340, 727 331, 552 266, 676 252, 804 212, 725 189, 291 163, 749 129, 472 119, 065 292, 060 30, 502, 961	2 2 1.8 1.5 1.2 1.2 1.2 1.1 1.1 .7 .6 .5 .4 .4 .9 100.0

TABLE 3.—States which produced over 100,000,000 feet of lumber in 1905; reports from 11,666 mills.

Table 3 gives the 33 States which produced over 100,000,000 feet of lumber each, according to the reports received by the Forest Service. Washington leads with 3,917,166,000 feet, or 12.8 per cent of the total amount reported, followed by Wisconsin with 2,543,503,000 feet, or 8.3 per cent; next Louisiana, with 2,293,809,000 feet, or 7.5 per cent; then Minnesota, with 1,925,804,000 feet, or 6.3 per cent; and fifth Michigan, with 1,719,687,000 feet, or 5.6 per cent. From no other State does the amount reported exceed 5 per cent of the total. The 11 States which reported a cut of over 1,000,000,000 feet each, produced two-thirds of the lumber reported for the entire United States. The relative rank of the 33 States given in Table 3 is shown graphically in figure 2.



FIG. 3.—Relative rank of the eight States leading in the production of lumber since 1850. [Cir. 52] It is interesting to note that the five leading States in the production of lumber in 1899 were Wisconsin, with 10 per cent of the total; 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. During the past five years Washington has advanced from fifth to first place, a position it will assuredly hold for a long time.

Figure 3 gives in order of rank the eight States which have led in lumber production since 1850. From this it is seen New York occupied first place in 1850, Pennsylvania in 1860, Michigan in 1870, 1880, and 1890, Wisconsin in 1900 and 1904, and Washington in 1905. This chart is based upon Census reports, except for 1905, for which Forest Service figures are used. Previous to 1900, data are lacking concerning the quantity of lumber cut in the various States, and the rank is based on value, while for 1900, 1904, and 1905 it is based on the total cut.

PRODUCTION BY SPECIES.

Tables 4 to 28 give the quantity of each kind of lumber cut in the various States in the order of relative importance, as indicated by the reports to the Forest Service. It should be borne in mind that the total number of mills given in these tables far exceeds the total given in Table 29. If, for instance, a mill cuts oak, ash, hickory, and gum it appears in the tables for each of these species.

YELLOW PINE.

The term "yellow pine" covers all of the pine in the eastern half of the United States except white and Norway pine. The principal species included are, in order of importance, longleaf, shortleaf, loblolly, and pitch pine.

In 1905, 3,162 mills, as shown by Table 4, reported a cut of 8,771,-966,000 feet of yellow pine. It will be seen from the table that Louisiana leads, with 1,737,960,000 feet, or 19.8 per cent of the total. Then comes Arkansas, with 1,024,011,000 feet, or 11.7 per cent; Mississippi, with 1,017,191,000 feet, or 11.6 per cent; Texas, with 910,465,000 feet, or 10.4 per cent; North Carolina, with 837,366,000 feet, or 9.5 per cent; Alabama, with 744,192,000 feet, or 8.5 per cent; Georgia, with 663,831,000 feet, or 7.6 per cent; Florida, with 601,-374,000 feet, or 6.9 per cent; Virginia, with 496,895,000 feet, or 5.7 per cent; and South Carolina, with 406,502,000 feet, or 4.6 per cent. These ten States produced over 96 per cent of the total amount of yellow pine reported. A relatively small amount was cut in Missouri and Maryland, and a little was reported from sixteen other States.

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The annual cut of yellow pine has probably not yet reached its maximum, and this timber will undoubtedly hold first rank in the point of output for several years.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
Louisiana Arkansas Mississippi Texas. North Carolina Alabama Georgia Florida	168 235 241 153 551 290 326 117	$\begin{matrix} 1,737,960\\ 1,024,011\\ 1,017,191\\ 910,465\\ 837,366\\ 744,192\\ 663,831\\ 601,374 \end{matrix}$	$19.8 \\ 11.7 \\ 11.6 \\ 10.4 \\ 9.5 \\ 8.5 \\ 7.6 \\ 6.9$	Virginia South Carolina Missouri. Maryland All others Total	340 191 63 77 410 3, 162	496, 895 406, 502 161, 128 85, 023 86, 028 8, 771, 966	5.7 4.6 1.8 .9 1.0 100.0

TABLE 4.—Cut of yellow pine in 1905.

WHITE PINE.

The cut of white pine by States is given in Table 5. White pine in greater or less quantity was reported from twenty-four States. Norway or red pine is included with white pine, since the two species are cut and sold together under the name of "northern pine" in the Lake States, and it is impossible to determine exactly the proportion of Norway. It is safe to say, however, that at present at least 30 per cent of the pine cut in Michigan, Wisconsin, and Minnesota is Norway pine, or over 1,000,000,000 feet annually.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num. ber of mills.	M feet.	Per cent.
Minnesota Wisconsin Michigan New Hampshire Maine Massachusetts	. 128 289 252 248 299 226	$1,847,072 \\1,467,078 \\463,308 \\211,586 \\201,867 \\176,340$	37.930.19.54.34.13.6	Pennsylvania Illinois West Virginia North Carolina Virginia. All others	$366 \\ 4 \\ 46 \\ 77 \\ 51 \\ 256$	$\begin{array}{c} 87,097\\ 32,794\\ 31,450\\ 28,438\\ 22,200\\ 65,878 \end{array}$	1.8 .7 .6 .5 1.4
New York	7 728	122,757 110,155	2.5 2.3	Total	2,977	4,868,020	100.0

TABLE 5.—Cut of white pine in 1905.

