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S. N. SPRING, Forester,

IN CO-OPERATION WITH THE

FOREST SERVICE,

U. S. DEPARTMENT OF AGRICULTURE,

HENRY S. GRAVES, Forester.

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WOOD-USING INDUSTRIES OF CONNECTICUT

BY

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NOTE.

The investigation upon which this report is based was undertaken by the Forest Service in coöperation with the Connecticut Agricultural Experiment Station, the work being done under the direction of S. N. Spring, State Forester, and O. T. Swan, Engineer in Forest Products, in charge of the Office of Wood Utilization, United States Department of Agriculture, Washington, D. C. The statistics were compiled from data collected in 1911, covering a period of one year. By the terms of the coöperative agreement, the Experiment Station is authorized to publish the findings of the investigation.

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INTRODUCTION.

Connecticut is one of the most densely populated states of the Union. Its 4,990 square miles are occupied by over a million inhabitants. A very large percentage of its people reside within two score manufacturing centers and depend directly upon industrial employment for a livelihood. The various industries include nearly 10,000 factories, with an invested capital of more than a third of a billion dollars, an annual output worth a like sum, and a payroll of some millions. A considerable number of these factories convert the raw material of the forest into finished products. The report of the lumber cut of the United States in 1910, prepared by the Bureau of the Census in coöperation with the Forest Service, United States Department of Agriculture, shows that the Connecticut sawmills cut over 222,945,000 board feet in that year. Part of the lumber made in the State is shipped away, and of the total domestic consumption probably one-fourth is utilized in rough lumber and in general construction. The total consumed by the Connecticut wood-using industries in 1910, including lumber purchased from other states, amounted to 110,051,323 feet.

The amount of wood taken from the forests in forms other than lumber has been only roughly estimated, but the quantity of lumber annually milled in Connecticut has been determined for some years. This is the first attempt to follow the lumber from the sawmill through the factories. The information here presented shows the relations between the wood-using industries of Connecticut and her forests. It also shows to what extent the State's native resources are drawn upon to meet home requirements, and to what extent manufacturers draw from outside.

This report is intended to answer the question of what becomes of the seventy-two or seventy-three million feet of rough lumber that are used each year in Connecticut's wood-using factories. It also discusses properties of the various woods that fit them for use in certain industries and the products made from these woods. It gives the average cost of lumber delivered at the factory, both home-grown and shipped-in material. The prices given, it must be remembered, are not market prices, but are merely an average computed from many different grades and forms of each kind of wood reported.

KINDS OF WOOD.

There are fifty-eight kinds of wood used by Connecticut manufacturers. Twenty-six of them are from timber grown wholly or partially within the State. The remainder are obtained either from other states, from Canada, or from foreign countries. Table I shows that of the woods listed forty-eight are domestic and ten foreign-grown species. The first column of the table gives the common names of the different species used and the second column gives the botanical names.

It will be noted that the above table gives the kinds of wood consumed by Connecticut wood manufacturing establishments arranged in order of quantity used. White pine heads the list, supplying one-fifth of all the raw material. Over 60 per cent. of the white pine goes to box makers at a lower price, delivered, than is paid by fourteen other industries using this wood. The most costly grades of white pine are demanded by the ship builders and the manufacturers of musical instruments. Chestnut is the most important hardwood used and comes second in the amount consumed. It forms a larger proportion of the forest than any other commercial tree. Why the lumber regions of other states are called on for a little over two-thirds of the chestnut needed is a difficult matter to explain. Nearly one-half of the chestnut consumed by the factories goes into pianos and cabinet organs, the larger part of it into piano cases. No other wood reported is used by a larger number of industries than tulip poplar. Nineteen of the twenty-six report using it. A study of the table brings out the fact that 50 per cent. of the white oak used is home-grown. Boat building uses more of it than any other industry.

It is surprising that 75 per cent. of the hickory used by the manufacturers of Connecticut grows in the State; for it would seem that the supply of a wood so useful and produced so near the place of consumption would have long since been completely exhausted. Dogwood is not called for in large quantities, but, like white birch, often called gray birch, the demand is met entirely by home-grown wood, as is also the demand for aspen, pitch pine, and applewood. Over 90 per cent. of the butternut or white walnut used is cut in the State. Loblolly, which leads the Southern pines, is sometimes sold with shortleaf pine as

North Carolina pine; and since it is often difficult to separate the two, they have been classed rather arbitrarily. It is a matter of interest that longleaf pine occupies eighth place in Table I. Most of the cypress consumed come from the Carolinas. The Florida wood is also in demand, but Louisiana cypress is reported only in small quantities.

The two general classes into which woods are divided by users are hardwoods and softwoods. This classification is not based absolutely on hardness or softness, but is an arbitrary distinction which has come into general use because it is convenient and holds true generally. The broadleaf trees are hardwoods; the needle-leaf species are softwoods.

THE PINES.

The eight species of pine used in Connecticut make up over 40 per cent. of the total consumption. With the exception of the white and pitch pine, the supply is obtained entirely from other states.

White Pine.

White pine (*Pinus strobus*) furnishes 25 per cent. of the lumber used in manufacturing. It is found from New England westward to Manitoba, southward to northern Illinois, and in the Appalachian regions southward to northern Georgia. In virgin forests the white pine often attains great size, but much the greater part of the timber now being cut in New England is second growth and often small. Because the wood is light, soft, and easily worked, it has always been in great demand. Only about one-fifth of the amount used is grown in Connecticut. A little more than 90 per cent. of the total quantity made into wood products is reported by the box makers and the manufacturers of sash, doors, blinds, and other planing mill products.

Loblolly Pine.

The most important of the yellow pines used by Connecticut manufacturers is loblolly (*Pinus taeda*). It comprises 6 per cent. of the total and comes from Virginia and North Carolina. It makes rapid growth and takes possession of abandoned fields in a surprisingly short time. The wood is generally rather brittle and coarse-grained, its texture being much affected by the con-

TABLE I. CONSUMPTION OF WOOD IN CONNECTICUT FACTORIES—BY SPECIES.

Rank	Common name	Botanical name	Quantity used annually		Cost f. o. b. factory		Grown in Conn. Per cent. (Quantity)	Grown outside Conn. Per cent. (Quantity)
			Feet b. m.	Per cent.	Average per 1000 ft.	Total		
1	White Pine	(*Pinus strobus*)	26,988,150	24.52	$ 28.14	$759,558.68	20.07	79.93
2	Chestnut	(*Castanea dentata*)	7,244,700	6.58	25.82	187,053.66	35.34	64.66
3	Yellow poplar or whitewood	(*Liriodendron tulipifera*)	6,914,366	6.28	47.57	328,882.91	9.52	90.48
4	Loblolly pine	(*Pinus taeda*)	6,843,263	6.22	27.00	184,785.31	....	100.00
5	Bald cypress	(*Taxodium distichum*)	6,736,555	6.12	41.03	276,407.32	....	100.00
6	Spruce	(*Picea* species)	6,423,144	5.84	24.30	156,084.28	....	100.00
7	*White oak	(*Quercus alba*)	5,498,875	5.00	56.41	310,194.21	44.05	55.95
8	Longleaf pine	(*Pinus palustris*)	5,358,951	4.87	36.10	193,438.61	....	100.00
9	*Red oak	(*Quercus rubra*)	3,682,185	3.35	41.20	151,701.19	23.50	76.50
10	Shortleaf pine	(*Pinus echinata*)	3,622,800	3.29	23.32	84,488.50	....	100.00
11	Basswood	(*Tilia americana*)	3,559,598	3.23	40.37	143,702.70	2.84	97.16
12	*Hard maple	(*Acer saccharum*)	3,201,111	2.91	34.72	111,131.94	22.64	77.36
13	Ash	(*Fraxinus* species)	2,995,198	2.72	52.17	156,256.54	26.72	73.28
14	Hickory	(*Hicoria* species)	2,818,265	2.56	31.65	89,201.35	73.17	26.83
15	Sugar pine	(*Pinus lambertiana*)	1,723,370	1.57	66.67	114,902.35	....	100.00
16	Yellow birch	(*Betula lutea*)	1,525,800	1.39	30.10	45,919.40	32.80	67.20
17	Cotton gum	(*Nyssa aquatica*)	1,426,476	1.30	19.05	27,173.17	....	100.00
18	Water gum	(*Nyssa biflora*)	1,250,000	1.14	17.00	21,250.00	....	100.00
19	*Rock elm	(*Ulmus racemosa*)	1,044,000	.95	38.49	40,185.90	18.34	81.66
20	Paper birch (white birch)	(*Betula papyrifera*)	1,010,750	.92	24.89	25,153.00	5.10	94.90
21	*Mahogany	(*Swietenia mahagoni*)	901,369	.82	174.28	157,094.64	....	100.00
22	Black cherry	(*Prunus serotina*)	796,800	.72	63.62	50,692.50	19.11	80.89
23	Red gum	(*Liquidambar styraciflua*)	792,505	.72	45.28	35,887.73	....	100.00
24	*Soft maple	(*Acer rubrum*)	708,000	.64	27.17	19,236.00	29.94	70.06
25	Beech	(*Fagus atropunicea*)	691,200	.63	31.70	21,908.00	52.18	47.82
26	Douglas fir	(*Pseudotsuga taxifolia*)	688,180	.63	46.92	32,288.90	....	100.00
27	Sweet birch	(*Betula lenta*)	674,070	.62	49.51	33,371.54	5.93	94.07
28	Black walnut	(*Juglans nigra*)	648,650	.59	89.63	58,137.25	.31	99.69
29	*Boxwood	(*Buxus sempervirens*)	634,890	.58	49.19	31,227.60	....	100.00
30	Hemlock	(*Tsuga canadensis*)	553,000	.50	14.08	7,788.00	72.88	27.12

31	Western yellow pine	(*Pinus ponderosa*)	400,000	.36	45.00	18,000.00	....	100.00
32	White birch (gray birch)	(*Betula populifolia*)	309,500	.28	17.54	5,428.00	100.00	....
33	Cocobola	(*Platymiscium* species)	273,360	.25	176.67	48,294.00	....	100.00
34	Pitch pine	(*Pinus rigida*)	270,900	.25	17.53	4,749.80	100.00	....
35	White cedar	(*Chamaecyparis thyoides*)	267,700	.24	56.72	15,185.00	....	100.00
36	*Lignum-vitæ	(*Guajacum officinale*)	257,348	.23	91.90	23,650.00	....	100.00
37	Rosewood	(*Dalbergia* species)	234,092	.21	225.40	52,763.80	....	100.00
38	Soft (white) elm	(*Ulmus americana*)	211,900	.19	38.25	8,104.70	15.67	84.33
39	Western white pine	(*Pinus monticola*)	126,000	.11	47.38	5,970.00	....	100.00
40	Persimmon	(*Diospyros virginiana*)	120,000	.11	17.50	2,100.00	....	100.00
41	Western red cedar	(*Thuja plicata*)	116,500	.11	45.32	5,280.00	....	100.00
42	Dogwood	(*Cornus florida*)	100,000	.09	24.00	2,400.00	100.00	....
43	Hackmatack	(*Larix laricina*)	88,225	.08	73.53	6,487.41	....	100.00
44	Cottonwood	(*Populus deltoides*)	72,500	.07	16.03	1,162.50	....	100.00
45	Ebony	(*Diospyros* species)	42,677	.04	264.94	11,307.00	....	100.00
46	Butternut	(*Juglans cinerea*)	42,500	.04	22.49	956.00	92.94	7.06
47	Redwood	(*Sequoia sempervirens*)	37,000	.03	46.22	1,710.00	....	100.00
48	*Spanish cedar	(*Cedrela odorata*)	32,000	.03	115.59	3,699.00	....	100.00
49	Locust	(*Robinia pseudacacia*)	32,000	.03	98.63	3,156.00	....	100.00
50	Sitka spruce	(*Picea sitchensis*)	25,000	.02	47.00	1,175.00	....	100.00
51	Northern white cedar	(*Thuja occidentalis*)	10,000	.01	30.00	300.00	....	100.00
52	Teak	(*Tectona grandis*)	8,000	.01	287.50	2,300.00	....	100.00
53	Sycamore	(*Platanus occidentalis*)	4,000	†....	26.25	105.00	75.00	25.00
54	*Circassian walnut	(*Juglans regia*)	3,900	†....	287.44	1,121.00	....	100.00
55	Apple wood	(*Malus malus*)	3,500	†....	26.43	92.50	100.00	....
56	Aspen	(*Populus tremuloides*)	3,000	†....	15.00	45.00	100.00	....
57	Red cedar	(*Juniperus virginiana*)	3,000	†....	65.00	195.00	....	100.00
58	*White mahogany	(*Tabebuia donnell-smithii*)	500	†....	250.00	125.00	....	100.00
	Totals	.....	110,051,323	100.00	$37.08	$4,080,964.89	16.61	83.39

* Several species are probably included besides the one for which the botanical name is given.
† Less than 1-100 of one per cent.

ditions under which it is grown. It is used for a great variety of purposes where strength and resistance to decay are not essential. Loblolly is used extensively in Connecticut in competition with spruce and white pine.

Longleaf Pine.

Over 5,000,000 feet of longleaf pine are consumed annually by the wood-using industries of Connecticut. Longleaf (*Pinus palustris*) is the most important structural pine grown in the South. Shortleaf and longleaf pine form the bulk of the cut of lumber in the Gulf States. The wood is hard, strong, and generally shows narrow rings of growth. Three-fourths of the consumption of this wood reported in Connecticut is by builders of ships and boats.

Shortleaf Pine.

Next in importance is the shortleaf pine (*Pinus echinata*). Much of it is sold in Connecticut mixed with loblolly, as North Carolina pine or as Virginia pine. Its range extends throughout the Southern States, but west of the Mississippi River is the region where it grows most abundantly and attains its largest size. The entire quantity reported was consumed by the manufacturers of sash, doors, blinds, general mill work, and planing-mill products.

Sugar Pine.

One and three-quarter million feet of this western white pine (*Pinus lambertiana*) was used in Connecticut. It is found in heavy stands in southern Oregon and in California. The wood is light, soft, and easily worked. These qualities make it valuable for the same purposes as those for which the eastern white pine is employed. Only the higher grades of the wood are shipped to the East. An average price of $66.67 per thousand is obtained for it in Connecticut.

Western Yellow Pine.

This species (*Pinus ponderosa*) is native to every State west of the Great Plains and ranges from southern British Columbia to northern Mexico. The wood is variable in color, running from pale yellow to an orange-brown. It is usually fine-grained and,

although naturally heavier and much more resinous than white pine, is occasionally sold as a substitute for that species.

Pitch Pine.

Of the eastern yellow pines only one species, pitch pine (*Pinus rigida*), grows within the limits of Connecticut. The wood is of medium weight and hardness and rather coarse-grained. The tree has a large proportion of sapwood and is decidedly resinous. Its principal use is in boxes and crates.

Idaho White Pine.

This spieces (*Pinus monticola*) is a true white pine and, like the eastern white pine, has five needles in a cluster. It is a native of the northern Rocky Mountain region. As it is light, soft, and easy to work, it is readily adaptable to all purposes for which eastern white pine is used.

SPRUCE.

From the reports received, it has not been possible to determine what species of spruce is used in each case. Doubtless most of that reported is red spruce (*Picea rubens*). This is an upland tree found from New Brunswick to the high peaks of North Carolina. Two other species are found in the East; black spruce (*Picea mariana*), which is a swamp tree and is found much farther north than red spruce; and white spruce (*Picea canadensis*), found in New England, northern New York, the Lake States, South Dakota, Montana, British Columbia, and northwest to Alaska. Sitka spruce, the largest spruce in the United States, is native to the Pacific Coast States of the northwest. Only a very small quantity of this species reaches Connecticut.

HEMLOCK.

The eastern hemlock (*Tsuga canadensis*) is found from Nova Scotia to Minnesota across the northern tier of states, and follows the Appalachian highland south to northern Georgia. Connecticut supplied more of this wood to its wood-using industries than was brought in from other states. It is a light, strong, coarse wood, useful for many purposes, but is used principally for cheap finish and for boxes and crates.

CYPRESS.

Cypress, or bald cypress (*Taxodium distichum*) is a swamp tree of the southern coastal region. The wood has great durability, does not shrink nor warp badly, and is practically tasteless. These qualities make it desirable for many special purposes. Although the planing mills consume the largest quantities of the wood, it is in great demand by the manufacturers of tanks, ships and boats.

THE CEDARS.

A number of woods are known as cedar. Those used in Connecticut are probably the southern white cedar (*Chamæcyparis thyoides*), with a range extending from southern Maine to Florida, chiefly near the Atlantic coast in swamps and best developed in New Jersey and southward; the northern white cedar, or arborvitæ (*Thuja occidentalis*), growing in the northeastern part of the United States, now most abundant in the Lake States; the red cedar, sometimes called juniper (*Juniperus virginiana*), growing in all states east, and in several west, of the Mississippi River, but now most abundant in Tennessee and southward; and western red cedar, often called giant arborvitæ (*Thuja plicata*), common in the northwestern part of the United States. The southern white cedar is employed in Connecticut chiefly for boat planking. The northern white cedar serves well for the same purpose, although it is a smaller tree, and because of windshakes and other defects is not so well adapted for lumber. The western red cedar—the largest cedar in this country—is used more for shingles than for any other purpose. All cedars are classed as durable in contact with the soil. The red cedars are so named on account of the color of the heartwood, and the white cedars because of the lack of such color. The red cedar from the South is in much demand for clothes chests because of its odor, which is said to be repellent to moths.

TAMARACK.

The Tamarack (*Larix laricina*) is a northern tree. In Connecticut it is often called hackmatack. The wood is rather coarse-grained but hard, strong, and durable. One of its chief

uses in the State is for small ship knees. The roots are the part of the tree reported as used in Connecticut, and most of it comes from Maine, where it grows in cold swamps. The best ship knees are developed above old beaver dams, where the made soil rests on heavy clay which roots can not penetrate. When they reach the clay they turn at right angles, forming the desired crooks.

DOUGLAS FIR.

Just as longleaf pine is the important construction timber furnished by the Southern States, so Douglas fir (*Pseudotsuga taxifolia*) is the great construction wood furnished by the Northwestern and Pacific States. It is sold under a number of different names in various parts of the country, being known also as Oregon pine, red fir, Oregon fir, Washington pine, and Douglas spruce. The wood is very strong and stiff, and on account of the great size of the timbers that can be cut, and its relative cheapness at the point of production, Douglas fir has forced its way into Eastern markets in competition with longleaf pine. It takes stain and paint well, holds nails firmly, and on the Pacific Coast is much used for doors. Its use for interior finish is just beginning in the Eastern States, but appears to be increasing.

THE OAKS.

Although the industries of Connecticut demand a larger amount of softwoods than of hardwoods, many kinds of the latter are also used. Among the principal hardwoods employed by the manufacturers of Connecticut are the oaks, which are separated into two general classes by wood workers—white oaks and red oaks. The user naturally does not make so close a distinction as the botanist, but the white oaks and the red oaks are generally separated in the factories. The user bases the distinction on the relative quality of the woods, for the white oaks are as a class harder, tougher, stronger and more durable than the red oaks. The botanist's classification is based on differences in flower, fruit, and leaf.

White Oak.

The most important tree in the white oak group is that which nearly always bears the name white oak (*Quercus alba*). It is

common throughout the eastern half of the United States, and is a valuable forest tree of Connecticut. The wood is stiff, strong, hard, and resists decay well. It will take a number of styles of color finish, ranging from pale green, brown, or gray mission, to the golden which is so much admired in furniture and interior work. Its prominent medullary rays (the bright streaks in the wood radiating from the heart outward) fit it for quarter sawing, by which as much as possible of the surface of the rays is exposed to view. Lumber classed as white oak in Connecticut includes several species which are distinguished from one another while the trees are standing, but not usually separated in the lumber yard or factory. Among these are burr oak (*Quercus macrocarpa*), cow oak (*Quercus michauxii*), post oak (*Quercus minor*), swamp white oak (*Quercus platanoides*), and sometimes chestnut oak (*Quercus prinus*). The three last are native and abundant in Connecticut. Eighteen industries in the State report the use of white oak, nearly one-fourth of the total quantity going into the construction of ships and boats.

TABLE II. CONNECTICUT INDUSTRIES USING WHITE OAK.

NAME OF INDUSTRY	Quantity		Cost	
	Feet b. m.	Per cent.	Average per 1000	Total
Ships and boats	1,296,625	23.6	$ 40.39	$52,370.31
Sash, doors, blinds and general mill work	932,700	16.9	72.47	67,593.00
Planing mill products	824,000	15.0	73.60	60,650.00
Vehicles and vehicle parts	633,400	11.5	32.44	20,548.15
Musical instruments	362,900	6.6	109.05	39,573.50
Miscellaneous	290,000	5.3	64.83	18,800.00
Clocks	262,300	4.8	47.35	12,420.00
Chairs	242,000	4.4	39.92	9,660.00
Fixtures	234,200	4.3	73.80	17,285.00
Handles	147,000	2.7	30.72	4,516.00
Wooden ware	92,200	1.7	21.82	2,012.00
Sporting and athletic goods	57,000	1.0	20.18	1,150.00
Electrical machinery and apparatus	43,300	.8	20.38	882.50
Agricultural implements	35,000	.6	19.57	685.00
Machinery and apparatus, not electrical	30,000	.5	35.33	1,060.00
Furniture	11,250	.2	74.56	838.75
Shuttles, bobbins and spools	4,000	.1	25.00	100.00
Laundry appliances	1,000	*	50.00	50.00
	5,498,875	100.0	$56.41	$310,194.21

* Less than .1 of 1%.

Red Oak.

Of the score or more oaks in the red oak group, one species may be taken as typical of all. This is generally known, both at the mill and in the woods, as red oak, although it is occasionally called black or Spanish oak. Its botanical name is *Quercus rubra.* Other members of the group familiar to the manufacturers of Connecticut are black or yellow oak (*Quercus velutina*) and scarlet oak (*Quercus coccinea*). Thirteen industries in the State report the use of red oak. The largest users are clock makers. Many manufacturers report oak without stating whether it is white or red. In fact, the oak lumber which reaches factories is apt to be a mixture of many species, difficult to separate and distinguish.

Table III. Connecticut Industries Using Red Oak.

NAME OF INDUSTRY	Quantity		Cost	
	Feet b. m.	Per cent.	Average per 1000	Total
Clocks	1,481,000	40.2	$30.22	$44,750.00
Planing mill products	818,500	22.2	58.61	47,972.75
Sash, doors, blinds and general mill work	384,485	10.4	54.83	21,081.24
Vehicles and vehicle parts	199,500	5.4	30.21	6,026.50
Miscellaneous	189,500	5.2	47.82	9,062.50
Chairs	143,000	3.9	55.38	7,920.00
Fixtures	140,000	3.8	45.32	6,345.00
Electrical machinery and apparatus	96,700	2.6	20.35	1,967.50
Agricultural implements	93,000	2.5	19.32	1,797.00
Furniture	80,000	2.2	23.69	1,895.00
Boxes and crates	24,000	.7	16.67	400.00
Musical instruments	24,000	.7	97.04	2,329.00
Prof. and scientific instruments	8,500	.2	18.20	154.70
	3,682,185	100.0	$41.20	$151,701.19

CHESTNUT.

In Connecticut, chestnut is more used than any other hardwood, and more than one-third of the supply is State-grown. The annual sawmill output of chestnut in the State is larger than the combined cut of all other hardwoods. Nineteen industries report its use, as appears in Table IV. Musical instrument makers demand nearly as much as do all the other industries combined, but most of the chestnut that goes into musical instruments comes

from outside the State. The wood is light, rather strong, and has a handsome grain when properly finished. The tree is found in the northeastern part of the United States, south of southern Maine. It is liable to attack by several diseases; and just now is being destroyed in much of its northern range by a fungus which induces what is commonly called the chestnut bark disease.* Much chestnut timber is infested with boring insects, which cause the small holes in so-called "wormy chestnut."

TABLE IV. CONNECTICUT INDUSTRIES USING CHESTNUT.

