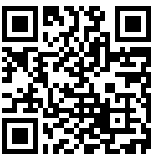
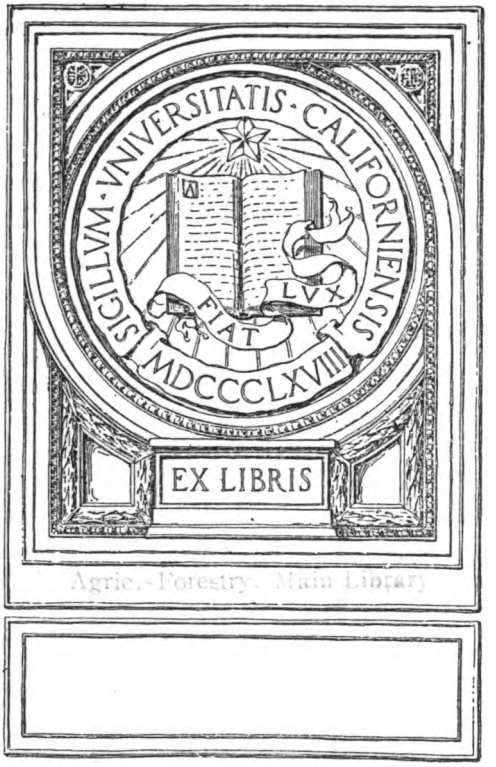
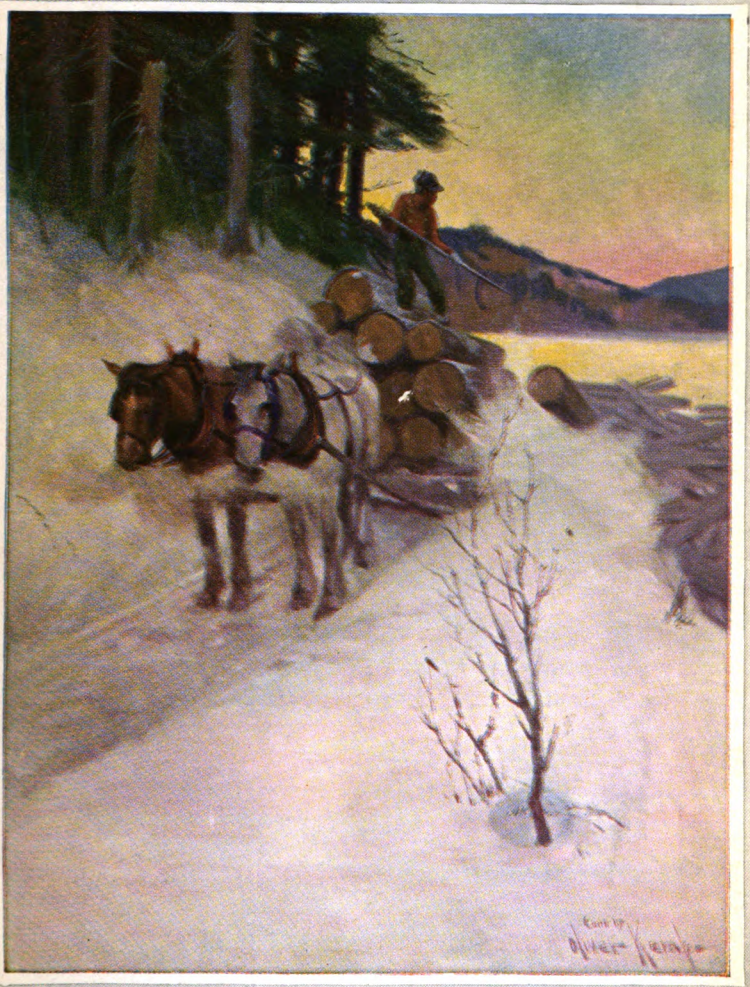


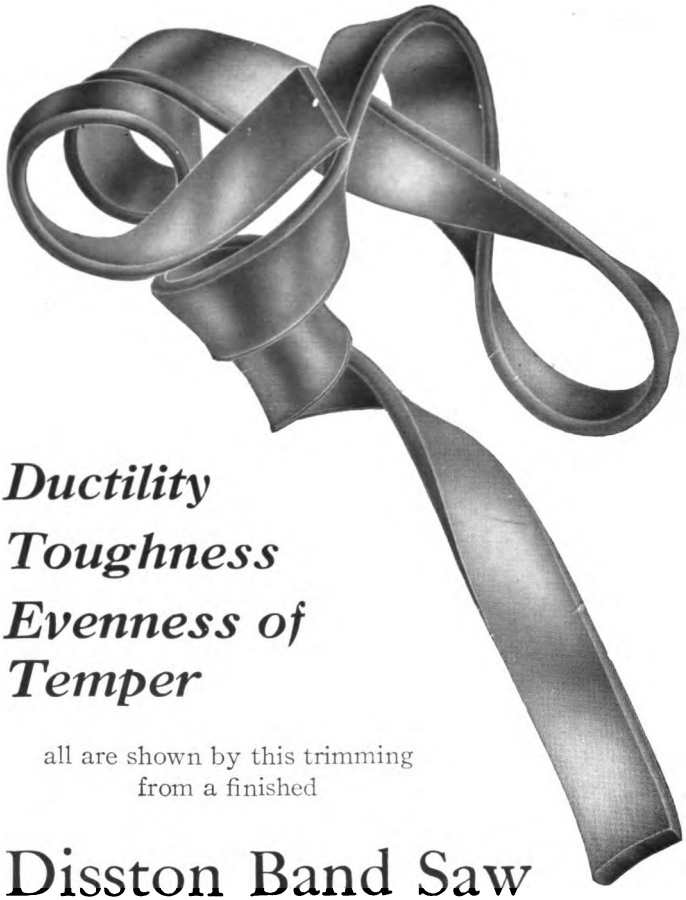


THE DISSTON CRUCIBLE



FEBRUARY

1917



Ductility
Toughness
Evenness of Temper

all are shown by this trimming from a finished

Disston Band Saw

which was purposely twisted in this manner to prove these qualities. They stand for superior

Tension Holding
Cutting Edge and
Setting or Swaging Qualities

This is one of the severest tests to which a highly tempered piece of steel could be subjected

THE DISSTON CRUCIBLE

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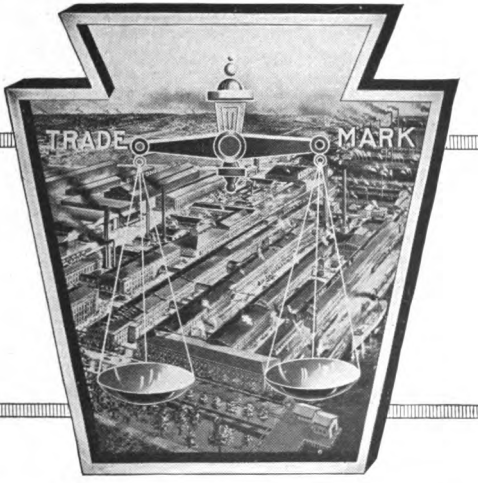

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Keystone Saw, Tool, Steel, and File Works

PHILADELPHIA

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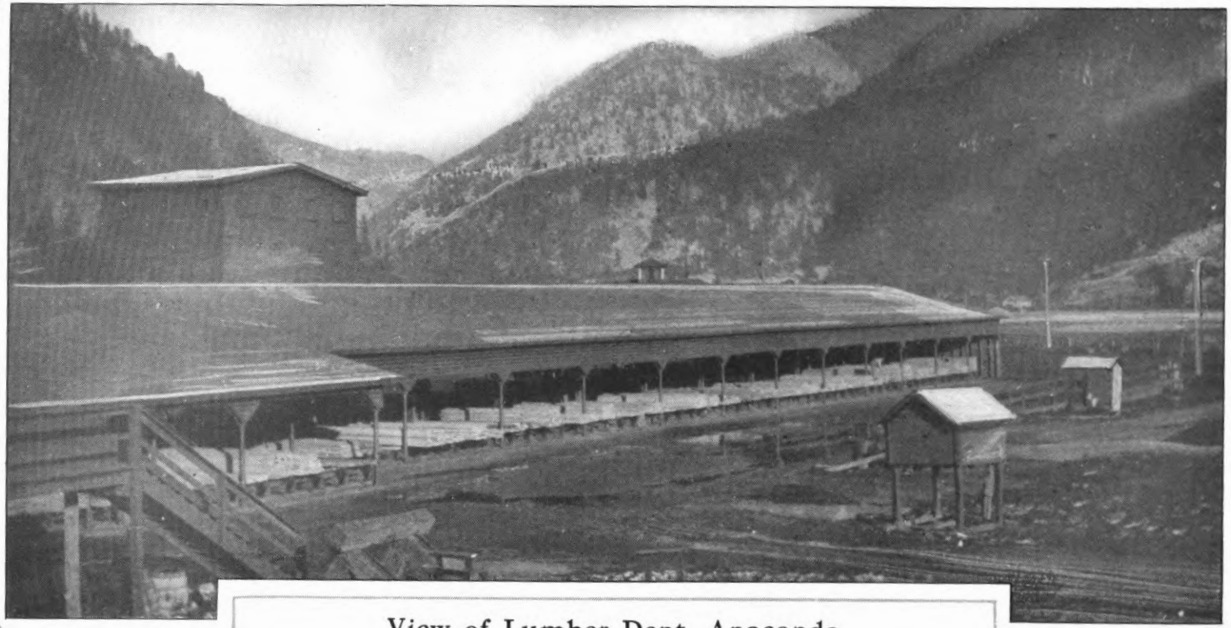


View of Lumber Dept. Anaconda
Copper Mining Company

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

Vol. VI FEBRUARY, 1917 No. 1

EDITORIAL CHAT

Experience

ONCE upon a time there was a successful man who did not smugly explain that anybody could be equally successful by grabbing all the work in sight, his own and everybody's else, etc., etc.—the inference being that his success is a slight token of the boss' appreciation of his industry. A man can learn all the motions of swimming on a piano stool, but he can't make much headway with them until he gets into the water. Industry doubtless is the foundation of success, but it is because work develops character, ability and judgment. Experience covers the term and it is the experience back of a man which determines, to a large extent, his earning capacity; in other words, his success.

So with business; the successful concern is the one backed by a wealth of experience which equips it to meet every contingency which may arise in its field of effort; the concern whose knowledge of all the details of its operation is the result of long and thorough familiarity. The product of such a concern, whether it be merchandise or service, has a ready market because experience is a pretty reliable measure of ability.

There are exceptions in business as with the individual, but in the long run it is the cold, hard market value of experience, whether manifested in product or ability, that determines success.

Quality Tells

Annual Consumption of Wood by the Wood-Manufacturing Industries

Where and how the supplies of stock are used

STATISTICS have been compiled by the Forest Service which show for the first time precisely how the lumber produced in the country is utilized. About 45 billion feet of lumber of all kinds is the annual production in the United States; of this nearly 25 billion feet, board measure, is further manufactured, the other portion remaining for rough construction lumber and for similar purposes.

This is exclusive of that material which reaches its final use in the form of fuel, railroad ties, posts, poles, pulpwood, cooperage, wood distillates, and the barks and extracts demanded by the tanning industry.

The work of collecting and compiling the figures extended over a considerable period and was carried out State by State; but as one full year was made the basis of statistics in each State the total is a fair average of the use of lumber in further manufacture in the whole country. Between 50 and 60 per cent. of the lumber produced is subject to further manufacture. In preparing the figures in this way, however, it should be remembered that considerable material reaches shops and factories in the form of logs, bolts and billets without having passed through sawmills, and while this material is included in these statistics, this fact should be remembered in comparing the statistics with those of lumber production.

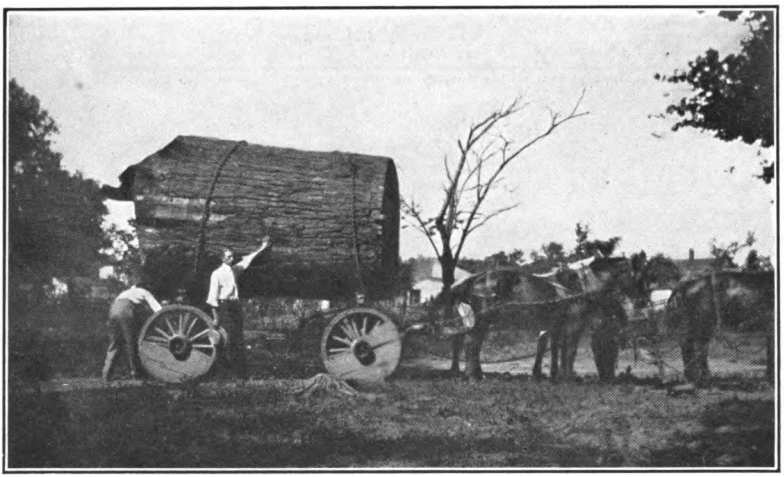
Nearly or quite 100 different woods are used in this country under their own names, while an unknown number find their way to shops and factories without being identified or separately listed, except under general names. In quantity the softwoods, the needle-leaf or coniferous trees, are most important, but there is a greater number of species among the hardwoods or broad-leaf trees.

More than one-half of the total represented in the tables consists of planing-mill products, the largest items of which are flooring, siding and finishing. The next industry, in point of quantity

(Continued on page 14)

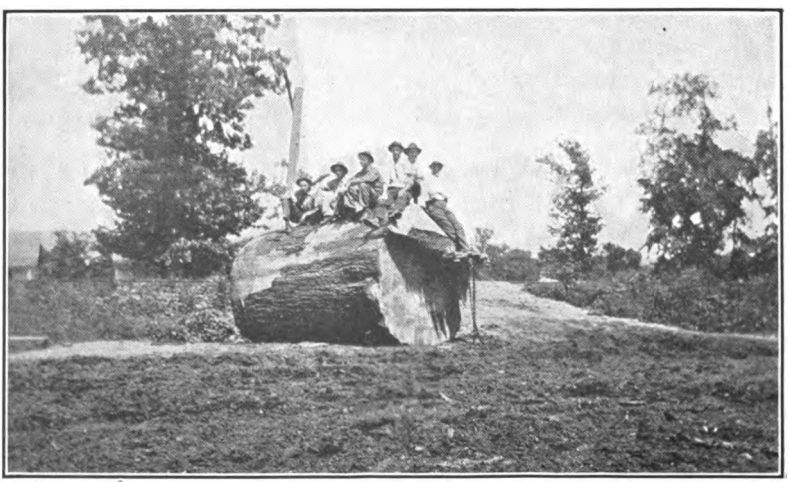
The lucky part of this was that a "DISSTON" was on the wheels

This horse-shoe, embedded in a large block of red oak, was encountered by a 9-inch Disston band saw in the C. & W. Kramer Co. plant in Richmond, Indiana. The saw was uninjured, beyond the necessity of re-swaging and sharpening, and it did not miss a run. This was the more remarkable in that really two cuts of the metal were made. After cutting off the upper projection, the teeth, necessarily dulled, went through the second piece of the horse-shoe, as before stated, uninjured. That's the kind of quality that is cheap at any price.



Arkansas Cottonwood Log

While it doesn't exactly rival the California product, the cottonwood log shown in the two photographs is a sizable piece of timber. It measures 10 feet in length, 7 feet across the butt and 6 feet across the small end. It contains 3300 feet of lumber and was cut by the Baker Lumber Company at Turrell, Arkansas, which has long been an enthusiastic user of Disston Saws.



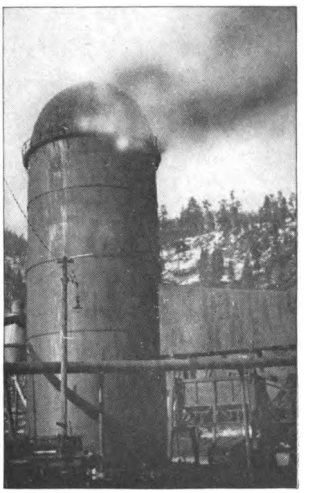
Lumber Department of the Anaconda Copper Mining Company at Bonner, Montana

By DORR SKEELS

THE mill of the Lumber Department of the Anaconda Copper Mining Company is located at Bonner, Montana, on the main line of the Northern Pacific railroad and the Chicago, Milwaukee & St. Paul railroad. This is a big, long name for a big, long mill.