The table shows that 2,977 firms reported a cut of 4,868,020,000 feet of white and Norway pine. Minnesota is the leading State, with 1,847,072,000 feet, or 37.9 per cent of the total. Wisconsin comes second with 1,467,078,000 feet, or 30.1 per cent. Michigan stands third, with 463,308,000 feet, or 9.5 per cent. Then follow New Hampshire, Maine, Massachusetts, and other States. It will be noted that Iowa is credited with 122,757,000 feet and Illinois with 32,794,000 feet. This lumber was cut in mills along the Mississippi from Minnesota logs, and if Minnesota is credited with this timber, the output of white and Norway pine in the Lake States was over 80 per cent of the entire cut of these species. The Census figures upon the cut of white and Norway pine in these three States in 1899 were: Wisconsin, [Cir.52] 2,412,688,000 feet; Minnesota, 2,253,391,000 feet; and Michigan, 1,274,923,000 feet—a total of 5,941,002,000 feet, against 3,777,458,000 feet in 1905. The falling off has been greatest in Michigan, but the turning point has been past even in Minnesota, and a decreasing output of pine can be lookt for from the Lake States from year to year.

DOUGLAS FIR.

Douglas fir now ranks third in importance as a lumber producer in the United States, and it will hold second place within a short time. It is unfortunate that this species has so many names. "Red fir," "Douglas spruce," "yellow fir," and "Oregon pine" are other terms given it, and confusion is constantly arising in consequence. All are more or less justified by the circumstance that, botanically, the tree is neither a fir, a spruce, nor a pine. The cut for 1905, 4,319,479,000 feet, is given in Table 6. Of this amount, 427 mills in Washington cut 3,125,325,000 feet, or 72.4 per cent, and 281 mills in Oregon cut 1,076,695,000 feet, or 24.9 per cent. California reported 100,816,000 feet, and 16,643,000 feet was reported from 5 other western States.

There is a large amount of Douglas fir stumpage in Washington and Oregon, and the cut of this species will largely increase in the near future. In fact, the output of Douglas fir promises before many years to equal that of southern yellow pine and eventually to surpass it as the stumpage of the latter is reduced.

State.	Num- ber of mills.	M feet.	Per cent.
— Washington	427	3, 125, 325	72.4
All others		100, 816 16, 643	2.3 .4
Total		4, 319, 479	100.0

TABLE 6.—Cut of Douglas fir in 1905.

HEMLOCK.

The amount of hemlock cut last year by 3,023 mills was 2,804,083,000 feet, as shown in Table 7. Pennsylvania leads with 920,854,000 feet, practically one-third of the total output, followed by Wisconsin, with 610,225,000 feet, or 21.8 per cent; and Michigan, with 569,810,000 feet, or 20.3 per cent; the three States producing three-fourths of the total quantity reported. Only a relatively small proportion was cut in any other State, but the production was widely scattered, as may be seen from the fact that returns were received from twenty-six States.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
Pennsylvania Wisconsin Michigan New York	$415 \\ 241 \\ 299 \\ 1,006$	920, 854 610, 225 569, 810	32. 8 21. 8 20. 3	Maine Washington All others	257 42 763	86, 753 84, 773 182, 474	3: 1 3. 0 6. 5
West Virginia	111	169,644	6. 1	Total	3,023	2,804,083	100. 0

TABLE 7.—Cut of hemlock in 1905.

It is of particular interest to note that 84,773,000 feet of hemlock was reported from the State of Washington. This is the western species, the lumber of which is freer from defects and of higher quality than that of the eastern species. So great has been the prejudice against the name "hemlock" in the West, however, that until very recently hemlock lumber has been mixt in with other lumber or sold under names which disguised its identity. The actual cut of western hemlock in 1905 was undoubtedly greater than the amount reported. The Census gave a cut of only 204,000 feet of this species for Washington in 1899, which indicates the difficulty of securing accurate figures upon it.

SPRUCE.

No attempt was made to distinguish the different kinds of spruce in the reports, but it will be understood, of course, that the spruce of Washington is different from that of Maine, and that altogether several species are cut for lumber. It is probable that a small amount of Douglas fir was reported as spruce by western operators.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
Maine New York Washington	238 329 70	358,758 211,076 179,864	30. 7 18. 1 15. 4	Oregon Massachusetts All others	23 39 244	57,208 31,980 48,622	4. 9 2. 8 4. 2
West Virginia New Hampshire	$ \begin{array}{r} 244 \\ 35 \\ 111 \end{array} $	107,072 59,710	9.6 9.2 5.1	Total	1,333	1, 165, 940	100.0

TABLE.	8	-Cut	of	smuce	in	1905.
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In 1905, 1,133 mills cut 1,165,940,000 feet of spruce, as shown by Table 8. Maine is far in the lead, as it has been for many years. The quantity reported from Maine for 1905 was 358,758,000 feet, or 30.7 per cent of the total. New York comes next with 211,076,000 feet, or 18.1 per cent, followed by Washington with 179,864,000 feet, or 15.4 per cent; Vermont with 111,650,000 feet, or 9.6 per cent; West Virginia with 107,072,000 feet, or 9.2 per cent, and New Hampshire with 59,710,000 feet, or 5.1 per cent. Oregon reported 4.9 per cent of the total, Massachusetts 2.8 per cent, and all other States combined 4.2 per cent. Altogether the cutting of spruce was reported from twentyfour different States.

WESTERN YELLOW PINE.

This is another species, concerning the trade name of which unfortunate difficulties have arisen. Botanically it is Pinus ponderosa, and is classed with the pitch or yellow pines. The wood, however, is less resinous and lighter than that of the southern yellow pines, and many manufacturers insist, with considerable reason, that it is so nearly like white pine that the word "white" should appear in the name. It is sold principally under the names of western pine, western white pine, and California white pine. The cut reported for 1905 is 988,542,000 feet, given in Table 9. California leads with 363,932,000 feet, or 36.8 per cent; Washington is second with 217,074,000 feet, or 22 per cent, and Montana third, with 101,998,000 feet, or 10.3 per cent. Then follow Oregon with 8.6 per cent of the total, Idaho with 8.4 per cent, and Colorado with 4.9 per cent. Six other States cut 9 per cent of the total.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
California. Washington Montana Oregon Idaho	$ \begin{array}{r} 110 \\ 109 \\ 19 \\ 44 \\ 46 \end{array} $	363, 932 217, 074 101, 998 84, 955 83, 640	36.822.010.38.68.4	Colorado All others Total	37 60 425	48,223 88,720 988,542	4.9 9.0 100.0

TABLE 9.—Cut of western yellow pine in 1905.