NAME OF INDUSTRY	Quantity		Cost	
	Feet b. m.	Per cent.	Average per 1000	Total
Musical instruments	3,559,000	49.1	$21.58	$76,815.50
Planing mill products	839,500	11.6	46.48	39,017.00
Sash, doors, blinds and general mill work	683,480	9.4	37.61	25,704.15
Ships and boats	546,645	7.6	23.54	12,866.71
Miscellaneous	440,000	6.1	22.68	9,980.00
Clocks	285,000	3.9	19.02	5,420.00
Fixtures	245,500	3.4	23.20	5,696.50
Prof. and scientific instruments	161,000	2.2	18.07	2,910.00
Boxes and crates	142,500	2.0	14.82	2,111.50
Wooden ware	135,000	1.9	13.56	1,830.00
Furniture	78,000	1.1	22.27	1,737,00
Machinery and apparatus, not electrical	44,975	.6	23.84	1,072.30
Patterns	20,000	.3	22.00	440.00
Laundry appliances	17,500	.2	22.29	390.00
Agricultural implements	15,000	.2	20.00	300.00
Vehicles and vehicle parts	12,800	.2	25.00	320.00
Handles	10,000	.1	18.00	180.00
Printing materials	5,800	.1	35.00	203.00
Electrical machinery and apparatus	3,000	*	20.00	60.00
	7,244,700	100.0	$25.82	$187,053.66

* Less than .1 of 1%.

TULIP POPLAR.

This tree is usually called white wood in Connecticut, but is more generally known as the tulip tree, because of its tulip-shaped flower, from which it derives its botanical name, *Liriodendron*

* Those interested, and who wish further information concerning the chestnut-bark disease, are referred to Farmers' Bulletin, No. 467 of the United States Department of Agriculture, "The Control of the Chestnut Bark Disease"; also to the 1911-12 Report of the Botanist, Connecticut Agricultural Experiment Station.

tulipifera. It grows in Connecticut, and was formerly more abundant and of larger size than at present. Few trunks larger than eighteen inches are now cut in the State. The best lumber comes from West Virginia, Kentucky, Tennessee, and western North Carolina and Virginia. The wood is of fine texture and hold paint better than almost any other American wood. It is light, rather soft, has only medium strength, seasons well, but is liable to warp unless carefully seasoned and worked. It is one of the best panel woods, but when wide pieces are used the best results are secured by three or five-ply veneers. In exposed situations this wood resists decay fairly well. There is great difference between the heartwood and the sapwood; the former is often of a yellow color, hence the name, yellow poplar, often applied to it. The sapwood is light in color, and unless quickly seasoned, is liable to turn blue, which color is due to a fungus. As appears from Table V, nineteen Connecticut industries use yellow poplar, nine-tenths of which is brought in from other states. Musical instruments makers are the largest users. The highest price is paid by pattern makers.

TABLE V. CONNECTICUT INDUSTRIES USING TULIP POPLAR, OR WHITEWOOD.

NAME OF INDUSTRY	Quantity		Cost	
	Feet b. m.	Per cent.	Average per 1000	Total
Musical instruments	2,113,500	30.6	$46.72	$98,748.50
Planing mill products	1,404,500	20.3	57.45	81,267.50
Clocks	1,050,000	15.2	35.32	37,082.50
Sash, doors, blinds and general mill work	590,690	8.6	60.35	35,684.15
Vehicles and vehicle parts	575,225	8.3	61.70	35,490.00
Boxes and crates	396,365	5.7	23.94	9,490.63
Miscellaneous	205,000	3.0	38.20	7,830.00
Fixtures	161,500	2.3	43.34	7,001.00
Printing materials	140,000	2.0	21.00	2,940.00
Patterns	44,380	.6	91.76	4,072.30
Furniture	43,000	.6	22.00	946.00
Handles	38,600	.6	22.96	886.20
Cigar boxes	33,000	.5	46.85	1,546.00
Machinery and apparatus, not electrical	30,776	.5	64.05	1,971.18
Wooden ware	29,600	.4	32.74	969.00
Prof. and scientific instruments	25,000	.4	75.00	1,875.00
Ships and boats	15,230	.2	49.29	704.95
Electrical machinery and apparatus	10,000	.1	22.00	220.00
Shuttles, bobbins and spools	8,000	.1	20.00	160.00
	6,914,366	100.0	$47.57	$328,882.91

BASS WOOD.

This tree (*Tilia americana*) occurs in northeastern United States and follows the Appalachian highland southward. Half of the present total cut is credited to Wisconsin and Michigan. It is not abundant in Connecticut. The wood is light in color and weight, is rather tough, but soft, and without conspicuous grain. In this State the makers of clocks and musical instruments use much more of it than is consumed by all other industries combined. (See Table VI.)

TABLE VI. CONNECTICUT INDUSTRIES USING BASSWOOD.

NAME OF INDUSTRY	Quantity		Cost	
	Feet b. m.	Per cent.	Average per 1000	Total
Musical instruments	1,500,000	42.1	$48.35	$72,530.00
Clocks	1,400,000	39.3	32.64	45,700.00
Boxes and crates	268,000	7.5	31.79	8,520.00
Prof. and scientific instruments	137,600	3.9	41.61	5,726.11
Machinery and apparatus, not electrical	84,518	2.4	50.56	4,273.49
Handles	76,800	2.2	41.43	3,181.80
Sash, doors, blinds and general mill work	44,000	1.2	50.98	2,243.00
Printing materials	15,000	.4	31.00	465.00
Wooden ware	9,000	.3	20.00	180.00
Vehicles and vehicle parts	8,375	.2	31.76	266.00
Fixtures	7,305	.2	39.88	291.30
Cigar boxes	4,000	.1	55.50	222.00
Miscellaneous	3,000	.1	20.00	60.00
Furniture	2,000	.1	22.00	44.00
	3,559,598	100.0	$49.37	$143,702.70

THE MAPLES.

Connecticut manufacturers report the use of hard and soft maple. Either of these names may include more than one species, but generally hard maple is the sugar tree (*Acer saccharum*), and soft maple is the red maple (*Acer rubrum*). Woodsmen easily distinguish these in the forest by their general appearance. The United States Census, in its annual report of lumber cut, makes no distinction, and although the total sawmill output of the United States probably includes a dozen species of maple, it is all listed under the one name "maple." Rock maple is

not a distinct species, but the name is usually applied to the hard or sugar maple. Eighteen industries in Connecticut use maple, the largest users being the musical instrument makers, with chair manufacturers next. (See Table VII.) Nearly 23 per cent. of the hard maple, and nearly 30 per cent. of the soft maple manufactured into commodities, grows in the State.

TABLE VII. CONNECTICUT INDUSTRIES USING MAPLE.

NAME OF INDUSTRY	Quantity		Cost	
	Feet b. m.	Per cent.	Average per 1000	Total
Musical instruments	1,190,500	30.46	$42.15	$50,184.50
Chairs	685,000	17.52	30.69	21,025.00
Handles	576,100	14.74	22.17	12,771.20
Woodenware and novelties	240,500	6.15	25.00	6,013.00
Planing mill products	223,000	5.71	40.54	9,040.50
Carpenters' tools	190,000	4.86	25.92	4,925.00
Agricultural implements	167,000	4.27	16.12	2,692.00
Sash, doors, blinds and general mill work	131,550	3.37	47.00	6,183.00
Vehicles and vehicle parts	91,645	2.34	28.25	2,588.70
Clocks	80,000	2.05	28.00	2,240.00
Miscellaneous	64,000	1.64	33.44	2,140.00
Ship and boat building	63,000	1.61	31.43	1,980.00
Fixtures	60,500	1.55	45.00	2,722.50
Shuttles, spools and bobbins	50,200	1.28	40.06	2,011.00
Boxes and crates	40,000	1.02	28.63	1,145.00
Printing materials	33,136	.85	48.57	1,609.34
Machine parts	18,930	.48	51.45	973.95
Butchers' blocks	2,050	.05	35.73	73.25
Furniture	2,000	.05	25.00	50.00
	3,909,111	100.00	$33.35	$130,367.94

THE ASHES.

Three species of ash are native to Connecticut. Each is named from the color of its wood or bark. They are white ash (*Fraxinus americana*), black ash (*Fraxinus nigra*), and red ash (*Fraxinus pennsylvanicum*). The Connecticut manufacturers probably use all three species, but report only two kinds, white and brown. The latter probably includes all that is not white ash, and possibly some of that, for the distinction seems to be based on the color of the wood without much regard to species. The brown ash reported is used chiefly for interior house finish and for planing-mill products, while the white ash goes into vehicles. Sixteen industries report ash, but more is used in vehicle making than in

any other industry. (See Table VIII.) Ash is valuable chiefly because it is strong, stiff, and hard. It has enough figure to give it value in furniture making, stairwork, and inside finish.

Table VIII. Connecticut Industries Using Ash.

NAME OF INDUSTRY	Quantity		Cost	
	Feet b. m.	Per cent.	Average per 1000	Total
Vehicles and vehicle parts	1,132,465	37.8	$59.13	$66,967.71
Planing mill products	660,000	22.0	58.08	38,332.00
Sash, doors, blinds and general mill work	590,965	19.7	58.09	34,313.27
Miscellaneous	206,000	6.9	20.02	4,125.00
Handles	93,900	3.1	30.40	2,854.90
Shuttles, bobbins and spools ..	82,000	2.8	25.12	2,060.00
Agricultural implements	81,000	2.7	21.88	1,772.00
Sporting and athletic goods ...	40,000	1.4	25.00	1,000.00
Boxes and crates	33,000	1.1	27.58	910.00
Printing materials	31,000	1.0	61.32	1,901.00
Machinery and apparatus, not electrical	20,868	.7	48.00	1,001.66
Musical instruments	6,000	.2	54.00	324.00
Ships and boats	5.500	.2	40.00	220.00
Furniture	5,000	.2	53.00	265.00
Wooden ware	4,000	.1	35.00	140.00
Prof. and scientific instruments	3,500	.1	20.00	70.00
	2,995,198	100.0	$52.17	$156,256.54

HICKORY.

As in the case of ash, a number of species of hickory are used without much attempt to distinguish them. Four or five species grow in Connecticut, and its sawmills cut more of this wood than do those of any other New England State. The country's chief supply, however, comes from the middle and lower Mississippi Valley. Hickory has been called the indispensable wood because for some purposes no satisfactory substitute has been found. It is strong, tough, elastic and hard, and has no equal for long, slender handles, as well as for buggy spokes, poles and shafts. Eleven industries in Connecticut report its use. (See Table IX.) More than three-fourths of the total is consumed by makers of vehicles and handles.

TABLE IX. CONNECTICUT INDUSTRIES USING HICKORY.

NAME OF INDUSTRY	Quantity		Cost	
	Feet b. m.	Per cent.	Average per 1000	Total
Vehicles and vehicle parts	1,172,365	41.6	$41.85	$49,062.85
Handles	987,400	35.0	23.00	22,709.00
Shuttles, spools and bobbins...	444,000	15.7	26.65	11,832.50
Prof. and scientific instruments	105,500	3.7	24.93	2,630.00
Agricultural implements	50,000	1.8	22.30	1,115.00
Boxes and crates	25,000	.9	14.00	350.00
Sash, doors, blinds and general mill work	13,000	.5	76.54	995.00
Sporting and athletic goods....	13,000	.5	25.00	325.00
Ships and boats	3,500	.1	25.00	87.50
Miscellaneous	2,500	.1	25.00	62.50
Furniture	2,000	.1	16.00	32.00
	2,818,265	100.0	$31.65	$89,201.35

THE BIRCHES.

Five species of birch grow in Connecticut: sweet birch (*Betula lenta*), yellow birch (*Betula lutea*), paper birch (*Betula papyrifera*), river birch (*Betula nigra*), and white birch, frequently called gray birch (*Betula populifolia*). Three of these are extensively used, but only two, yellow birch and sweet birch, are of importance in Connecticut. The birch employed for furniture and interior finish for houses is mostly the yellow. Paper birch is the best spool wood. Indians and traders formerly made canoes of its bark, and it has not yet wholly gone out of use for that purpose. The richly colored heartwood of the sweet and yellow birches gives them value for industrial purposes. The sweet birch is so called because of the sweet flavor of the inner bark. Musical instrument makers are the largest users of the wood in Connecticut; but much is made into doors. Nine industries in the State report birch, but generally the particular species used is not stated. (See Table X.)

THE GUMS.

Connecticut manufacturers use three gum woods, two of which grow in the State. Cotton gum or tupelo (*Nyssa aquatica*) and water gum (*Nyssa biflora*) are not native to the State, but black gum or pepperidge (*Nyssa sylvatica*) is a common tree,

TABLE X. CONNECTICUT INDUSTRIES USING BIRCH.

NAME OF INDUSTRY	Quantity		Cost	
	Feet b. m.	Per cent.	Average per 1000	Total
Handles	654,000	18.58	$19.13	$12,513.00
Musical instruments	627,000	17.81	40.89	25,636.00
Woodenware and novelties	557,600	15.84	22.32	12,446.00
Chairs	500,000	14.20	30.10	15,050.00
Shuttles, spools and bobbins	310,250	8.81	31.70	9,835.00
Sash, doors, blinds and general millwork	290,330	8.25	54.10	15,705.18
Agricultural implements	198,000	5.63	16.40	3,248.00
Planing mill products	171,000	4.86	52.74	9,019.00
Machinery and apparatus—electrical	70,000	1.99	20.00	1,400.00
Clocks	43,000	1.22	45.12	1,940.00
Miscellaneous	28,500	.81	19.72	562.00
Furniture	25,000	.71	21.84	546.00
Printing materials	20,000	.57	58.20	1,164.00
Fixtures	14,440	.41	37.66	542.76
Vehicles and vehicle parts	10,500	.30	22.86	240.00
Ship and boat building	500	.01	50.00	25.00
	3,520,120	100.00	$31.21	$109,871.94

while red gum (*Liquidambar styraciflua*) is occasionally found in the southwestern corner. No native gum wood is reported, however, the cotton and water gums and red gum of commerce coming from the South. Water gum, like the native black gum, is known as one of the most difficult domestic woods to split unless frozen. Red gum is popular as a material for furniture and finish, and lumbermen speak of it as two kinds of lumber, sap, and red or heart. The same tree produces both, but some trees are nearly all sap, while others may be nearly all heart. When cut in rotary veneer around the log a figure closely resembling Circassian walnut is often shown, which makes it valuable for table tops and panels. In Connecticut the makers of firearms use more than 20,000 feet of red gum yearly for gun and pistol stocks as a substitute for black walnut. The largest use of gum in the State is for sash, doors, blinds, and general millwork. (See Table XI.)

THE ELMS.

Three species of elm are used by Connecticut manufacturers: white elm (*Ulmus americana*), slippery elm (*Ulmus pubescens*),

TABLE XI. CONNECTICUT INDUSTRIES USING RED GUM.

NAME OF INDUSTRY	Quantity		Cost	
	Feet b. m.	Per cent.	Average per 1000	Total
Sash, doors, blinds and general mill work	231,505	29.2	$50.40	$11,668.23
Planing mill products	210,500	26.6	45.21	9,517.50
Firearms	210,000	26.5	44.50	9,345.00
Miscellaneous	40,000	5.1	34.00	1,360.00
Musical instruments	35,000	4.4	45.00	1,575.00
Clocks	27,000	3.4	32.91	888.50
Cigar boxes	17,000	2.1	45.88	780.00
Fixtures	14,000	1.8	34.00	476.00
Furniture	5,000	.6	43.00	215.00
Electrical machinery and apparatus	2,500	.3	25.00	62.50
	792,505	100.0	$45.28	$35,887.73

and cork elm (*Ulmus racemosa*), the last not being found in the State. Little effort is made to separate the species. Rock elm is a name given to hard, tough wood, but it does not apply to any particular species; it may be any one of the three. Musical instrument makers use about one-half of the elm reported used in the State. The rest is divided among a number of industries. (See Table XII.) Cigar boxes took 93,500 feet, although elm is rarely reported by that industry.

TABLE XII. CONNECTICUT INDUSTRIES USING ELM.

NAME OF INDUSTRY	Quantity		Cost	
	Feet b. m.	Per cent.	Average per 1000	Total
Musical instruments	638,000	50.80	$41.18	$26,270.00
Vehicles and vehicle parts	256,000	20.38	26.72	6,840.90
Boxes and crates	156,000	12.42	43.88	6,845.00
Cigar boxes	93,500	7.44	52.41	4,900.00
Woodenware and novelties	50,000	3.98	25.00	1,250.00
Chairs	20,000	1.59	40.00	800.00
Sash, doors, blinds and general mill work	18,700	1.49	43.61	815.50
Agricultural implements	10,000	.80	18.00	180.00
Handles	6,000	.48	20.00	120.00
Ship and boat building	3,500	.28	54.29	190.00
Miscellaneous	3,000	.24	20.00	60.00
Furniture	1,200	.10	16.00	19.20
	1,255,900	100.00	$38.45	$48,290.60

CHERRY.

Practically all of the cherry lumber of this country comes from a single species (*Prunus serotina*), generally known as wild or black cherry. The fine color of the heartwood gives it much value for many purposes. Twelve industries in Connecticut report its use, but nearly half goes into professional and scientific instruments, the next largest use being for handles. The best original stands of cherry in the United States were found through western New York, southward through Pennsylvania and West Virginia. It is not an important timber tree in Connecticut, but small quantities are cut by many mills. (See Table XIII.)

TABLE XIII. CONNECTICUT INDUSTRIES USING CHERRY.

NAME OF INDUSTRY	Quantity		Cost	
	Feet b. m.	Per cent.	Average per 1000	Total
Prof. and scientific instruments	375,000	47.1	$ 57.50	$21,562.50
Handles	120,000	15.1	20.17	2,420.00
Planing mill products	100,000	12.6	97.50	9,750.00
Musical instruments	89,000	11.2	88.65	7,890.00
Printing materials	45,000	5.6	81.78	3,680.00
Chairs	25,000	3.1	120.00	3,000.00
Wooden ware	20,000	2.5	20.00	400.00
Sash, doors, blinds and general mill work	13,000	1.6	112.31	1,460.00
Fixtures	6,500	.8	45.23	294.00
Patterns	1,300	.2	120.00	156.00
Vehicles and vehicle parts	1,000	.1	20.00	20.00
Ships and boats	1,000	.1	60.00	60.00
	796,800	100.0	$63.62	$50,692.50

BEECH.

The one species of beech native to this country is common east of the Mississippi River. The wood is hard, heavy, and strong, and is used extensively for carpenter's tools and scientific instruments. It polishes well, but is apt to check in seasoning. Over 50 per cent. of the amount used in Connecticut is grown in the State.

BLACK WALNUT.

This wood is cut in more than thirty states, but is no longer abundant anywhere. Very large trees once grew in Connecticut,

and a small amount is still cut in the sawmills of the State. It has dropped from the important place it once held as a furniture and cabinet wood, partly because of scarcity and partly because of change in fashion. An important use for walnut in Connecticut is for gun stocks. Its handsome color, sufficient strength, and medium weight fit it for that product. The heartwood of butternut (*Juglans cinerea*) resembles black walnut in grain, but is not so dark in color. It grows in Connecticut but is not plentiful.

OTHER NATIVE WOODS.

Small amounts of several other native hardwoods are used in Connecticut, besides those already mentioned. For example, persimmon and dogwood are regarded as the best shuttle woods of this country. Dogwood grows abundantly in the State, but usually the commercial supply of both woods comes from regions further south, as does the small amount of cottonwood also reported.

FOREIGN WOODS.

Mahogany is imported in large quantities, and made into furniture, finish, and musical instruments. The true mahogany, a tropical American tree (*Swietenia mahagani*), is found in the United States only in the extreme south of Florida. There are other woods which in commerce pass for mahogany. One of the most widely used comes from Africa, another from the United States of Colombia, and others from the Philippines and from India.

Spanish cedar, from Cuba, Mexico and Central America, appears to have no general use in this country, except for cigar boxes. Its aromatic odor, subdued pleasing color, lightness, the ease with which it may be worked, together with its comparative cheapness, make it a favorite with cigar-box makers. It is surprising that more Spanish cedar was not reported, as cigar making is an important industry in Connecticut, and cigar boxes are in great demand.

Several other foreign hardwoods are purchased by Connecticut manufacturers. Boxwood from the West Indies is substituted for the more costly Turkish boxwood. Cocobola comes from Central America and northern South America; rosewood from

Brazil; lignum-vitæ from the West Indies; ebony from Madagascar and Ceylon, and teak from British India and Burma.

INDUSTRIES.

The various woods demanded by the Connecticut manufacturers are listed and discussed on the preceding pages. The industries using these woods, the extent to which they are used, and the qualities which make them valuable will next be considered. There are twenty-six Connecticut industries listed in Table XIV.

TABLE XIV. CONSUMPTION OF WOOD

Rank	INDUSTRY	Quantity used annually		Average cost per 1000 ft. f. o. b. factory
		Feet b. m.	Per cent.	
1	Boxes and crates	24,411,090	22.18	$21.11+
2	Planing mill products	23,011,000	20.91	37.33+
3	Sash, doors, blinds and general millwork	17,299,570	15.72	42.87
4	Musical instruments	11,811,927	10.73	49.13—
5	Ships and boats	7,084,354	6.44	40.93—
6	Clocks	4,761,590	4.33	35.81+
7	Vehicles and vehicle parts	4,392,010	3.99	48.55—
8	Handles	3,484,320	3.17	33.31
9	Carpenters' tools	2,190,531	1.99	68.47—
10	Woodenware and novelties	1,746,800	1.59	24.55+
11	Miscellaneous	1,686,000	1.53	38.66—
12	Chairs	1,622,500	1.47	35.92+
13	Fixtures	1,036,245	.94	48.70
14	Shuttles, spools, bobbins, etc.	1,023,450	.93	27.65
15	Electrical apparatus	793,000	.72	36.17—
16	Agricultural implements	741,000	.67	21.89—
17	Firearms	603,431	.55	67.11
18	Machine	554,751	.50	39.90
19	Patterns	512,905	.47	65.73—
20	Furniture	489,238	.45	35.93+
21	Printing materials	289,936	.26	41.26—
22	Cigar boxes	209,500	.19	60.94
23	Tanks	154,825	.14	39.51+
24	Sporting and athletic goods	110,300	.10	22.68+
25	Laundry appliances	29,000	.03	27.93
26	Butchers' blocks	2,050	*....	35.73
	Totals	110,051,323	100.00	$37.08

* Less than 1-100 of one per cent.

To maintain uniformity in the reports, the same classification is here followed that has been used in preparing similar reports for other states. Connecticut is surpassed by many states in the amount of wood used for manufacturing purposes, but only six of the twenty states already studied exceed Connecticut in the number of industries and the diversity of manufactured wood products.

Whenever more than three manufacturers in the State specialize in the making of a certain commodity, or closely related commodities, their specialty is classed as an industry. For instance, the

IN CONNECTICUT—BY INDUSTRIES.