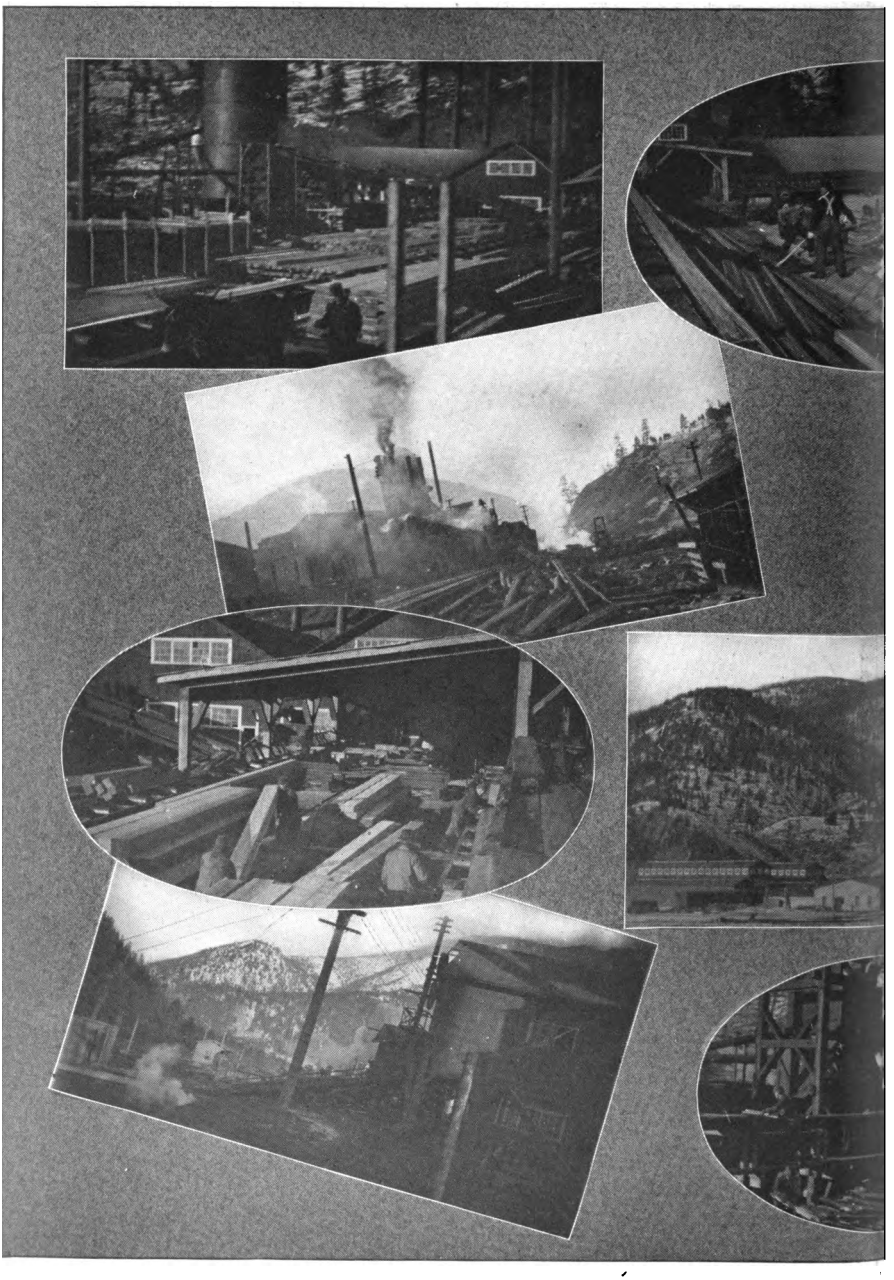
When crops are poor in eastern Montana and the Dakotas, or when the coast mills dump their products into this territory and Inland Empire salesmen work feverishly for enough mixed-car orders to pay traveling expenses, Manager Ross of the A. C. M. Company at Bonner should worry.

Under ground, in the mines at Butte, Montana, are nearly two billion board feet of sawed timber, stulls and lagging, and sawed mining timbers are being planted there at the rate of more than 100,000,000 feet each year, of which a large part comes from Bonner. The annual output of the Bonner plant is nearly 100,000,000 feet, which, when markets are slack, can all be put to use in the company's mines. The company is troubled with no such problem at present, however, and more than 75 per cent. of its output is going into high-class western pine lumber.

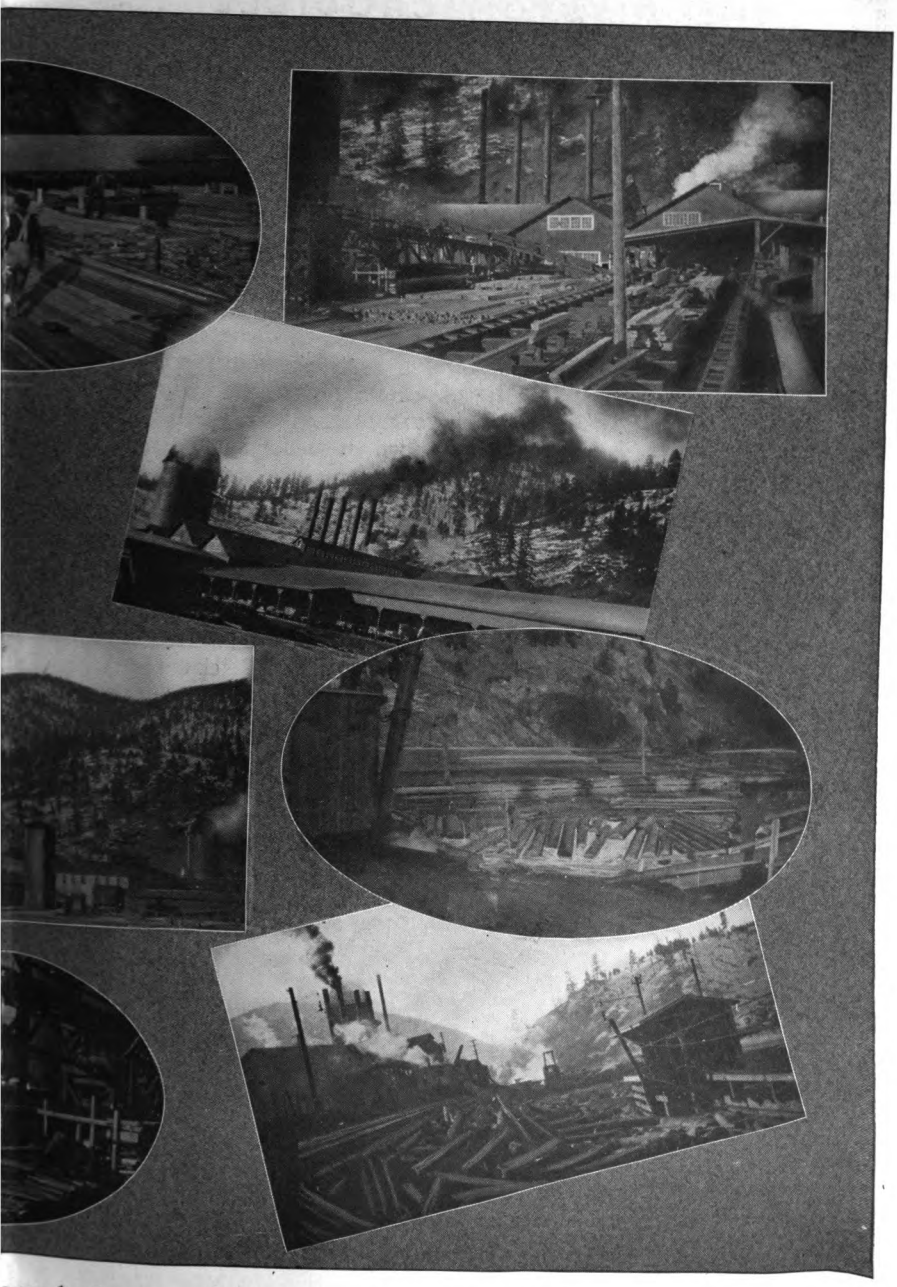


The first transcontinental railroad reached the Inland Empire in 1883, when the Northern Pacific railroad was extended through Bonner, and in 1885 the first mill to ship lumber to eastern markets was built there. The plant is now the second largest in the Inland Empire and is a model of efficiency and close utilization. The sawmill — at present equipped with one double-cutting band mill and two single-cutting band mills, and a horizontal re-saw—is being converted to three double-cutting bands. Each saw has at present an output of about 80,000 feet in

(*Continued on page 10*)



Views of the Lumber Department of the An



aconda Copper Mining Co., Bonner, Mont.

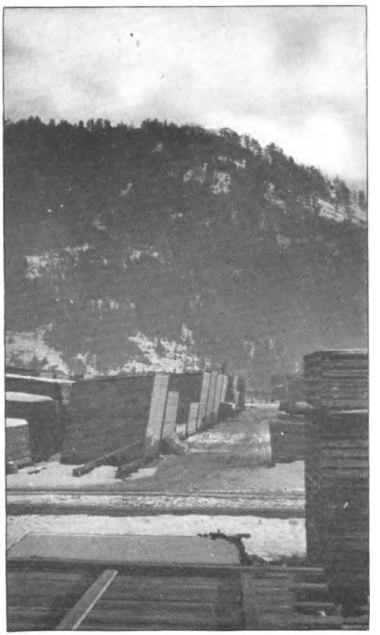
Lumber Department of the Anaconda Copper Mining Company at Bonner, Montana

(*Continued from page 7*)

a nine-hour shift. When the conversion of the mill is completed, an output of over one-half a million feet of lumber will be maintained for each twenty-four hours.

In the big, splendidly lighted filing room three filing machines are operated under the efficient direction of head filer Willis Ross.

The big Muskegon Boiler Works waste-burner, with a girth of more than 120 feet at its base, has a hard time to keep warm these days. Shavings and sawdust from the sawmill and planing-mill are conveyed directly to the battery of nine 150 horse-power Allis & Chalmers boilers, which maintain a steam pressure of 130 pounds for the giant 750 horse-power Allis & Chalmers engine which furnishes power to the sawmill. Steam from this boiler-room also operates the smaller engine of the same type in the planing-mill. Slabs, edgings, trimmings and other mill waste are sorted and carried in conveyors to the lath-mill and to cars on separate loading-tracks for 16-inch and 4-foot fuel wood, and fine indeed is the grist to reach the burner. The lath-mill has a daily output of from fifty to sixty thousand lath per day. The company is just shipping a carload of western pine slabs to a distillation plant in Florida to be tested for turpentine values.



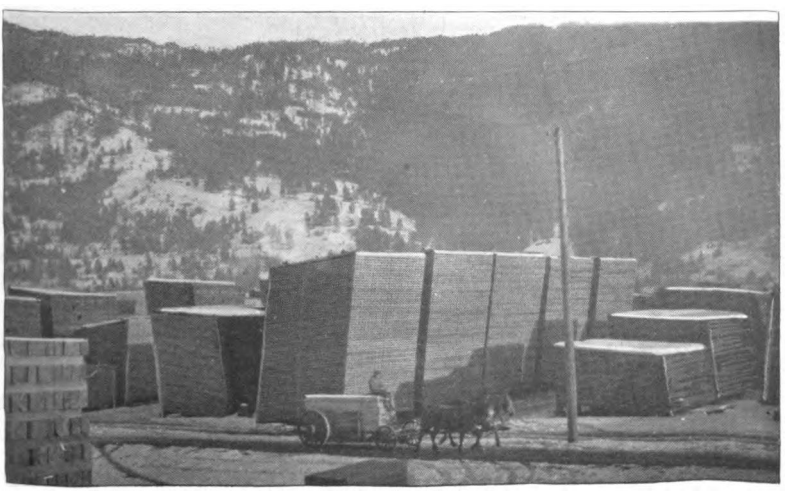
Over in the planing-mill thirteen machines are operated. A well-equipped factory for sashes, doors and other millwork, the largest in Montana, is maintained here, and a box factory takes care of the market for boxes in the Bitter Root valley and other fruit valleys in western Montana; boxes and shipping cases for the cereal products of eastern Montana and the Dakotas, and Standard Oil boxes for the Montana territory.

The company acquired the fin-

est and most extensive holdings of timber lands in western Montana by purchase of grant lands of the Northern Pacific railroad, and any timber tributary to the Milwaukee railroad in western Montana is directly tributary to this mill for immediate use. Such is the versatility of the company's logging arrangements, that they are at present stocking the mill both by driving in the Blackfoot River and by transportation over a branch of the Milwaukee railroad from the upper reaches of the Blackfoot River and by transportation over the main line of the Milwaukee railroad from Nine Mile Creek in the St. Regis River district. With the exceptional facilities for log transportation enjoyed by this company, the Bonner mill may be sustained almost indefinitely from the company's holdings in the watershed of the Clarks Fork River and its tributaries in western Montana.

The mill at Bonner was first operated by the Missoula Mercantile Company and was acquired by its present owners in 1898 under the name of the Big Blackfoot Milling Company. The present organization of the Lumber Department of the Anaconda Copper Mining Company includes also a mill at St. Regis, Montana.

Kenneth Ross is the manager of the Lumber Department of the A. C. M. Company, and has entire charge of all timber and lumbering operations, and W. C. Lubrecht is assistant manager, in more immediate charge of the operations at Bonner. The other personnel of the organization at Bonner includes W. W. Markle, mill superintendent; G. H. Clynick, factory superintendent; M. Yonts, planer superintendent; W. H. Fowler, yards superintendent.

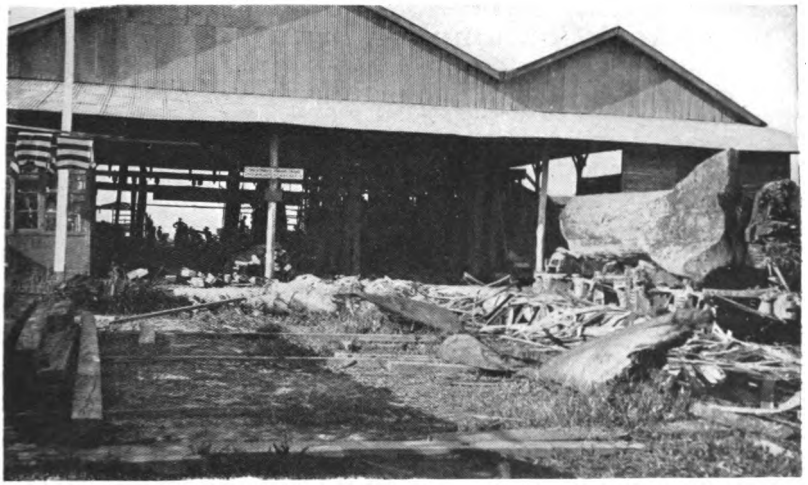


Redwood—*(Continued from Jan. Issue)*

Redwood is frequently referred to as one of the lightest in this country. Its weight per cubic foot, oven-dry, is 26.2 pounds. On the same basis, white pine is 24, southern white cedar 20.7, northern white cedar 19.7, and bigtree 18.2. There are woods in Florida lighter than any of these. Redwood is very soft, yet it dulls tools quickly. It is moderately strong, a little below white pine; it is brittle, again ranking below white pine; it splits and works easily and polishes well. Few, if any, woods surpass this one in splitting properties. Boards twelve feet long and a foot wide may be rived from selected logs, and they present surfaces nearly as smooth as if cut with a saw. However, curly and wavy redwood is not uncommon, and that, too, splits well, but the surface is not smooth. The width of annual rings varies, usually wide in young timber and narrow in old. The bands of summerwood are narrow and clearly defined. The surface of redwood lumber absorbs water quickly, yet, for some reason, creosote and other preservatives can be forced into the wood only with the greatest difficulty. Fortunately, it is not necessary to treat this timber to prevent decay, for, in almost any position, it wears out before it rots. Shingles and window and door frames of the old barracks buildings at Eureka, California, remained in place until fifty years of wind and driven sand wore them away. Railroads use the wood for ties until they wear out, not until they rot out. Farmers near some of the California railroads gather up the rejected worn ties by thousands and use them for fence posts. When redwood is employed as city paving blocks it is wear and not decay that puts them out of commission.