CYPRESS.

The cut of cypress by 468 mills in 1905 was 753,369,000 feet. Louisiana, as shown by Table 10, is by far the largest producer, with a cut of 487,504,000 feet, or 64.7 per cent of the total. Relatively small amounts were cut in fourteen other States. Arkansas reported 8 per cent of the total, Florida 7.4 per cent, Missiscippi 7.2 per cent, South Carolina 3.5 per cent, North Carolina 2.7 per cent, and the remaining States combined 6.5 per cent.

TABLE	10.	-Cut	of	cypress	in	1905.	
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State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
Louisiana	73 98	487, 504 60, 252	64.7 8.0	North Carolina All others	52 134	20, 423 49, 194	2.7 6.5
Florida Mississippi South Carolina	17 74 20	55,569 54,211 26,216	7.4 7.2 3.5	Total	468	753, 369	100.0

The output of cypress has apparently not yet reached its maximum, as the Forest Service figures for 1905 are slightly greater than the Census figures for 1904, and over 50 per cent larger than those of the Census for 1899.

REDWOOD.

The cut of redwood, 411,689,000 feet, reported by 55 mills, is given in Table 11. The area of production of this wood is very limited, but there is yet a comparatively large amount of stumpage and it is probable that the annual output will not fall below the present quantity for some time.

TABLE	11	-Cut	of	redwood	in	1905
TUDUE			01	reawooa	un	1300.

	State.		Num- ber of mills.	M. feet.	Per cent.
California	 	· · · · · · · · · · · · · · · · · · ·	 55	411, 689	100.0

CEDAR.

Like spruce, "cedar" covers several species, the wood of which has similar properties. Cedar is used principally for poles, piles, posts, and shingles, and it is only in the State of Washington that any considerable quantity of it is cut into lumber. The amount of cedar lumber reported is given in Table 12. Of the total of 363,900,000 feet, Washington produced 69.3 per cent, Maine 8.6 per cent, Oregon 7 per cent, Idaho 4.3 per cent, Michigan 3.4 per cent, Wisconsin 3.2 per cent, and twelve other States combined 4.2 per cent.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
Washington Maine Oregon Idaho	$140 \\ 52 \\ 65 \\ 8$	252, 174 31, 267 25, 428 15, 560	69.3 8.6 7.0 4.3	Wisconsin All others Total	18 121 433	11, 591 15, 298 363, 900	3.2 4.2 100.0

TABLE	12.— <i>Cut</i>	of cedar	r in 1905.
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SUGAR PINE.

The cut of sugar pine by 63 mills in 1905 is given in Table 13. The range of merchantable sugar pine is practically restricted to the west side of the Sierra Nevadas and portions of the Coast range, and 97.6 per cent of the cut of 123,085,000 feet reported was in California. The cut of sugar pine in 1899, according to the Census, was only 53,558,000 feet, which indicates the rapid increase in output the last few years.

	TABLE	13.—0	Cut o	f sugar	$pine \ i$	n 1905	-	
				-			Num_	

State.	Num- ber of mills.	M feet.	Per cent.
California	53 10	$, {120,002 \atop 3,083}$	97.6 2.4
Total	63	123, 085	100.0

WESTERN WHITE PINE.

Western white pine is a true white pine, and very closely resembles the eastern white pine, both in the appearance of the tree and the properties of the wood. It is cut principally in a rather small territory covering portions of Montana, Idaho, and eastern Washington. So far as could be determined from the reports, the cut by 39 mills in these three States in 1905 was 115,678,000 feet, as shown in Table 14. It is quite certain, however, that the figures, particularly those for Washington, include considerable western yellow pine, which is frequently marketed under the name of white pine.

	State.	Num- ber of mills.	M feet.	Per cent.
Idaho Washington Montana		 14 20 5	$\begin{array}{c} 62,453\ 32,664\ 20,561 \end{array}$	54. 0 28. 2 17. 8
Total		 39	115, 678	100.0

TABLE 14 — Cut of western white pine in 1905.

OAK.

The cut of white and red oak reported for 1905 is given in Tables No further separation into the various kinds of oak was 15 and 16. Without question, a number of species were included practicable. under each head by the manufacturers, and quite probably in making out their reports they did not, in many cases, distinguish carefully between the white and red oaks. The oaks are among the most widely distributed hardwoods, and reports of oak lumber were received from thirty-five States. The total amount of white oak reported was 1,210,216,000 feet, of which West Virginia produced 12.9 per cent; Kentucky, 12.7 per cent; Ohio, 11.4 per cent; Tennessee, 10.6 per cent, and Indiana, 10 per cent. The total amount of red oak reported was 623,553,000 feet, of which Tennessee cut 12.8 per cent, Arkansas, 10.8 per cent; Kentucky, 9.3 per cent, and Indiana, 8.8 per cent.

While the Forest Service figures upon the output of oak in 1905 are incomplete, there is no doubt that the cut is decreasing because of the diminished supply of stumpage. The Census reports show a decrease of about 945,000,000 feet between 1899 and 1904.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
West Virginia. Kentucky. Ohio. Tennessee. Indiana. Arkansas. Pennsylvania. Virginia.	252 380 467 412 380 270 469 253	$\begin{array}{c} 156,099\\ 153,682\\ 137,268\\ 127,599\\ 121,091\\ 100,502\\ 92,998\\ 63,432 \end{array}$	$ \begin{array}{r} 12.9\\ 12.7\\ 11.4\\ 10.6\\ 10.0\\ 8.3\\ 7.7\\ 5.3 \end{array} $	Mississippi North Carolina Missouri Alabama All others Total	137 333 141 90 1,142 4,726	58, 899 40, 622 30, 888 20, 302 106, 744 1, 210, 216	4.9 3.4 2.6 1.7 8.5 100.0

TABLE 15.--Cut of white oak in 1905.