	Grown in Connecticut			Grown out of Connecticut		
Total cost f. o. b. factory	Quantity Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Quantity Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory
$515,431.70	5,330,865	$19.14	$102,033.57	19,080,225	$21.67—	$413,398.13
859,107.00	1,050,500	24.49	25,725.50	21,960,500	37.95—	833,381.50
741,641.07	852,000	29.38	25,032.00	16,447,570	43.57—	716,609.07
580,284.15	331,000	21.05	6,968.00	11,480,927	49.94—	573,316.15
289,962.27	1,789,670	32.76+	58,636.27	5,294,684	43.69—	231,326.00
167,309.80	724,500	19.18—	13,895.00	4,037,090	38.00	153,414.80
213,224.32	2,186,095	30.71—	67,129.15	2,205,915	66.23—	146,095.17
116,065.60	2,339,900	20.70—	48,426.70	1,144,420	59.10+	67,638.90
149,982.75	348,450	20.71—	7,214.95	1,842,081	77.50+	142,767.80
42,889.70	632,000	18.16+	11,534.00	1,111,800	28.20	31,355.70
65,177.00	434,000	19.98	8,672.00	1,252,000	45.13+	56,505.00
58,287.50	327,000	34.82—	11,385.00	1,295,500	36.20+	46,902.50
50,463.56	140,500	20.54+	2,886.50	895,745	53.11+	47,577.06
28,298.50	450,500	26.62	11,540.00	572,950	29.25	16,758.50
28,680.00	213,000	20.23+	4,310.00	580,000	42.02	24,370.00
16,220.00	666,000	18.16	12,095.00	75,000	55.00	4,125.00
40,496.00	.....	.....	.....	603,431	67.11	40,496.00
22,135.07	69,975	26.90	1,882.30	484,776	41.78—	20,252.77
33,711.61	117,227	22.57—	2,645.68	395,678	78.71+	31,065.93
27,364.95	134,700	18.27—	2,460.70	354,538	70.24+	24,904.25
11,962.34	5,800	35.00	203.00	284,136	41.39—	11,759.34
12,767.00	.....	.....	.....	209,500	60.94	12,767.00
6,117.75	2,500	28.00	70.00	152,325	39.70	6,047.75
2,502.00	110,000	22.50	2,475.00	300	90.00	27.00
810.00	18,500	23.78+	440.00	10,500	35.24—	370.00
73.25	2,050	35.73	73.25	.....	.....	.....
$4,080,964.89	18,279,732	$23,40	$427,733.57	91,771,591	$39.81—	$3,653,231.32

TABLE XV. BOXES AND CRATES.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
White pine	16,940,925	$21.70	$367,617.83	4,104,000	$19.58+	$80,376.44	12,836,925	$22.38—	$287,241.39
Spruce	2,179,524	20.24—	44,109.57	.....	.....	.....	2,179,524	20.24—	44,109.57
Cotton gum	1,295,676	17.04—	22,072.17	.....	.....	.....	1,295,676	17.04—	22,072.17
Water or black gum	1,250,000	17.00	21,250.00	.....	.....	.....	1,250,000	17.00	21,250.00
Loblolly pine	800,000	21.86—	17,485.00	.....	.....	.....	800,000	21.86—	17,485.00
Hemlock	513,000	13.93+	7,148.00	363,000	14.04+	5,098.00	150,000	13.67—	2,050.00
Yellow poplar (whitewood)	396,365	23.94+	9,490.63	390,365	23.11+	9,022.63	6,000	78.00	468.00
Basswood	268,000	31.79+	8,520.00	3,000	15.00	45.00	265,000	31.98+	8,475.00
Pitch pine	245,000	17.27—	4,230.00	245,000	17.27—	4,230.00	.....	.....	.....
Chestnut	142,500	14.82—	2,111.50	132,500	14.43—	1,911.50	10,000	20.00	200.00
White (soft) elm	106,000	43.35—	4,595.00	6,000	15.83+	95.00	100,000	45.00	4,500.00
Cottonwood	65,000	15.00	975.00	.....	.....	.....	65,000	15.00	975.00
Rock (cork) elm	50,000	45.00	2,250.00	.....	.....	.....	50,000	45.00	2,250.00
Ash	33,000	27.58—	910.00	25,000	14.00	350.00	8,000	70.00	560.00
Hard maple	30,000	34.50	1,035.00	.....	.....	.....	30,000	34.50	1,035.00
Hickory	25,000	14.00	350.00	25,000	14.00	350.00	.....	.....	.....
Red oak	24,000	16.67—	400.00	24,000	16.67—	400.00	.....	.....	.....
Cypress	19,100	20.00	382.00	.....	.....	.....	19,100	20.00	382.00
Longleaf pine	15,000	23.00	345.00	.....	.....	.....	15,000	23.00	345.00
Soft maple	10,000	11.00	110.00	10,000	11.00	110.00	.....	.....	.....
Sycamore	3,000	15.00	45.00	3,000	15.00	45.00	.....	.....	.....
Totals	24,411,090	$21.11+	$515,431.70	5,330,865	$19.14	$102,033.57	19,080,225	$21.67—	$413,398.13

cigar box manufacturers make one kind of container, the trunk manufacturers another, and the casket manufacturers, in their outer cases or rough boxes, still another. Instead of listing these several products as "Boxes," they are classified under the separate titles. The same rule accounts for noting the manufacture of chairs as distinct from furniture making, but in several cases the classifications run so closely together that a distinction is difficult to make. Because of this fact, an arbitrary division of the data is sometimes unavoidable. These cases will be pointed out later on under the discussion of the individual industry tables. In many cases, the information given by a single manufacturer relates to the making of products listed under several different industries. This explains the frequent appearance in the directory of this report of the names of the same manufacturer under more than one industry heading. Several small industries, in which no more than two establishments reported, are grouped together under the caption "Miscellaneous."

Over $4,000,000 a year is paid by the Connecticut wood users for their raw material. Less than 15 per cent. of this is paid for home-grown woods. This leaves more than $3,500,000 as the sum which Connecticut thus pays out each year to other states. In not a few instances, this purchase money is expended for material which might be produced in the State.

BOXES.

In Connecticut more lumber is used for boxes and crates than for any other class of wood products, but the cost of the box material, over $500,000, was considerably less than the cost of lumber reported by industries using smaller quantities. The musical instrument makers, for instance, paid $65,000 more, and used less than one-half of the quantity, while the sash and door factories used nearly 6,000,000 feet less but paid $200,000 more. Much of the material used for boxes is of the cheaper grades, as shown by the fact that the average price, $21.11 per thousand feet, is lower than that for raw material reported by any of the other twenty-five classes of manufacturers.

The statistics in Table XV include the material used not only by box factories but also by box-making departments of other manufacturing industries, which produce packages and crates to

TABLE XVI. PLANING-MILL PRODUCTS.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Loblolly pine	4,279,000	$ 25.48+	$109,040.00	.....	.....	.....	4,279,000	$ 25.48	$109,040.00
Cypress	3,658,700	40.97+	149,914.50	.....	.....	.....	3,658,700	40.97+	149,914.50
Shortleaf pine	3,497,800	23.11+	80,838.50	.....	.....	.....	3,497,800	23.11+	80,838.50
White pine	2,613,000	39.13—	102,245.25	659,500	$25.01	$16,544.00	1,953,500	43.80	85,701.25
Spruce	2,238,500	24.54	59,425.00	.....	.....	.....	2,238,500	24.54	59,425.00
Yellow poplar (whitewood)	1,404,500	57.45+	81,267.50	2,000	25.00	50.00	1,402,500	57.91	81,217.50
Longleaf pine	984,500	28.08—	27,642.50	.....	.....	.....	984,500	28.08—	27,642.50
Chestnut	839,500	46.48—	39,017.00	250,000	24.29—	6,071.50	589,500	55.89—	32,945.50
White oak	824,000	73.60+	60,650.00	32,000	32.50	1,040.00	792,000	75.27—	59,610.00
Red oak	818,500	58.61	47,972.75	38,000	20.00	760.00	780,500	60.49	47,212.75
Ash	660,000	58.08—	38,332.00	.....	.....	.....	660,000	58.08—	38,332.00
Hard maple	223,000	40.54	9,040.50	4,000	30.00	120.00	219,000	40.73+	8,920.50
Red gum	210,500	45.21+	9,517.50	.....	.....	.....	210,500	45.21+	9,517.50
Sweet birch	171,000	52.74+	9,019.00	.....	.....	.....	171,000	52.74+	9,019.00
Sugar pine	127,000	47.91	6,085.00	.....	.....	.....	127,000	47.91	6,085.00
Cherry	100,000	97.50	9,750.00	.....	.....	.....	100,000	97.50	9,750.00
Douglas fir	100,000	45.00	4,500.00	.....	.....	.....	100,000	45.00	4,500.00
Western red cedar	90,000	45.00	4,050.00	.....	.....	.....	90,000	45.00	4,050.00
Tupelo	47,500	34.11—	1,620.00	.....	.....	.....	47,500	34.11—	1,620.00
Mahogany	42,000	166.67—	7,000.00	.....	.....	.....	42,000	166.67—	7,000.00
Hemlock	40,000	16.00	640.00	40,000	16.00	640.00	.....	.....	.....
Pitch pine	25,000	20.00	500.00	25,000	20.00	500.00	.....	.....	.....
Northern white cedar	10,000	30.00	300.00	.....	.....	.....	10,000	30.00	300.00
Black walnut	5,000	120.00	600.00	.....	.....	.....	5,000	120.00	600.00
Beech	2,000	70.00	140.00	.....	.....	.....	2,000	70.00	140.00
Totals	23,011,000	$37.33	$859,107.00	1,050,500	$24.49	$25,725.50	21,960,500	$37.95—	$833,381.50

meet their own requirements only. In the directory appended to this report, box factories are designated by an asterisk (*). There is a class of box makers who purchase their material in the form of shooks or knocked-down boxes; these are manufacturers only in that they assemble or nail the parts together. This class of box makers was not asked to make a report, since information concerning the material used by them will be secured from the shook makers and appear in the report of the particular State in which their several factories are in operation.

Twenty-one different woods are used in Connecticut for boxes and crates, and the entire supply of only five was reported as home-grown, while nine kinds came entirely from other states. White pine, which is one of the three principal box woods in the country, made up nearly 70 per cent. of the total quantity used in Connecticut. It is used not only for common nailed boxes, shooks, and crates, but also for lock-cornered and dove-tailed boxes.

The quantity of cotton gum or tupelo consumed was probably greater than that shown in the table, as cotton gum, like water gum, is often called black gum and, in a few cases, it was difficult to determine from the manufacturers' report which of the two species was used. That these two woods should have been used in greater amounts than was loblolly pine is somewhat surprising, since they grow in the same region with loblolly, mostly in Virginia and North Carolina. In these states the quantity of loblolly used for boxes exceeds many fold the quantity of tupelo and black gum used. In Connecticut the largest demand for native pitch pine is from the box makers who use it for rough crating and cheap boxes. The amount of chestnut lumber used for this purpose is surprisingly low, since this tree is more abundant in Connecticut than any other and, next to soft maple, which is used only in small amounts, it is the cheapest wood purchased. Of the twenty-one states in which similar studies have been made, Connecticut alone reports the use of hickory by box factories.

PLANING-MILL PRODUCTS.

It is difficult to distinguish definitely between an industry making ordinary planing-mill products and one making sash,

TABLE XVII. SASH, DOORS, BLINDS, AND GENERAL MILLWORK.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
White pine	5,670,135	$ 37.49	$212,582.26	324,500	$31.92+	$10,359.00	5,345,635	$ 37.83—	$202,223.26
Cypress	2,749,250	40.32	110,864.24	.....	.....	.....	2,749,250	40.32	110,864.24
Loblolly pine	1,485,310	31.64+	47,000.30	.....	.....	.....	1,485,310	31.64+	47,000.30
Spruce	1,104,700	24.47	27,032.30	.....	.....	.....	1,104,700	24.47	27,032.30
White oak	932,700	72.47	67,593.00	34,500	28.65	988.50	898,200	74.15+	66,604.50
Sugar pine	921,370	55.64	51,287.35	.....	.....	.....	921,370	55.64	51,287.35
Chestnut	683,480	37.61—	25,704.15	445,250	27.57	12,275.25	238,230	56.37—	13,428.90
Ash	590,965	58.09—	34,313.27	.....	.....	.....	590,965	58.09—	34,313.27
Yellow poplar (whitewood)	590,690	60.35	35,684.15	.....	.....	.....	590,690	60.35	35,684.15
Western yellow pine	400,000	45.00	18,000.00	.....	.....	.....	400,000	45.00	18,000.00
Red oak	384,485	54.83	21,081.24	43,500	29.82—	1,297.00	340,985	58.02	19,784.24
Douglas fir	325,680	46.96+	15,294.90	.....	.....	.....	325,680	46.96+	15,294.90
Longleaf pine	262,400	32.99—	8,655.80	.....	.....	.....	262,400	32.99—	8,655.80
Red gum	231,505	50.40+	11,668.23	.....	.....	.....	231,505	50.40+	11,668.23
Sweet birch	173,130	65.46	11,332.78	.....	.....	.....	173,130	65.46	11,332.78
Hard maple	131,550	47.00	6,183.00	3,250	23.77—	77.25	128,300	47.59—	6,105.75
Shortleaf pine	125,000	29.20	3,650.00	.....	.....	.....	125,000	29.20	3,650.00
Idaho white pine	123,000	46.83	5,760.00	.....	.....	.....	123,000	46.83	5,760.00
Yellow birch	81,200	44.92	3,647.40	.....	.....	.....	81,200	44.92	3,647.40
Mahogany	72,020	165.96—	11,952.20	.....	.....	.....	72,020	165.96—	11,952.20
Cotton gum (tupelo)	50,800	35.06—	1,781.00	.....	.....	.....	50,800	35.06—	1,781.00
Basswood	44,000	50.98—	2,243.00	.....	.....	.....	44,000	50.98—	2,243.00
Paper birch	36,000	20.14	725.00	.....	.....	.....	36,000	20.14	725.00
Redwood	26,500	32.83	870.00	.....	.....	.....	26,500	32.83	870.00
Sitka spruce	25,000	47.00	1,175.00	.....	.....	.....	25,000	47.00	1,175.00
White (soft) elm	18,700	43.61—	815.50	.....	.....	.....	18,700	43.61—	815.50
Western red cedar	16,500	32.12—	530.00	.....	.....	.....	16,500	32.12—	530.00
Black walnut	14,500	105.82	1,535.00	.....	.....	.....	14,500	105.82	1,535.00
Cherry	13,000	112.31	1,460.00	.....	.....	.....	13,000	112.31	1,460.00
Hickory	13,000	76.54—	995.00	1,000	35.00	35.00	12,000	80.00	960.00
Butternut	3,000	75.00	225.00	.....	.....	.....	3,000	75.00	225.00
Totals	17,299,570	$42.87	$741,641.07	852,000	$29.38	$25,032.00	16,447,570	$43.57—	$716,609.07

doors, blinds, or doing a general millwork business. The former industry includes those products which can be manufactured for general use, such as flooring, siding, ceiling, partitions, and stock moulding, while under the latter industry are listed commodities made for a particular purpose, usually according to a design or drawing. This separation may seem unnecessary in Connecticut where the products of both industries are manufactured by the same class of establishments, but to make this report comparable with those from other states, a uniform method of classification is followed. In many states planing mills are operated in connection with sawmills, and where this is the case, the planing mills make products quite distinct from those of the sash and general millwork factories.

Large quantities of the planing-mill products used in Connecticut are brought into the State already manufactured, but information relating to this class of material was not asked for and is not included in the statistics of Table XVI.

Loblolly pine leads all other woods in the quantity used. Its cheapness, ease of working, and attractive figure account for its popularity with this class of manufacturers. Shortleaf often grows in the same region with loblolly and the two woods are so similar in quality and appearance that they are sold together as North Carolina pine, or sometimes as Virginia pine. Loblolly makes up more than 75 per cent. of the mixture.

Over 95 per cent. of the wood shown in the table grew outside of Connecticut, while only two kinds were reported as grown entirely at home. These two were hemlock and pitch pine. The amount of waste at planing mills is very large, and in Connecticut few manufacturers report any use of this waste other than for fuel, except that shavings and sawdust occasionally serve for bedding and for ice packing.

SASH, DOORS, BLINDS AND GENERAL MILLWORK.

Table XVII lists thirty-one kinds of wood that are used not only for sash, doors, and blinds, but for mouldings, casings, stair and porch work, screens, consoles, mantels, and other commodities for house building. These products are made up to fit a particular design and thus differ from the material listed in Table XVI as planing-mill products, which are made for general

TABLE XVIII. MUSICAL INSTRUMENTS.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Chestnut	3,559,000	$ 21.58+	$76,815.50	215,000	$21.02+	$4,520.00	3,344,000	$ 21.62	$72,295.50
Yellow poplar (whitewood)	2,113,500	46.72	98,746.50	35,000	18.00	630.00	2,078,500	47.21	98,116.50
Basswood	1,500,000	48.35+	72,530.00	.....	.....	.....	1,500,000	48.35+	72,530.00
Hard maple	1,190,500	42.15+	50,184.50	8,000	18.00	144.00	1,182,500	42.32	50,040.50
Sugar pine	675,000	85.23	57,530.00	.....	.....	.....	675,000	85.23	57,530.00
Rock (cork) elm	638,000	41.18—	26,270.00	.....	.....	.....	638,000	41.18—	26,270.00
Yellow birch	400,000	42.00	16,800.00	.....	.....	.....	400,000	42.00	16,800.00
White oak	362,900	109.05—	39,573.50	.....	.....	.....	362,900	109.05—	39,573.50
White pine	349,900	59.89	29,955.65	.....	.....	.....	349,900	59.89	20,955.65
Mahogany	269,500	243.60	65,649.50	.....	.....	.....	269,500	243.60	65,649.50
Sweet birch	219,000	39.69	8,692.00	.....	.....	.....	219,000	39.69	8,692.00
Longleaf pine	90,000	38.00	3,420.00	.....	.....	.....	90,000	38.00	3,420.00
Cherry	89,000	38.65+	7,890.00	30,000	30.00	900.00	59,000	118.47	6,990.00
Boxwood	69,228	53.45	3,700.00	.....	.....	.....	69,228	53.45	3,700.00
Black walnut	57,250	198.37	11,356.75	.....	.....	.....	57,250	198.37	11,356.75
Spruce	55,000	48.98	2,693.75	.....	.....	.....	55,000	48.98	2,693.75
Ebony	41,041	266.25	10,927.00	.....	.....	.....	41,041	266.25	10,927.00
Red gum	35,000	45.00	1,575.00	.....	.....	.....	35,000	45.00	1,575.00
Butternut	35,000	18.00	630.00	35,000	18.00	630.00	.....	.....	.....
Cypress	25,000	60.00	1,500.00	.....	.....	.....	25,000	60.00	1,500.00
Red oak	24,000	97.04	2,329.00	.....	.....	.....	24,000	97.04	2,329.00
Paper birch	8,000	18.00	144.00	8,000	18.00	144.00	.....	.....	.....
Ash	6,000	54.00	324.00	.....	.....	.....	6,000	54.00	324.00
Circassian walnut	100	450.00	45.00	.....	.....	.....	100	450.00	45.00
Rosewood	8	312.50	2.50	.....	.....	.....	8	312.50	2.50
Totals	11,811,927	$49.13—	$580,284.15	331,000	$21.05	$6,968.00	11,480,927	$49.94—	$573,316.15

use. More than 30 per cent. of the wood used is white pine, which has a greater number of uses in this industry than any other wood reported. Formerly white pine from New England and the Lake States was the only wood used for making sash, doors and blinds in Connecticut, but in later years the growing scarcity of the upper grades of this wood has resulted in the substitution of sugar pine, Idaho white pine, and Western yellow pine, woods which are similar in appearance and quality to white pine, and are often sold as Western white pine. The large quantity of these Western woods used in Connecticut is due to the fact that only upper grades can be shipped so far, and these sell at lower prices than similar grades of Eastern white pine.

Cypress is the second wood of importance in this industry, most of it coming from the Carolinas and Florida. It goes into doors, stair work and interior finish, and is used more than any other wood for outside casing, cornice and porch work. Douglas fir from the Pacific Coast competes with cypress, more particularly for exterior work. The price of the Western wood is only $6.34 more than the average cost of cypress. Loblolly pine and a small amount of shortleaf pine, which are sold together as North Carolina and longleaf pine, have a substantial place in this industry. These three woods are the important members of the yellow pine family, and their annual consumption aggregates over a million and three-quarter feet in the sash and door industry.

Among the hardwoods used chiefly for interior finish, the oaks are the most important, white oak greatly exceeding red oak in quantity. The ornamental figure and cheapness of chestnut make it the most popular for this use next to oak. The other woods listed in the table are used only in small amounts. Their number is due to the fact that different woods are selected to suit the designs and color schemes of the particular jobs in which they are to be used.

MUSICAL INSTRUMENTS.

Table XVIII shows the material used in making pianos, and cabinet and church organs, the large part going into the former product. Thirteen manufacturers supplied the information listed. Some piano makers specialize in building cases, while others

Table XIX. Ships and Boats.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Longleaf pine	3,949,995	$ 33.33	$151,393.07	.....	.....	.....	3,949,995	$ 33.33	$151,393.07
Oak (white)	1,296,625	40.39	52,370.31	1,169,525	$37.16+	$43,464.56	127,100	70.07—	8,905.75
Chestnut	546,645	23.54—	12,866.71	546,645	23.54—	12,866.71	.....	.....	.....
Spruce	315,370	26.68	8,415.01	.....	.....	.....	315,370	26.68	8,415.01
Southern white cedar	267,700	56.72+	15,185.00	.....	.....	.....	267,700	56.72+	15,185.00
Douglas fir	182,500	43.94	8,019.00	.....	.....	.....	182,500	43.94	8,019.00
White pine	111,935	70.54	7,895.58	.....	.....	.....	111,935	70.54	7,895.58
Hackmatack	88,225	73.53	6,487.41	.....	.....	.....	88,225	73.53	6,487.41
Cypress	76,905	59.82	4,600.83	.....	.....	.....	76,905	59.82	4,600.83
Mahogany	70,630	166.92	11,789.60	.....	.....	.....	70,630	166.92	11,789.60
Maple (hard)	63,000	31.43—	1,980.00	60,000	30.00	1,800.00	3,000	60.00	180.00
Loblolly pine	37,145	37.15	1,379.80	.....	.....	.....	37,145	37.15	1,379.80
Locust	31,500	100.00	3,150.00	.....	.....	.....	31,500	100.00	3,150.00
Yellow poplar (whitewood)	15,230	49.29	704.95	.....	.....	.....	15,230	49.29	704.95
Teak	8,000	287.50	2,300.00	.....	.....	.....	8,000	287.50	2,300.00
White ash	5,500	40.00	220.00	5,000	38.00	190.00	500	60.00	30.00
Rock (slippery) elm	3,500	54.29	190.00	3,500	54.29	190.00	.....	.....	.....
Hickory	3,500	25.00	87.50	3,500	25.00	87.50	.....	.....	.....
Lignum-vitæ	2,449	142.92	350.00	.....	.....	.....	2,449	142.92	350.00
Red cedar	2,000	65.00	130.00	.....	.....	.....	2,000	65.00	130.00
Applewood	1,500	25.00	37.50	1,500	25.00	37.50	.....	.....	.....
Black walnut	1,000	100.00	100.00	.....	.....	.....	1,000	100.00	100.00
Cherry	1,000	60.00	60.00	.....	.....	.....	1,000	60.00	60.00
Sycamore	1,000	60.00	60.00	.....	.....	.....	1,000	60.00	60.00
Redwood	500	80.00	40.00	.....	.....	.....	500	80.00	40.00
Sweet birch	500	50.00	25.00	.....	.....	.....	500	50.00	25.00
White mahogany	500	250.00	125.00	.....	.....	.....	500	250.00	125.00
Totals	7,084,354	$40.93—	$289,962.27	1,789,670	$32.76+	$58,636.27	5,294,684	$43.69	$231,326.00

make only the actions and keys. Another class, not included in this study, buy their cases of one manufacturer, their actions of another, their sounding boards of a third, and their hardware of the piano-hardware dealers, while their manufacturing operations consist merely in putting these parts together.

Chestnut, which is the favorite wood for veneer cores or backing, is the principal species reported in use by the Connecticut piano makers and organ builders. It goes almost entirely into cases, especially piano cases, and for this use, as in many other states in which studies similar to this have been made, it is the leading wood. Notwithstanding the fact that the chestnut tree is common throughout Connecticut, more than 90 per cent. of the three and a half million feet consumed by the musical instrument makers comes from the forests of other states. Other casewoods to be veneered or enameled are tulip poplar and white pine. The material used for the exterior work on cases is largely bought in the form of veneer. White oak, red oak, red gum, birch, mahogany, walnut, and sugar maple, are among the principal kinds reported. Sugar maple and elm enter largely into posts and backs of piano cases. White oak, red oak, cherry, mahogany and walnut are used for organ cases in addition to chestnut.

Action makers require yellow poplar, basswood, and sugar maple. Sugar pine from California is used considerably, and is the highest-priced action wood reported. Piano keys are also made from it as well as from sweet birch, ash, and cherry. Basswood is the favorite for organ keys, except for sharps or flats which—both for pianos and organs—are made of ebony. Spruce has no competitor for piano sounding boards, red spruce being preferred, though white spruce and, to a limited extent, Oregon Sitka spruce answer. Organ pipes are made from sugar pine and white pine, while for stop handles ebony is in greatest demand, though boxwood and rosewood are also used.