The medullary rays of redwood are thin and very obscure, but numerous. Few woods show them to less advantage in quarter-sawing. The lack of luster in the surface of polished panels is well known. The wood's beauty is in its sameness and richness of color. Except curly specimens and burls, the wood may be said to have no figure, though in planks cut tan-

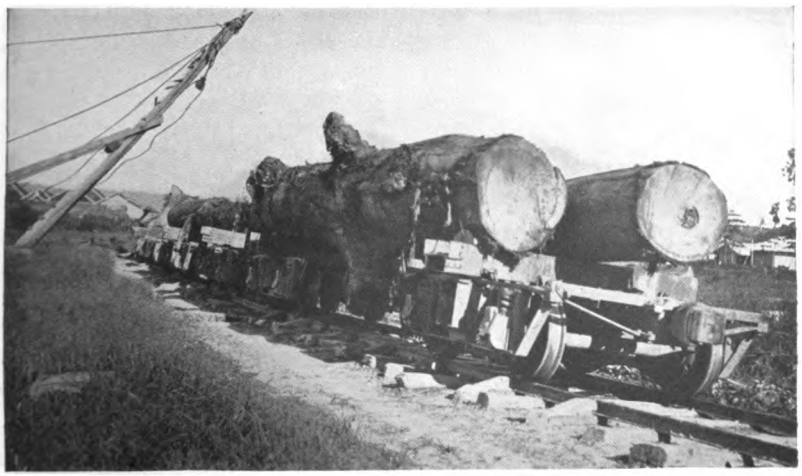
(Continued on page 14)



A Saw Mill of the Orient

These two photographs are doubly interesting from the fact that they come from the opposite side of the world. They have travelled a long way since they were taken on an island in the far-off Indian Ocean. They were sent by one of our foreign sawmill friends from Sinabang, North West Sumatra.

Here American Saws (DISSTON, by the way) and American sawmilling methods are being rapidly introduced in lumbering and sawing. The upper photograph shows the mill, which will soon be replaced by a larger one that is now under construction and being fully equipped with the most up-to-date American machinery and will be operated under the most approved American methods. At the bottom of the page appears a trainload of teak logs, on their way to the mill, which will give a good idea of the timber Disston Saws are successfully felling and cutting up.



Annual Consumption of Wood by the Wood Manufacturing Industries

(*Continued from page 4*)

used, is the manufacture of boxes and crates.

Nearly four times as much wood is demanded by makers of boxes and crates as by the builders of steam and electric cars, which come next, and almost fivefold the amount that goes into furniture, which, in turn, leads vehicle manufacture.

Vehicles demand surprisingly large supplies of wood, and much of it must be of a high class in order to meet requirements for frames, gears and bodies.

A table shows the apportionment of wood among the various industries, grading from planing-mill products, which take most, 13,428,863,066 board feet yearly, down to aeroplanes (74,300 board feet) and drykilns (58,000 board feet), at the bottom of the list.

—*Wood Craft.*

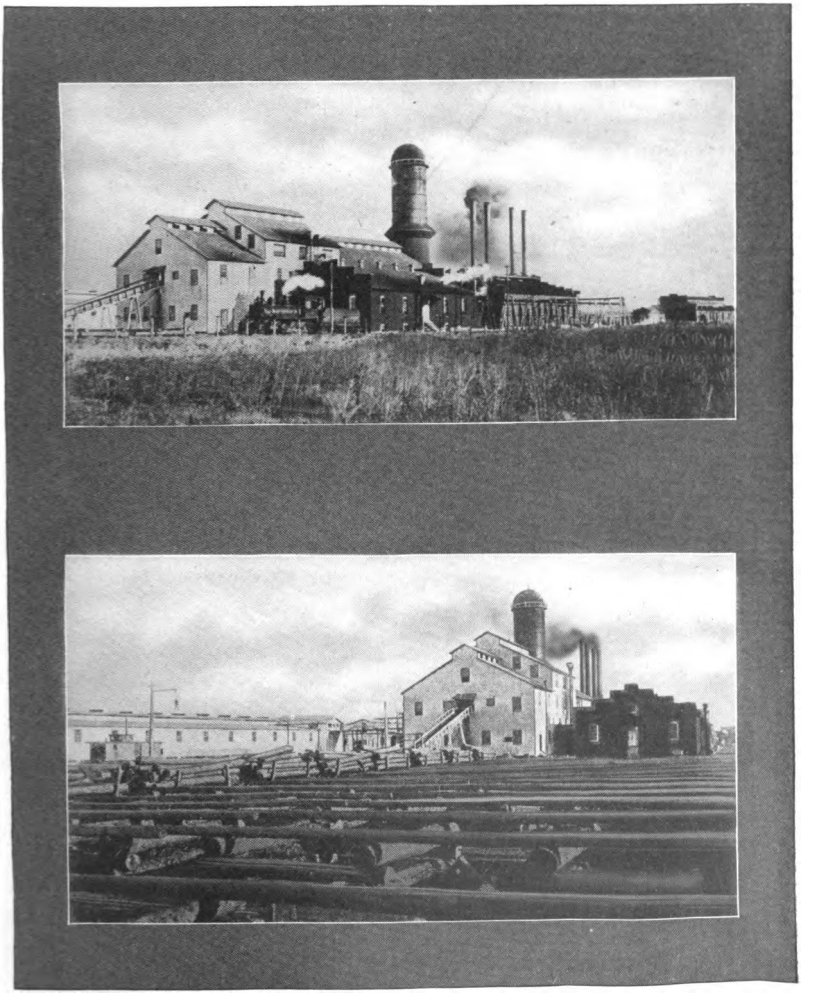
Redwood

(*Continued from page 12*)

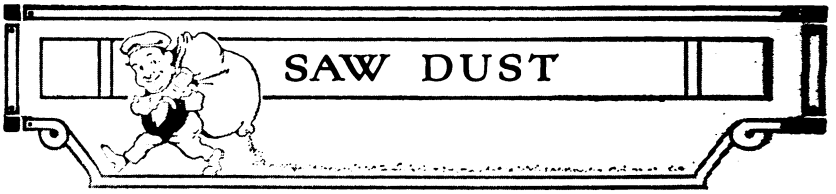
gentially, the contrast of spring and summerwood displays some figure in a modest way. It is possible to wash much of the coloring matter out of the wood, if it is first chipped fine. It washes from the surface by ordinary exposure to weather. Red rainwater runs from a roof of new redwood shingles, and weatherboarding, posts and picket fences fade perceptibly in a few months. This coloring matter when washed out in large amounts in the process of paper making has been manufactured into fuel gas.

A complete list of the uses of redwood is not practicable, for this material goes into most of the large wood-using factories of this country, and much is exported—nearly 60,000,000 feet annually going to foreign countries. It has been much employed in California cities and towns for picket fences, and as posts for wire and plank fences. It is, next to western red cedar, the most important shingle wood of the Pacific Coast. One western railroad alone had in its tracks 12,000,000 redwood ties at one time. Builders of tanks, flumes and water pipes procure some of their best material, and large quantities of it, from redwood sawmills. Few woods are more universally found in furniture factories.

Two Views of North Carolina's Largest Saw Mill



The Roper Lumber Co., New Bern, N. C.



NO TELLING

BRITISH OFFICER (*to a raw recruit trying to ride*)—"Where the deuce are you going to?"

RAW RECRUIT (*vainly trying to control his steed who is making a bolt for the doorway of the riding school*)—"Don't know, sir. But the horse's home is in Canada!"

ONE FOR PA

"Tommy, your master's report of your work is very bad. Do you know that when George Washington was your age he was head of the school?"

"Yes, pa; and when he was your age he was president of the United States."

A REGULAR CHEER

"I hear," said a member of the church to the young parson—"I hear that you have an offer from another church."

"Yes," the minister replied, "I have a call offering four thousand dollars a year."

"And what," the friend inquired, "are you getting now?"

"Nine hundred."

"And you call the other a call? I should think it was nothing short of a yell."—*Country Gentleman.*

BEYOND POLITENESS

A pleasant lady customer was looking at tea kettles. The patient clerk handed down large tea kettles and small tea kettles, aluminum, porcelain and copper. Finally the pleasant customer said, "Well, thank you very much. I was just looking for a friend."

"Wait," said the patient clerk, "here is one more. Perhaps you'll find your friend in that!"—*Exchange.*

SOME NIGHT!

JONES (who has called round to see if his friend has recovered from a wild night)—Is Mr. Wuzzy up yet?

LANDLADY (sternly)—Yes, he got up an hour ago, drank his bath, and went back to bed.—*London Notes.*

HAD HER TRAINED

THE BACHELOR—"So you are married, eh?"

THE BENEDICK—"Yes; been married for nearly six months."

THE BACHELOR—"Got your wife pretty well trained by this time, I suppose?"

THE BENEDICK—"That's what. I've got so I can make her do anything she wants to."—*Indianapolis Star.*

AMEN!

I wish't I was a little rock
A settin' on a hill,
An' doin' nothin' all day long
But jest a settin' still.

I wouldn't eat, I wouldn't drink
I wouldn't even wash;
But set and set a thousand years
And rest myself, begosh.

MILL'S SCARECROW

The new arrival from the North had noticed a scarecrow in an Isle of Pines vegetable patch.

"My father once put up a scarecrow so ugly that not a crow was seen in the vicinity for a whole year," he boasted.

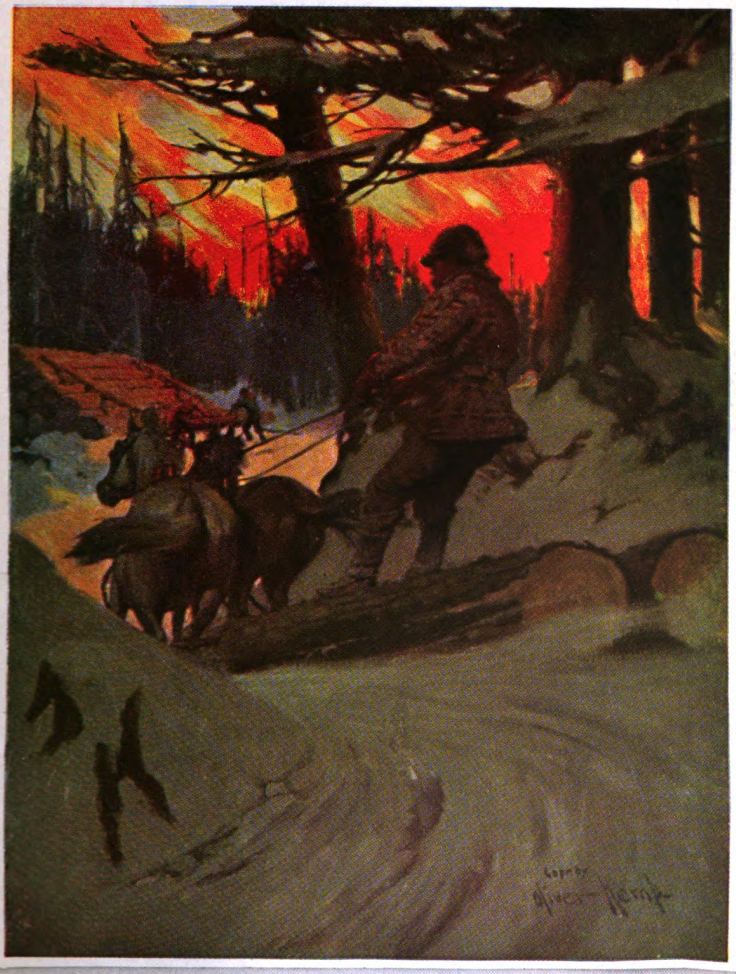
"Huh, that's nothing," declared Wm. J. Mills, "I put out a scarecrow in a potato field in Watertown, N. Y., once that was so ugly that—" here he paused for emphasis, "that the next day crows brought back five bushels of potatoes they had already stolen."—*Exchange.*

HARD LUCK

FIRST TROLLEY CONDUCTOR—"Why was Kelly fired?"

SECOND TROLLEY CONDUCTOR—"His car struck a man at Steenth street and carried him a block on the fender. After collecting a nickel from him, Kelly, in the excitement, forgot to ring it up—and the man was a spotter."—*Life.*

THE DISSTON CRUCIBLE



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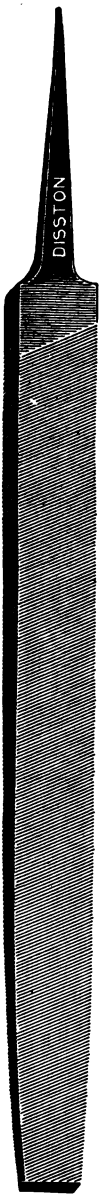

The Best Results

are obtained with saws that have been carefully and properly filed. Having a file especially adapted for the work you have to do enables you to perform that work better, and with more effective results.

The greatest aids to efficient filing are

Disston Files

Manufactured of the best Crucible Steel, carefully forged to shape. Each file is fully inspected and tested before leaving the factory and guaranteed to be as perfect as a file can be made.

The teeth are formed to give the greatest amount of strength, with sharp cutting edge, and at the same time to allow sufficient clearance to prevent clogging.

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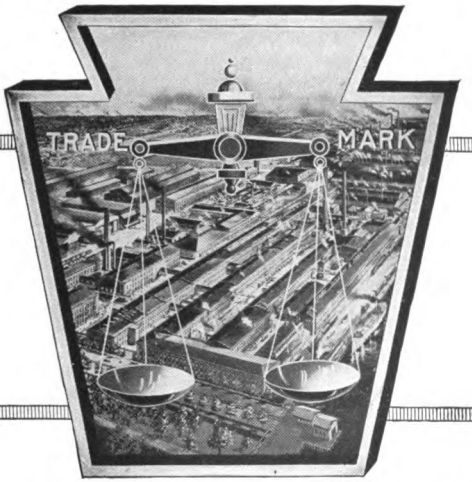