TABLE 16.—Cut of red oak in 1905.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
Tennessee. Arkansas Kentucky Indiana. Mississispi. North Carolina. Pennsylvania. West Virginia.	367 214 277 375 112 261 403 149	79, 793 67, 514 58, 056 54, 725 41, 453 41, 411 40, 054 26, 378	$12.8 \\ 10.8 \\ 9.3 \\ 8.8 \\ 6.6 \\ 6.6 \\ 6.4 \\ 4.2$	Ohio Virginia Illinois. Wisconsin All others Total	385 167 145 201 1, 207 4, 263	24, 575 23, 298 23, 072 20, 097 123, 128 623, 553	4.0 3.8 3.7 3.2 19.8 100.0

MAPLE.

The cut of maple reported by 2,765 mills in 1905 was 608,746,000 feet, as shown in Table 17. Michigan is by far the greatest producer of maple lumber, reporting 357,611,000 feet, or 58.8 per cent of the total. Vermont cut 53,745,000 feet, or 8.9 per cent; Pennsylvania 48,883,000 feet, or 8 per cent; New York 44,550,000 feet, or 7.3 per cent; Wisconsin 40,425,000 feet, or 6.6 per cent; Indiana 15,828,000 feet, or 2.6 per cent, and twenty other States, combined, 47,704,000 feet, or 7.8 per cent. There has apparently been little change in the total output of maple for several years.

TABLE	17Cu	t of map	le in	1905.
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State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
Michigan Vermont Pennsylvania	$311 \\ 182 \\ 326$	357,611 53,745 48,883	58.8 8.9	Indiana All others	$\substack{298\\1,002}$	15,828 47,704	2.6 7.8
New York Wisconsin	421 225	44,550 40,425	7.3 6.6	Total	2, 765	608,746	100.0

YELLOW POPLAR.

Table 18 shows the cut of yellow poplar reported by 2,115 manufacturers. This was 582,748,000 feet. Kentucky is the leading State, with 21 per cent of the total, followed by West Virginia, with 19.2 per cent; Tennessee, with 19 per cent; Ohio, with 9.5 per cent;

North Carolina, with 8.3 per cent; Virginia, with 7.1 per cent; Alabama, with 6.5 per cent, and small amounts in nine other States. The Forest Service figures upon yellow poplar are incomplete, but probably the cut of this species is still decreasing. The Census figures show a heavy decrease between 1899 and 1904.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
Kentucky. West Virginia. Tennessee. Ohio North Carolina. Virginia. Alabama.	309 197 361 203 274 156 75	$122, 485 \\112, 230 \\110, 480 \\55, 140 \\48, 122 \\41, 294 \\37, 808$	$21.0 \\ 19.2 \\ 19.0 \\ 9.5 \\ 8.3 \\ 7.1 \\ 6.5$	Indiana Mississippi Georgia All others Total	251 63 78 148 2, 115	18, 143 14, 165 11, 128 11, 753 582, 748	

FABLE 18.— Cut o	of yellow	poplar	in	1905.
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RED GUM.

In 1905, 898 mills cut 316,588,000 feet of red gum. The leading State, as shown by Table 19, is Arkansas, which cut 91,942,000 feet, or 29 per cent of the total. Missiouri comes second, with 71,948,000 feet, or 22.7 per cent; and Mississippi third, with 47,320,000 feet, or 15 per cent. Then follow Tennessee with 11.7 per cent, Kentucky with 6.2 per cent, Indiana with 4.1 per cent, and Illinois with 3.2 per cent. Eleven other States combined cut 8.1 per cent. The cut of red gum has increased to some extent in the last few years, the Census figures on gum of all kinds in 1899 being 268,251,000 feet.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
Arkansas Missouri Mississippi	$ \begin{array}{r} 148 \\ 60 \\ 95 \\ 125 \end{array} $	91, 942 71, 948 47, 320	29.0 22.7 15.0 11.7	Indiana Illinois All others	94 51 217	$\begin{array}{c} 12,858 \\ 10,072 \\ 25,543 \end{array}$	4. 1 3. 2 8. 1
Kentucky	135 121	37, 147 19, 758	$\begin{array}{c}11.7\\6.2\end{array}$	Total	921	316, 588	100.0

TABLE 19.—Cut of red gum in 1905.

BASSWOOD.

In 1905, 258,390,000 feet of basswood was cut by 2,212 mills, as given in Table 20. Wisconsin produced nearly one-half the total, or 47.1 per cent. Michigan ranks second, with 18.1 per cent, followed by New York with 9.6 per cent, Pennsylvania with 4.9 per cent, and West Virginia with 4 per cent. Fifteen other States combined cut 16.3 per cent. The cut of basswood given by the Census of 1899 was 280,025,000 feet, but there has been some decrease since that time.

State.	Num- ber of mills.	M feet.	Percent.	State.	Num- ber of mills.	M feet.	Per cent.
Wisconsin Michigan New York Pennsylvania	300 280 375 206	121,85746,75924,76012,520	47.1 18.1 9.6 4.9	West Virginia All others Total	94 957 2,212	10, 251 42, 243 258, 390	4.0 16.3 100.0

TABLE 20.--Cut of basswood in 1905.

BIRCH.

In 1905, 1,327 mills cut 240,704,000 feet of birch. The figures for the leading States are given in Table 21. By far the largest amount was cut in Wisconsin, which reported 95,191,000 feet, or 39.5 per cent of the total. Michigan cut 39,693,000 feet, or 16.5 per cent; New York, 24,760,000 feet, or 10.3 per cent; Pennsylvania, 23,852,000 feet, or 9.9 per cent; Vermont, 21,750,000 feet, or 9 per cent; Maine, 20,164,000 feet, or 8.4 per cent; and nine other States, combined, 15,294,000 feet, or 6.4 per cent of the total. There has been a relatively large increase in the cut of birch since 1899, for which year the Census reported 128,410,000 feet.