SHIPS AND BOATS.

In quantity of wood used, boat builders stand fifth in the list of Connecticut industries. There are forty-one boat and ship builders in the State who make all kinds of boats, from a racing shell to a steamship. A large part of the material reported went

TABLE XX. CLOCKS.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Red oak	1,481,000	$ 30.22	$44,750.00	342,000	$19.44	$6,650.00	1,139,000	$ 33.45	$38,100.00
Basswood	1,400,000	32.64	45,700.00	62,500	18.00	1,125.00	1,337,500	33.34	44,575.00
Yellow poplar (whitewood)	1,050,000	35.32	37,082.50	.....	.....	.....	1,050,000	35.32	37,082.50
Chestnut	285,000	19.02	5,420.00	285,000	19.02	5,420.00	.....	.. ..	.....
White oak	262,300	47.35	12,420.00	30,000	20.00	600.00	232,300	50.88	11,820.00
Mahogany	104,000	146.83	15,270.00	.....	.....	.....	104,000	146.83	15,270.00
Soft maple	80,000	28.00	2,240.00	.....	.....	.....	80,000	28.00	2,240.00
Sweet birch	33,000	49.70	1,640.00	.....	.....	.....	33,000	49.70	1,640.00
Red gum	27,000	32.91	888.50	.....	.....	.....	27,000	32.91	888.50
White pine	20,000	37.50	750.00	5,000	20.00	100.00	15,000	43.33	650.00
Paper birch	10,000	30.00	200.00	.....	.....	.....	10,000	30.00	300.00
Black walnut	9,000	83.33	750.00	.....	.....	.....	9,000	83.33	750.00
Rosewood	290	340.69	98.80	.....	.....	.....	290	340.69	98.80
Totals	4,761,590	$35.81+	$167,309.80	724,500	$19.18—	$13,895.00	4,037,090	$38.00	$153,414.80

into barges and tow boats, extensively used for the coastwise freight business. Many high-grade launches, yachts, and large pleasure boats are made by the Connecticut boat builders. Wood is used chiefly for inside work and interior finish, since of late years steel construction has largely taken the place of wood.

Twenty-seven kinds of wood were reported by the Connecticut boat builders, aggregating more than seven million feet. (See Table XIX.) Yellow pine ranks first, and is used in building barges, scows, and tow boats, for the framework as well as for planking or siding. Oak stands next in amount and is put to a greater number of uses than any other wood reported for ship building. Inasmuch as the greater portion of this wood is reported as State-grown, it is safe to say that it is mostly black or yellow oak and red oak, since these are the more common species in Connecticut. The oak lumber shipped in from other states, and a small per cent. of the home-grown, is white oak, which is in large demand, especially by makers of pleasure craft, such as row boats, launches, and small sail boats. It goes into the framework of these, and for all classes of boats it is the principal wood for interior finish and cabinet work. Hackmatack appears in no other industry and is used with spruce for ship knees. Spruce also answers for bulkheads, spars, canopies, and hatches. Douglas fir, used mainly as large timbers for barges and scows, also contributes material for keelsons and sleepers.

Southern white cedar, brought from Virginia and North Carolina, is used for the siding of high-grade pleasure boats. It is interesting to note the use of applewood, exclusively Connecticut-grown, for knees in small boats. Besides oak, the principal finishing woods used for interior work are mahogany, ash, tulip poplar, black walnut, sycamore, redwood and sweet birch, in the order named.

CLOCKS.

The clock manufacturing industry of Connecticut is probably larger than that of any other State. Wood is used only in the making of cases. Six of the sixteen clock factories of the State report its use for mantel and wall clocks, and a small per cent. for large hall or "grandfather" clocks. Red oak, basswood and tulip poplar are reported in the largest quantities, and these woods together constitute nearly 83 per cent. of the total

Table XXI. Vehicles and Vehicle Parts.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Hickory	1,172,365	$ 41.85	$49,062.85	783,650	$33.20	$26,017.75	388,715	$ 59.29—	$23,045.10
White ash	1,132,465	59.13+	66,967.71	293,350	32.04	9,397.50	839,115	68.61	57,570.21
White oak	633,400	32.44	20,548.15	566,900	31.61	17,918.15	66,500	39.55	2,630.00
Yellow poplar (whitewood)	575,275	61.70—	35,490.00	119,050	31.13	3,706.25	456,175	69.68	31,783.75
Rock elm	228,000	25.81	5,900.90	175,000	20.00	3,500.00	53,000	45.30	2,400.90
Red oak	199,500	30.21—	6,026.50	165,000	27.60	4,554.00	34,500	42.68	1,472.50
Loblolly pine	145,325	44.77	6,506.75	.....	.....	.....	145,325	44.77	6,506.75
Mahogany	97,000	160.18	15,537.50	.....	.....	.....	97,000	160.18	15,537.75
Hard maple	91,645	28.25	2,588.70	23,246	23.30	541.70	68,400	29.93—	2,047.50
White (soft) elm	28,000	33.57	940.00	23,000	25.65	590.00	15,000	70.00	350.00
Spruce	19,710	26.71	526.46	.....	.....	.....	19,710	26.71	526.46
Beech	15,000	23.00	345.00	7,500	23.00	172.50	7,500	23.00	172.50
Chestnut	12,800	25.00	320.00	12,800	25.00	320.00	.....	.....	.....
Paper birch	10,500	22.86—	240.00	5,000	23.00	115.00	5,500	22.73	125.00
Basswood	8,375	31.76+	266.00	6,200	28.87	179.00	2,175	40.00	87.00
White pine	8,300	31.51—	261.50	3,500	22.14	77.50	4,800	38.33+	184.00
Cypress	6,800	66.84	454.50	.....	.....	.....	6,800	66.84	454.50
Black walnut	3,500	171.43	600.00	.....	.....	.....	3,500	171.43	600.00
Circassian walnut	1,800	320.00	576.00	.....	.....	.....	1,800	320.00	576.00
Cherry	1,000	20.00	20.00	1,000	20.00	20.00	.....	.....	.....
Pitch pine	900	22.00	19.80	900	22.00	19.80	.....	.....	.....
Longleaf pine	400	65.00	26.00	.....	.....	.....	400	65.00	26.00
Totals	4,392,010	$48.55—	$213,224.32	2,186,095	$30.71—	$67,129.15	2,205,915	$66.23—	$146,095.17

shown in Table XX. Red oak is in largest demand for all grades of cases. It is used extensively in making wall clocks, and is finished by staining in the natural color of the wood or in the darker mission shades. Basswood and yellow poplar, used for hidden work and the backs of cases, are also the favorites for enamel cases. The art of enameling wood has made such rapid progress of late years that the imitations are difficult to distinguish from marble, foreign woods, or other materials which they are made to resemble. Chestnut goes largely into backing for veneered cases. Considerable mahogany is imported, much of it in the form of veneer which is used with sweet birch, red gum, black walnut, and rosewood for exterior finish. Red gum is growing in popularity with the clock makers. It is found beautifully mottled, with figure and color like those of Circassian walnut. When finished naturally it closely resembles that wood.

VEHICLES AND VEHICLE PARTS.

Table XXI includes conveyances of all grades and kinds, from the finest of automobile limousines and carriages like landaus and broughams, to common dump carts, together with sleighs, cutters, and bob sleds. A small per cent. of the wood used goes into hand-made vehicles, which are reported by wheelwrights in small towns and at cross roads, who, in addition to their chief business of repairing, also build a few wagons for local trade. Most of the information about vehicle material, however, was received from large vehicle and automobile factories, and by those specializing in the manufacture of vehicle supplies, such as poles, shafts, spokes and rims, wheels, and manufactured gear parts.

Every effort was made to avoid listing the same material twice. Makers who purchased ready-made parts only to assemble them into a new unit and put on the finishing touches were not asked for information, while vehicle builders buying some of their material already manufactured were asked to report only concerning those parts which they actually cut from the rough lumber. There are twenty-two kinds of lumber reported; almost half of which is State-grown. In quantity consumed, hickory and ash are the principal woods and constitute about 50 per cent. of the total material used.

It is somewhat surprising that so large a part of the hickory used is home-grown, but this is accounted for by the fact that native hickory is well adapted to the needs of concerns making vehicle supplies, who form an important part of this industry. The material brought from the South and other states comes into Connecticut in the form of billets to be shaped into the finished products by manufacturers who only make parts like the parts of the running gear, and sell them to other factories which assemble and finish the vehicle. For gear stock, hickory is the principal wood used.

The manufacture of automobile bodies is conspicuous among the wood-using industries of Connecticut and, in this line, this State is ahead of the other twenty states in which like reports have been made. The manufacture of automobile bodies demands ash in greater quantities than any other kind of wood. Ash being strong and light is the favorite for body frames. In no other State does it occupy as prominent a position among the vehicle materials. The Connecticut manufacturers of horse vehicles use it for spring bars, poles, and shafts, and for gear parts of light vehicles. Yellow poplar is the other important body wood and meets an exacting demand for panel work. Because it is fine grained, soft and easily worked, and has a special capacity for holding paint, it is the favorite wood with builders of automobile, carriage, and buggy bodies. Its high price now prevents its use as formerly for wagon beds. In Connecticut, loblolly pine, spruce, and basswood have largely taken its place. Cypress, used only in small amounts, is growing in favor as a panel wood for fine vehicle bodies.

The white oak reported comes principally from without the State but the red oak largely from within. The yellow oak is entirely home-grown. The last named species as it grows in Connecticut is of an excellent quality and is popular as a vehicle wood. Being cheaper it is substituted even for uses which in many states are supplied by white oak alone, as for instance, in making gear parts for wagons, drays and heavy vehicles.

The elms are the hub woods, both the rock and the white elm being equally suitable. The elms are the easiest to bend and for that reason are used for the bent parts of vehicle and cutter bodies. Ash and yellow poplar also serve for this class of products. Sugar maple, red oak, longleaf pine, beech and

chestnut go into the bottoms of wagon bodies; the flooring of passenger vehicles is principally of red oak. The large quantity of mahogany shown in the table goes principally into automobile and limousine bodies, window frames of limousines, door parts of the tonneau, wind shields, steering wheels, magneto boxes, etc. Black and Circassian walnut also answer the same purposes.

HANDLES.

A great variety of handles is made in Connecticut, which accounts for the many kinds of wood shown in the table of this industry. Twenty-two species are reported. (See Table XXII.) No other State shows as many handle woods used. Hickory heads the list. Inasmuch as this wood meets an exacting demand for long tool handles like those for picks, sledge-hammers, mauls, etc., it would be natural to assume that their manufacture was the most important part of the handle-making industry of Connecticut, but the largest per cent. of the hickory reported goes into handles of small tools, like files, chisels, hatchets, nail hammers, etc. For this purpose it is best of all woods. Other species are used for small handles in which the shock-resisting quality is not so important a requisite, such as those of awls, gimlets, augurs, braces, screw-drivers, and drawknives. Sugar maple, white oak, white and paper birch, mahogany and rosewood were the principal woods serving this latter purpose.

For garden-tool handles, ash is generally used, but in Connecticut, sugar maple, sweet birch and beech are substituted and consumed in greater quantities. These woods are also most in demand for brush handles.

The manufacture of knife and fork handles takes a prominent part in this industry in Connecticut. Many woods supply the material; some of them are foreign, and purchased at high prices. Of these cocobola, a Central American wood, is the favorite. It is dense, hard, ornamental, and susceptible of a high finish. Box-wood, mahogany, rosewood, and ebony are the other imported woods, and flowering dogwood stained to imitate ebony or cherry, butternut, yellow birch, sugar maple, and beech are the principal domestic woods used.

The only softwood or conifer reported for handles is white pine. It serves with the softer hardwoods, like basswood, tulip

TABLE XXII. HANDLES.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Hickory	987,400	$ 23.00	$22,709.00	719,400	$22.59	$16,250.00	268,000	$ 25.03+	$ 6,459.00
Hard maple	536,600	22.40	12,020.20	431,100	19.29—	8,314.20	105,500	35.13—	3,706.00
Beech	395,000	21.07—	8,321.50	300,000	16.18+	4,855.00	95,000	36.49—	3,466.50
Yellow birch	284,500	20.31—	5,778.00	194,000	20.14+	3,908.00	90,500	20.66	1,870.00
Gray birch	260,000	17.52	4,555.00	260,000	17.52	4,555.00	.....	.....	.....
Cocobola	208,560	167.07	34,844.00	.....	.....	.....	208,560	167.07	34,844.00
Paper birch	109,500	19.91—	2,180.00	.....	.....	.....	109,500	19.91—	2,180.00
Cherry	120,000	20.17—	2,420.00	70,000	20.29	1,420.00	50,000	20.00	1,000.00
Dogwood	100,000	24.00	2,400.00	100,000	24.00	2,400.00	.....	.....	.....
White ash	93,900	30.40+	2,854.90	64,500	26.90—	1,730.50	29,400	38.23+	1,124.40
Basswood	76,800	41.43	3,181.80	6,800	17.91	121.80	70,000	43.71	3,060.00
Soft maple	39,500	19.01+	751.00	29,000	18.45—	535.00	10,500	20.57+	216.00
Yellow poplar (white-wood)	38,600	22.96—	886.20	18,600	21.83—	406.20	20,000	24.00	480.00
Boxwood	37,383	54.89	2,052.00	.....	.....	.....	37,383	54.89	2,052.00
Rosewood	14,441	285.30	4,120.00	.....	.....	.....	14,441	285.30	4,120.00
Chestnut	10,000	18.00	180.00	10,000	18.00	180.00	.....	.....	.....
Mahogany	9,000	180.00	1,620.00	.....	.....	.....	9,000	180.00	1,620.00
Rock elm	6,000	20.00	120.00	3,000	15.00	45.00	3,000	25.00	75.00
White pine	5,500	17.45+	96.00	5,500	17.45+	96.00	.....	.....	.....
Butternut	2,000	25.00	50.00	2,000	25.00	50.00	.....	.....	.....
Ebony	1,636	232.27	380.00	.....	.....	.....	1,636	232.27	380.00
Applewood	1,000	30.00	30.00	1,000	30.00	30.00	.....	.....	.....
Totals	3,484,320	$33.31	$116,065.60	2,339,900	$20.70—	$48,426.70	1,144,420	$59.10+	$67,638.90

poplar or whitewood, for handles of soldering irons, carving and engraving tools, files, etc. Chestnut is used for casket handles, which are generally cloth-covered. Applewood, in limited quantities, with sugar maple, meets the demand for draw-knife handles.

CARPENTERS' TOOLS.

Table XXIII shows the use of sixteen woods and more than two million feet in the manufacture of carpenters' tools. The material listed under the handle industry goes largely into carpenters' tools, but exclusively for handles, or for tools which are part wood and part metal. The products listed in the present class include carpenters' tools made entirely of wood, such as rules, planes, levels, mallets, mitre boxes, braces, clamps, plumbers' rules, gauges, etc. The entire supply of five of the woods reported is home-grown, but their combined quantity amounts to less than one-sixth of the total. Boxwood, which comes principally from Turkey and other Mediterranean countries, meets the largest part of the demand. In only one other industry table for Connecticut does a foreign wood lead in point of quantity. Its most important use is for rules, but it also contributes material for planes and gauges. It is hard, strong, and not liable to warp when seasoned. This makes it the chief rule wood, while its exceptional quality of wearing smooth—the same property that puts beech and sugar maple to this use—makes it specially valuable for planes and gauges.

Cherry and mahogany are the only woods used for plumbs and levels. Beech is chiefly used for mitre boxes, plane stocks, and hand screws. Chestnut, basswood, and black walnut are the principal tool chest materials. Hickory and lignum-vitæ are the mallet woods, and ash alone serves for clamps. The tool makers use a larger quantity of rosewood than any other class of manufacturers. Nearly a quarter of a million feet is demanded each year and the average price is higher than that of any other wood shown in Table XXIII.

WOODENWARE AND NOVELTIES.

The manufacture of articles commonly known as woodenware and of articles known as novelties are so closely related that it

TABLE XXIII. CARPENTERS' TOOLS.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Boxwood	526,548	$ 48.00	$25,275.60	.....	.....	.....	526,548	$ 48.00	$25,275.60
Cherry	375,000	57.50	21,562.50	31,250	$25.00	$ 781.25	343,750	60.45+	20,781.25
Beech	243,200	50.67+	12,324.00	30,200	16.69	504.00	213,000	55.49	11,820.00
Rosewood	219,353	221.30	48,542.50	.....	.....	.....	219,353	221.30	48,542.50
Hard maple	190,000	25.92+	4,925.00	2,500	20.00	50.00	187,500	26.00	4,875.00
Chestnut	161,000	18.07+	2,910.00	161,000	18.07+	2,910.00	.....	.....	.....
Basswood	137,600	41.61+	5,726.11	5,000	18.00	90.00	132,600	42.50+	5,636.11
Hickory	105,500	24.93—	2,630.00	105,500	24.93—	2,630.00	.....	.....	.....
Black walnut	65,600	63.61—	4,166.00	.....	.....	.....	65,600	63.61—	4,166.00
Cocobola	64,800	207.56	13,450.00	.....	.....	.....	64,800	207.56	13,450.00
Lignum-vitæ	36,236	87.62	3,175.00	.....	.....	.....	36,236	87.62	3,175.00
Mahogany	27,694	114.51+	3,171.34	.....	.....	.....	27,694	114.51+	3,171.34
Yellow poplar (whitewood)	25,000	75.00	1,875.00	.....	.....	.....	25,000	75.00	1,875.00
Red oak	8,500	18.20	154.70	8,000	18.20	154.70	.....	.....	.....
Ash	3,500	20.00	70.00	3,500	20.00	70.00	.....	.....	.....
Applewood	1,000	25.00	25.00	1,000	25.00	25.00	.....	.....	.....
Totals	2,190,531	$68.47—	$149,982.75	348,450	$20.71—	$7,214.95	1,842,081	$77.50+	$142,767.80

TABLE XXIV. WOODENWARE AND NOVELTIES.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Paper birch	504,500	$ 22.04+	$11,338.50	.....	.....	.....	504,500	$ 22.47+	$11,338.50
White pine	400,000	24.40	9,760.00	210,000	$22.05—	$4,630.00	190,000	27.00	5,130.00
Hard maple	235,000	25.07+	5,892.00	120,500	14.45+	1,741.50	114,500	36.25—	4,150.50
Spruce	170,300	30.43—	5,182.20	.....	.....	.....	170,300	30.43—	5,182.20
Chestnut	135,000	13.56—	1,830.00	135,000	13.56—	1,830.00	.....	.....	.....
White oak	92,200	21.82+	2,012.00	57,000	19.82+	1,130.00	35,200	25.06—	882.00
Gray birch	49,500	17.65	873.50	49,500	17.65	873.50	.....	.....	.....
Yellow poplar (white-wood)	29,600	32.74—	969.00	21,000	20.00	420.00	8,600	63.84	549.00
Cherry	20,000	20.00	400.00	20,000	20.00	400.00	.....	.....	.....
Beech	16,000	18.00	288.00	8,000	18.00	144.00	8,000	18.00	144.00
Rock (cork) elm	15,000	25.00	375.00	.....	.....	.....	15,000	25.00	375.00
Mahogany	11,000	158.18	1,740.00	.....	.....	.....	11,000	158.18	1,740.00
Basswood	9,000	20.00	180.00	9,000	20.00	180.00	.....	.....	.....
Soft maple	5,500	22.00	121.00	.....	.....	.....	5,500	22.00	121.00
Douglas fir	5,000	70.00	350.00	.....	.....	.....	5,000	70.00	350.00
Ash	4,000	35.00	140.00	.....	.....	.....	4,000	35.00	140.00
Yellow birch	3,600	65.00	234.00	.....	.....	.....	3,600	65.00	234.00
Black walnut	3,100	89.84—	278.50	2,000	70.00	140.00	1,100	125.91	138.50
Aspen	3,000	15.00	45.00	3,000	15.00	45.00	.....	.....	.....
Locust	500	12.00	6.00	.....	.....	.....	500	12.00	6.00
Totals	1,746,800	$24.55+	$42,889.70	635,000	$18.16+	$11,534.00	1,111,800	$28.20	$31,355.70

is difficult to separate them. Therefore the two classes are grouped as one in Table XXIV. Generally woodenware refers to housekeeping accessories, like pails, buckets, dishes, bowls, trays, platters, and boards, step-ladders, flour sieves, etc. Connecticut manufacturers make but few of these. The principal one, according to the quantity of wood used, is step-ladders. Spruce being light and strong meets the entire demand. The other products reported are flour sieves and cutting boards. The sieves are made of soft elm, because it bends easily and retains a cylindrical shape. Cutting boards are commonly made of sugar maple.

The manufacture of novelties is the more important part of this industry. Vial and pill boxes are made from whitewood or yellow poplar, and basswood. Chestnut, maple, and birch serve for the plugs used by paper mills in the ends of rolls of paper. White pine and basswood furnish material for cloth boards; while beech birch and maple are used for rug and drugget poles. An interesting line of manufacture belonging to this industry is the making of collar buttons for laundries. They are used but once then thrown away, hence are made in enormous numbers.

The operation of making these is similar to that for making collets, or small wooden rings used as collars around the flanges of hose and stocking supporters, and both are usually made in the same factory, white birch being reported as the principal wood used. It is probable, however, that only a small portion of it is the true white birch. Door knobs and door stops are turned from a variety of woods, principally oak, sugar maple, cherry and mahogany.

MISCELLANEOUS.

Materials used in the manufacture of a large number of commodities, which can not be listed in any of the foregoing industries, have been classed together in the miscellaneous table which follows (Table XXV). Had there been more than two concerns making any one of these products, separate figures relating to it would have been given. For plumber's woodwork, white oak is in largest demand; the casket makers use chestnut, yellow poplar, and red cedar for their cloth-covered products, mahogany and red oak for their caskets finished in the natural wood, and white pine for their outer cases, or rough boxes. The manufacturers

Table XXV. Miscellaneous.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Chestnut	440,000	$ 22.68+	$ 9,980.00	100,000	$19.00	$1,900.00	340,000	$ 23.76+	$ 8,080.00
White oak	290,000	64.83—	18,800.00	.....	.....	.....	290,000	64.83—	18,800.00
White ash	206,000	20.02+	4,125.00	206,000	20.02+	4,125.00	.....	.....	.....
Yellow poplar (white-wood)	205,000	38.20	7,830.00	25,000	20.00	500.00	180,000	40.72+	7,330.00
Red oak	189,500	47.82+	9,062.50	19,500	25.00	487.50	170,000	50.44	8,575.00
White pine	144,000	26.53—	3,820.00	.....	.....	.....	144,000	26.53—	3,820.00
Hard maple	54,000	36.11+	1,950.00	29,000	19.83	575.00	25,000	55.00	1,375.00
Red gum	40,000	34.00	1,360.00	.....	.....	.....	40,000	34.00	1,360.00
Mahogany	32,000	118.75	3,800.00	.....	.....	.....	32,000	118.75	3,800.00
Black walnut	30,000	110.00	3,300.00	.....	.....	.....	30,000	110.00	3,300.00
Yellow birch	28,500	19.72—	562.00	28,500	19.72—	562.00	.....	.....	.....
Soft maple	10,000	19.00	190.00	10,000	19.00	190.00	.....	.....	.....
Beech	7,500	20.00	150.00	7,500	20.00	150.00	.....	.....	.....
Basswood	3,000	20.00	60.00	3,000	20.00	60.00	.....	.....	.....
White (soft) elm	3,000	20.00	60.00	3,000	20.00	60.00	.....	.....	.....
Hickory	2,500	25.00	62.50	2,500	25.00	62.50	.....	.....	.....
Red cedar	1,000	65.00	65.00	.....	.....	.....	1,000	65.00	65.00
Rattan	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	1,686,000	$38.66—	$65,177.00	434,000	$19.98	$8,672.00	1,252,000	$45.13+	$56,505.00

of sewing-machine tables and cabinets use a variety of woods, but principally red and white oak. A large part is quarter-sawed and, with mahogany, walnut, red gum and maple, serves chiefly for exterior work. A portion of these expensive woods is purchased in the form of veneer and made up usually with chestnut as a base. Yellow poplar from the Southern states is used for interior work like drawer sides and bottoms, and other compartments of sewing-machine cabinets.