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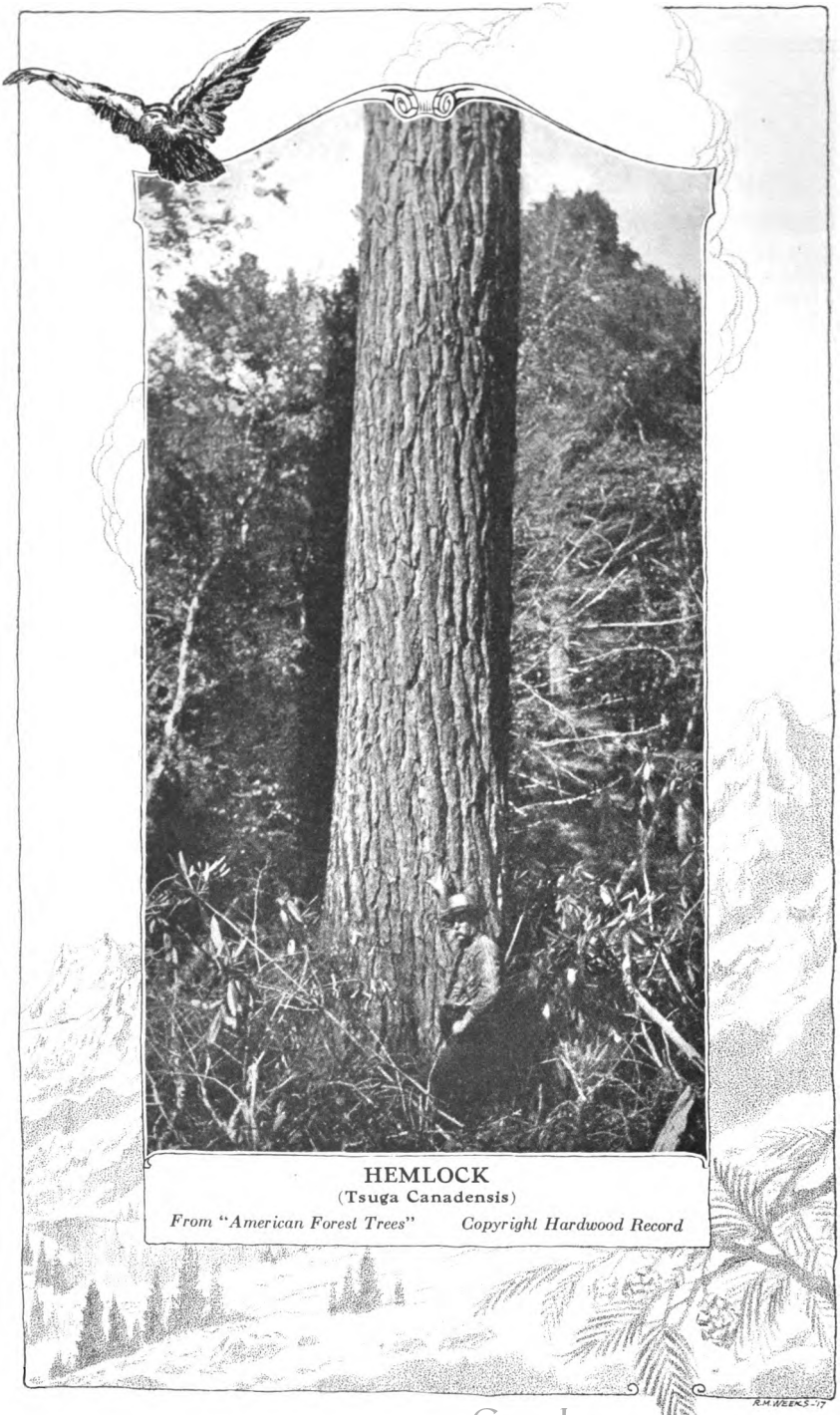


HEMLOCK
(Tsuga Canadensis)

From "American Forest Trees" *Copyright Hardwood Record*

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

Vol. VI MARCH, 1917 No. 2

EDITORIAL CHAT

Enlightenment

TIME was when "emptors" had to "caveat" for all they were worth to keep a stride ahead of the receivers but buyers haven't been "beware-ing" since business wakened to the fact that it was *customers* and not merely purchasers that paid the dividends.

When the obvious finally percolated, when it was realized that no business could prosper indefinitely whose patronage depended upon misrepresentation to a constantly changing clientele, the wariness shifted to the seller. Instead of the ever-increasing dissatisfaction and narrowing market which his trickery secured for him, he cultivated cumulative good-will and a broader market by means of fair dealing.

In giving value received he was patently doing only his duty—in comparison with previous methods, very commendable; in the abstract, nothing for which he should receive any credit. And as a class, he didn't. He was able to hold his own, which he couldn't have done (indefinitely) by unfair tactics, but that was all.

But how about the institutions that have risen to tremendous proportions, that dominate their fields, that set the standards which others endeavor to follow? They are the firms that did *more* than their duty, that gave *more* than agreed, that leaned backward in their regard for the purchasers' rights and interests. And moreover, the quality, service and good-will which have built their success are their assurance of its continuance while that policy remains unchanged.

Quality Tells

Hard on the Dogs

The two dogs shown above were cut by a Disston Saw in the mill of O. L. Bartlett, Mound City, Ill. Mr. Joe Layton is filer for this concern and the following letter from him expresses his views as to the quality of Disston Saws:

February 17, 1917.

THE HENRY DISSTON'S SONS CO.

GENTLEMEN: Note the two chain dogs which I am mailing you to-day. You will note one of these dogs has been cut completely in two, the other ripped for two inches diagonally across, almost cutting same in two. Both these were cut with the same saw without material injury to the saw in either instance, a good deep bite with the swage, few licks with the hammer to straighten some of the points and a few rounds with the grinder put the saw in perfect running condition and it is now taking its regular turn.

This was one of the 8-inch 17-ga. band saws which you recently furnished us.

This is only part of the every-day *"pleasures"* connected with filing for a mill cutting rafted elm logs.

In conclusion I wish to state I am certainly well pleased with results obtained from DISSTON saws.

Trusting this may be of interest to you and perhaps others,

Sincerely your friend,

JOE LAYTON,
Filer, O. L. Bartlett, Mound City, Ill.

Hemlock

(Tsuga Canadensis)

From "American Forest Trees" *Copyright Hardwood Record*

SEVEN hemlocks are known in the world, four of them in America. Two of these are in the East, two in the West. The eastern species are the Canadian and Carolinian. The former is Tsuga canadensis, the latter Tsuga caroliniana. The western species are, mountain hemlock (Tsuga mertensiana), and western hemlock (Tsuga heterophylla). The word *tsuga* is Japanese and means hemlock.

The hemlock lumber in eastern markets is practically all from one species, which is known as hemlock in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Virginia, North Carolina, South Carolina, Kentucky, Wisconsin, Michigan, Minnesota, Ohio, Ontario. In Vermont, Rhode Island, New York, Pennsylvania, New Jersey, West Virginia, North Carolina, South Carolina; in England it is called hemlock spruce; spruce tree in Pennsylvania and West Virginia; spruce pine in Pennsylvania, Delaware, Virginia, North Carolina, Georgia; to the New York Indians it was known as oh-neh-tah, which being interpreted means "greens on the stick."

The range of hemlock extends east and west more than fifteen hundred miles, from Nova Scotia to western Wisconsin; south to Delaware and southern Michigan, and along the Appalachian mountains to northern Alabama and Georgia. The original quantity of timber was enormous, for large areas were covered with dense stands. The largest trees are found near the southern part of its range, among the mountains of Tennessee and North Carolina; but the bulk of the timber has always been in the North. It thrives best in well drained soil, but it likes cool situations and often develops dense forests on northern slopes or in deep ravines; but it maintains a foothold on ridges, on the banks of streams, and around the borders of swamps.

The cones are very small, about a half inch in length, growing from the lower side of the branchlet. The scales are rounded and thin, light brown in color. The seeds are winged and even when ripe the cones do not spread apart perceptibly. The seeds escape, however, slowly during the winter following their maturity. They are very small, and their

(Continued on page 26)

The kind that Gilchrist & Fordney cut, down Mississippi way

Views taken of Gilchrist & Fordney Lumber Co.'s operations, Laurel, Miss.

The Louisiana Saw Mill Co., Ltd.
Glenmora, La.

ONE of the finest yellow pine mills in the South is that of the Louisiana Saw Mill Company at Glenmora, La. Three views taken at this plant are shown on the two following pages.

The company cuts yellow pine exclusively and only the finest quality of lumber is produced. The "stick" shown on the photograph measures 20″ x 20″ x 40′.

They cut 157,000 feet in ten hours and their equipment consists of two 60″ Disston circular saws, 800 H. P., running at 960 R.P.M.; two edgers and seventeen saw trimmers.

Naturally in a plant of the finest type producing lumber of the highest grade the saws throughout are *Disston.*

"Have At Last Got SOME Saw!"

The following is a simple little comment on that quality which extends through the entire Disston line. It came unsolicited, just a frank expression of appreciation when writing for some of our literature:

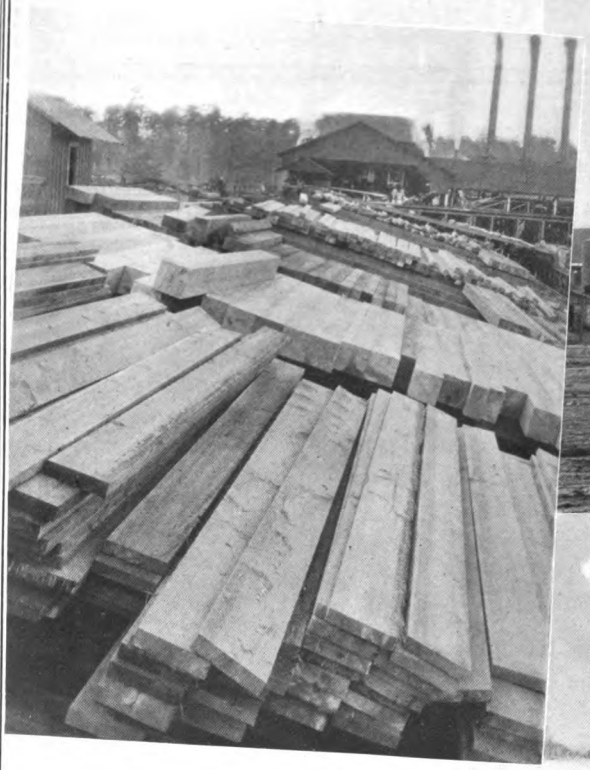
CANTON, OHIO, February 28, 1917.

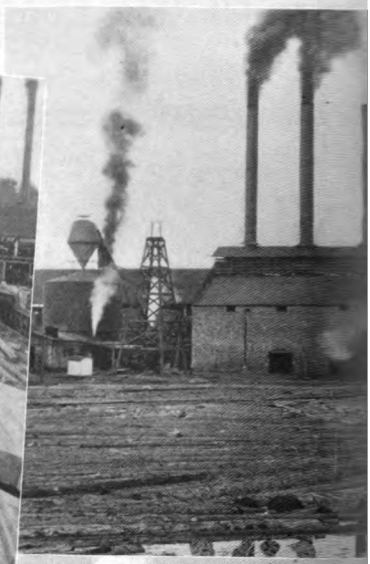
HENRY DISSTON & SONS, INC.
Dear Sirs:

I have just purchased one of your hand saws (fine) and also saw set. First trial convinces me I have at last got some saw. Would like to have you send me booklet with instructions for setting and filing saws.

Nothing but a Disston for me hereafter.

Yours truly,
WM. S. POORMAN.

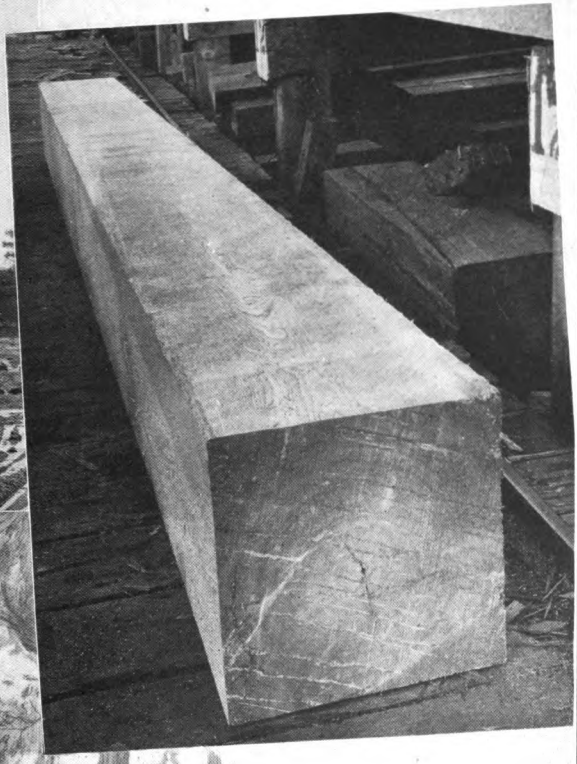




Views of the Louis

Glenmora,

(See preced



iana Saw Mills Co.,

Louisiana.

g page)

Hemlock—(*Continued from page 21*)

wings distribute them a hundred feet or more. The seeds germinate best on leaf mold, but the seedling takes several years to thrust its roots deep into the mineral soil. During that time, growth is very slow. A seedling five years old may not exceed five inches in height; but when its roots have developed, growth is fairly rapid. The distribution of seeds is often facilitated by the activities of red squirrels, and perhaps other small mammals, which climb the trees in winter and tear the cones apart to get at the seeds. Many of the seeds are devoured, but more escape and fly away on the winter winds.

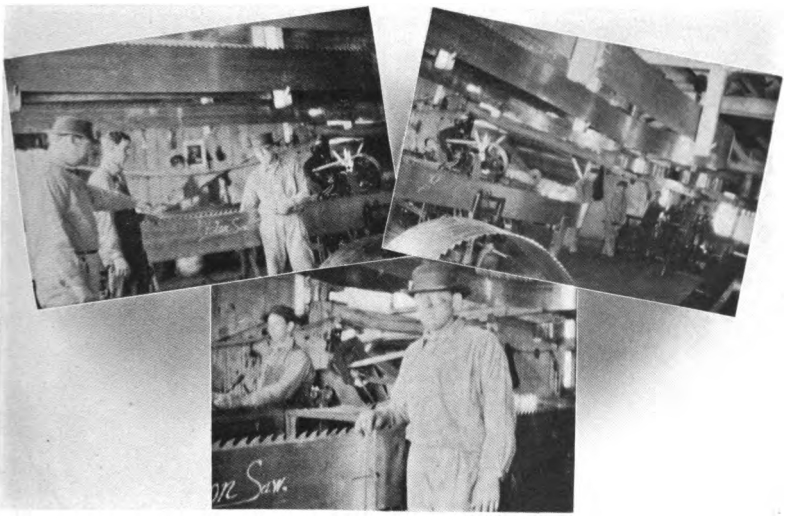
Hemlock leaves are narrow and about half an inch long. Examined closely, particularly with a magnifying glass, rows of white dots extend from end to end on the under side. Small as these white points are separately, when seen in the aggregate they change the color of the whole crown of the tree. This is illustrated by looking at a hemlock from a distance—the upper sides of the leaves on the drooping twigs being then visible and the tree's aspect dark green. Approach the tree, and look up from its base—the under side of the leaves being then visible—and the dark color changes to a light silvery tint. The whiteness is due to the white spots on the leaves. The spots are stomata (mouths), and are parts of the chemical laboratory which carries on the tree's living processes. All tree leaves have stomata, but all are not arranged in the same way and are not visible alike. Few trees have them as prominent as the hemlocks.

(*To be Continued*)

Mill Waste for Sulphite Chips

THE increasing cost of pulpwood is focalizing attention upon the possibility of utilizing sawmill waste for the manufacture of chips suitable for pulp. An exhaustive study has been completed showing the extent to which mill waste is now used in making pulp as well as methods of barking, chipping, screening, drying and baling chips. This study indicates that there is likely to be an extensive utilization in the future of certain kinds of mill waste, particularly hemlock. Co-operation has been started with some paper mills in Wisconsin to test the utilization of such waste on a commercial scale.

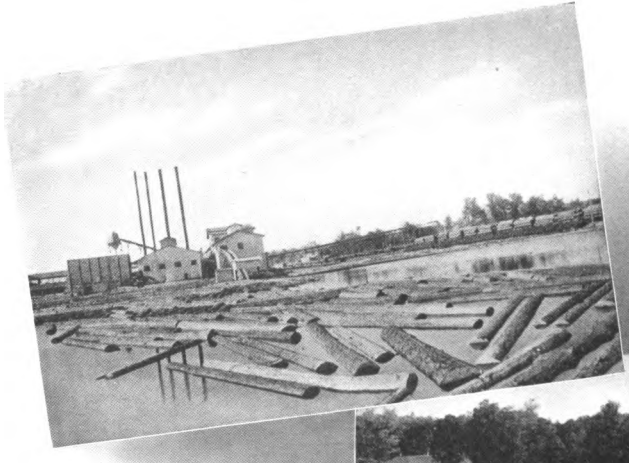
Filing-Room of the Thompson & Ford Lumber Co., Graysburg, Tex.



THE photographs show the filing-room of the Thompson & Ford plant. The success of this company is attributed to an unbeatable combination of Keelies and Disstons. William Keelie is Superintendent; Dan Keelie, Head Filer; Arthur Keelie, Sawyer on the short-side and Steve Keelie, Head Engineer.