State.	Num- ber of mills.	M feet.	Percent.	State.	Num- ber of mills.	M feet.	Percent.
Wisconsin Michigan	223 191	95, 191 39, 693	39.5 16.5	Maine	122 239	20,164 15,294	8.4 6.4
New Ÿork Pennsylvania Vermont	225 142 185	24,760 23,852 21,750	10.3 9.9 9.0	Total	1,327	240,704	100.0

TABLE 21.—Cut of birch in 1905.

COTTONWOOD.

The cut of cottonwood reported for 1905 by 422 mills was The leading State, as shown by Table 22, was 236,000,000 feet. Arkansas, with 90,920,000 feet, or 38.5 per cent of the total. Next in order came Mississippi, with 43,462,000 feet, or 18.4 per cent; Louisiana, with 38,693,000, or 16.4 per cent; Tennessee, with 28,683,000, or 12.2 per cent; and small amounts in twenty-three other States, aggregating 34,242,000 feet, or 14.5 per cent of the The cut of cottonwood in 1899, according to Census figures, total. was 401,437,000 feet, so it is probable that the cut in 1905 was considerably larger than is indicated by the reports to the Forest Service, tho not equal to that of 1899.

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State.	Num- ber of mills.	M feet.	Percent.
Arkansas. Mississippi Louisiana Tennessee. All others.	$ \begin{array}{r} 66 \\ 30 \\ 15 \\ 16 \\ 295 \end{array} $	90, 920 43, 462 38, 693 28, 683 34, 242	38.5 18.4 16.4 12.2 14.5
Total	422	236,000	100.0

TABLE 22.-Cut of cottonwood in 1905.

ELM.

The cut of elm reported for 1905 was 227,038,000 feet, as shown by Table 23. Of this amount, Wisconsin cut 31 per cent; Michigan, 25.2 per cent; Indiana, 11 per cent; Ohio, 9.9 per cent; Arkansas, 4.1 per cent; Missouri, 3.7 per cent; and twenty-six other States, combined, 15.1 per cent. The cut of elm given by the Census for 1899 was 388,095,000 feet. There has been a falling off in the output since that time, but the cut in 1905 was probably somewhat larger than is indicated from the reports to the Forest Service.

TABLE 23.—Cut of elm in 1905.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Percent.
Wisconsin Michigan	254 254 200	70,327 57,305	31.0 25.2 11.0	Missouri	.72 688	8,425 34,285	3.7 15.1
Ohio Arkansas	$\begin{array}{r} 259\\316\\54\end{array}$	24,911 22,464 9,321	9.9 4.1	Total	1,937	227,038	100.0

CHESTNUT.

The cut of chestnut by 1,599 mills in 1905 was 224,413,000 feet. The figures for the leading States are given in Table 24. Pennsylvania heads the list, with 41,018,000 feet, or 18.3 per cent of the total; Tennessee comes next, with 28,010,000 feet, or 12.5 per cent; and then follow North Carolina, Connecticut, and West Virginia, with over 25,000,000 feet each and approximately equal amounts. Kentucky reported 6.7 per cent of the total; Virginia, 6.2 per cent; Maryland, 5 per cent; Massachusetts, 4.6 per cent, and thirteen other States combined, 12.6 per cent. The cut of chestnut in 1904 was 243,537,000 feet, according to the Census.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
Pennsylvania Tennessee North Carolina Connecticut	397 171 117 73	$\begin{array}{r} 41,018\\ 28,010\\ 25,628\\ 25,562\\ \end{array}$	18.3 12.5 11.4 11.4	Virginia Maryland Massachusetts All others	84 31 117 321	$13,994 \\11,228 \\10,388 \\28,312$	$\begin{array}{r} 6.2 \\ 5.0 \\ 4.6 \\ 12.6 \end{array}$
Kentucky	141 147	25,256 15,017	6.7	Total	1,599	224,413	100.0

TABLE 24.—Cut of chestnut in 1905.

BEECH.

The cut of beech reported for 1905 is given in Table 25. The output of 1,853 mills was 219,000,000 feet. Michigan is the leading State, with 59,896,000 feet, or 27.3 per cent of the total. Pennsylvania comes next, with 53,494,000 feet, or 24.7 per cent; and then Indiana, with 30,827,000 feet, or 14 per cent. Beech was reported from seventeen other States, but only relatively small amounts were cut outside of Michigan, Pennsylvania, and Indiana, which furnished 66 per cent of the total quantity reported. The Census gave no figures upon beech in 1899, so there is no basis for comparison.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
Michigan Pennsylvania Indiana	192 238 285	59, 896 53, 494 30, 827	27.3 24.7 14.0	Vermont Kentucky All others	123 129 342	7, 829 7, 787 20, 110	$3.6 \\ 3.5 \\ 9.1$
New York Ohio	$275 \\ 269$	24, 760 14, 297	11.3 6.5	Total	1,853	219,000	100.0

TABLE 25.—Cut of beech in 1905.

ASH.

In 1905, 159,634,000 feet of ash was cut by 2,653 mills. As shown by Table 26, Michigan was the leading State, with 26,141,000 feet, or 16.5 per cent of the total. Next comes Wisconsin, with 14,588,000 feet, or 9.2 per cent, and then Indiana, Arkansas, and Kentucky, with approximately 13,000,000 feet, or over 8 per cent each. Relatively small amounts were reported from twenty-nine other States, but over half of the output came from the five States mentioned. The cut of ash in 1899, according to the Census, was 256,431,000 feet, but the output is decreasing, because of the scarcity of stumpage.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
Michigan Wisconsin Indiana Arkansas	253 203 279 88	26, 141 14, 588 13, 340 13, 034	$ \begin{array}{r} 16.5 \\ 9.2 \\ 8.4 \\ 8.2 \\ \hline 8.2 \end{array} $	South Carolina Pennsylvania Tennessee All others	$12 \\ 237 \\ 154 \\ 922$	7,4606,6915,81941,000	4.7 4.2 3.6 25.9
Kentucky Ohio Mississippi	$ \begin{array}{r} 157 \\ 280 \\ 68 \end{array} $	12, 939 10, 539 8, 083	8.1 6.1 5.1	Total	2,653	159,634	100.0

TABLE 26.—Cut of ash in 1905.