Rattan is imported from China by the wickerware manufacturers and made into reeds, principally for baskets. Yellow poplar and basswood are the supplies for trunk and sample-case material. For barrel bungs, yellow poplar furnishes the entire supply, while the birches and maples are used in making faucets. Toy manufacturers use four kinds of wood—white pine, aspen, basswood and birch. Ash alone furnishes the material for tackle blocks, and, judging from the low average price reported, much of it must be brown or black ash. For making coal screens, oak, beech, and maple comprise the largest part of the supply, while the makers of ox yokes demand white oak, elm, hickory and maple in almost equal amounts.

CHAIRS.

Table XXVI gives statistics of lumber manufactured into chairs, piano stools, and benches. The chair industry is not important in Connecticut, since only a little more than a million and a half feet of lumber per annum is required for it. Contrary to expectation, only a small number of the chairs made in Connecticut are from turned stock, but are chiefly oak chairs of the mission design made from sawed or squared material. Folding chairs and camp stools, having canvas or other cloth seats, are turned-stock products for which sugar maple and yellow birch are used.

The piano stool manufacturers report the largest number of woods listed in this table. Yellow and sweet birch, sugar maple, soft maple, elm, and mahogany are the favorites. Birch, better than any other wood, can be stained to imitate mahogany and for that reason is used to meet the largest part of the demand. Soft maple and elm are excellent woods for holding glue and therefore generally used as veneer backing or cores for veneered stools of mahogany, cherry, and quartered oak.

TABLE XXVI. CHAIRS.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Yellow birch	500,000	$ 30.10	$15,050.00	50,000	$18.00	$900.00	450,000	$ 31.44	$14,150.00
Soft maple	400,000	33.00	13,200.00	.....	.....	.....	400,000	33.00	13,200.00
Hard maple	285,000	27.46—	7,825.00	35,000	23.57	825.00	250,000	28.00	7,000.00
White oak	242,000	39.92—	9,660.00	242,000	39.92—	9,660.00	.....	.....	.....
Red oak	143,000	55.38+	7,920.00	.....	.....	.....	143,000	55.38+	7,920.00
Cherry	25,000	120.00	3,000.00	.....	.....	.....	25,000	120.00	3,000.00
White (soft) elm	20,000	40.00	800.00	.....	.....	.....	20,000	40.00	800.00
Mahogany	7,500	111.00	832.50	.....	.....	.....	7,500	111.00	832.50
Totals	1,622,500	$35.92+	$58,287.50	327,000	$34.82—	$11,385.00	1,295,500	$36.20+	$46,902.50

TABLE XXVII. FIXTURES.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Chestnut	245,500	$ 23.20+	$ 5,696.50	135,500	$20.50—	$2,778.50	110,000	$ 26.28—	$ 2,918.00
White oak	234,200	73.80+	17,285.00	.....	.....	.....	234,200	73.80+	17,285.00
Yellow poplar (whitewood)	161,500	43.34—	7,001.00	1,500	30.00	45.00	160,000	43.48	6,956.00
Red oak	140,000	45.32	6,345.00	.....	.....	.....	140,000	45.32	6,345.00
Hard maple	60,500	45.00	2,722.50	.....	.....	.....	60,500	45.00	2,722.50
White pine	56,500	34.28+	1,937.00	.....	.....	.....	56,500	34.28+	1,937.00
Mahogany	28,800	133.94	3,857.50	.....	.....	.....	28,800	133.94	3,857.50
Loblolly pine	27,000	42.59+	1,150.00	.....	.....	.....	27,000	42.59+	1,150.00
Sweet birch	14,440	37.59—	542.76	.....	.....	.....	14,440	37.59—	542.76
Red gum	14,000	34.00	476.00	.....	.....	.....	14,000	34.00	476.00
Black walnut	10,000	110.00	1,100.00	.....	.....	.....	10,000	110.00	1,100.00
Redwood	10,000	80.00	800.00	.....	.....	.....	10,000	80.00	800.00
Western red cedar	10,000	70.00	700.00	.....	.....	.....	10,000	70.00	700.00
Spruce	10,000	26.50	265.00	.....	.....	.....	10,000	26.50	265.00
Basswood	7,305	39.88—	291.30	3,500	18.00	63.00	3,805	60.00	228.30
Cherry	6,500	45.23	294.00	.....	.....	.....	6,500	45.23	294.00
Totals	1,036,245	$48.70	$50,463.56	140,500	$20.54+	$2,886.50	895,745	$53.11+	$47,577.06

FIXTURES.

Eleven firms in Connecticut report the manufacture of office, store, bank, and bar-room fixtures. A number specialize along these lines, but more report these products in conjunction with the manufacture of other commodities. The most important products of this industry are display show cases and racks, counters, wall cabinets and cases, shelving, buffets, bookcases, school furniture, railing bars, and filing cabinets. They are often difficult to separate from certain kinds of furniture, and many are closely related to the products for interior finish described under the industry of sash, doors, blinds, and general mill work, such as partitions, built-in buffets, sodawater fountains, cabinets, and wall cases. Manufacturers making several classes of such commodities seldom make any distinctions in their reports. This circumstance requires an arbitrary classification of the data.

Sixteen kinds of wood are used by the fixture manufacturers. (See Table XXVII.) Chestnut and basswood are the only ones grown in the State. For the exterior or exposed work the best grades of cabinetwood are desired. This is shown by the high average prices of the principal wood given in Table XXVII. They are white oak, red oak, tulip poplar, mahogany, black walnut, redwood, red gum, and cherry. For the hidden portions such as framing, lining, reinforcements, bases, veneer coring, drawer sides and bottoms, cheaper woods answer. Chestnut is the principal one, but white pine, spruce, and basswood are also used.

SHUTTLES, SPOOLS, AND BOBBINS.

Eight woods are used in Connecticut for making shuttles, spools, bobbins, and affiliated products, and three of them, namely, hickory, white or gray birch, and persimmon constitute considerably more than four-fifths of the total quantity shown in Table XXVIII. Rated by the amount of wood consumed, picker sticks are the principal product made by this class of manufactures. These differ in shape and size according to the looms for which they are made. They taper toward one end and are about one and one-half inches wide, three-fourths of an inch thick, and from twenty-six to thirty-two inches in length. In the loom they are used as levers to impart motion to the shuttle.

TABLE XXVIII. SHUTTLES, SPOOLS, AND BOBBINS, INCLUDING PICKER STICKS.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Hickory	444,000	$26.65—	$11,832.50	356,500	$25.86+	$9,220.00	87,500	$29.86—	$2,612.50
Paper birch	310,250	31.70	9,835.00	.....	.....	.....	310,250	31.70	9,835.00
Persimmon	120,000	17.50	2,100.00	.....	.....	.....	120,000	17.50	2,100.00
White ash	82,000	25.12	2,060.00	82,000	25.12	2,060.00	.....	.....	.....
Hard maple	50,200	40.06	2,011.00	.....	.....	.....	50,200	40.06	2,011.00
Yellow poplar (white-wood)	8,000	20.00	160.00	8,000	20.00	160.00	.....	.....	.....
Beech	5,000	40.00	200.00	.....	.....	.....	5,000	40.00	200.00
White oak	4,000	25.00	100.00	4,000	25.00	100.00	.....	.....	.....
Totals	1,023,450	$27.65	$28,298.50	450,500	$26.62	$11,540.00	572,950	$29.25	$16,758.50

TABLE XXIX. MACHINERY AND APPARATUS—ELECTRICAL.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
White pine	200,000	$ 25.00	$ 5,000.00	.....	.....	.....	200,000	$ 25.00	$ 5,000.00
Spruce	200,000	25.00	5,000.00	.....	.....	.....	200,000	25.00	5,000.00
Mahogany	100,000	100.00	10,000.00	.....	.....	.....	100,000	100.00	10,000.00
Red oak	96,700	20.35	1,967.59	96,700	$20.35	$1,967.50	.....	.....	.....
Black walnut	60,000	65.00	3,900.00	.....	.....	.....	60,000	65.00	3,900.00
White oak	43,300	20.38	882.50	43,300	20.38	882.50	.....	.....	.....
Sweet birch	40,000	20.00	800.00	40,000	20.00	800.00	.....	.....	.....
Yellow birch	30,000	20.00	600.00	30,000	20.00	600.00	.....	.....	.....
Yellow poplar (whitewood)	10,000	22.00	220.00	.....	.....	.....	10,000	22.00	220.00
Cottonwood	7,500	25.00	187.50	.....	.....	.....	7,500	25.00	187.50
Chestnut	3,000	20.00	60.00	3,000	20.00	60.00	.....	.....	.....
Red gum	2,500	25.00	62.50	.....	.....	.....	2,500	25.00	62.50
Totals	793,000	$36.17—	$28,680.00	213,000	$20.23+	$4,310.00	580,000	$42.02	$24,370.00

Necessarily, a picker stick must be made from strong, tough, straight-grained wood. Hickory is used more than any other wood, but ash is used to a limited extent. Bobbins, spindles, and speeders are made from maple, birch, and beech, while persimmon alone contributes the shuttle material.

Two kinds of spools are made in Connecticut. The one-piece spool used for silk and cotton thread, and fine wire, is made of white birch. The spool used in connection with textile mill machinery is a three-piece product. The barrel is turned from birch, beech, or maple, and the disc-like heads are screwed and glued to the barrel. These spool heads are frequently made from a softer wood, like aspen, whitewood, and basswood, but birches and maples are heavier, more durable, and largely used.

ELECTRICAL EQUIPMENT.

This includes electric wire and cable reels, wooden parts of switchboards, battery boxes and coil cases, telephone boxes, and other wooden parts of electrical apparatus. Mahogany is the only foreign wood reported, and, in quantity, exceeds all other species. It is the favorite material for switchboards and serves together with red oak, white oak, sweet and yellow birch, and red gum for telephone boxes. White pine and spruce, reported in equal quantities, exceed the amount of all other woods shown in Table XXIX. They are not used for the parts of electrical instruments but are made solely into reels of various sizes, around which cables and electric wire are wound.

AGRICULTURAL IMPLEMENTS.

Most of the agricultural implements used in Connecticut are shipped into the State. Since tool handles, farm wagons, carts and sleds are listed under other industries, there remain only harrows, cultivators, plows, and hayrakes to be included in the statistics of Table XXX. White ash furnishes all the material for making wooden rakes, except for the teeth, which are made only of hickory. All other woods shown in the table went into harrows, yokes, and eveners, except a small quantity of oak and ash which was used for plow beams and handles.

TABLE XXX. AGRICULTURAL IMPLEMENTS.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Yellow birch	198,000	$16.40+	$3,248.00	198,000	$16.40+	$3,248.00	.....	.....	.....
Soft maple	163,000	16.10—	2,624.00	163,000	16.10—	2,624.00	.....	.....	.....
Red oak	93,000	19.32+	1,797.00	93,000	19.32+	1,797.00	.....	.....	.....
White ash	81,000	21.88—	1,772.00	81,000	21.88—	1,772.00	.....	.....	.....
Douglas fir	75,000	55.00	4,125.00	.....	.....	.....	75,000	$55.00	$4,125.00
Hickory	50,000	22.30	1,115.00	50,000	22.30	1,115.00	.....	.....	.....
White oak	35,000	19.57+	685.00	35,000	19.57+	685.00	.....	.....	.....
Chestnut	15,000	20.00	300.00	15,000	20.00	300.00	.....	.....	.....
White pine	15,000	18.00	270.00	15,000	18.00	270.00	.....	.....	.....
Rock (slippery) elm	10,000	18.00	180.00	10,000	18.00	180.00	.....	.....	.....
Hard maple	4,000	17.00	68.00	4,000	17.00	68.00	.....	.....	.....
Butternut (white walnut)	2,000	18.00	36.00	2,000	18.00	36.00	.....	.....	.....
Totals	741,000	$21.89—	$16,220.00	666,000	$18.16	$12,095.00	75,000	$55.00	$4,125.00

TABLE XXXI. FIREARMS.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Black walnut	389,700	$ 78.14	$30,451.00	.....	.....	.....	389,700	$ 78.14	$30,451.00
Red gum	210,000	44.50	9,345.00	.....	.....	.....	210,000	44.50	9,345.00
Circassian walnut	2,000	250.00	500.00	.....	.....	.....	2,000	250.00	500.00
Boxwood	1,731	115.54	200.00	.....	.....	.....	1,731	115.54	200.00
Totals	603,431	$67.11	$40,496.00	.....	.....	.....	603,431	$67.11	$40,496.00

TABLE XXXII. MACHINERY AND APPARATUS—NOT ELECTRICAL.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
White pine	111,280	$33.04	$3,676.80	.....	.....	.....	111,280	$33.04	$3,676.80
Basswood	84,518	50.56+	4,273.49	.....	.....	.....	84,518	50.56+	4,273.49
Loblolly pine	69,483	32.00	2,223.46	.....	.....	.....	69,483	32.00	2,223.46
Cypress	53,975	55.57—	2,988.50	.....	.....	.....	53,975	55.57—	2,988.50
Longleaf pine	51,156	35.11+	1,796.24	.....	.....	.....	51,156	35.11+	1,796.24
Chestnut	44,975	23.84+	1,072.30	44,975	$23.84+	$1,072.30	.....	.....	.....
Spruce	38,790	28.29+	1,097.49	.....	.....	.....	38,790	28.29+	1,097.49
Yellow poplar (whitewood)	30,776	64.05—	1,971.18	.....	.....	.....	30,776	64.05—	1,971.18
White oak	30,000	35.33+	1,060.00	25,000	32.40	810.00	5,000	50.00	250.00
Ash	20,868	48.00	1,001.66	.....	.....	.....	20,868	48.00	1,001.66
Hard maple	18,930	51.45	973.95	.....	.....	.....	18,930	51.45	973.95
Totals	554,751	$39.90	$22,135.07	69,975	$26.90	$1,882.30	484,776	$41.78—	$20,252.77

FIREARMS.

The Connecticut manufacturers of firearms bring in from other states all the wood they use. (See Table XXXI.) This is not surprising, since of the four woods reported, black walnut alone is indigenous to Connecticut and, owing to its scarcity in the State, the price is high. Black walnut is preferred to any other wood for gun stocks because of its strength and ornamental color—qualities which have made it for many years a favorite wood with American manufacturers. In Europe, Circassian walnut is the leading gunstock wood, because it is tough and strong and its mottled figure makes a very attractive appearance. Owing to its high price not much of it is used in this country. The heartwood of red gum is several times as cheap and often resembles it so closely in figure and color that they cannot be distinguished. Red gum possesses all the essential qualities for gun stock material and, next to black walnut, is used in the largest quantity. Yellow birch also answers for gun stocks, and some Connecticut manufacturers are beginning to use it for the cheaper guns. English walnut was reported in too small a quantity to be listed in the table. It goes into pistol stocks. Boxwood, owing to its exceptional strength, is selected for gun rods.

MACHINERY.

In Table XXXII following, are listed eleven kinds of lumber used in the wooden parts of machinery other than electrical. Parts of silk and textile machinery, cotton gins, papermill machinery, engine and other machine skids, machine tables, typewriter platen cores, and hat-making machines are the principal products into which the material enters. No foreign woods are used, but seven-eighths of the more than half a million feet purchased yearly for this industry are brought into Connecticut from other states.

PATTERNS.

Patterns and flasks used by foundrymen, and hat blocks and flanges, are the products represented in the statistics in Table XXXIII. The principal pattern woods are pine and mahogany.

TABLE XXXIII. PATTERNS.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
White pine	333,375	$ 66.48+	$22,163.81	96,727	$22.65—	$2,190.68	236,648	$ 84.40	$19,973.13
Spruce	81,250	24.46	1,987.50	.....	.....	.....	81,250	24.46	1,987.50
Yellow poplar (white-wood)	44,380	91.76	4,072.30	.....	.....	.....	44,380	91.76	4,072.30
Mahogany	29,100	160.38—	4,667.00	.....	.....	.....	29,100	160.38—	4,667.00
Chestnut	20,000	22.00	440.00	20,000	22.00	440.00	.....	.....	.....
Idaho white pine	3,000	70.00	210.00	.....	.....	.....	3,000	70.00	210.00
Cherry	1,300	120.00	156.00	.....	.....	.....	1,300	120.00	156.00
Butternut	500	30.00	15.00	500	30.00	15.00	.....	.....	.....
Totals	512,905	$65.73—	$33,711.61	117,227	$22.57—	$2,645.68	395,678	$78.71+	$31,065.93

They are straight-grained and, when well seasoned, are less liable to warp and twist than any other wood. The quantity of white pine used in Connecticut exceeds the amount of mahogany used more than a hundredfold. In Connecticut there are a number of pattern makers who specialize in models, but most of the pattern wood is reported by foundrymen who run their own pattern department. Since a pattern must be designed in the exact shape and dimensions of the article to be molded from it, only the highest grades of material are used, as the prices in the table indicate; in this regard patterns differ from flasks, as these latter can be made from a variety of cheap woods. Flasks serve for frames holding the molding sand and the pattern employed in molding and casting. Two-part flasks are used when the molding is in two pieces, one fitting upon the other. The woods used are chestnut, white pine, and spruce. The average price of the flask woods is $25.50 per thousand feet, as against $87, about the average cost of the pattern material.

Hat blocks and flanges closely resemble patterns, and therefore are included in this classification. The blocks are used in making crowns, while flanges are employed for shaping the rims. Yellow poplar is the favorite wood for making these commodities, and in Connecticut the manufacturers use no other kinds. It is purchased in only the highest grades, and great care is used in seasoning it. The average price paid per thousand was $91.76, the highest cost reported for this wood by any industry.

FURNITURE.

The furniture industry is not an important one in Connecticut. Only one manufacturer in the State makes tables and case goods, such as bookcases, buffets, dressers, and chiffoniers; another makes only couch frames; while the rest specialize in furniture parts. Lignum-vitæ, imported from Costa Rica, furnishes the entire supply of the caster material; judging from the quantity used, the Connecticut manufacturers evidently supply the needs of furniture makers in many other states. Couch frames are usually veneered and chestnut is the principal wood used for backing.

Red gum, plain and quartered oak, ash and sweet birch were the woods consumed for the exterior finish of case goods. For

TABLE XXXIV. FURNITURE.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Lignum-vitæ	218,663	$ 92.04	$20,125.00	.....	.....	.....	218,663	$ 92.04	$20,125.00
Red oak	80,000	23.69—	1,895.00	35,000	$15.57+	$545.00	45,000	30.00	1,350.00
Chestnut	78,000	22.27—	1,737.00	25,000	21.00	525.00	53,000	22.78+	1,212.00
Yellow poplar (whitewood)	43,000	22.00	946.00	38,000	18.84+	716.00	5,000	46.00	230.00
Paper birch	22,000	17.73—	390.00	22,000	17.73—	390.00	.....	.....	.....
White oak	11,250	74.56—	838.75	.....	.....	.....	11,250	74.56—	838.75
Beech	7,500	18.60	139.50	7,500	18.60	139.50	.....	.....	.....
Cypress	5,000	45.00	225.00	.....	.....	.....	5,000	45.00	225.00
Red gum	5,000	43.00	215.00	.....	.....	.....	5,000	43.00	215.00
Brown ash	5,000	53.00	265.00	.....	.....	.....	5,000	53.00	265.00
Sweet birch	3,000	52.00	156.00	.....	.....	.....	3,000	52.00	156.00
Cotton gum (tupelo)	2,500	32.00	80.00	.....	.....	.....	2,500	32.00	80.00
Hard maple	2,000	25.00	50.00	2,000	25.00	50.00	.....	.....	.....
Basswood	2,000	22.00	44.00	2,000	22.00	44.00	.....	.....	.....
Hickory	2,000	16.00	32.00	2,000	16.00	32.00	.....	.....	.....
White (soft) elm	1,200	16.00	19.20	1,200	16.00	19.20	.....	.....	.....
Mahogany	1,125	184.44+	207.50	.....	.....	.....	1,125	184.44+	207.50
Totals	489,238	$35.93+	$27,364.95	134,700	$18.27—	$2,460.70	354,538	$70.24+	$24,904.25

the interior work, yellow poplar, cotton gum, and cypress answered. Table XXXIV presents the available statistics.

PRINTING MATERIALS.

Seven woods are used for making printing accessories in Connecticut, and the quantity and price of each are shown in Table XXXV. Base blocks for rubber-stamp pads constitute a very large per cent. of the total, and for these, low grades of yellow poplar and basswood provide the material. Cherry serves as backing for electrotypes, sweet birch for press tables, and the remainder for printing-press parts.

CIGAR BOXES.

Though cigar boxes belong in the same general class with packing boxes, the former are made in separate factories and therefore the industry is distinguished in this report. Cigar-box manufacturers buy their wood by superficial measurement. To make the statistics of Table XXXVI comparable with the other tables of this report, cigar-box material has been reduced to board feet measure. This accounts for the high price shown in the table, because the cost increases as the thickness of the sheet of veneer decreases.

Owing to the high price of Spanish cedar, it is customary to make cigar boxes of a two-ply veneer of the cedar, glued on to a cheap domestic wood like elm, whitewood, tupelo or basswood. Red gum is shipped all the way from Missouri to Connecticut to be used in cigar boxes for holding the medium-priced goods, while for the best grades of cigars, Spanish cedar is used alone, usually of three-sixteenths thickness. Manufacturers in no other State already appearing in these studies of wood consumption report the use of elm for making cigar boxes. Connecticut manufacturers use it in larger quantities than any other kind of wood. It answers for cores or backing in two-ply work.

TANKS.

The manufacture of tanks, vats, and silos in Connecticut calls for the use of only three woods. Cypress, which is the principal

TABLE XXXV. PRINTING MATERIALS.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Yellow poplar (whitewood)	140,000	$21.00	$2,940.00	.....	.....	.....	140,000	$21.00	$2,940.00
Cherry	45,000	81.78	3,680.00	.....	.....	.....	45,000	81.78	3,680.00
Hard maple	33,136	48.57—	1,609.34	.....	.....	.....	33,136	48.57—	1,609.34
Ash	31,000	61.32+	1,901.00	.....	.....	.....	31,000	61.32+	1,901.00
Sweet birch	20,000	58.20	1,164.00	.....	.....	.....	20,000	58.20	1,164.00
Basswood	15,000	31.00	465.00	.....	.....	.....	15,000	31.00	465.00
Chestnut	5,800	35.00	203.00	5,800	$35.00	$203.00	.....	.....	.....
Totals	289,936	$41.26—	$11,962.34	5,800	$35.00	$203.00	284,136	$41.39—	$11,759.34

TABLE XXXVI. CIGAR BOXES.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Rock (cork) elm	93,500	$ 52.41—	$4,900.00	.....	.....	.....	93,500	$ 52.41—	$4,900.00
Yellow poplar (whitewood)	33,000	46.85	1,546.00	.....	.....	.....	33,000	46.85	1,546.00
Spanish cedar	32,000	115.59	3,699.00	.....	.....	.....	32,000	115.59	3,699.00
Cotton gum	30,000	54.00	1,620.00	.....	.....	.....	30,000	54.00	1,620.00
Red gum	17,000	45.88	780.00	.....	.....	.....	17,000	45.88	780.00
Basswood	4,000	55.50	222.00	.....	.....	.....	4,000	55.50	222.00
Totals	209,500	$60.94	$12,767.00	.....	.....	.....	209,500	$60.94	$12,767.00

Table XXXVII. Tanks.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Cypress	141,825	$38.62	$5,477.75	.....	.....	.....	141,825	$38.62	$5,477.75
White pine	8,000	62.50	500.00	2,500	$28.00	$70.00	5,500	78.18	430.00
Longleaf pine	5,000	28.00	140.00	.....	.....	.....	5,000	28.00	140.00
Totals	154,825	$39.51+	$6,117.75	2,500	$28.00	$70.00	152,325	$39.70	$6,047.75

Table XXXVIII. Sporting and Athletic Goods.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
White oak	57,000	$20.18—	$1,150.00	57,000	$20.18—	$1,150.00	.....	.....	.....
White ash	40,000	25.00	1,000.00	40,000	25.00	1,000.00	.....	.....	.....
Hickory	13,000	25.00	325.00	13,000	25.00	325.00	.....	.....	.....
White pine	300	90.00	27.00	.....	.....	.....	300	$90.00	$27.00
Totals	110,300	$22.68+	$2,502.00	110,000	$22.50	$2,475.00	300	$90.00	$27.00

tank-wood in the country at large, contributes over 95 per cent. of the total shown in Table XXXVII. Most of it was shipped from Florida. Silo makers use cypress and longleaf pine, the latter wood coming from Georgia. The making of tank staves in this State is not a distinct industry. It is carried on as a side line by manufacturers listed in this report under other classes of industries.