Dan Keelie is a young filer in years, but the only way you can tell it is to look at *him;* you'd never guess it to look at his saws. He recently discarded a set of bands that were originally 14-inch wide that he had run down to less than 9 inches—more than 5 inches of service. All of them had only the factory braze in them, except one. He now uses them as extras. This is an indication of what Mr. Keelie can do in the filing-room, as well as what Disston saws will do when properly handled.

He is a Disston man from every angle.



Choctaw Lumber Co. Plant at Broken Bow, Okla,

View of Bismark, Okla.

Hauling in the Logs, Bismark, Okla.

The Choctaw Lumber Co.

ON the page opposite are shown a view of the Broken Bow plant of the Choctaw Lumber Company and also a typical logging scene at their operations.

This company has mills at both Broken Bow and Bismark, Okla. They are erecting a new plant at Dierks, Ark., which will operate under the name of the Dierks Lumber and Coal Company.

The equipment of the latest plant includes a double-band mill of the most modern type, and two 14-inch single-cutting bands.

We have, through our Memphis branch, the Reichman-Crosby Co., an order covering the complete saw requirements of this mill.

In the Broken Bow and Bismark plants also, Disston saws are used exclusively, and Disston cross-cuts are used in the woods.

Mr. Allbagh, formerly manager of the mill at Bismark, is in charge of the new operation at Dierks.

We naturally consider it a high tribute to the quality of Disston saws that so prominent and progressive a firm as the Choctaw Lumber Company uses them throughout in their three mills.

Great Southern Record with a "Suwanee"

THE Great Southern Lumber Company at their Bogalusa, Louisiana, operations have made the following record with a Disston "Suwanee" cross-cut saw:

Ran every day for four months;

Cut 75 logs per day, averaging 5½ to the thousand.

After this four months of strenuous service, it was sold to a cross-tie maker, who claims that it is yet in service and doing good work cutting his stocks in proper lengths.

The foreman is Mr. I. K. Carkin; filer is William F. Miller; the cutters' names were Dave Henry and Frank Abram, and the cross-tie cutter was Mr. P. M. Forbes, all of Argyle, La.

Some Simple Fire Preventives

ORDERLINESS and cleanliness of your premises will go far toward avoiding fire. Keep your plant free of worthless accumulations. Waste paper, rags, old clothes and rubbish are responsible for many fires.

At quitting time the working clothes of the men should be hung up and not thrown down in the most convenient corner.

Examine all heating apparatus and devices, flues, chimneys and piping. See that there is safe clearance between woodwork or other combustible material, and heating connections. Deposit ashes only in metal receptacles.

Have the fire underwriters and a competent electrician examine your electric wiring. Improper installation is a source of great danger.

Provide a safe place for the storage of gasolene, kerosene and all volatiles or explosive materials and keep them out of buildings except for small quantities for immediate use. Any left over at night should be removed from buildings.

Use a safety can in handling gasolene and like fluids and instruct all your men as to the extreme danger of careless handling.

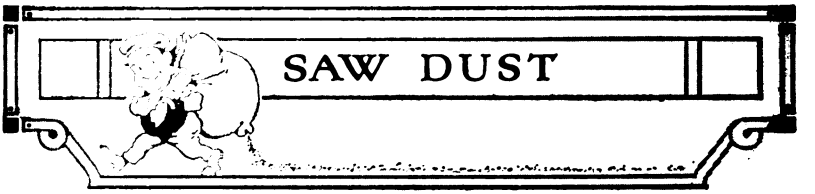
Do not use pendant gas mantles unless shielded below to catch the hot carbon in case of breakage.

Swinging gas brackets are dangerous as are also burners without tips. Protect the ceiling above brackets and lights and see that contact with inflammable material at the side is impossible. Use safety matches only.

Discourage or prohibit smoking except in a smoking room during leisure time.

Don't fail to provide some means of hand fire protection. Fire hose, chemicals, even water pails, may prevent a serious fire loss. Most fires have an insignificant beginning. Be prepared to put it out with some means of hand fire protection. This will prevent a more extensive loss.

Organize your employees. Make the danger personal. Fire means at least a temporary suspension of business and loss of employment.



RATHER TEDIOUS

The messenger from the dockside stores with a Government contract hailed a vessel in dock at Liverpool.

"What do you want?" growled the surly mate.

"Got some vegetables for the ship!" was the reply.

"All right! You needn't come aboard! Throw them up one at a time," said the mate, as he stood ready to receive the vegetables.

"Ahoy, there, look out!" shouted the lad, as he threw a small dried pea toward the mate. "I've got two hundredweight of these!"—*London Opinion.*

TEACHER—"Francis, have you any coat?"

FRANCIS—"No."

TEACHER—"No, what?"

FRANCIS—"No coat."

OUT OF SIGHT

The employer of a Polish maid who has learned to speak English has told the Philadelphia *Public Ledger* of her experiences with the telephone. After its use was explained to her she was eager to answer every call. One day a ring came and she jumped to the instrument.

"Hello!" came the receiver.

"Hello!" answered the girl, flushed with pride at being able to give the proper answer.

"Who is this?" continued the voice.

"I don't know!" explained the maid. "I can't see you."—*Youth's Companion.*

HIS MITE

"It is my belief, and I venture to assert it," declared the lecturer, raising his voice, "there isn't a man in this audience who has ever done anything to prevent the destruction of our vast forests."

A rather timid looking man quietly arose in the rear of the hall and said: "I've shot woodpeckers."—*Life.*

HIS CHOICE

The judge looked over at the prisoner and said:

"You are privileged to challenge any member of the jury now being impaneled."

Hogan brightened. "Well, thin," he said, "yer Honor, Oi'll foight the shmall mon wid wan eye, in the corner, there fornist ye."

GOING UP!

The horrible news comes from Arkansas that a boy climbed a corn stalk to see how the corn was getting along and now the stalk is growing up faster than the boy can climb down. The boy is plumb out of sight. Three men have undertaken to cut down the stalk with axes and save the boy from starvation. It grows so fast they can't hack twice in the same place. The poor boy is living on nothing but raw corn and has already thrown down four bushels of cobs. Next!

EASILY ACCOMMODATED

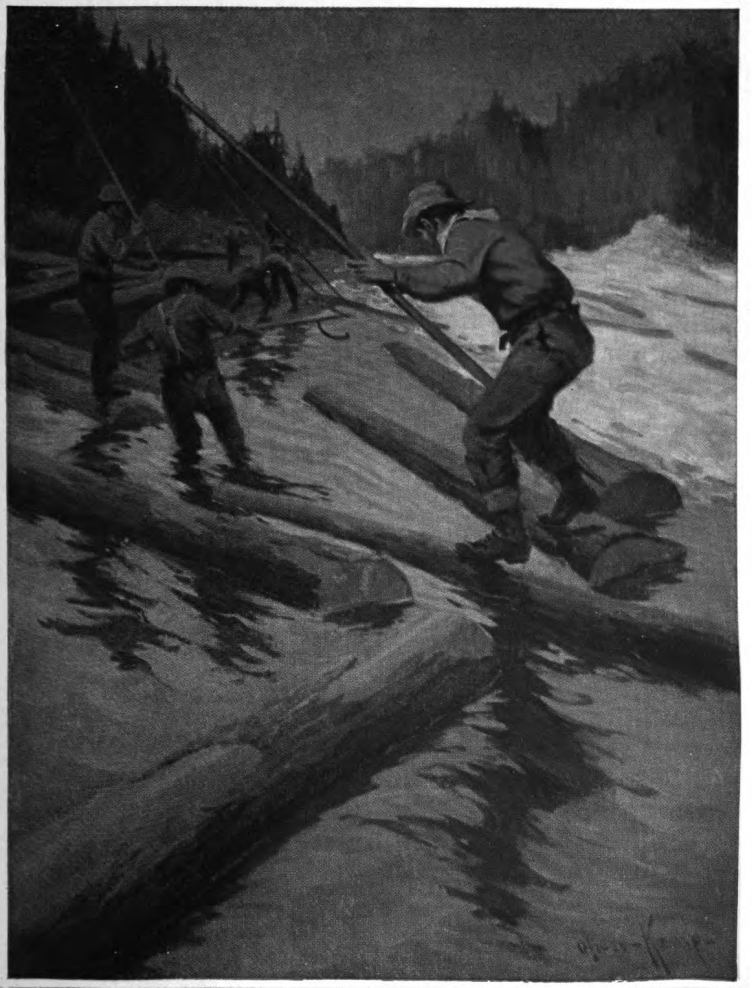
"Got an opening for me here?" asked a college graduate, walking into a busy man's office.

"Certainly," responded the employer pleasantly. "Close it as you go out."

IN A GARDEN

As I walked among the paths this morning, plucking flowers, I found, in the yellow heart of a lady-slipper, a little brown bee. My first impulse was to shake him out of his honeyed abode, but as I looked at his velvety body and sunlit rainbow wings a feeling of foolish tenderness surged over me. Perhaps there were baby bees at home that would starve if papa bee did not bring back honey; and how useful the little creature was, carrying the pollen from flower to flower—so I moved on, leaving him unmolested. But even as I turned away thinking these pure, sweet thoughts, the damned thing stung me.—*E. M. Nelson in Smart Set.*

THE DISSTON CRUCIBLE



APRIL 1917

Be Sure
This Mark Is on Every
SAW
You Buy

EXTRA
HENRY DISSTON & SONS
SPRING STEEL WARRANTED
EXTRA THIN BACK
PATENT GROUND
PHILADELPHIA, U.S.A.
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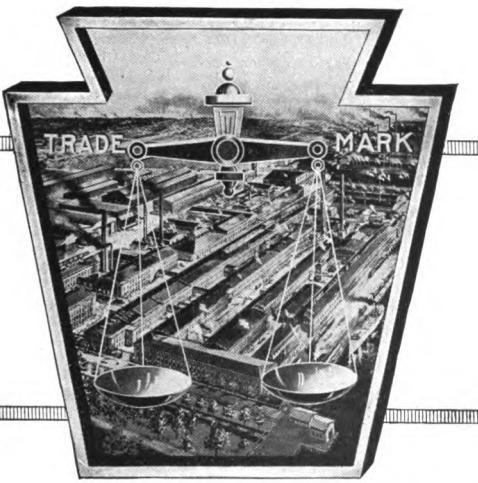

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HENRY DISSTON & SONS

INCORPORATED

Keystone Saw, Tool, Steel, and File Works

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THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

Vol. VI APRIL, 1917 No. 3

EDITORIAL CHAT

Enthusiasm

ENTHUSIASM alone probably wouldn't produce much in the line of results, but it's a powerful stimulant. Ways and means are mere incidents in the path of accomplishment if enthusiasm is the driving power. Problems of material and process are solved, machinery and equipment developed with the greatest facility, for enthusiasm acknowledges no obstacles.

Enthusiasm is the quality which produces excellence where its absence breeds mediocrity. It transforms the dull monotony of clock-watching routine into the exalted satisfaction of constructive achievement.

Devoid of it, the finest equipment in the world is inadequate. With it, no heights of attainment but may be surmounted.

It is a safe assertion that no enterprise has become great without the impelling force of enthusiasm, and by the same token enthusiasm is in large measure the gauge of that greatness.

Quality Tells

A California Sugar Pine

The giant shown above, while not exactly in the class with California's redwoods, still makes a strong bid for honor. It measured 9 feet 6 inches at the butt, and it was necessary to cut it in seven lengths. The logs were cut up in Westside Lumber Company's mill, Tuolumne, Cal., and produced 3,700 feet of lumber, Disston Saws doing the work.

Hemlock

(*Continued from March Issue*)

From "American Forest Trees"

HEMLOCK attains a height from sixty to 100 feet and a diameter from two to four. When it grows in the open, it is one of the handsomest and most symmetrical evergreens of any country. Its dark, dense foliage will permit scarcely any sunlight to filter through. When forestgrown, it loses its lower limbs. In the forester's language, they are "shaded off," and long, smooth trunks are developed; but the stubs from which the branches fall remain buried deep inside the smoothest bole, and the saws will find them when the logs are converted into lumber.

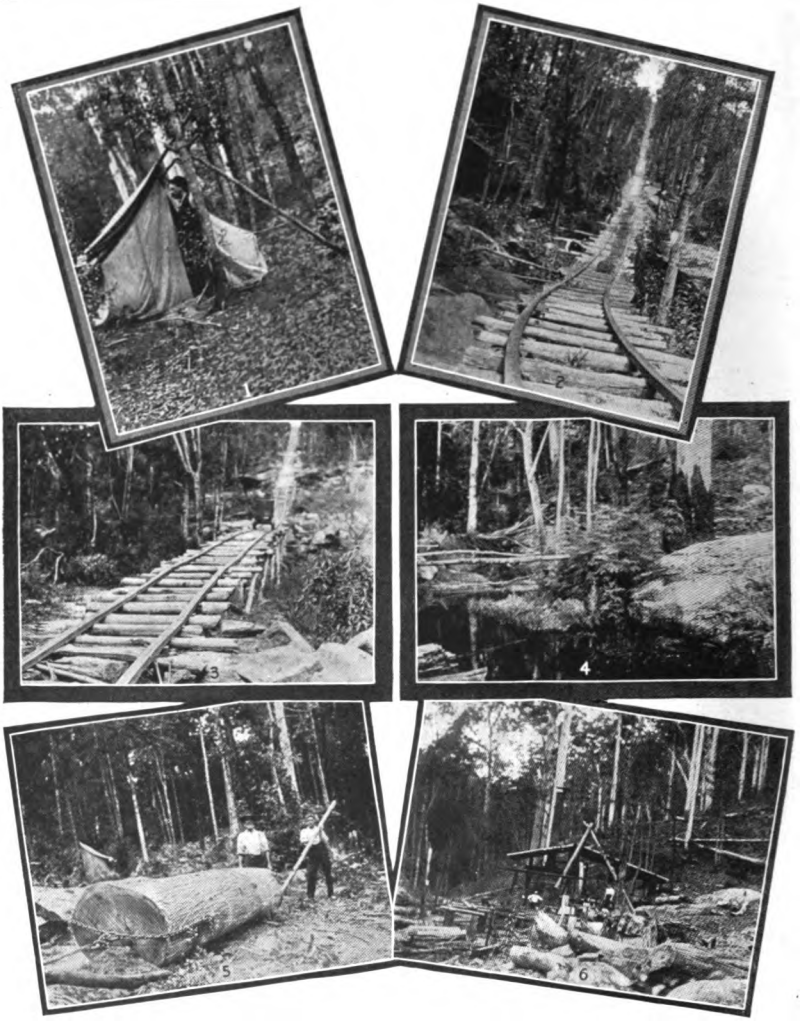
Reference has been made to hemlock's slow growth during the seedling's first four or five years. That takes place in the dense shade of the hemlock forest. If the seed falls on open ground, in full sunlight, the chance is that it will not germinate; but if it does, the seedling is doomed to an early death. It cannot endure strong light. This fact is of great importance, for it means the end of hemlock forests. When a stand is cut and the sunshine reaches the ground, no seedlings bring on a new forest. White pine seeds grow in open ground, in old fields, in burnt woods, wherever they reach soil, but hemlock must scatter its seeds in cool, deep shade or they will do little good. Strong, vigorous, and healthy as hemlock trees are, they are killed more easily than almost any other. Cut a few trees from the center of a mature hemlock clump, and the chance is that several trees next to the open space thus made will die. The unusual light proves too much for their roots which had always been cool and damp; but when young hemlocks are protected until they get a start, they thrive nicely in the open.

The wood of hemlock is light, soft, not strong, brittle, coarse and crooked grained, difficult to work, liable to windshake, splinters badly, not durable. The summerwood of the annual ring is conspicuous; and the thin medullary rays are numerous. The color of hemlock heartwood is light brown, tinged with red, often nearly white. The sapwood is darker. Lumbermen recognize two varieties, red and white, but botanists do not recognize them.

The physical characters of hemlock are nearly all unfavorable, yet it has become a useful and widely used wood. It is largely manufactured into coarse lumber and used for outside work—railway ties, joists, rafters, sheathing, plank walks, laths, etc. It is rarely used for inside finishing, owing to its brittle and splintery character. Clean boards made into panels or similar work and finished in the natural color often present a very handsome appearance, owing to the peculiar pinkish tint of the wood, ripening and improving with age.