HICKORY.

The cut of hickory reported for 1905 by 1,829 mills was 95,803,000 feet. The figures for the principal States are given in Table 27. Indiana leads, with 15,138,000 feet, or 15.8 per cent; followed by Arkansas, with 13,262,000 feet, or 13.8 per cent; Kentucky, with 12,894,000 feet, or 13.4 per cent; Tennessee, with 11,958,000 feet, or 12.5 per cent and Ohio, with 11,054,000 feet, or 11.5 per cent. Mississippi reported 6.5 per cent of the total, Illinois 5.6 per cent, Pennsylvania 5.4 per cent, Missouri 3.6 per cent, West Virginia 2.4 per cent. Twenty other States combined reported 9.5 per cent. The total cut of hickory in 1905 reported to the Forest Service is practically the same as that given by the Census for 1899, but there is no doubt that these figures are considerably below the actual annual consumption of hickory. A considerable amount of hickory, particularly spoke material, is sold by the piece, and consequently was not reported as lum-The members of the National Hickory Association estimate ber. their annual requirements as equivalent to 250,000,000 board feet.

State.	Num- ber of mills.	M feet.	Per cent.	State.	Num- ber of mills.	M feet.	Per cent.
Indiana. Arkansas. Kentucky. Tennessee Ohio. Mississippi. Illinois.	319 81 148 148 352 40 103	$\begin{array}{c} 15,138\\ 13,262\\ 12,894\\ 11,958\\ 11,054\\ 6,239\\ 5,308 \end{array}$	$15 8 \\ 13.8 \\ 13.4 \\ 12.5 \\ 11.5 \\ 6.5 \\ 5.6 $	Pennsylvania Missouri West Virginia All others Total	188 68 74 308 1, 829	5, 146 3, 430 2, 310 9, 064 95, 803	5. 4 3. 6 2. 4 9. 5 100. 0

TABLE	27.	-Cut	of	' hici	kory	in	1905.	

OTHER KINDS.

Several kinds of lumber which are cut only in relatively small amounts, and the States in which they are chiefly produced, are given in Table 28. These are: Larch, 76,173,000 feet; tamarack, 64,463,000 feet; white fir, 52,725,000 feet; tupelo, 35,794,000 feet; balsam, 35,506,000 feet; and walnut, 29,851,000 feet. While these woods are of minor importance, their output, with the exception of walnut has increased strongly since 1899. The cut of larch and tamarack combined for that year is given by the Census as only 49,802,000 feet, while no figures at all are given for balsam and tupelo.

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LABLE	28	-Cut	of	minor	snemes	200.	1905
	40.	0.000	~,	11001001	0 000000	010	1000.

Kind.	M feet.	States mostly cut in.
Larch.	76, 173	Montana, Washington, Idaho, Oregon.
Tamarack.	64, 463	Wisconsin, Michigan, Minnesota.
White fir	52, 725	California, Washington, Oregon.
Tupelo.	35, 794	Virginia, Louisiana, Alabama, North Carolina, etc.
Balsam.	35, 506	Maine, Vermont, New York, etc.
Walnut.	29, 851	Indiana, Ohio, Illinois, Missouri, Kentucky, Tennessee, etc.

The production of lumber in 1905 by 11,666 mills is given by States and species in Table 29. The following States led in the production of the kinds of timber specified:

Arkansas: Red gum and cottonwood.

California: Western yellow pine and redwood.

Idaho: Western white pine.

Indiana: Hickory and walnut.

Kentucky: Yellow poplar.

Louisiana: Yellow pine and cypress.

Maine: Spruce and balsam.

Michigan: Maple, beech, and ash.

Minnesota: White pine.

Montana: Larch.

Pennsylvania: Hemlock and chestnut.

Tennessee: Red oak.

Washington: Douglas fir and cedar.

West Virginia: White oak.

Wisconsin: Basswood, birch, elm, and tamarack.

SHINGLES.

The cut of shingles in 1905 by 2,547 mills is given in Table 30. The total number reported was 15,340,909,000, of which western cedar furnished 9,595,245,000, or 62.5 per cent; cypress 1,514,478,000, or 9.9 per cent; eastern cedar 1,313,297,000, or 8.6 per cent; Douglas fir 911,173,000, or 5.9 per cent. The cut of redwood shingles reported was 483,887,000, or 3.1 per cent of the total; of yellow pine 459,472,000, or 3 per cent; of white and Norway pine 382,742,000, or 2.5 per cent; and of hemlock 135,020,000, or 0.9 per cent. The shingles cut of other species than those mentioned amounted to 3.6 per cent of the total.

The total number of shingles cut in 1899, according to the Census, was 11,947,620,000. Most of the increase in cut in 1905 consists of western red cedar.

Kind.	Number of thousands.	Per cent.	State.	Num- ber of mills.	Number of thousands.	Per cent.
Western cedar. Cypress. Eastern cedar. Douglas fir Redwood. Yellow pine. White and Norway pine Hemlock. All others.	$\begin{array}{c} 9,595,245\\ 1,514,478\\ 1,313,297\\ 911,173\\ 483,887\\ 459,472\\ 382,742\\ 135,020\\ 545,595 \end{array}$	62.5 9.9 8.6 5.9 3.1 3.0 2.5 .9 3.6	Washington. Michigan Louislana. California. Wisconsin Maine. Arkansas. Alabama Minnesota Georgia. Florida. All others.	$515 \\ 153 \\ 62 \\ 71 \\ 172 \\ 214 \\ 47 \\ 50 \\ 68 \\ 112 \\ 40 \\ 1,043$	$\begin{array}{c} 10, 509, 914\\ 875, 051\\ 743, 398\\ 547, 863\\ 417, 046\\ 312, 497\\ 302, 135\\ 285, 080\\ 193, 738\\ 177, 986\\ 154, 524\\ 821, 677 \end{array}$	68.6 5.7 4.8 3.6 2.7 2.0 2.0 1.8 1.3 1.2 1.0 5.3
Totai	15, 340, 909	100.0	Total	2, 547	15, 340, 909	100. 0

TABLE 30.—Cut of shingles in 1905.