SPORTING GOODS.

Polo sticks, hockey sticks, and fishing floats are the only commodities made in Connecticut whose wood material can be listed under the head of sporting goods. (See Table XXXVIII.) White pine is used for floats, and white oak, ash and hickory for the other articles named. This material is all home-grown.

LAUNDRY APPLIANCES.

The quantity of wood shown in Table XXXIX indicates that the making of laundry accessories is not an important industry in Connecticut. Only four woods are reported in Table XXXIX. Chestnut and spruce are used for making clothes reels, while rock oak and longleaf pine contribute the raw material for washing machines.

BUTCHERS' BLOCKS.

Sugar maple is the only wood reported for butchers' blocks. (See Table XL.) The price paid indicates that the better grades are demanded. Sycamore is used more than any other wood for meat blocks in other states, but no Connecticut manufacturers report using sycamore for this purpose.

WOODS CLASSIFIED BY INDUSTRIES.

The statistics shown in Table XLI afford a comprehensive review of the distribution of the kinds of woods used by the Connecticut manufacturers and the extent to which each of the twenty-six industries purchase them. For example, all but ten industries use hard maple, the chair manufacturers demanding the most—an amount equivalent to over 55 per cent. of the total—

Table XXXIX. Laundry Appliances.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Chestnut	17,500	$22.29—	$390.00	17,500	$22.29—	$390.00	.....	.....	.....
Spruce	10,000	35.00	350.00	.....	.....	.....	10,000	$35.00	$350.00
White oak	1,000	50.00	50.00	1,000	50.00	50.00	.....	.....	.....
Longleaf pine	500	40.00	20.00	.....	.....	.....	500	40.00	20.00
Totals	29,000	$27.93	$810.00	18,500	$23.78+	$440.00	10,500	$35.24—	$370.00

Table XL. Butchers' Blocks.

KIND OF WOOD	Total quantity used annually			Grown in Connecticut			Grown out of Connecticut		
	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Total cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory	Feet b. m.	Average cost per 1000 ft. f. o. b. factory	Cost f. o. b. factory
Hard maple	2,050	$35.73	$73.25	2,050	$35.73	$73.25	.....	.....	.....
Totals	2,050	$35.73	$73.25	2,050	$35.73	$73.25	.....	.....	.....

while the box makers use the least, about 2 per cent. White pine, which leads all other kinds of wood in quantity, is apportioned among only thirteen industries. Tulip poplar has the widest demand of any of the species; nineteen of the twenty-six manufacturers report using it. White birch, dogwood, persimmon, Sitka spruce, and western pine are among the woods reported by only a single factory.

SUMMARY OF AVERAGE PRICES.

Table XLII has been compiled to permit comparison of the average cost per thousand feet of the different kinds of wood used by the Connecticut manufacturers, as shown in the preceding industry tables. The form in which the raw material is delivered at the factory, whether in log, billet, bolt, veneer, or lumber; the thickness, dimension, grade; and the source, whether imported, domestic, etc., are but some of the causes of variation in the prices shown. Under no circumstances should the prices in Table XLII be confused with market prices.

TABLE XLI. PERCENTAGE OF THE DIFFERENT KINDS OF WOOD USED BY EACH INDUSTRY.

DOMESTIC WOODS	Total	Agricultural implements	Boxes and crates	Butchers' blocks	Chairs	Cigar boxes	Clocks	Firearms	Fixtures	Furniture	Handles	Laundry appliances	Machinery and apparatus, electrical	Machinery and apparatus, not electrical	Musical instruments	Patterns	Planing mill products	Printing materials	Professional and scientific instruments	Sash, doors, blinds and general millwork	Ships and boats	Shuttles, spools and bobbins	Sporting and athletic goods	Tanks	Vehicles and vehicle parts	Woodenware and novelties	Miscellaneous
Applewood	100	....	....	....	....	....	....	....	....	....	28.6	....	....	....	....	....	....	....	28.6	....	42.8	....	....	....	....	....	....
Ash	100	.7	1.1	....	....	....	....	....	....	0.2	3.1	....	....	0.7	0.2	....	22.0	1.0	.1	19.7	.2	2.8	1.4	....	37.8	0.1	6.9
Aspen	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	100.0	....
Basswood	100	....	7.5	....	0.1	39.3	....	....	0.2	.1	2.2	....	....	2.4	42.1	....	....	.4	3.9	1.2	....	....	....	....	.2	.3	.1
Beech	100	....	....	....	....	....	....	....	....	1.1	57.1	....	....	....	....	....	.3	....	35.2	....	....	.7	....	....	2.2	2.3	1.1
Birch, paper	100	....	....	....	....	1.0	....	....	....	2.2	10.85	....	....	....	.8	....	....	....	....	3.5	....	30.7	....	....	1.0	49.9	....
sweet	100	....	....	....	....	4.0	....	....	2.1	.4	....	....	5.9	....	32.5	....	25.4	3.0	....	25.7	.1	....	....	....	....	....	....
white	100	....	....	....	....	....	....	....	....	....	84.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	16.0	....
yellow	100	13.0	....	....	32.8	....	....	....	....	....	18.6	....	2.0	....	26.2	....	....	....	....	5.3	....	....	....	....	....	.2	1.9
Butternut	100	4.7	....	....	....	....	....	....	....	....	4.7	....	....	....	82.3	1.2	....	....	....	7.1	....	....	....	....	....	....	....
Cedar, red	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	66.7	....	....	....	....	....	33.3
western red	100	....	....	....	....	....	....	....	8.6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
white	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	77.2	....	....	14.2	....	....	....	....	....	....	....
Cherry	100	....	....	....	3.1	....	....	....	.8	....	15.1	....	....	....	11.2	.2	100.0	....	....	....	100.0	....	....	....	....	....	....
Chestnut	100	.2	2.0	....	....	3.9	....	3.4	1.1	.1	.2	*....	.6	49.1	.3	12.6	5.0	47.1	1.6	.1	....	....	....	.1	2.5	....
Cottonwood	100	....	89.7	....	....	....	....	....	....	....	....	....	10.3	....	....	....	....	....	2.2	9.4	7.6	....	....	....	.2	1.9	6.1
Cypress	100	....	.3	....	....	....	....	....	....	.1	....	....	....	.8	.4	....	54.3	....	....	40.8	1.1	....	....	2.1	.1	....	....
Dogwood	100	....	....	....	....	....	....	....	....	....	100.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Elm, rock	100	1.0	4.8	....	....	9.0	....	....	....	....	.6	....	....	....	61.1	....	....	....	....	....	.3	....	....	....	21.8	1.4	....
soft (white)	100	....	50.0	....	9.5	....	....	....	....	.6	....	....	....	....	....	....	....	....	....	8.8	....	....	....	....	13.2	16.5	1.4
Fir, Douglas	100	10.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	14.6	....	....	47.3	26.5	....	....	....	....	.7	....
Gum, black	100	....	100.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
red	100	....	....	....	....	2.1	3.4	26.5	1.8	.6	....	....	.3	....	4.4	....	26.6	....	....	29.2	....	....	....	....	....	....	5.1
Hackmatack	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	100.0	....	....	....	....	....	....
Hemlock	100	....	92.8	....	....	....	....	....	....	....	....	....	....	....	....	....	7.2	....	....	....	....	....	....	....	....	....	....
Hickory	100	1.8	.9	....	....	....	....	....	....	.1	35.0	....	....	....	....	....	....	....	3.7	.5	.1	15.7	.5	....	41.6	....	.1
Locust	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	98.4	....	....	....	....	1.6	....
Maple, hard	100	.1	.9	.1	8.9	....	....	....	1.9	.1	16.8	....	....	.6	37.2	....	7.0	1.0	5.9	4.1	2.0	1.6	....	....	2.8	7.3	1.7
soft	100	23.0	1.4	....	56.5	....	11.3	....	....	....	5.6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.8	1.4
Oak, red	100	2.5	.7	....	3.0	....	40.2	....	3.8	2.2	....	....	2.6	....	.7	....	22.2	....	.2	10.4	....	....	....	....	5.4	....	5.2
white	100	.6	....	....	4.4	....	4.8	....	4.3	.2	2.7	*....	.8	.5	6.6	....	15.0	....	....	16.9	23.6	.1	1.0	....	11.5	1.7	5.3
Persimmon	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	100.0	....	....	....	....	....
Pine, loblolly	100	....	11.7	....	....	....	....	....	.4	....	....	....	....	1.0	....	....	62.5	....	....	21.7	.6	....	....	....	2.1	....	....
longleaf	100	....	.3	....	....	....	....	....	....	....	....	*....	....	.9	1.7	*	18.4	....	....	4.9	73.7	....	.1	*....	....	....	....
pitch	100	....	90.5	....	....	....	....	....	....	....	....	....	....	....	....	....	9.2	....	....	....	....	....	....	....	.3	....	....
shortleaf	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	96.5	....	....	3.5	....	....	....	....	....	....	....
sugar	100	....	....	....	....	....	....	....	....	....	....	....	....	....	39.2	....	7.4	....	....	53.4	....	....	....	....	....	....	....
western white Idaho	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2.4	....	....	....	97.6	....	....	....	....	....	....	....
western yellow	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	100.0	....	....	....	....	....	....	....
white	100	.1	62.8	....	....	....	.1	....	.2	....	*....	....	.7	.4	1.3	1.3	9.7	....	....	21.0	.4	....	*....	*....	*....	1.5	.5
Poplar, tulip or whitewood	100	....	5.7	....	....	.5	15.2	....	2.3	.6	.6	....	.1	.5	30.6	.6	20.3	2.0	.4	8.6	.2	.1	....	....	8.3	.4	3.0
Redwood	100	....	....	....	....	....	....	....	27.0	....	....	....	....	....	....	....	....	....	....	71.6	1.4	....	....	....	....	....	....
Spruce	100	....	33.9	....	....	....	....	....	.1	....	....	.1	3.1	.6	.9	1.3	34.9	....	....	17.2	4.9	....	....	....	.3	2.7	....
Sitka	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	100.0	....	....	....	....	....	....	....
Sycamore	100	....	75.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	25.0	....	....	....	....	....	....
Tupelo	100	....	90.8	....	....	2.1	....	....	....	.2	....	....	....	....	....	....	3.3	....	....	3.6	....	....	....	....	....	....	....
Walnut, black	100	....	....	....	....	....	1.4	60.1	1.5	....	....	....	9.3	....	8.8	....	.8	....	10.1	2.2	.2	....	....	....	.5	.5	4.6
IMPORTED WOODS																											
Boxwood	100	....	....	....	....	....	....	.3	....	....	5.9	....	....	....	10.9	....	....	....	82.9	....	....	....	....	....	....	....	....
Cedar, Spanish	100	....	....	....	....	100.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cocobola	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Ebony	100	....	....	....	....	....	....	....	....	....	76.3	....	....	....	....	....	....	....	23.7	....	....	....	....	....	....	....	....
Lignum-vitæ	100	....	....	....	....	....	....	....	....	....	3.8	....	....	....	96.2	....	....	....	....	....	....	....	....	....	....	....	....	....
Mahogany	100	....	....	....	....	....	....	....	....	85.0	....	....	....	....	....	....	....	....	14.1	....	.9	....	....	....	....	....	....
white	100	....	....	....	.8	....	11.5	....	3.2	.1	1.0	....	11.1	....	29.9	3.2	4.7	....	3.1	8.0	7.8	....	....	....	10.8	1.2	3.6
Rosewood	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	100.0	....	....	....	....	....	....
Teak	100	....	....	....	....	....	.1	....	....	....	6.2	....	....	....	*....	....	....	....	93.7	....	....	....	....	....	....	....	....
Walnut, Circassian	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	100.0	....	....	....	....	....	....
		....	....	....	....	....	....	31.3	....	....	....	....	....	....	2.6	....	....	....	....	....	....	....	....	....	46.1	....	....

Less than $\frac{1}{10}$ of one per cent.

TABLE XLII. AVERAGE COST PER 1000 FEET OF THE DIFFERENT KINDS OF WOOD USED.

	All industries	Agricultural implements	Boxes and crates	Butchers' blocks	Chairs	Cigar boxes	Clocks	Firearms	Fixtures	Furniture	Handles	Laundry appliances	Machinery and apparatus, electrical	Machinery and apparatus, not electrical	Musical instruments	Patterns	Printing materials	Professional and scientific instruments	Sash, doors, blinds and general millwork	Planing mill products	Ships and boats	Shuttles, spools and bobbins	Sporting and athletic goods	Tanks	Vehicles	Woodenware	Miscellaneous
All woods	$37.08	$21.89	$21.11	$35.73	$35.92	$60.94	$35.81	$67.11	$48.70	$35.93	$33.31	$27.93	$36.17	$39.90	$49.13	$65.73	$41.26	$63.47	$42.87	$37.33	$40.93	$27.65	$22.68	$39.51	$48.55	$24.55	$38.66
DOMESTIC WOODS																											
Applewood	26.43	.....	.....	.....	.....	.....	.....	.....	.....	.....	30.00	.....	.....	.....	.....	.....	.....	25.00	.....	.....	25.00	.....	.....	.....	.....	.....	.....
Arbor vitæ	30.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30.00	.....	.....	.....	.....	.....	.....	.....
Ash	52.17	21.88	27.58	.....	.....	.....	.....	.....	.....	53.00	30.40	.....	.....	48.00	54.00	.....	61.32	20.00	58.09	58.08	40.00	25.12	25.00	.....	59.13	35.00	20.02
Aspen	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.00	.....
Basswood	40.37	.....	31.79	.....	.....	55.50	32.64	.....	39.88	22.00	41.43	.....	.....	50.56	48.35	.....	31.00	41.61	50.98	.....	.....	.....	.....	.....	31.76	20.00	20.00
Beech	31.70	.....	.....	.....	.....	.....	.....	.....	.....	18.60	21.07	.....	.....	.....	.....	.....	.....	50.67	.....	70.00	.....	40.00	.....	.....	23.00	18.00	20.00
Birch, paper	20.54	.....	.....	.....	.....	.....	30.00	.....	.....	17.73	18.23	.....	.....	.....	18.00	.....	.....	.....	20.14	.....	.....	.....	.....	.....	22.86	22.04	.....
sweet	49.51	.....	.....	.....	.....	.....	49.00	.....	37.59	52.00	.....	.....	20.00	.....	39.69	.....	58.20	.....	65.46	52.74	50.00	.....	.....	.....	.....	.....	.....
white	31.70	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31.70	.....	.....	.....	.....	.....
yellow	30.10	16.40	.....	.....	30.10	.....	.....	.....	.....	.....	20.31	.....	20.00	.....	42.00	.....	.....	.....	44.92	.....	.....	.....	.....	.....	.....	65.00	19.72
Butternut	22.49	18.00	.....	.....	.....	.....	.....	.....	.....	.....	25.00	.....	.....	.....	18.00	30.00	.....	.....	75.00	.....	.....	.....	.....	.....	.....	.....	.....
Cedar, red	65.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	65.00	.....	.....	.....	.....	.....	65.00
western red	45.32	.....	.....	.....	.....	.....	.....	.....	70.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	32.12	45.00	.....	.....	.....	.....	.....	.....	.....
white	56.72	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	56.72	.....	.....	.....	.....	.....	.....	.....
Cherry	63.62	.....	.....	.....	120.00	.....	.....	.....	45.23	.....	20.17	.....	.....	.....	88.65	120.00	81.78	57.50	112.31	97.50	60.00	.....	.....	.....	20.00	20.00	.....
Chestnut	25.82	20.00	14.82	.....	.....	.....	19.02	.....	23.20	22.27	18.00	22.29	20.00	23.84	21.58	22.00	35.00	18.07	37.61	46.48	23.54	.....	.....	.....	25.00	13.56	22.68
Cottonwood	16.03	.....	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	25.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cypress	41.03	.....	20.00	.....	.....	.....	.....	.....	.....	45.00	.....	.....	.....	55.57	60.00	.....	.....	.....	40.32	40.97	59.82	.....	.....	32.62	66.84	.....	.....
Dogwood	24.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	24.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elm, rock	38.49	18.00	45.00	.....	.....	52.41	.....	.....	.....	.....	20.00	.....	.....	.....	41.18	.....	.....	.....	.....	.....	54.29	.....	.....	.....	25.81	25.00	.....
soft	38.25	.....	43.35	.....	40.00	.....	.....	.....	.....	16.00	.....	.....	.....	.....	.....	.....	.....	.....	43.61	.....	.....	.....	.....	.....	33.57	25.00	20.00
Fir, Douglas	46.92	55.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46.96	45.00	43.94	.....	.....	.....	.....	70.00	.....
Gum, black	17.00	.....	17.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
red	45.28	.....	.....	.....	.....	45.88	32.91	44.50	34.00	43.00	.....	.....	25.00	.....	45.00	.....	.....	.....	50.40	45.21	.....	.....	.....	.....	.....	.....	34.00
Hackmatack	73.53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	73.53	.....	.....	.....	.....	.....	.....
Hemlock	14.68	.....	13.93	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16.00	.....	.....	.....	.....	.....	12.00	.....
Hickory	31.65	22.30	14.00	.....	.....	.....	.....	.....	.....	16.00	23.00	.....	.....	.....	.....	.....	.....	24.93	76.54	.....	25.00	26.65	25.00	.....	41.85	.....	25.00
Locust	98.63	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	100.00	.....	.....	.....	.....	12.00	.....
Maple, hard	34.72	17.00	34.50	35.73	27.46	.....	.....	.....	45.00	25.00	22.40	.....	.....	51.45	48.15	.....	48.57	25.92	47.00	40.54	31.43	40.00	.....	.....	28.25	25.07	36.11
soft	27.17	16.10	11.00	.....	33.00	.....	28.00	.....	.....	.....	19.01	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22.00	19.00
Oak, red	41.20	19.32	16.67	.....	55.38	.....	30.22	.....	45.32	23.69	.....	.....	20.35	.....	97.04	.....	.....	18.20	54.83	58.61	.....	.....	.....	.....	30.21	.....	47.82
white	56.41	19.57	.....	.....	39.92	.....	47.35	.....	73.80	74.56	30.72	50.00	20.38	35.33	109.05	.....	.....	.....	72.47	73.60	40.39	25.00	20.18	.....	32.44	21.82	64.83
Persimmon	17.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17.50	.....	.....	.....	.....	.....
Pine, loblolly	27.00	.....	21.86	.....	.....	.....	.....	.....	42.59	.....	.....	.....	.....	32.00	.....	.....	.....	.....	31.64	25.48	37.15	.....	.....	.....	44.77	.....	.....
longleaf	36.10	.....	23.00	.....	.....	.....	.....	.....	.....	.....	.....	40.00	.....	35.11	38.00	.....	.....	.....	32.99	28.08	33.33	.....	.....	28.00	65.00	.....	.....
pitch	17.53	.....	17.27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20.00	.....	.....	.....	.....	22.00	.....	.....
shortleaf	23.32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20.20	23.11	.....	.....	.....	.....	.....	.....	.....
sugar	66.67	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	55.64	47.91	.....	.....	.....	.....	.....	.....	.....
western white	47.38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	85.23	.....	.....	.....	46.83	.....	.....	.....	.....	.....	.....	.....	.....
western yellow	45.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	70.00	.....	.....	45.00	.....	.....	.....	.....	.....	.....	.....	.....
white	28.14	18.00	21.70	.....	.....	.....	37.50	.....	34.28	.....	17.45	.....	25.00	33.04	50.89	66.48	.....	.....	37.49	39.13	70.54	.....	90.00	62.50	31.51	24.40	26.53
Poplar, tulip or whitewood	47.57	.....	23.94	.....	.....	46.85	35.32	.....	43.34	22.00	22.96	.....	22.00	64.05	46.72	91.76	21.00	75.00	60.35	57.45	49.29	20.00	.....	.....	61.70	32.74	38.20
Redwood	46.22	.....	.....	.....	.....	.....	.....	.....	80.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	32.83	.....	80.00	.....	.....	.....	.....	.....	.....
Spruce	24.30	.....	20.24	.....	.....	.....	.....	.....	26.50	.....	.....	35.00	25.00	28.29	48.98	24.46	.....	.....	24.47	24.54	26.68	.....	.....	.....	26.71	30.43	.....
Sitka	47.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47.00	.....	.....	.....	.....	.....	.....	.....	.....
Sycamore	26.25	.....	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60.00	.....	.....	.....	.....	.....	.....
Tupelo	19.05	.....	17.04	.....	.....	54.00	.....	.....	.....	32.00	.....	.....	.....	.....	.....	.....	.....	.....	35.06	34.11	.....	.....	.....	.....	.....	.....	.....
Walnut, black	89.63	.....	.....	.....	.....	.....	83.33	78.14	110.00	.....	.....	.....	65.00	.....	198.37	.....	.....	63.61	105.82	120.00	100.00	.....	.....	.....	171.43	89.84	110.00
IMPORTED WOODS																											
Boxwood	49.19	.....	.....	.....	.....	.....	.....	115.54	.....	.....	54.89	.....	.....	.....	53.45	.....	.....	48.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cedar, Spanish	115.59	.....	.....	.....	.....	115.59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cocobola	176.67	.....	.....	.....	.....	.....	.....	.....	.....	.....	167.07	.....	.....	.....	.....	.....	.....	207.56	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ebony	264.94	.....	.....	.....	.....	.....	.....	.....	.....	.....	232.27	.....	.....	.....	266.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lignum-vitæ	91.90	.....	.....	.....	.....	.....	.....	.....	.....	92.04	.....	.....	.....	.....	.....	.....	.....	87.62	.....	.....	142.92	.....	.....	.....	.....	.....	.....
Mahogany	174.28	.....	.....	.....	111.00	.....	146.83	.....	133.94	184.44	180.00	.....	100.00	.....	243.60	160.38	.....	114.51	165.96	166.67	166.92	.....	.....	.....	160.18	158.18	118.75
white	250.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	250.00	.....	.....	.....	.....	.....	.....
Rosewood	225.40	.....	.....	.....	.....	.....	340.69	.....	.....	.....	285.30	.....	.....	.....	312.50	.....	.....	221.30	.....	.....	.....	.....	.....	.....	.....	.....	.....
Teak	287.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	287.50	.....	.....	.....	.....	.....	.....
Walnut, Circassian	287.44	.....	.....	.....	.....	.....	.....	250.00	.....	.....	.....	.....	.....	.....	450.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	320.00	.....	.....

APPENDIX.

WOOD USES BY SPECIES.

DOMESTIC WOODS.

APPLEWOOD.

Gauges
Handles
Knees (Small Boats)
Planes
Tool Handles

ASH.

Ammunition Boxes
Auto Bodies
Auto Body Frames
Auto Bows
Auto Frames
Automobile Pillars
Auto Running Boards
Battery Boxes
Bent Work (Carriages)
Bent Work (Special)
Bonnet Sills (Autos)
Buggy Sills
Cabinet Makers' Clamps
Cabinet Work
Cattle Stanchions
Cotton Gins
Cushion Frames
Flails
Gears (Vehicle)
Handles
Handles (Edge Tools)
Handles (Engravers' Tools)
Handles (File)
Hockey Sticks
Interior Finish
Ladder Rounds
Office Fixtures
Oyster Tongs
Piano Keys
Picker Sticks
Plow Beams
Plow Pins
Plow Rungs
Polo Sticks
Press Platforms (Printing)
Printing Press Parts
Rakes
Reaches
Shafts
Sills (Vehicle) Bodies
Spring Bars
Stable Forks
Stair-work
Store Fixtures
Tackle Blocks
Trucks
Truck Body Frames
Truck Bows
Wagon (Gear Parts)
Wagon Bodies
Wagon Jacks
Wagon Parts
Wagon Poles
Wagon Shafts

ASPEN.