With the growing scarcity of white and Norway pine, hemlock

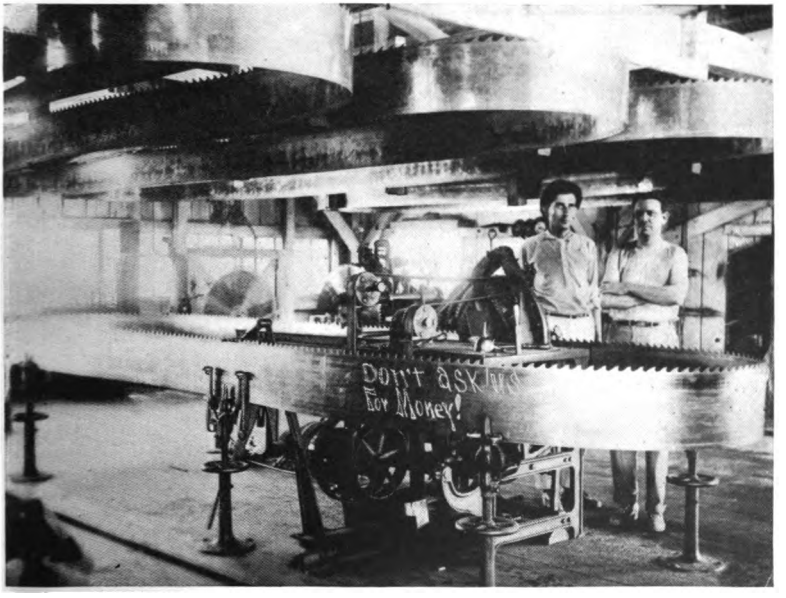
(*Continued on page 46*)



A Mountain Saw Mill in New South Wales, Australia

1. Mr. S. Hudson, a popular member of the firm of Geo. Hudson & Sons, making a mental valuation of some standing timber.
2. A "tramway" 2½ miles long, and climbing to a height of 2,500 feet, which is used to carry down timber from the mountain to a place where teams can haul it to the railway.
3. Where the "tramway" starts.
4. Showing the rough and rugged nature of the country being logged.
5. Coasting a log by means of a 50 H. P. steam winch, and wire hawser. This is the Blue Gum of Australia—an exceedingly hard and heavy timber. The log in the photo weighed 6 tons.
6. Erecting a "Bush" sawmill. These mills are only temporary structures, being shipped to a new site when the nearby timber is exhausted. Logging over long distances is usually impossible on account of the rough nature of the country.

The Crowell & Spencer Lumber Co.
Long Leaf, La.



Filing Room

SOME of the finest long leaf pine in the world comes from Louisiana, and of this the pine of Rapides Parish is without question of the finest. This parish enjoys also the distinction of being one of the most heavily timbered sections of the State.

The Crowell & Spencer Lumber Company were pioneers in the development of the lumber industry of this parish. From the beginning the aim of this company has been to produce lumber of the very finest grade. Combined with the excellence of the timber, this has resulted in a world-wide reputation for quality lumber and Crowell & Spencer pine is shipped to all parts of the civilized globe.

(Continued on page 42)

Log Dump and Train

New Office

Crowell and Spencer L

View of Mill

The Commissary

ber Co., Long Leaf, La.

The Crowell & Spencer Lumber Co. Long Leaf, La.

(*Continued from page 39*)

Views of the mill and some of the buildings are shown on the preceding pages.

The equipment of the mill comprises an 8-foot band mill carrying 14-inch Disston Band Saws; one circular rig carrying 58-inch, 8-ga. Disston Circular Saws; a double edger and a ten-saw trimmer. The average cut is 125,000 feet per ten-hour day, all of the very finest long leaf pine.

Last September a test run was made to determine the maximum capacity of the mill per ten hours. The result was 197,952 feet, log scale. Of this, the single-cutting band saw cut 97,247 feet. The photograph of the log dump and train in the group preceding shows the logs from which this record cut was made.

The personnel of the company is as follows:

J. S. Crowell, Proprietor.

L. M. Risher, General Superintendent.

J. W. Hutton, Saw Mill Foreman.

T. L. Hobbs, Planer Foreman.

W. W. Parry, Circular Saw Filer.

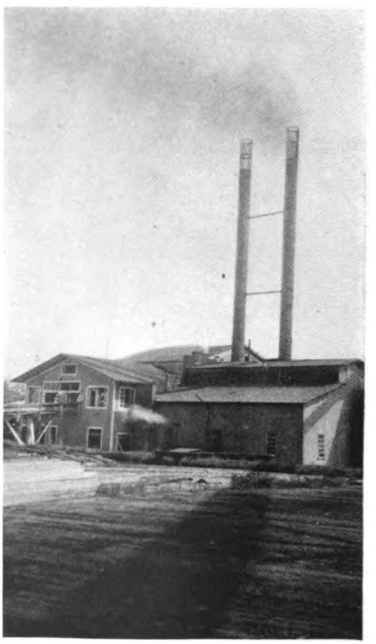
Theodore Grounds, Band Saw Filer.

Walter Scott, Circular Sawyer.

W. W. Quinn, Band Sawyer.

J. F. Oldham, Sales Manager.

Disston Saws are used exclusively and have been for a number of years.



Utilization of Bark for Felts

THE U. S. Forest Products Laboratory has discovered and thoroughly tested a new use for spent hemlock bark, which gives promise of being immensely important from an industrial standpoint. Over 200,000 tons of roofing felts are now made annually in this country, the basic fiber material used being rags. On account of the war and an increase in the business prosperity of the country, the price of rags rose to $72 per ton. The Laboratory then discovered a method whereby it was possible to substitute spent hemlock bark for as much as 30 per cent. of the rag stock. The bark is now used chiefly for fuel, and for this purpose is worth about one-fifth as much as soft coal per ton. The tests were supplemented by mill trials, and roofing felts containing 30 per cent. of bark are now being manufactured commercially. The mill with which the Laboratory cooperated in these tests is now utilizing 150 tons of bark per week and, as a result of this substitution, is saving $1,300 per week. This use of bark, if universally adopted, should cut the cost of manufacturing felts in this country probably $1,000,000 annually. At the same time, the value of the bark will be doubled.

Smith + "Suwanee" Cross-cut = 18,000 Feet

THE Rev. A. D. Smith says he considers a daily average of 18,000 feet over a seven-day period without fitting the saw a very satisfactory performance. This is what he got out of a new Disston "Suwanee" cross-cut he recently purchased. He doesn't mention in his letter whether the seven days were consecutive or "working," but we assume from his title that he was "sawing wood" in other directions on the seventh consecutive. At any rate, he assures us he is going to boost for Disston now on every occasion.

Cause—

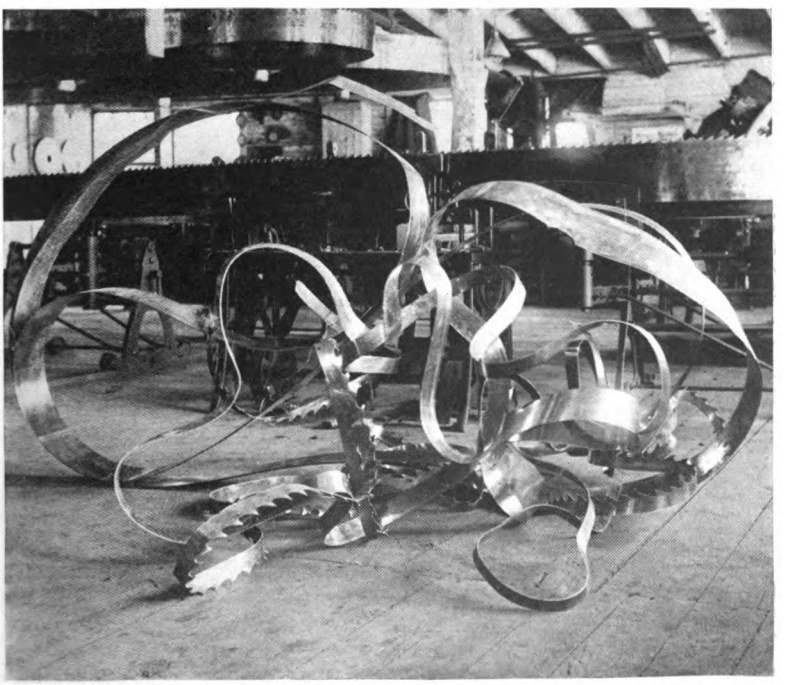
THIS is the picture of an ordinary bark spud which had a rapid rise to prominence (not popularity) at the plant of the Cummer-Diggins Company, Cadillac, Mich. The occasion of its meteoric leap into the limelight was its eminently successful portrayal of the villain in the title rôle of "Cause and Effect," a near-tragedy staged at the aforementioned plant. If Mr. Gabel, the company's sawyer, who was acting as director when the bark spud made its appearance on the "boards" had been a man of less unflinching nerve, it might well have been more than a "near" tragedy.

—and Effect

An 11″ Disston Band Saw, running about 8,000 feet per minute, was cutting a hard frozen log in the Cummer-Digger mill when it encountered the bark spud. The spud evidently had been broken off in the woods and carelessly left in the log. The saw struck the iron part of the spud first and then the steel. In a second the saw was three ribbons of writhing steel. One piece about twenty feet long wrapped itself about the levers and the sawyer, too. Mr. Gabel's gameness in sticking to his post and stopping the carriage doubtless averted serious damage. As it was, the only damage was to the saw itself—a miraculous escape.

Mr. O. P. Clark, head filer for the company, says he takes off his hat to no one so far as filing ability goes, but that it's no part of his job to fit up a wood-cutter to go through a tempered steel bark spud.

The photograph below shows the "Effect" part of the title.



Hemlock—(*Continued from page 37*)

has become the natural substitute for these woods for many purposes. It has never been conceded that hemlock possesses the intrinsic merit of either of the northern pines for structural purposes, but it has proven a suitable substitute for a variety of uses, notably for framing and sheathing of medium-priced structures.

In 1910 hemlock lumber was cut in twenty-one states, the total output exceeding 2,500,000,000 feet. Only four species or groups of species exceeded it in amount. They were southern yellow pines, Douglas fir, the oaks, and white pine. The principal cut of hemlock lumber was in the following states in the order named: Wisconsin, Michigan, Pennsylvania, West Virginia, New York, Maine, Vermont, Virginia, New Hampshire, Tennessee, and North Carolina. Ten other states produced smaller amounts.

Hemlock possesses remarkable holding power on nails and spikes, and that is one reason for its large use for railroad ties. It does not easily split, and there is no liklihood that spikes will work loose; but the wood decays quickly in damp situations, and unless given preservative treatment, hemlock ties do not last long. They are pretty soft anyway, and where traffic is heavy, rails cut them badly.

Manufacturers of boxes and crates use much hemlock. The annual use for that purpose in Massachusetts is about 27,000,000 feet, in Michigan practically the same quantity, in Illinois 34,000,000, and varying quantities in many other states. Michigan converts nearly 100,000,000 feet a year into flooring and other planing mill products, and Wisconsin and other hemlock states follow it in lesser amounts. The wood is employed by car builders, slack coopers, manufacturers of refrigerators, silos, and farm implements; but the largest demand comes from those who use the rough lumber.

Hemlock bark is the most important tanning material in this country. It has long been used by leather makers who generally mix it with some other bark or extract because leather tanned with hemlock alone has a redder color that is desired.

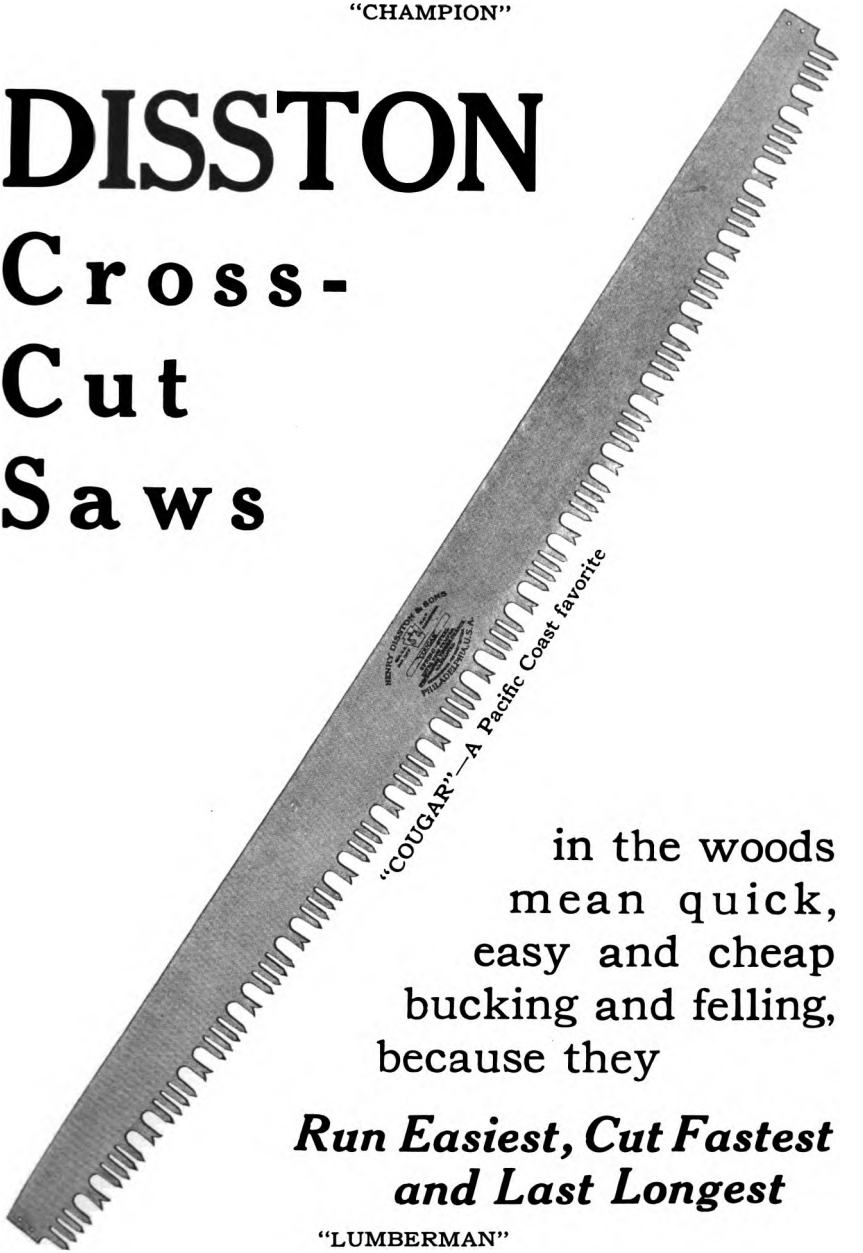
Large areas of hemlock forests have been cut for the bark alone. Formerly the wood was of so little value that it was cheaper to leave it in the forest than to take it out. The peelers worked in early summer, cutting trees and removing the bark in four-foot lengths, which was measured by the cord, though often sold by weight. Care was taken that the bark be removed from the slashings before the dry weather of autumn, for fire was to be expected then, and anything combustible in the woods at that time was likely to be lost. The tracts on which bark peelers worked were called "slashings," and they were fire traps of the worst kind with their tangled masses of tops and branches.

Large quantities of hemlock bark are still peeled every summer, but the practice is less destructive than formerly. The trunks are worth taking out, and when the fire comes late in the season it consumes little valuable hemlock.