		Softwoods.							Hardwoods.																									
State.	Number of mills.	Aggregate.	Total.	Yellow pine.	White pine.	Douglas fir	Hemlock.	Spruce.	Western yellow pine. Cypre	ss. Red woo	I. Ceda	r. Sugar pine.	Wester white pine.	n Larch.	Tama- rack.	White fir.	Balsam.	Total.	White oak.	Red oak.	Maple.	Yellow poplar.	Red gum.	Bass- wood.	Birch.	Cotton- wood.	Elm.	Chest- nut-	Beech.	Ash.	Hick- ory.	Tupelo.	Walnut.	Mixt.
Alabama	326 466	<i>M feet.</i> 843, 897 1, 488, 589	<i>M feet.</i> 751,721 1,084,263	M feet. 744, 192 1, 024, 011	M feet.	M feet.	M feet.	M feet.	M feet. M fe 7, 60,	et. M fe 29 52	et. M fe	et. M fee	t. M feet	. M feet.	M feet.	M feet.	M feet.	M feet. 92,176 404,326	M feet. 20,302 100,502	<i>M feet.</i> 12,923 67,514	M feet.	M feet. 37,808 1,650	<i>M feet.</i> 9,524 91,942	M feet.	M feet.	<i>M feet.</i> 420 90,920	M feet. 32 9,321	M feet. 305	M feet.	M feet. 1, 471 13, 034	M feet. 1,005 13,262	M feet. 6,362 2,828	M feet.	M feet. 2,024 13,217
California Colorado	175 52	1,061,608 56,753	1,058,852 56,653	1 409	14 700	100, 816		2,000 8,430	363, 932 48, 223	411,6	89 8,7	83 120,00)2			51,630		2,756 100		4 050	1 011					100	107	95 569		004	1 400			2,756
Dela ware Florida	93 29 123	69,845 12,260 658,007	19,215 7,260 656,943	1, 483 601, 374	14,788 7,200		2,684			69	····	49 60					. 10	5,000	6,472 2,260 55	4,856	1,211 60	359	283	. 340		38		23, 362 21	21	904 50 85	1,409 . 13 . 81	137		8,088 890 5
Georgia Idaho	. 349 . 54 . 174	712,604 212,725	679, 143 183, 699	663,831	32 704	10, 177	25 1,525	255	83,640	87	15,5	60	62,45	3 10,089			:	33, 461 29, 026 85, 263	8,615	5, 895	2 851	11, 128	1,007			. 80 . 5,442 . 924	7.584	2,772	1.507	553 873	1,330	736	10	1,225 23,584 12,230
Indiana Indian Territory	461	$ \begin{array}{r} 113,003 \\ 352,362 \\ 11,667 \end{array} $	33,802 460 5,216	5,216	15		15			30								351,902 6,451	13,329 121,091 1,440	54,725 2,130	15,828	18,143	10,072 12,858 100	6,609		2, 187 2, 141	24,911 140	1,087	30,827	13, 340 440	15,138 60		8,957	26,201
Ken tucky Louisiana	. 30 . 426 . 236	$\begin{array}{c} 129,472 \\ 464,676 \\ 2,293,809 \end{array}$	122,757 35,772 2,225,464	7,954 1,737,960	122,757		18,647	2,122	1, 	44								6,715 428,904 68,345	1, 139 153, 682 6, 568	936 58,056 1,974	938	122,485 2,797	19,758 2,155	6,116	25	653 88,693	1,503 2,351 7	15, 017	7,787	12,939 1,493	12,894 728	6,580	3,704	393 11,836 7,350
Maine. Maryland Massachusetts	. 373 . 114 . 251	745,705 163,749 252,804	703,979 111,179 222,626	3,435 85,023 2,504	201,867 1,785 176,340		86,753 20,394 11,208	358, 758 3, 977 31, 980			31,2	67 					21,899 517	41, 726 52, 570 30, 178	1,740 18,261 1,900	$ \begin{array}{r} 4,338\\11,894\\2,743\end{array} $	4,129 2,463 1,827			2,386 913 431	20,164 1,150 1,563		421 61 72	$710 \\ 11,228 \\ 10,388$	$2,750 \\ 759 \\ 2,169$	$1,279 \\ 601 \\ 614$	$\begin{array}{c} 42 \\ 524 \\ 249 \end{array}$		20	$3,767 \\ 4,696 \\ 8,222$
Michigan Minnesota Mississippi	437 174 355	1,719,687 1,925,804 1,299,390	1,077,549 1,890,610 1,071,402	1.017.191	463, 308 1, 847, 072		569,810 24,144	$11,592 \\ 5,592$	54.5		12,5	82 85 	· · · · · · · ·		18,726 13,017		1,531	642, 138 35, 194 227, 988	6, 521 3, 671 58, 899	5,633 2,044 41,453	357,611 2,638	14, 165	47.320	46,759 7,926	39, 693 4, 228	43, 462	57,305 5,251 2,037		59, 896 310	26,141 2,063 8,083	6,239	3, 928	154	42, 425 7,063 2,258
Missouri Montana	225	362,217 189,291 240,797	176, 964 175, 935	161, 128	911 202	6,132	5,000	155	101,998	36	3,(00	20, 56	1 39,089			1 700	185, 253 13, 356	30,888	39,977	2,739	2,508	71,948	1.242	7 510	7, 486	8,425		85	4,308	3,430 .	_,	3, 861	9, 581 13, 356
New Jersey	66 1,167	17, 704 750, 280	505, 845 7, 978 504, 203	1,985 5,050 1,915	691 110, 155		30,600 314 179,550	211,076			1,9 	23 53					1,702	9,726 246,077	2,765 7,425	4, 847 2, 069 12, 375	4, 343 122 44, 550			1,248	24 24,760		160 7, 425	3, 477 7, 425	2, 929 23 24, 760	1,390 120 9,900	770 520			185 82,177
Ohio Oregon	. 671 . 541 . 319	1,080,602 331,552 1,262,610	892,078 2,987 1,255,938	837,366 505	28,438 126	1,076,695	5,851 241 3,884	2,115 57,208	84,955	23	25,4	28 3,08	3	3,610		1,075		188,524 328,565 6,672	40, 622 137, 268	$41, 411 \\ 24, 575$	11,002 3,009	48, 122 55, 140	3,073 566	7,965		713 972 1,150	52 22, 464	25,628 5,542	14,297	4,111 10,539 1,530	729 11,054	5,608	88 4, 477	18,367 22,704 983
Pennsylvania Rhode Island South Carolina	. 714 . 16 . 205	1, 397, 164 14, 054 466, 478	1,024,739 8,438 434,190	15,929 173 406,502	87,097 7,500 150		920, 854 730	834		16		5 35		· · · · · · · · · · · · · · · · · · ·			. 20	372, 425 5, 616 32, 288	92, 998 805 1 810	40,054 515 1 273	48, 883	3 679	4 887	12,520	23,852 40	3, 686	2,323	41,018 3,615 59	53, 494		5,146 . 132 . 81	1.005	919 	44,527 102 8,327
South Dakota Tennessee	. 15 . 495 . 165	11,502 540,920 929,863	11,502 68,598 911,785	36, 294 910, 465	18,833		8,845	1,834	11,502 2,	92		····						472,322	127, 599	79,793	1, 323	110, 480	37,147	2,273		28,683	3,369	28,010	2,083	5,819	11,958		2,306	31, 479 1 302
Utah. Vermont.	21 287	3, 618 266, 676	3, 553 167, 719	273	9,285	150	37,911	10 111,650	3,393		i	32					8,468	65 98,957	257	2,040	53, 745		1,022	5, 439	21,750	65	947	181	7,829	3,269	124	0.010		3, 322
Washington West Virginia	458 557 285	3, 917, 166 672, 902	3,915,279 311,478	496, 895 3, 312	31,450	3, 125, 325	9,074 84,773 169,644	179,864 107,072	217,074	48	252, 1	74	32,66	4 23, 385		20		183,580 1,887 361,424	63,432 156,099	23,298 26,378	231 6,939	41, 294	2,260	10,251		1,261 299 65	20	13, 994 25, 256	5, 507	205 2,938	2, 310	8,610	377	1,152 12,792
Wisconsin Wyoming Arizona,Nevada,and	407 14 15	2,543,503 4,360 88,825	2, 130, 149 4, 345 70, 735		1,467,078	184	610,225	8,535 475 596	3,870 69,955		11,5	91			32,720			413, 354 15 18, 090	12,567	20,097	40, 425		·····	121,857	95, 191	. 15	70, 327		1,614	14, 588			·	36,688
New Mexico. Kansas, Nebraska	6 [.]	1,272	· · · ·	·····														1,272	10	60	30					. 750	80				25 .		67	250
Total	11,666	30, 502, 961	24, 914, 618	8, 771, 966	4,868,020	4, 319, 479	2,804,083	1, 165, 940	988, 542 753, 5	69 411 , 6	89 363,9	00 123,08	5 115,67	8 76, 173	64, 463	52,725	35, 506	5,588,343	1,210,216	623, 553	608, 746	582, 748	316,588	258, 390	240, 704	236,000	227,038	224, 413	219,000	159, 634	95, 803	35, 794	29, 851	519, 865