Boxes
Cloth Shells (Cotton)
Crates

BASSWOOD.

Bent Vehicle Parts
Boxes
Carriage Bodies (Panels)
Chest Bottoms
Cigar Boxes
Clock Cases
Cotton Gins
Couch Frames
Crates
Drawer Bottoms
File Handles
Handles
Handles (Engravers' Tools)
Handles (File)
Handles (Trowel)
Keys (Piano)
Music Cabinets
Organ Frames
Organ Keys
Packing Boxes
Piano Keys
Plumbs (Mechanic's)
Rails (Piano)
Record Cabinets
Rubber Type Boxes
Shelves (Desk)
Tool Boxes
Toys
Trays (Enamelling)
Vial Boxes

BEECH.

Brush Backs
Brush Handles
Coal Sieves
Drawer Knobs
Handles (Hay Fork)
Handles (Pitch Fork)
Handles (Small)
Hand Screws
Knife Handles
Nitre Boxes
Novelty Turnings
Planes
Rug Poles
Rulers
Truck Platforms

BIRCH (PAPER).

Auto Accessories
Brush Backs
Brush Handles
Cabinet Backs
Cabinet Shelves
Chair Frames (Rattan)
File Handles
Handles
Handles (Edge Tools)
Handles (Engravers' Tools)
Handles (File)
Knobs
Lawn Mower Rolls
Music Cabinets
Paper Plugs
Piano Benches
Piano Stools
Rails (Piano)
Rug Poles
Tool Handles
Toys

BIRCH (SWEET).

Action Parts (Organs)
Backing Electrotypes
Cabinet Work
Cases (Organ)
Clock Cases (Cabinet)
Cutting Board Straps
Doors Board
Interior Finish
Office Fixtures
Piano Cases
Piano Keys
Stair-work
Store Fixtures
Window Frames (Vehicle)

BIRCH (WHITE OR GRAY).

Collets
Laundry Buttons
Rolls (Braid)
Small Handles
Spools (Silk)

BIRCH (YELLOW).

Action Parts (Organ)
Agricultural Implements
Auto Accessories
Cabinet Work
Chairs
Coal Sieves
Doors
Drawers
Drawer Knobs
Faucets
Handles
Harrow Parts
House Trimmings
Interior Finish
Knobs
Lawn Mower Rolls
Music Cabinets
Novelty Turnings
Organ Rack Pins
Piano Benches
Piano Legs
Piano Stools
Press Table (Printing)
Small Handles
Spools (Wire)
Tool Handles
Truck Platforms
Ventilators

BUTTERNUT.

Agricultural Implements
Cabinet Work
Handles
Organ Pipe Feet
Organ Pipe Gates
Patterns

CEDAR (NORTHERN WHITE).

Interior Finish

CEDAR (RED).

Caskets

CEDAR (SOUTHERN WHITE).

Launches (Siding)
Planking (Boat)

CEDAR (WESTERN RED).

Cabinet Work
Doors
Fixtures (Office)
Interior Finish
Screen Door Frames

CHERRY.

Backing Electrotypes
Base Knobs
Cabinet Work
Cases (Organ)
Chisel Handles
Handles
Handles (Chisel)
House Trimmings
Interior Finish
Levels
Metronomes
Mouldings
Patterns
Piano Benches
Piano Keys
Piano Parts
Plumbs
Rubber Stamp Moulding
School Desks
School Seats
Show Case Frames
Window Frames (Vehicle)

CHESTNUT.

Agricultural Implements
Boxes
Burial Cases
Cabinet Work
Cart Body Sides
Caskets
Casket Handles
Clock Cases
Clock Cases (Kitchen)
Clock Cases (Office)
Clothes Reels
Coal Barges
Coffins
Coffin Boxes
Coil Cases
Cotton Gins
Couch Frames
Crates
Display Cabinets
Door Frames
Exterior Finish
Foundry Flasks
Frames (Barges)
Interior Finish
Interior Frames
Launches
Linings (Auto)
Machine Tables
Mouldings
Organ Pipe Handles
Panel Cores
Paper Plugs
Piano Cases
Piano Case (Cores)
Post Office Fixtures
Printing Presses
Settees
Shelves
Shelves (Desk)
Show Case Bases
Show Case Shelving
Stair-work
Store Fixtures
Swings
Timber (Ship)
Tool Chests
Trimmings
Window Frames

COTTONWOOD.

Electric Fixture Blocks
Woven Wire Boxes

CYPRESS.

Bodies (Vehicle)
Cabinet Work
Casings
Coal Barges
Cornice Work
Doors
Door Frames
Exterior Finish
House Trimmings
Interior Finish
Joiner-work (Ship)
Launches
Machinery Parts
Mouldings
Organ Pipes
Panels (Organ)
Rendering Cars
Sash
Sink Boards
Stair-work
Steps
Tanks
Trimmings
Vats
Window Frames

DOGWOOD.

Knife Handles

ELM, ROCK (CORK).

Bent Work
Cigar Boxes
File Handles
Frames (Vehicle)
Hubs
Ox Yokes
Piano Cases
Woven Wire Boxes

ELM, ROCK (SLIPPERY).

Bent Work (Carriages)
Harrow Parts
Hubs
Ox Yokes
Piano Backs
Sieve Rims
Woven Wire Boxes

ELM, SOFT (WHITE).

Bent Work (Carriages)
Frames (Vehicle)
Handles
Piano Benches
Piano Stools

FIR, DOUGLAS.

Agricultural Implements
Boat Bottoms
Cabinet Work
Columns
Decking (Boats)
Doors
House Trimmings
Interior Finish
Ladders (Fire Department)
Planking (Boat)
Skiffs
Spars

GUM, COTTON OR TUPELO.

Boxing
Cabinet Work
Cigar Boxes
House Trimmings
Shipping Cases (Wire Bound)

GUM, WATER OR BLACK.

Shipping Cases (Wire Bound)

HACKMATACK.

Ship Knees

HEMLOCK.

Box Shooks

HICKORY.

Agricultural Implements
Axe Handles
Axle Beds
Auto Parts
Auto Top Bows
Cabinet Work
Chisel Handles
Drop Hammer Pins
Eveners
Flails
Gears (Vehicle)
Gouge Handles
Hammer Handles
Handles
Hand Screws
Hockey Sticks
Mallets
Masons' Levels
Mast Hoops
Novelty Turnings
Ox Bows
Pick Handles
Picker Sticks
Polo Sticks

Rakes
Reaches
Rims
Sledge Handles
Spokes
Spring Bars
Stable Forks
Sweep Stakes
Tool Handles
Trucks
Truck Frames
Truck Poles
Yard Sticks
Wagons
Wagon Jacks
Wagon Parts
Whiffle Trees

LOCUST.

Novelty Turnings
Tree Nails

MAPLE, SOFT.

Agricultural Implements
Box Shooks
Clock Cases
Faucets
File Handles
Handles
Handles (Edge Tools)
Handles (Engravers' Tools)
Harrow Parts
Knobs
Lawn Mower Rolls
Organ Fittings
Organ Pipes
Paper Plugs
Tool Handles
Piano Benches
Piano Stools

MAPLE, HARD.

Action Parts (Organ)
Agricultural Implements
Automobile Frames
Automobile Panels
Bent Work (Carriages)
Brush Backs
Brush Handles
Bridges (Piano)
Butchers' Blocks
Case Cores (Organ)
Cattle Stanchions
Clock Cases
Coal Sieves
Cotton Gins
Couch Frames
Cutter Sticks
Cutting Boards
Drawers
Drawer Knobs
Draw Knife Handles
Electrical Appliances
Faucets
Feed Boards (Printing Press)
Flooring
Folding Chairs
Gear Logs
Handles
Handles (Edge Tools)
Handles (Engravers' Tools)
Handles (File)
Harrow Parts
Humidor Cabinets
Inside Finish (Vehicles)
Interior Finish (Houses)
Knobs
Letter Filing Cabinets
Machinery Parts
Mill Boards
Motor Trucks
Music Cabinets
Novelties (Small)
Organ Rack Pins
Organ Stock Rods
Ox Yokes
Phonograph Cabinets
Piano Action
Piano Benches
Piano Cases

Piano Stools
Pin Blocks (Piano)
Printing Presses
Rug Poles
Rulers
School Desks
School Seats
Sewing Machine Cabinets
Shelves
Sled Shoes
Spools (Wire)
Thread Cabinets
Tool Handles
Tumbling Barrels
Tumbling Barrel Linings
Truck Platforms
Work Stands
Woven Wire Boxes
Wrest Plank (Piano)
Yard Sticks

OAK, RED.

Agricultural Implements
Auto Parts
Cabinet Work
Carts
Caskets
Clock Cases
Clock Cases (Kitchen)
Clock Cases (Office)
Coal Barges
Coal Screens
Couch Frames
Drawer Knobs
Electrical Appliances
Electrical Equipment
Electric Fixture Blocks
Furniture Knobs
Handles
Harrow Frames
House Trimmings
Humidor Cabinets
Interior Finish
Knobs
Letter Filing Cabinets
Novelty Turnings
Phonograph Cabinets
Piano Benches
Piano Stools
Post Office Fixtures
Rims
Sewing Machine Cabinets
Stair-work
Store Fixtures
Thread Cabinets
Tool Chests
Trucks
Truck Handles
Truck Platforms
Wagons
Wagon Parts
Wagon Poles

OAK, WHITE.

Agricultural Implements
Auto Bodies
Axe Handles
Axle Beds
Bath Room Fixtures
Bent Sleigh Stock
Bent Work (Carriages)
Bits (Ship)
Body Sills (Vehicles)
Cabinets
Cabinet Work
Cafe Fixtures
Carling (Boat)
Carts
Cases (Organ)
Cattle Stanchions
Chairs
Chimney Bracket Arms
Clock Cases
Coal Barges
Combings (Ship)
Couch Frames
Deadwood Stems
Decks (Boats)
Desk Tops
Display Cases
Door Sills
Electrical Appliances

Electrical Equipment
Electric Fixture Blocks
Engine Beds (Boats)
Extension Ladder Bars
Felloes
Frames (Boats)
Frames (Wagon)
Furniture Knobs
Harrow Frames
Heavy Gears
Hockey Sticks
Humidor Cabinets
Interior Finish
Keels (Boats)
Ladder Rounds
Launches
Letter Filing Cabinets
Mast Hoops
Motor Trucks
Newspaper Files
Office Fixtures
Office Partitions
Ox Bows
Phonograph Cabinets
Piano Cases
Piano Stools
Picker Sticks
Pick Handles
Planking (Ship)
Plow Handles
Plow Rungs
Plow Pins
Plumbers' Wood-work
Polo Sticks
Porch Swing Slats
Post Office Fixtures
Postners (Ship)
Ribs (Boat)
Rims
Scraper Backs (Roads)
Scraper Handles (Roads)
Sewing Machine Cabinets
Sheer Strakes (Ship)
Show-case Frames
Sledge Handles
Special Furniture
Spokes
Stable Forks
Stairs
Stair-work
Store Fixtures
Swings
Tables
Thread Cabinets
Timbers (Ship)
Trucks
Truck Parts
Ventilators
Wagons
Wagon Bodies
Wagon Poles
Wagon Shafts
Wagon-work
Washboards (Ship)
Washing Machines
Whiffle Trees

PERSIMMON.

Shuttles

PINE, LOBLOLLY.

Auto Bodies
Auto Construction
Auto Running Boards
Bodies (Vehicle)
Bottom Boards (Auto)
Boxes
Cabinet Work
Coal Barges
Cotton Gins
Crates
Crating
Display Arms
Doors
Dump Carts
House Trimmings
Interior Finish
Joiner-work
Mouldings
Panels (Carriage)
Piano Cases

Pulley Stiles
Sash
Sheathing (Ship)
Stair-work
Swell Boxes (Organ)
Trimmings
Wagon Bodies
Wagon Floors
Window Jambs

PINE, LONGLEAF.

Boat Planking
Box Ends
Clamps (Boats)
Coal Barges
Cotton Gins
Crates
Exterior Finish
Framing (Boats)
Interior Finish
Keelsons
Packing Cases
Planking (Ship)
Silo Staves
Stringers (Boats)
Washing Machines

PINE, PITCH.

Boxes
Box Shooks
Dressed Boards
Packing Cases

PINE, SHORTLEAF.

Cabinet Work
Interior Finish

PINE, SUGAR.

Action Parts (Organs)
Blinds
Doors
Interior Finish
Keys (Piano)
Organ Pipes
Sash

PINE, WESTERN WHITE (IDAHO WHITE).

Cabinet Work
Doors
House Trimmings
Mouldings
Patterns
Sash
Shelves
Window Frames

PINE, WESTERN YELLOW.

Doors
Sash

PINE, WHITE.

Action Parts (Organs)
Agricultural Implements
Balusters
Blinds
Blocks (Piano)
Box Shooks
Burial Cases
Cabinet Work
Cabins (Boat)
Cable Reels
Case Cores (Organs)
Casket Handles
Clock Backs
Clothes Boards
Coal Barges
Coffin Boxes
Crates
Crayon Boxes
Decking (Boat)
Exterior Finish

Fishing Floats
Fixtures (Office)
Foundry Flasks
Handles
Handles (Edge Tools)
Handles (Engravers' Tools)
Handles (File)
Hat Cases
Interior Finish
Joiner-work
Machinery Parts
Models
Mouldings
Outside Cornice
Packing Boxes
Pallets
Pallet Racks
Patterns
Piano Cases
Porch Columns
Rails (Stairs)
Sash
Show-case Bases
Show-case Shelves
Siding
Silver Ware Blocks
Silver Ware Boxes
Small Boats
Sounding Board Ribs
Stair-work
Store Fixtures
Tanks
Toys
Window Frames
Wire Reels

POPLAR, YELLOW (WHITEWOOD).

Action Parts (Organ or Piano)
Ammunition Boxes
Auto Bodies
Auto Body Panels
Auto Frames
Automobile Panels
Baby Carriage Bodies
Bent Work (Carriages)
Berths (Boat)
Bodies (Vehicle)
Bungs (Barrel)
Cabinet Work
Caskets
Cigar Boxes
Clock Cases
Coal Barges
Coal Sieves
Cotton Gins
Couch Frames
Counters
Cutting Board Straps
Crating
Crayon Box Cases
Doors
Door Frames
Electrical Appliances
Electric Fixture Blocks
Enamel Clock Cases
Enamel Work
File Handles
Filler Strips
Folder Boards
Handles
Handles (Edge Tools)
Handles (Engravers' Tools)
Handles (File)
Hat Blocks
Hat Flanges
House Trimmings
Humidor Cabinets
Interior Finish
Letter Filing Cabinets
Machine Skids
Masons' Levels
Motor Trucks
Novelty Turnings
Office Fixtures
Organ Pipe Feet
Organ Pipe Handles
Panels
Panels (Carriages)
Phonograph Cabinets
Piano Cases
Pillars (Auto)
Platten Cores (Typewriters)
Post Office Fixtures

Rubber Stamp Pads
Sewing Machine Cabinets
Shelves (Desks)
Show-cases
Show-case Shelving
Spools (Goldleaf)
Stair-work
Store Fixtures
Thread Cabinets
Toys
Tray (Enamelling)
Trimmings
Trucks
Turnings
Vial Boxes
Wagons
Wagon Bodies
Wagon Seats
Wagon Work
Window Frames
Wood Rolls (Paper Machinery)

RED GUM.

Cabinet Work
Cigar Boxes
Clock Cases
Electrical Appliances
Electric Fixture Blocks
Embossed Trimmings (Clocks)
Gun Stocks
House Trimmings
Interior Finish
Humidor Cabinets
Letter Filing Cabinets
Phonograph Cabinets
Piano Cases
Sewing Machine Cabinets
Stair-work
Thread Cabinets

REDWOOD.

Cabinet Work
Doors
Fixtures (Office)

SPRUCE.

Blocking
Boxes
Bulk Heads (Ship)
Cable Reels
Canopy Tops (Boats)
Carpenters' Brackets
Carriages
Chimney Brackets
Clothes Reels
Coal Barges
Crates
Door Frames
Extension Trestles
Exterior Finish
Flooring
Foundry Flasks
Hat Cases
Hat Case Ends
Hatches (Barges)
Interior Finish
Joiner-work (Ship)
Ladders
Lawn Settees
Lawn Swings
Pallet Racks
Piano Cases
Silver Ware Blocks
Silver Ware Boxes
Sounding Boards
Spars
Stair-work
Step Ladders
Templets (Boats)
Trimmings
Window Frames
Wire Reels
Work Boxes

SPRUCE, SITKA.

Cabinet Work
Doors

SYCAMORE.

Boxes
Finish (Boats)

WALNUT, BLACK.

Cabinet Work
Clock Cases
Coil Cases
Cylinder Heads
Electrical Appliances
Fore-end Blanks (Fire-arms)
Gun Stocks
Humidor Cabinets
Knobs
Letter Filing Cabinets
Newspaper Files
Novelties
Phonograph Cabinets
Piano Cases
Piano Legs
Pistol Stocks
Rifle Stocks
Sewing Machine Cabinets
Thread Cabinets
Tool Boxes
Tool Chests
Window Frames (Auto)

FOREIGN WOODS.

BOXWOOD.

Fork Handles
Gauges
Gun Rods
Knife Handles
Planes
Rules
Sharps (Piano)

CEDAR, SPANISH.

Cigar Boxes

COCOBOLA.

Bit Brace Heads
Carpenters' Tools
Fork Handles
Handles
Knife Handles
Tool Handles

EBONY.

Fork Handles
Keys (Organ)
Knife Handles
Organ Stop Knobs
Sharps (Piano)

LIGNUM-VITÆ.

Bit Brace Handles
Bit Brace Heads
Castor Rolls
Mallets
Stern Bearings

MAHOGANY.

Auto Bodies
Auto Dash Boards
Auto Fixtures
Auto Panels
Bank Fixtures
Bar Tops
Cabinet Work
Caskets
Clock Cases
Couch Frames
Counter Tops
Crating
Desks
Electrical Appliances
Electrical Equipment
Furniture Knobs

Gauges
Gear Frames (Vehicle)
Handles
House Trimmings
Humidor Cabinets
Interior Finish
Joiner-work (Ship)
Knobs
Launches
Letter Filing Cabinets
Levels
Mantles
Models
Office Fixtures
Organ Cases
Panels
Patterns
Phonograph Cabinets
Piano Benches
Piano Cases
Piano Legs
Piano Stools
Planking (Ship)
Sewing Machine Cabinets
Show-case Frames
Special Furniture
Stair-work
Steering Wheels (Ship)
Store Fixtures
Table Tops
Thread Cabinets
Trimmings (Auto)
Window Frames (Auto)

MAHOGANY, WHITE.

Fine Finish (Boats)

ROSEWOOD.

Carpenters' Tools
Clock Cases
Gauges
Handles
Levels
Organ Stop Knobs
Planes
Tool Handles

TEAK.

Rails (Boats)

WALNUT, CIRCASSIAN.

Auto Dashes
Auto Frames
Piano Cases
Pistol Stocks

DIRECTORY.

Below is a list of the wood-using manufacturers who supplied the data contained in this report. If there are any names missing from this Directory it is because they did not answer the request for information or else they are not in an industry converting lumber into products in final form. The addresses of those manufacturing several products classified under different industries will appear in the list under more than one industry.

AGRICULTURAL IMPLEMENTS.

The Torrey Brothers Company ..... Central Village
W. S. Danielson ..... Danielson
The Cutaway Harrow Company ..... Higganum
The Rogers Rake Company ..... New Hartford
J. B. Tatem & Son ..... Putnam
W. & H. Bronson ..... Roxbury
Charles Gilbert ..... Stepney Depot

BOXES AND CRATES.

A. H. Lavietes & Company ..... Andover
*W. H. Thompson ..... Ansonia
*H. W. Woodford ..... Avon
*H. C. Hoffman & Company ..... Bridgeport
Locomobile Company of America ..... Bridgeport
The Sewing Machine Cabinet Company ..... Bridgeport
The Wheel & Wood Bending Company ..... Bridgeport
The E. Ingraham Company ..... Bristol
Horatio Kelsey ..... Clinton
The Collins Company ..... Collinsville
*Isaac Armstrong & Company ..... Danbury
*The Clark Box Company ..... Danbury
*The Hine Box & Printing Company ..... Danbury
Pratt, Read & Company ..... Deep River
*The East Hartford Lumber & Ladder Company ..... East Hartford
George M. Weld ..... East River
Ellington Basket Company ..... Ellington
The Sessions Clock Company ..... Forestville
The O. D. Case Company ..... Guilford
Austin Organ Company ..... Hartford
Colts Patent Fire-arms Manufacturing Company ..... Hartford

* Make boxes or shooks for sale.

The Columbia Motor Car Company ..... Hartford
Crase & Johnson ..... Hartford
The National Machine Company ..... Hartford
The Pope Manufacturing Company ..... Hartford
The Pope Manufacturing Company West Works ..... Hartford
*J. W. Rockwell & Son ..... Hartford
*Amos D. Bridge's Sons, Inc. ..... Hazardville
*The Dodd Cooperage Company ..... Meriden
Meriden Cutlery Company ..... Meriden
*The Charles Parker Company ..... Meriden
The Vocalion Organ Company ..... Meriden
*J. Dudley ..... Mystic
The American Hardware Corporation ..... New Britain
The John Pinches Company ..... New Britain
*D. C. Beardsley ..... New Haven
J. F. Goodrich & Company ..... New Haven
The Hemming Brothers Company ..... New Haven
*The Hubbell & Merwin Company ..... New Haven
Manning & Conger ..... New Haven
The New Haven Clock Company ..... New Haven
The New Haven Machinery Company ..... New Haven
*New Haven Wire Bound Box Company ..... New Haven
Samuel K. Page ..... New Haven
Rattan Manufacturing Company ..... New Haven
Sargent & Company ..... New Haven
E. B. Sheldon Company ..... New Haven
H. G. Shepard & Sons ..... New Haven
Standard Wash Tray Company ..... New Haven
The Wilbur Corporation ..... New Haven
Winchester Repeating Arms Company ..... New Haven
The Brown Cotton Gin Company ..... New London
*W. L. Roe, Jr. ..... New London
D. E. Whiton Company ..... New London
The Chapin-Stephens Company ..... Pine Meadow
J. B. Tatem & Son ..... Putnam
*F. W. Bradley ..... Rockville
James Swan Company ..... Seymour
The Huntington Piano Company ..... Shelton
Whitcomb Metallic Bedstead Company, Pioneer Works ..... Shelton
Whitlock Printing Press Company ..... Shelton
Peck, Stow & Wilcox Company ..... Southington
*Knapp Box Company ..... South Norwalk
Sealshipt Oyster System ..... South Norwalk
*The C. S. Trowbridge Company ..... South Norwalk
Cheney Brothers ..... South Manchester
The Smith & Winchester Manufacturing Company .... South Windham

* Make boxes or shooks for sale.

*Preble & Bumstead	Stafford Springs
Seth Thomas Clock Company	Thomaston
The Jennings & Griffen Manufacturing Company	Tracy P. O.
Waterbury Clock Company	Waterbury
C. B. Cottrell & Sons Company	Westerly
Windham Handle Company	Willimantic
The George P. Clark Company	Windsor Locks
Wm. L. Gilbert Clock Company	Winsted
*The Tiffany & Pickett Company	Winsted
Winsted Manufacturing Company	Winsted
*Still River Box Shop	Woodstock Valley

BUTCHERS' BLOCKS.

J. W. Curtiss	Ansonia
W. S. Danielson	Danielson
A. Bowe & Son	Meriden

CHAIRS.

The Charles Parker Company	Meriden
The Vocalion Organ Company	Meriden
Rattan Manufacturing Company	New Haven
Metropolitan Chair Company	New Haven
The B. J. Harrison Sons Company	Winsted
The John W. Roe Estate	Winsted

CIGAR BOXES.

The Bronson & Robinson Company	Hartford
Carl G. A. Gruettke	New Haven
Chas. S. St. John	South Norwalk
H. S. Cowles & Sons	Suffield

CLOCKS.