"CHAMPION"

DISSTON

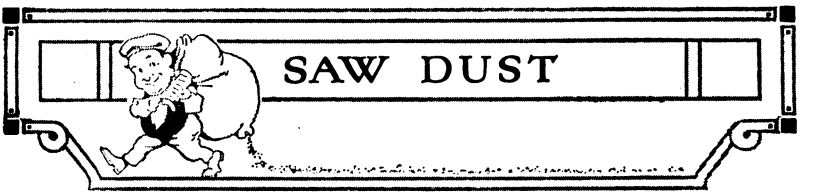
Cross-Cut Saws



in the woods
mean quick,
easy and cheap
bucking and felling,
because they

Run Easiest, Cut Fastest and Last Longest

"LUMBERMAN"



HARD TO MANAGE

A doctor had a patient who was suffering from stomach trouble. As he left him a large brown pill he said, "This is a new cure and if you can manage to keep it on your stomach it will cure you." The next day the doctor came back and inquired of the patient, "Did you keep it on your stomach?" "Oh, the pill was all right," the patient replied, "but when I went to sleep the darned thing rolled off."—*Ward McMasters.*

"Don't you find it hard these times to meet expenses?"

"Hard? Man alive! I meet expenses at every turn."—*Boston Transcript.*

Maybe the efficiency expert was jokingly misquoted when it was said of him that he proposed to cut the legs off the wheelbarrows in order to save the time now spent by the wheelers thereof in spitting on their hands.

GETTING IN LINE

The late Cy Warner, who deserted railway literature for a real railway job in Montreal, told this story at a luncheon not long before his death.

A Scotchman came upon an automobile overturned at a railway crossing. Beside it lay a man all smashed up.

"Get a doctor," he moaned.

"Did the train hit you?" asked the Scotchman.

"Yes, yes; get a doctor."

"Has the claim agent been here yet?"

"No, no; please get a doctor."

"Move over, you," said the Scot, "till I lie down beside you."—*Detroit Free Press.*

FARMER—"See here, boy, what yer doin' up that tree?"

BOY—"One of your pears fell off the tree an' I'm tryin' to put it back."

A BORING JOB

Of peculiar ways of earning a living one of the oddest is reported by a New Orleans attorney.

A colored man was brought into court on some minor charge. The judge, following the usual routine, after asking his name, demanded:

"What is your occupation?"

"Well, sah, jedge, Ise a wormhole borer in an antique-furniture shop."—*Saturday Evening Post.*

Little Pauline came in, bringing a scratched finger for salve and sympathy.

"I cut it on the cat," she explained.

NEW NAME FOR THEM

"When I order poultry from you again," said the man who quarrels with his grocer, "I don't want you to send me any of those aeroplane chickens."

"What kind do you mean?"

"The sort that are all wings and machinery and no meat."

"How wonderful your painting is! It fairly makes my mouth water!"

"A sunset makes your mouth water?"

"Oh, is it a sunset? I thought it was a fried egg!"

QUITS

"Didn't you promise never to do it again?" sternly demanded the parent.

"Yes, sir."

"And I said I'd whip you if you did, didn't I?"

"Yes, dad, but as I didn't keep my promise I won't hold you to yours."

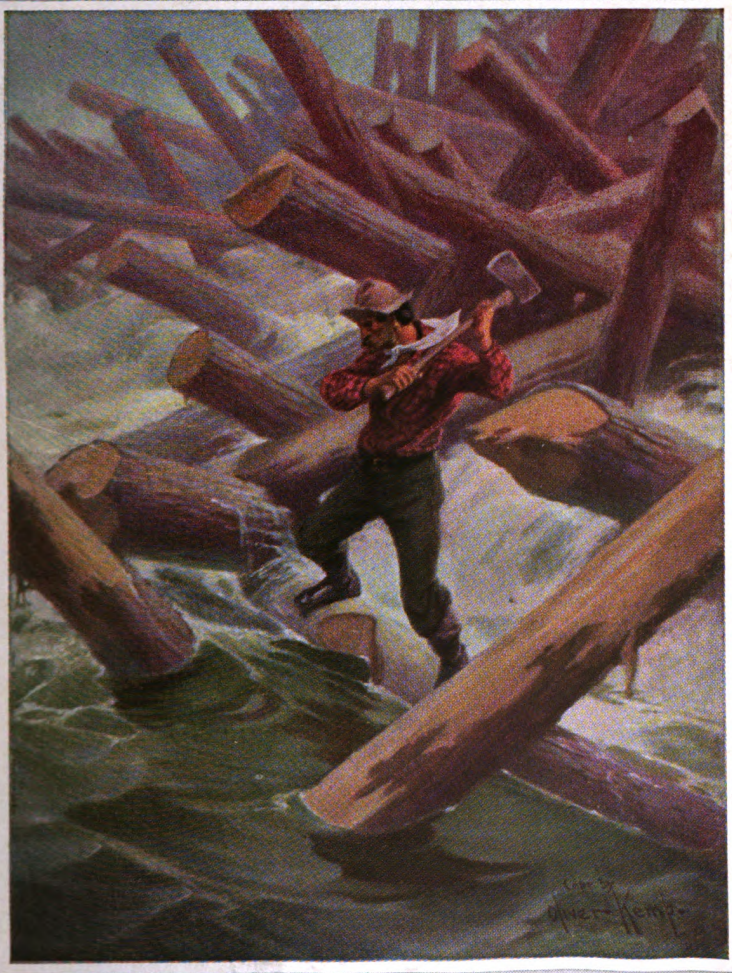
A man was being measured for a pair of trousers by a Kentucky tailor.

"How many hip pockets?" asked the tailor.

"Two."

"Pints or quarts?"

THE DISSTON CRUCIBLE



MAY 1917

Be Sure the Name DISSTON

Is on Your Cylinder and Bilge Saws

Any manufacturer who has used DISSTON Cylinder or Bilge Saws, will tell you this. And their number is increasing yearly.

Experience has taught them that the perfect design, finished workmanship, and superior steel found in these saws, insure longer life, better work, and consequent economy.

Less labor is required to care for DISSTON Saws, fewer re-steelings are necessary. Using the best Crucible Steel, ground and tempered by our improved process is the reason.

THE DISSTON CRUCIBLE

PRICE 10¢ PER COPY $1.00 YEARLY IN ADVANCE

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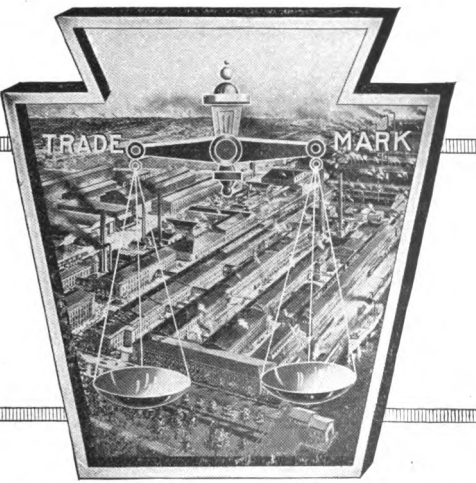

This Magazine is Published for the Advancement of the Interests of Millmen by

HENRY DISSTON & SONS

INCORPORATED

Keystone Saw, Tool, Steel, and File Works

PHILADELPHIA

BRANCH HOUSES:

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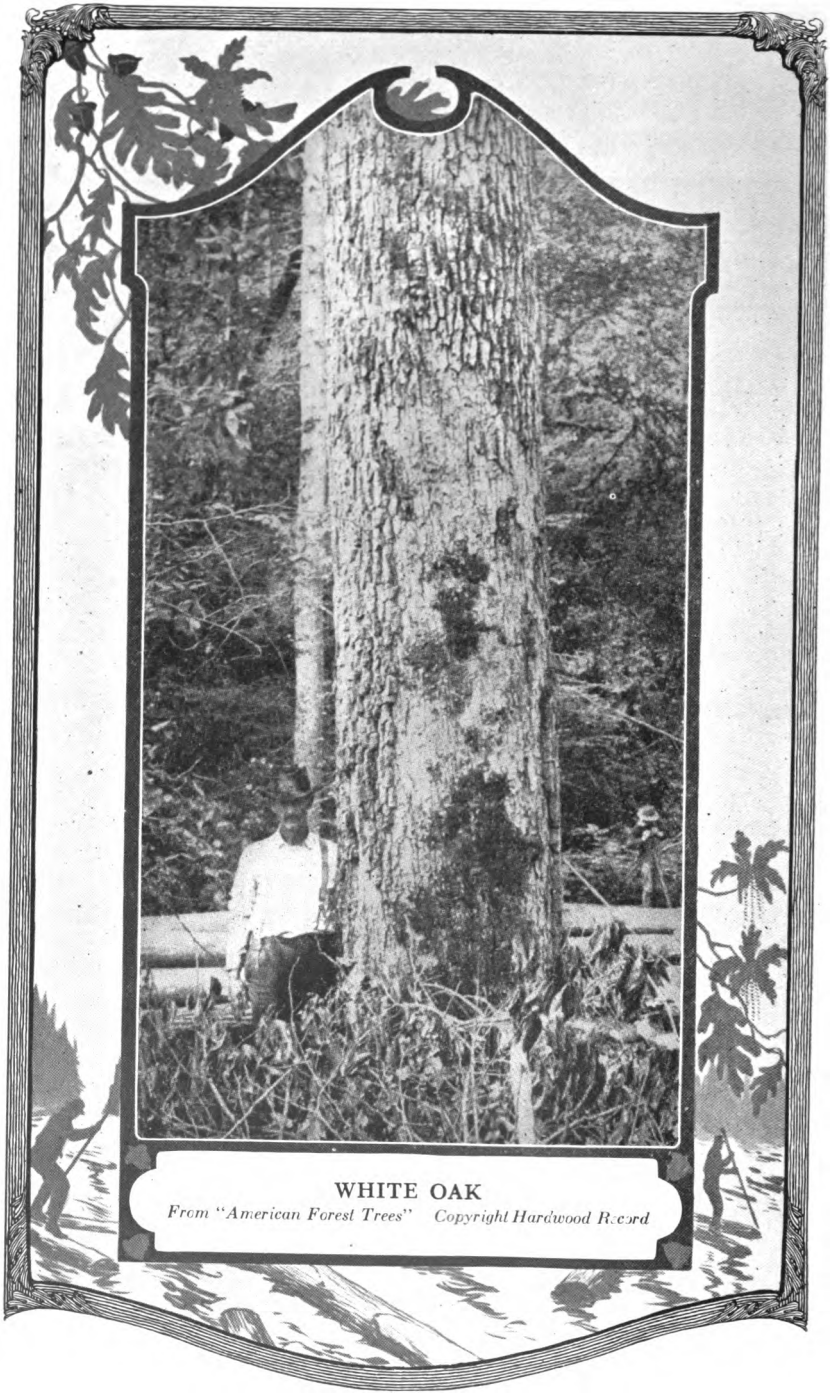


WHITE OAK

From "American Forest Trees" Copyright Hardwood Record

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

Vol. VI | MAY, 1917 | No. 4

EDITORIAL CHAT

Business and War

BUSINESS has been likened to war—an unjust analogy in the light of modern commercial practice. The bitterness, enmity, deception and destruction of warfare have disappeared long since from business. Business is not *like* war but, paradoxically, actually *is* war; more, it is a very real and vitally important factor of THE War.

The extent to which the business of the nation in all its branches lends its whole-hearted, unselfish, loyal support to this country and its allies will determine in great measure the duration and even the result of the struggle into which we have been drawn.

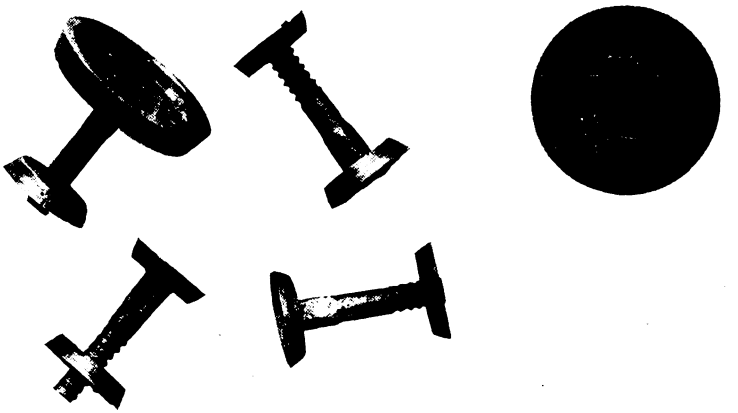
President Wilson in his magnificent appeal of April 15th to the nation declared the preparation of the army and navy to be a small part of the country's task. The development of our industries, farms, shipyards, mines and factories to the highest point of efficient and economical service and adaptation to the nation's requirements was, he said, essential. "And," the President continued, "what I want to say is that the men and the women who devote their thought and their energy to these things will be serving the country and conducting the fight for peace and freedom just as truly and just as effectively as the men on the battlefield or in the trenches.

"The industrial forces of the country, men and women alike, will be a great national, a great international, service army—a notable and honored host, engaged in the service of the nation and the world, the efficient friends and saviors of free man everywhere."

Not only the men on the field are privileged to serve. Let every one of us, employer or employed, do loyally and unselfishly the tasks which circumstances have best fitted us to perform and we will be serving our country well.

Quality Tells

Buried 1700 Feet For Half a Century



THROUGH the courtesy of James H. Cox, of Sutter Creek, Cal., we are able to show the saw screws of a Disston saw that had lain in an abandoned mine for nearly fifty years.

The mine was the famous "Hetty Green" or "Old Eureka" mine, which has recently been reopened after long years of idleness.

Mr. Cox's letter follows:

SUTTER CREEK, CALIFORNIA, March 10, 1917.

HENRY DISSTON & SONS,
Philadelphia.

Dear Sirs:

You have probably heard of the famous "Hetty Green" or "Old Eureka" mine which has recently been reopened after nearly fifty years of idleness.

Among other tools that had been left in the mine so many years ago, and were recently uncovered while cleaning out the shaft at the seventeen hundred foot level, were several Disston saws.

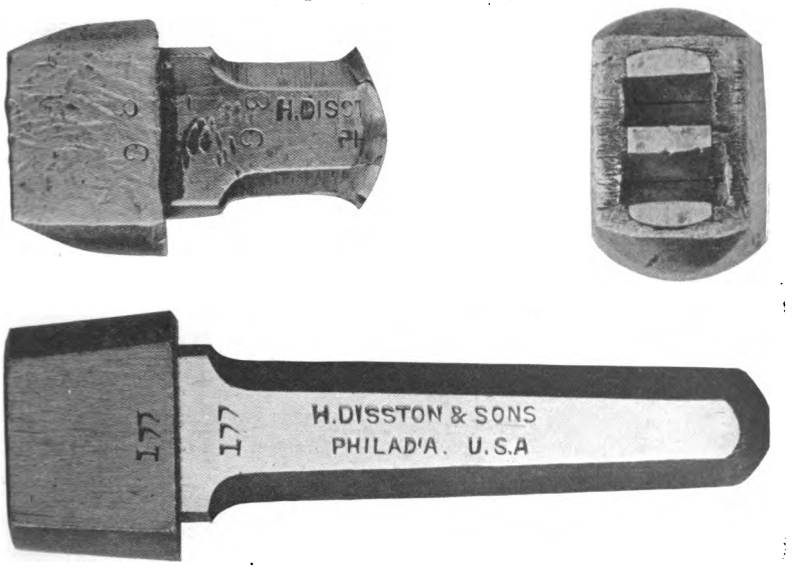
Your name and address were quite plain on the large screw in handle, and thinking you might like the same as a souvenir, I saved a set of four screws. You may have them if you wish. I am employed as saw filer at the mine.

Yours respectfully,

JAMES H. COX,
Sutter Creek, Amador Co., Cal.

The screws were not cleaned before photographing and the photograph was not retouched, as we desired to show the condition of the screws just as they came out of the mine.

Hammered Down Two Inches —Dies Still Perfect



HOWER & STENDER of Scranton, Pa., sent in the Conqueror Swage shown above, with their order for a new one. The swage had been used until the handle was too short for the comfort and ease of mind of the filer who used it. The view at the right shows the dies to be still in perfect condition. The original length of the swage was the same as the one shown beneath it.

It would be interesting to know just how many blows of the hammer these dies have been subjected to or how many saw teeth had been graced by their gentle pressure.

We were fortunate to be able to keep this swage long enough to photograph it. Messrs. Hower & Stender were taking no chance of its getting permanently out of their hands.