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TABLE 29.-Lumber cut in the United States in 1905 by 11,666 mills.

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Washington is far in the lead as a shingle-producing State, since it cut 68.6 per cent of the total number reported. This is because most of both the western cedar and the Douglas fir shingler come from this State. Michigan comes next in order, with 5.7 per cent, consisting mostly of cedar; then Louisiana, with 4.8 per cent, made up principally of cypress. The California shingles are mostly redwood, those of Wisconsin and Maine cedar, those of Minnesota northern pine, and those of the Southern States yellow pine and cypress.

LATH.

The total cut of lath reported for 1905 by 1,801 mills was 3,111,157,-000, as shown in Table 31. White and Norway pine lead with 872,599,000, or 28.1 per cent of the total. Douglas fir ranks second, with 584,884,000, or 18.8 per cent; hemlock third, with 430,014,000, or 13.8 per cent; and yellow pine fourth, with 407,742,000, or 13.1 per cent. Practically three-fourths of the lath were of these four species. Spruce is credited with 260,039,000, or 8.4 per cent of the total; cypress with 155,825,000, or 5 per cent. Lath of other kinds and those which could not be determined are given under the head "Mixt," the number being 400,054,000, or 12.8 per cent of the total. The Census reported a production of 2,501,314,000 lath of all kinds in 1899.

Kind.	Number of thou- sands.	Per cent.	State.	Num- ber of mills.	Number of thou- sands.	Per cent.
White and Norway pine Douglas fir	872, 599 584, 884 430, 014 407, 742 260, 039 155, 825 400, 054	28. 1 18. 8 13. 8 13. 1 8. 4 5. 0 12. 8	Washington Minnesota Wisconsin Louisiana Maine Michigan Pennsylvania Oregon All others	97 80 195 56 121 109 211 34 898	559,813422,025328,905259,259255,482221,386219,143116,456728,688	18. 0 13. 3 10. 6 8. 3 8. 2 7. 2 7. 0 3. 8 23. 6
Total	3, 111, 157	100. 0	Total	1,801	3, 111, 157	100.0

TABLE 31.—Cut of lath in 1905.

The leading States in the production of lath are also given, in order, in Table 31, their relative importance being due to one or more of the species mentioned in the preceding paragraph. Washington comes first, with 18 per cent of the total reported, followed by Minnesota, with 13.3 per cent, Wisconsin with 10.6 per cent, Louisiana with 8.3 per cent, Maine with 8.2 per cent, Michigan with 7.2 per cent, Pennsylvania with 7 per cent, and Oregon with 3.8 per cent. These eight States produced over three-fourths of the total number of lath reported.

Approved.

JAMES WILSON,

Secretary.

WASHINGTON, D. C., November 30, 1906.