The E. Ingraham Company	Bristol
The Sessions Clock Company	Forestville
The New Haven Clock Company	New Haven
Seth Thomas Clock Company	Thomaston
Waterbury Clock Company	Waterbury
Wm. L. Gilbert Clock Company	Winsted

FIRE ARMS.

Colts Patent Fire Arms Manufacturing Company	Hartford
Meriden Fire Arms Company	Meriden
Parker Brothers	Meriden
Winchester Repeating Arms Company	New Haven
The Marlin Firearms Company	New Haven
Union Hardware Company	Torrington

* Make boxes or shooks for sale.

FIXTURES.

Wm. Ellis ..... Bethel
The Sewing Machine Cabinet Company ..... Bridgeport
Hoffman Show Case Company ..... Bridgeport
James H. S. Jones ..... Bridgeport
Essex Wood Turning Company ..... Essex
The O. D. Case Company ..... Guilford
L. F. Dettenborn Wood Working Company ..... Hartford
Robt. T. Alcorn ..... Hartford
The American Hardware Corporation ..... New Britain
Chas. E. Griffiths ..... New Haven
A. E. Bradley Company ..... New Haven

FURNITURE.

Essex Wood Turning Company ..... Essex
The Sperry & Amos Company ..... New Haven
Eastern Lounge Company ..... New Milford
Union Hardware Company ..... Torrington
Connecticut Screen & Cabinet Company ..... Yalesville

HANDLES.

E. W. Buell ..... Andover
Frank L. Smith ..... Baltic R. F. D.
W. H. Kelsey ..... Bristol
A. A. Lowrey ..... Bristol
Joseph Masack ..... Bristol
Fayette Wightman ..... Bristol
The Torrey Brothers Company ..... Central Village
Horatio Kelsey ..... Clinton
Wm. R. Hartigan ..... Collinsville
H. G. Jones ..... Deep River
The Rogers Brush Works ..... Deep River
Biglow Brothers ..... Litchfield
Meriden Cutlery Company ..... Meriden
H. A. Smith ..... Milford
Landers, Frary & Clark ..... New Britain
Stanley Rule & Level Company ..... New Britain
The Rogers Lake Company ..... New Hartford
Sargent & Company ..... New Haven
E. L. Walker ..... New Haven
Seymour Smith & Son ..... Oakville
Chas. I. Allen ..... Pequabuck
The Chapin-Stephens Company ..... Pine Meadow
Bates & Warfield ..... Plainville
J. B. Tatem & Son ..... Putnam
James Swan Company ..... Seymour

Peck, Stow & Wilcox Company ..... Southington
Windham Handle Company ..... South Windham
Union Hardware Company ..... Torrington
The Jennings & Griffen Manufacturing Company ..... Tracy P. O.
Eastern Wood Working Company ..... Wallingford
F. B. Smith & Sons ..... Warrenville
James H. Harry ..... West Cheshire
B. P. Mervin Wood Turning Works ..... Westport
J. M. Tatem Handle Company ..... Willimantic
The Winsted Edge Tool Works ..... Winsted
C. I. Yale Manufacturing Company ..... Yalesville

INSTRUMENTS, PROFESSIONAL AND SCIENTIFIC.

Prentice Manufacturing Company ..... Bridgeport
Stanley Rule & Level Company ..... New Britain
Sargent & Company ..... New Haven
The Wilbur Corporation ..... New Haven
D. E. Whiton Company ..... New London
The Chapin-Stephens Company ..... Pine Meadow
C. M. & E. B. Kent ..... Putnam
Peck, Stow & Wilcox Company ..... Southington
Union Hardware Company ..... Torrington
The Upson Nut Company ..... Unionville

LAUNDRY APPLIANCES.

The East Hartford Lumber & Ladder Company ..... East Hartford
Bishop Ladder Company ..... Hartford
Geo. C. Wilcox ..... Winsted

MACHINERY AND APPARATUS, ELECTRICAL.

The N. J. Patrick Corporation ..... Derby
Bates & Warfield ..... Plainville
Union Hardware Company ..... Torrington

MACHINERY AND APPARATUS, NOT ELECTRICAL.

The Ball & Socket Company ..... Cheshire
Turner Machine Company ..... Danbury
A. Gilbert & Sons ..... Derby
Brown Cotton Gin Company ..... New London
Cheney Brothers ..... South Manchester
The Smith & Winchester Manufacturing Company ..... South Windham

MISCELLANEOUS.

Olmstead-Thompson Manufacturing Company ..... Berlin
N. Buckingham & Company, Inc. ..... Bridgeport
The Sewing Machine Cabinet Company ..... Bridgeport
Clayton Cooperage Company ..... Canaan

W. L. Sanford ..... Canaan
The Torrey Brothers Company ..... Central Village
Norman P. Little ..... East Hartford
The Brewing Appliance Specialty Company ..... Hartford
Hartford Burial Case Company ..... Hartford
C. O. Jelliff & Company ..... New Canaan
Sargent & Company ..... New Haven
Chas. I. Allen ..... Pequabuck
Geo. W. Smith & Son ..... South Canterbury
The W. N. Craw Manufacturing Company ..... South Norwalk
Chas. Gilbert ..... Stepney Depot
Union Hardware Company ..... Torrington
L. D. & E. E. Hoyt ..... Unionville
B. P. Mervin Wood Turning Works ..... Westport

MUSICAL INSTRUMENTS.

Denison Bros. ..... Deep River
Pratt, Read & Company ..... Deep River
The Sterling Company ..... Derby
Austin Organ Company ..... Hartford
The Comstock Cheney Company ..... Ivoryton
Mansfield Organ Pipe Works ..... Mansfield Depot
The Chas. Parker Company ..... Meriden
The Vocalion Organ Company ..... Meriden
The Wilcox & White Company ..... Meriden
H. Hall & Company ..... New Haven
B. Shoninger Company ..... New Haven
Imperial Manufacturing Company ..... Stamford
Schleicher & Sons Piano Company ..... Stamford

PATTERNS.

Fred F. Beach ..... Bridgeport
Bridgeport Pattern & Model Company ..... Bridgeport
The Lake Torpedo Boat Company ..... Bridgeport
O. S. Platt ..... Bridgeport
Sessions Foundry Company ..... Bristol
Turner Machine Company ..... Danbury
C. F. Yochum ..... Danbury
N. F. Ball ..... Croton
E. J. Anderson ..... Hartford
The J. C. Barrett Company, Inc. ..... Hartford
The Columbia Motor Car Company ..... Hartford
Crase & Johnson ..... Hartford
The Hartford Pattern & Model Company ..... Hartford
Topping Brothers ..... Hartford
The Cutaway Harrow Company ..... Higganum
The Hemming Brothers Company ..... New Haven

The McLagon Foundry Company ..... New Haven
New Haven Machinery Company ..... New Haven
Brown Cotton Gin Company ..... New London
New London Marine Iron Works ..... New London
The Thames Tow Boat Company ..... New London
D. E. Whiton Company ..... New London
The Baird Machine Company ..... Oakville
C. H. Aisthrope ..... South Norwalk
The Smith & Winchester Manufacturing Co. ..... South Windham
Wm. B. Judd ..... Waterbury
C. H. Manville ..... Waterbury
C. B. Cottrell & Sons Company ..... Westerly, R. I.
Geo. C. Wilcox ..... Winsted

PLANING MILL PRODUCTS.

H. W. Woodford ..... Avon
A. W. Burritt Company ..... Bridgeport
H. C. Hoffman & Company ..... Bridgeport
W. S. Hurlburt Building Company ..... Bridgeport
Frank E. Miller Lumber Company ..... Bridgeport
W. A. Smith & Son ..... Bridgeport
Rhoades & Stanton ..... Canaan
W. S. Danielson ..... Danielson
James A. Nichols ..... Danielson
Thomas Forsyth ..... Fairfield
The Maher Brothers Corporation ..... Greenwich
The East Hartford Lumber & Ladder Co. ..... East Hartford
W. H. Cairns Wood Working Company ..... East Hartford
The Edwin Taylor Lumber Company ..... Hartford
S. C. Lewis ..... Meriden
The T. E. Main Company ..... Moosup
The Naugatuck Lumber & Coal Company ..... Naugatuck
H. C. Messenger ..... New Hartford
The George Alling's Sons Company ..... New Haven
David E. Clark ..... New Haven
The M. J. Gibbud Company ..... New Haven
The Hubbell & Merwin Company ..... New Haven
The Sperry & Amos Company ..... New Haven
Warren & Sperry Company ..... New Haven
Denison & Brown ..... New London
H. R. Douglas ..... New London
New London Marine Iron Works ..... New London
L. S. Raymond ..... New London
H. B. Porter & Son Company ..... Norwich
The Wheaton Building & Finish Company ..... Putnam
H. W. Mather ..... South Norwalk
St. John & Keyser ..... South Norwalk

A. Waldron ..... South Norwalk
The St. John Wood Working Company ..... Stamford
The Hotchkiss Brothers Company ..... Torrington
The Torrington Lumber Company ..... Torrington
Loucks & Clarke ..... Wallingford
The C. F. Woodking Company ..... Wallingford
J. E. Smith & Company, Inc. ..... Waterbury
The Tracy Brothers Company ..... Waterbury
Geo. A. Upham ..... Waterbury
H. S. Case ..... Weatogue
The H. H. Richards Lumber Company ..... West Haven
The Isaac Sherman Company ..... Westerly, R. I.
R. G. Barlow & Son ..... Westford
Hillhouse & Taylor ..... Willimantic

PRINTING MATERIALS.

B. P. Webler ..... Bristol
W. T. Barnum & Company ..... New Haven
C. S. Butler & Son ..... New Haven
E. B. Sheldon Company ..... New Haven
The Brown Cotton Gin Company ..... New London
Whitlock Printing Press Company ..... Shelton
C. B. Cottrell & Sons Company ..... Westerly

SASH, DOORS AND BLINDS AND GENERAL MILLWORK.

W. H. Thompson ..... Ansonia
A. W. Burrett Company ..... Bridgeport
H. C. Hoffman & Company ..... Bridgeport
Frank E. Miller Lumber Company ..... Bridgeport
W. R. Muirhead Lumber Company ..... Bridgeport
W. A. Smith & Company ..... Bridgeport
Johnson Lindell & Company ..... Canaan
Elmer H. Barnum ..... Danbury
Foster Brothers ..... Danbury
W. S. Danielson ..... Danielson
James A. Nichols ..... Danielson
The H. Sands Selleck Company ..... Darien
F. A. Bradley ..... Derby
Wm. Cooper ..... Derby
The N. J. Patrick Corporation ..... Derby
W. H. Cairns Wood Working Company ..... East Hartford
J. P. Crosby ..... Greenwich
The Maher Brothers Corporation ..... Greenwich
The Andrews and Peck Company ..... Hartford
W. E. Caulkins & Son ..... Hartford
C. H. Dresser & Son, Inc. ..... Hartford
Hartford Builders' Finish Company ..... Hartford

The Hartford Sash & Door Company	Hartford
McIntyre & Ahern	Hartford
J. W. Murray	Hartford
Wm. Olds & Company	Hartford
James Struthers	Hartford
The Edwin Taylor Lumber Company	Hartford
Amos D. Bridge's Sons, Inc.	Hazardville
Chapman & Tripp	Jewett City
Geo. J. Switzer	Litchfield
The Morehouse Brothers Company	Meriden
The Gustav Lowenthal Company	Middletown
Naugatuck Lumber & Coal Company	Naugatuck
Carlson & Torell	New Britain
H. E. Dimock	New Britain
The John Pinches Company	New Britain
The Geo. Alling's Sons Company	New Haven
David E. Clark	New Haven
M. Etzel & Son	New Haven
Gerrish & Hume	New Haven
The M. J. Gibbud Company	New Haven
Lewis Hawthorne Company	New Haven
The Hubbell & Merwin Company	New Haven
G. E. Johnstone & Company	New Haven
Morgan & Humiston Company	New Haven
Norton Brothers	New Haven
Lewis Rempfer	New Haven
Sargent & Company	New Haven
The Sperry & Amos Company	New Haven
Warner & Sperry Company	New Haven
The Wilbur Corporation	New Haven
Denison & Brown	New London
H. R. Douglas	New London
Henry O. Hawthorne	New London
W. L. Roe, Jr.	New London
A. R. Malkin & Company	Norwalk
The H. B. Porter & Son Company	Norwich
C. M. & E. B. Kent	Putnam
The Wheaton Building & Finish Company	Putnam
Gem Ventilator Company	Saybrook
Cheney Brothers	South Manchester
Colonial Column Manufacturing Company	South Norwalk
The Hatch & Bailey Company	South Norwalk
H. W. Mather	South Norwalk
St. John & Keyser	South Norwalk
A. Waldron	South Norwalk
The St. John Wood Working Company	Stamford
Walter Bates & Sons	Thompson

The Hotchkiss Brothers Company ..... Torrington
The Torrington Lumber Company ..... Torrington
R. F. Jones ..... Unionville
The Parsons Lumber & Hardware Company ..... Unionville
The C. F. Wooding Company ..... Wallingford
W. W. Wilson ..... Washington Depot
Brass City Lumber Company ..... Waterbury
Thomas Heaton ..... Waterbury
Wm. B. Judd ..... Waterbury
J. E. Smith & Company, Inc. ..... Waterbury
The Tracy Brothers Company ..... Waterbury
Geo. A. Upham ..... Waterbury
The Watertown Lumber Company ..... Watertown
The Isaac Sherman Company ..... Westerly, R. I.
The H. H. Richards Lumber Company ..... West Haven
Thomas Quinlan ..... Westport
Hillhouse & Taylor ..... Willimantic
Latham & Crane ..... Willimantic
Connecticut Screen & Cabinet Company ..... Yalesville

SHIPS AND BOATS.

Claus A. Johnson ..... Branford
The Lake Torpedo Boat Company ..... Bridgeport
Geo. Saunders ..... Chester
C. E. Stevens ..... Clinton
R. Stoughton ..... Clinton
Palmer Brothers ..... Cos Cob
Comstock & Mack ..... Essex
Harrison & Halliday ..... Essex
Aaron T. Perkins ..... Essex
The Gildersleeve Ship Building Co. ..... Gildersleeve
Greenwich Yacht Yard ..... Greenwich
Chas. Butson ..... Groton
C. F. Ferguson ..... Groton
L. P. Anderson ..... Guilford
W. P. Fowler ..... Guilford
Reuben E. Hall ..... Guilford
Ralph B. Hall ..... Guilford
The Hartford & New York Transportation Co. ..... Hartford
H. T. Adams ..... New Haven
E. E. Crampton ..... New Haven
John E. Mar & Son ..... New Haven
Antonio Palo ..... New Haven
S. W. Pring ..... New Haven
Edw. M. Sears ..... New Haven
Louis Anderson ..... New London
The T. A. Scott Company ..... New London

The Thames Tow Boat Company	New London
Jerry Davis	Noank
The Robert Palmer & Son S. B. & M. Ry. Co.	Noank
Freeman Rogers	Noank
C. L. Barker	Norwalk
Marine Ry. & Boat Building Company	Portland
Geo. W. Smith & Son	South Canterbury
Oscar Anderson	South Norwalk
Banks & Company	South Norwalk
Leslie Gamble	South Norwalk
The Marine Railways & Con. Company	Stamford
Geo. Scrobogna	Stamford
The Stamford Motor Gompany	Stamford
W. E. Bedell	Stratford
The West Mystic Boat Company	West Mystic

SPOOLS AND BOBBINS.

Frank L. Smith	Baltic, R. F. D.
The Torrey Brothers Company	Central Village
A. Gilbert & Sons	Derby
G. W. Winslow	East Killingly
J. M. Keith & Company	Eastford
The Allen Spool & Printing Company	Mystic
Webster D. Whedon	Madison
E. L. Walker	New Haven
J. B. Tatem & Son	Putnam
Geo. W. Smith & Son	South Canterbury
W. H. Armstrong	Coventry
Cheney Brothers	South Manchester
Windham Handle Company	South Windham
Walter Bates & Sons	Thompson
J. M. Tatem Handle Company	Willimantic

SPORTING GOODS.

A. Gilbert & Sons	Derby
The Torrey Brothers Company	Central Village
H. G. Shepard & Sons	New Haven
Geo. W. Smith & Son	South Canterbury

TANKS.

H. C. Hoffman	Bridgeport
Elmer H. Barnum	Danbury
W. S. Danielson	Danielson
The Geo. Alling's Sons Company	New Haven
H. G. Shepard & Sons	New Haven
The T. A. Scott Company	New London

C. M. & E. B. Kent ..... Putnam
The Smith & Winchester Manufacturing Co. ..... South Windham
Geo. C. Wilcox ..... Winsted

VEHICLE AND VEHICLE PARTS.

J. G. Curtiss ..... Ansonia
J. W. Curtiss ..... Ansonia
James McKinnon ..... Ansonia
Dennis Mahoney ..... Ansonia
W. H. Thompson ..... Ansonia
Frank L. Smith ..... Baltic, R. F. D.
The Flynn & Doyle Company ..... Bantam
Tudor Whiton ..... Bloomfield
Thos. M. Bray ..... Branford
H. W. Hubbard ..... Branford
J. S. Moore ..... Branford
R. Nillson ..... Branford
Belamore Armoured Car and Equipment Co. ..... Bridgeport
The Blue Ribbon Auto & Carriage Co. ..... Bridgeport
The Eddy-Sherwood Carriage & Motor Co. ..... Bridgeport
Gates Wagon Company ..... Bridgeport
The C. W. Hall Carriage Company ..... Bridgeport
Locomobile Company of America ..... Bridgeport
Metropolitan Auto & Carriage Company ..... Bridgeport
Peck & Lines ..... Bridgeport
The Wheel & Wood Bending Company ..... Bridgeport
H. M. Brockaway ..... Centerbrook
The Torrey Brothers Company ..... Central Village
C. H. Kelsey ..... Clinton
E. J. Clinton & Son ..... Clintonville
W. S. Danielson ..... Danielson
Frank M. Howard ..... Deep River
J. J. Booth ..... Derby
P. J. Donovan ..... Derby
G. W. Winslow ..... East Killingly
Wm. Potter ..... Essex
Harris Hymon ..... Groton
The Maher Brothers Corporation ..... Greenwich
The Archibald-Guilford Wheel Company ..... Guilford
P. P. Ives ..... Guilford
F. E. Banning ..... Hadlyme
The Columbia Motor Car Company ..... Hartford
The Hartford Model & Pattern Company ..... Hartford
B. L. McGurk ..... Hartford
Mansuy & Smith ..... Hartford
J. W. Murray ..... Hartford
The Pope Manufacturing Company ..... Hartford

The Pope Manufacturing Company, West Works	Hartford
The James Pullar Company	Hartford
W. H. Fowler	Hockanum
F. A. Chapman	Ivoryton
Chapman & Tripp	Jewett City
M. Abraham	Meriden
John Bostelman	Meriden
A. Bowe & Son	Meriden
Chalker & Fenn	Meriden
Otto G. Ost	Meriden
J. B. Evans	Middletown
W. S. Reynolds	Middletown
H. A. Smith	Milford
James Murphy	Naugatuck
Barney Van Ness	Naugatuck
Benoit Brothers	New Britain
New Britain Carriage Company	New Britain
The M. Armstrong Company	New Haven
D. W. Baldwin & Company	New Haven
Dann Brothers	New Haven
A. T. Demarest & Company	New Haven
Joseph Gardner	New Haven
W. J. Gates	New Haven
J. F. Goodrich & Company	New Haven
Charles M. Hamm	New Haven
The Holcomb Company	New Haven
Henry Hooker & Company	New Haven
Frederick Howshield	New Haven
Chas. A. Kandetski	New Haven
James Murphy	New Haven
New Haven Auto Top Company	New Haven
New Haven Carriage Company	New Haven
Samuel K. Page	New Haven
Rattan Manufacturing Company	New Haven
H. G. Shepard & Sons	New Haven
Rafter Wagon Works	New Haven
W. Robertson	New Haven
West Rock Wagon Works	New Haven
G. A. Tenbroeck	New Haven
Geo. H. Barber	New London
A. B. Collins	New London
J. B. Getchell	New London
D. E. & J. F. Moran	New London
Elliott Wagon Corporation	North Grosvenor Dale
C. L. Barker	Norwalk
S. T. Ruby	Norwalk

The L. L. Chapman Company	Norwich
Geo. W. Harris	Norwich
M. B. Ring	Norwich
Scott & Clark Corporation	Norwich
J. A. Walz	Norwich
A. R. Keables	Norwichtown
E. E. Gay	Norwichtown
I. M. Shapiro	Oakville
The Wheaton Building & Finish Company	Putnam
Geo. B. Milne	Rockville
Fred H. Scharp	Rockville
Raymond Brothers	Rowayton
W. H. Armstrong	South Coventry
H. W. Mather	South Norwalk
A. Waldron	South Norwalk
Ira B. Bliss	Stamford
C. L. Smalley	Stepney
M. G. Dibble	Suffield
H. C. Holdredge	Suffield
J. H. Baeder	Torrington
C. C. Haight	Torrington
L. D. & E. D. Hoyt	Unionville
L. B. Scranton	Wallingford
H. Oddy & Son	Wallingford
Ekman Brothers	Washington Depot
R. N. Blakeslee	Waterbury
W. M. Doyle	Waterbury
Geo. H. Goodwin	Waterbury
A. J. Kenneally	Waterbury
Peter Laroque	Waterbury
O'Neil & Fox	Waterbury
O'Neil & Warner	Waterbury
Geo. Panneton	Waterbury
M. Rosen	Waterbury
W. B. Whitney	Waterbury
A. A. Devylder	West Cheshire
James H. Harry	West Cheshire
C. H. Holdredge	Westerly, R. I.
Stillman Carriage Company	Westerly, R. I.
A. R. Burnham	Willimantic
Galipeau & Ducharme	Willimantic
J. Alexander	Winchester Center
John Darcey & Son	Winchester Center
The Geo. P. Clark Company	Windsor Locks
Howard L. Hitchcock	Woodbury
L. L. Ives	Yalesville

WOODENWARE AND NOVELTIES.

E. W. Buell ..... Andover
Connecticut Screen & Cabinet Company ..... Yalesville
Elmwood Button Company ..... Bridgeport
Fayette Wightman ..... Bristol
W. S. Danielson ..... Danielson
A. Gilbert & Son ..... Derby
The East Hartford Lumber and Ladder Co. ..... East Hartford
E. J. Anderson ..... Hartford
Bishop Ladder Company ..... Hartford
Crase & Johnson ..... Hartford
Amos S. Bridge's Sons, Inc. ..... Hazardville
C. O. Jelliff & Company ..... New Canaan
A. W. Flint & Company ..... New Haven
Sargent & Company ..... New Haven
The Baird Machine Company ..... Oakville
Chas. I. Allen ..... Pequabuck
Peck, Stow & Wilcox Company ..... Southington
Windham Handle Company ..... South Windham
Preble & Bumstead ..... Stafford Springs
Union Hardware Company ..... Torrington
B. P. Merwin Wood Turning Works ..... Westport

THE 1910 LUMBER CUT OF CONNECTICUT.

The statistics and discussions in the foregoing report are based on a study of the woods consumed in 1911 by the Connecticut factories. This report, it will be recalled, does not include the cut of rough lumber but only that part of it which becomes the raw material of the factories converting it into various commodities. For the convenience of the reader who may desire to make a comparison of the kinds and amounts of lumber produced by the Connecticut sawmills, with the quantity consumed by the factories, an exact copy of part of the Bureau of Census Bulletin giving the 1910 lumber cut for Connecticut is presented in the following table:

KIND OF WOOD	FEET B. M.	KIND OF WOOD	FEET B. M.
Chestnut	58,810,000	Elm	215,000
Oak	25,686,000	Tupelo	112,000
White Pine	23,021,000	Walnut	91,000
Hemlock	5,376 000	Cedar	48,000
Hickory	3,483,000	Sycamore	5,000
Maple	2,780,000	Spruce	4,000
Ash	1,893,000	Tamarack	3,000
Birch	1,750,000	Balsam	2,000
Pitch Pine	1,527,000	All others	69,000
Basswood	739,000		
Beech	581,000	Total cut	126,463,000
Cottonwood	268,000