Perhaps they want it in case any question should arise regarding Disston Quality; they'd certainly have a clinching argument.

White Oak

From "American Forest Trees" *Copyright Hardwood Record*

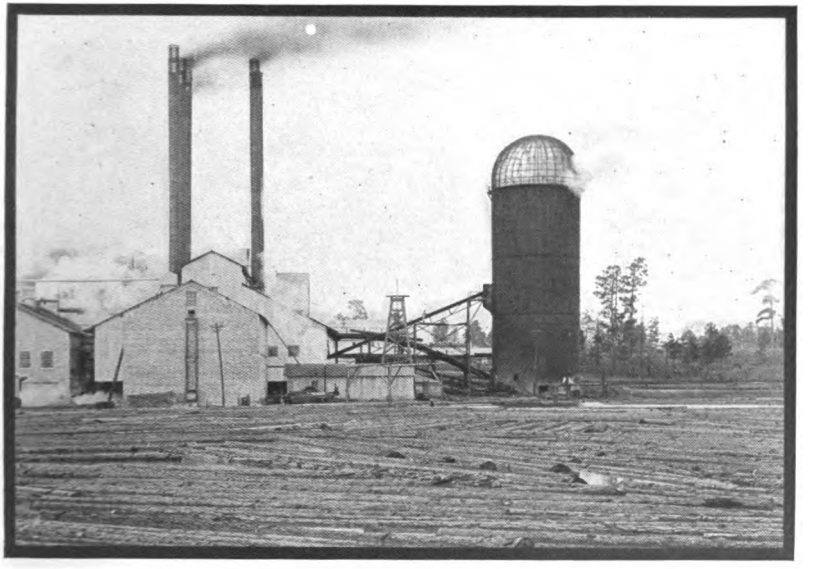
OAKS belong to the beech family, that is, the "food trees," though most acorns are too bitter and contain too much tannin to be edible; some may be eaten, and for that reason the ancients classed them among the food trees. "Quercus," which is the name of the genus, means oak in the language of northwestern Europe. The name white oak nearly always suffices, but in Arkansas it is often called stave oak, because it is the best stave timber in that region. It could with equal reason be called stave oak nearly everywhere, for it is excellent material for tight cooperage. Formerly it was sometimes called Baltimore oak, because many of the staves of export were shipped from that city. That name, however, belonged more to post oak (Quercus minor) than to white oak, because the fine staves which went out of Chesapeake Bay in the export trade were largely post oak. It matters little now, for the name Baltimore oak is not much used, and white oak may be said to have only one trade name. After the wood is dressed, it has different names referring to the style of finish and not to the wood itself.

White oak grows in all the States east of the Mississippi River, and it crosses that stream two or three hundred miles in some places. It reaches eastern Nebraska and eastern Kansas, and runs southward through Oklahoma to the Brazos River, Texas. It is scarce in the northern parts of Michigan, Wisconsin and Minnesota. Its total range covers an area of more than 1,000,000 square miles. Like all other important timber trees, it has regions where the species is best developed. The finest original stands of white oak were found in the upper Ohio Valley, beginning in Indiana. The timber in many other districts was, and in some still is, very good, such as southern Michigan, eastern Arkansas, some of the Appalachian valleys and slopes, and in certain places along the upper tributaries of streams flowing into the Atlantic Ocean.

This tree is in the very front rank in economic importance, and it has held that place since the earliest settlements in this country. No forest tree was more evenly distributed than white oak over the eastern half of the United States. It did not form pure forests of large extent, as some of the pines did, but white oaks were within reach of almost every part of the country. Conditions have greatly changed. The establishment of farms where woods originally occupied the whole country, lessened the abundance of oak long before lumbermen made it a commodity; and since then, the cutting of billions of feet of it has depleted or exhausted the supply in many regions. Still,

Continued on page 59

One of Mississippi's New Mills



Marathon Lumber Company's Log Pond

THE Marathon Lumber Company of Laurel, Miss., started operations late in 1914 (November 19th, to be exact) and has been running continuously and to capacity ever since.

The company's mill is of modern all-steel construction throughout. The alleyways to the lumber piling sheds are of concrete.

The photographs on the next pages will give a comprehensive idea of the size and manner of doing things at the Marathon.

The mill cuts yellow pine and has a daily capacity of 150,000 feet per ten hours. It is equipped with:

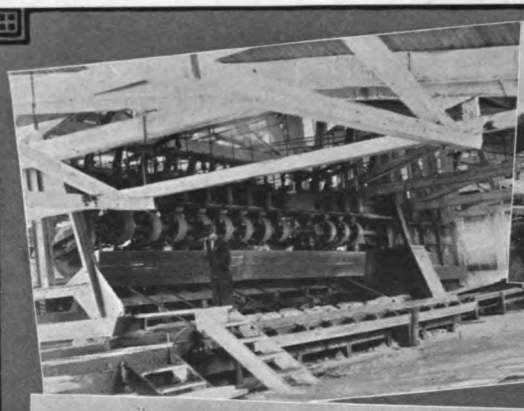
two 12-inch single cutting band saws,

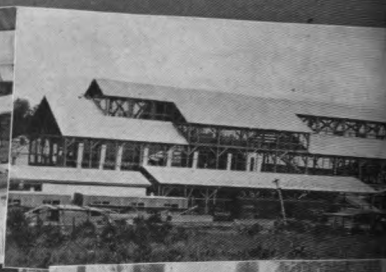
one 12-inch horizontal band re-saw,

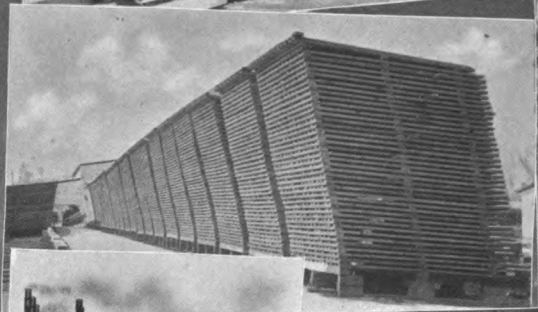
one 10-inch vertical band re-saw,

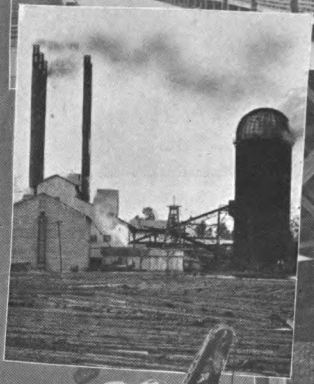
two 7-saw edgers, 24-inch saws,

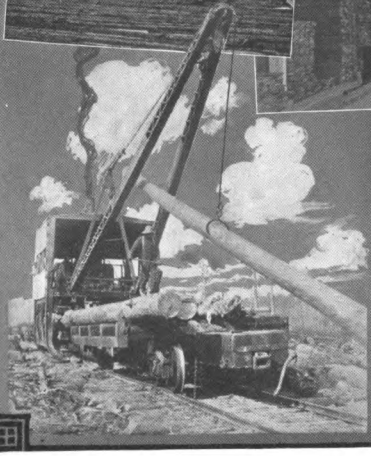
Continued on page 58



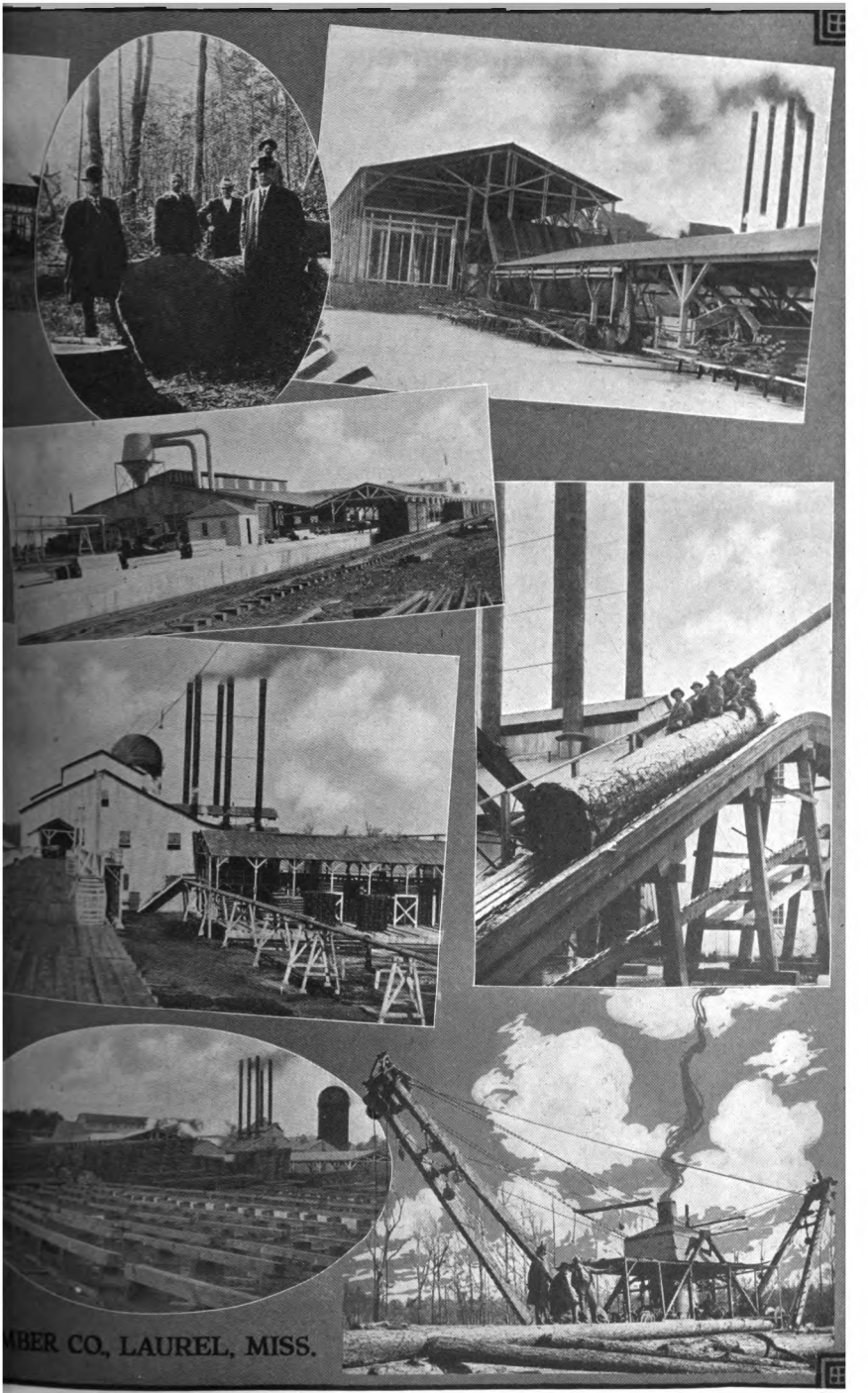








VIEWS OF THE MARATHO



BER CO., LAUREL, MISS.

One of Mississippi's New Mills

Continued from page 55

one 13-saw trimmer, 36-inch saws, one 5-saw slasher, 40-inch saws.

Disston Saws have been used exclusively throughout ever since the mill started and have given unqualified satisfaction in every respect.

The personnel of the officers of the Marathon Lumber Company is as follows:

Mr. W. H. Bissell, President;

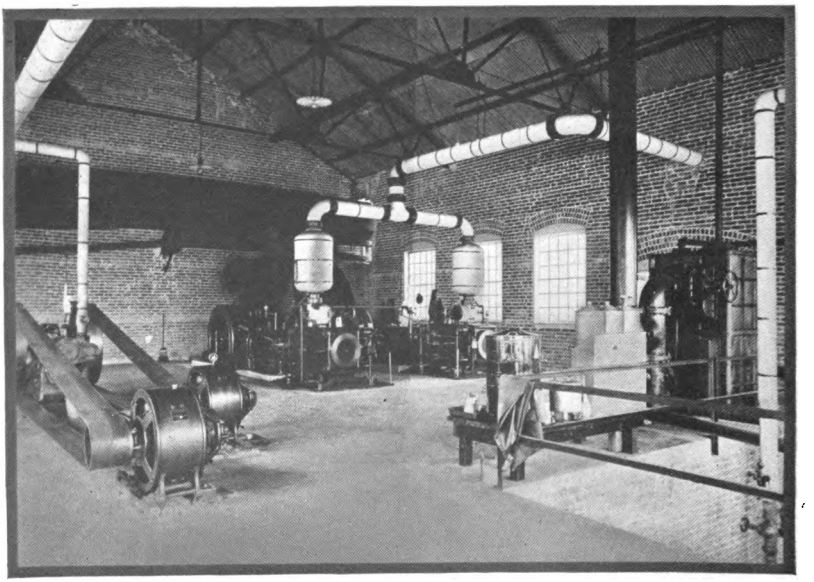
Mr. B. F. Hammond, Vice-President;

Mr. Cyrus C. Yawkey, Secretary;

Mr. Charles Edgar, Treasurer;

Mr. R. C. Schulz, General Manager.

Mr. O. G. Harris is filer for the company and is naturally a Disston enthusiast, after the record Disston Saws enjoy in his plant.



Engine Room

White Oak—(*Continued from page 54*)

hite oak is as widely dispersed ever. It has not been comletely exterminated in any exnsive region. White oak of as igh grade goes to market now as ver in the past, but in smaller mounts, and the lower grades go proportionately larger quantiies. In other words, prime white ak has passed its best day. A undred years of use and abuse n States west of the Alleghany ountains, and two hundred ears in some of the regions east, ave reduced original forests to emnants. But with all that, hite oak remains undisputed ing of American hardwoods.

At its best, white oak attains height of 125 feet and a diameter of 6, but that size is unusual. A diameter of 3 feet and a height of 100 is above the average. The leaves are peculiar in that they hang on the branches until late winter, sometimes dropping only in time to give place to the new crop. They turn brown after the first hard frost. In some sections of the Appalachian region white oak coppice (sprout growth) is known as "red brush," because of the adherence of the brown leaves during winter. The leaves of some other species have the same habit.

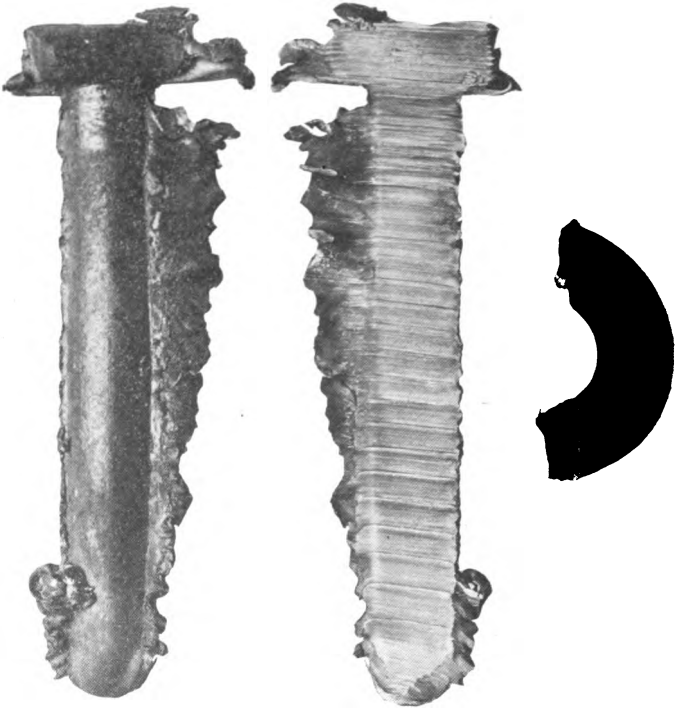
The wood of white oak is very strong, stiff, heavy and durable when exposed in all kinds of weather. Scarcely any other wood which can be had in merchantable quantities equals white oak in these qualities. It rates high in fuel value, and 6,000 pounds of dry wood when burned leaves about 245 pounds of ashes. The color of the heartwood is light brown; the sapwood is thin; medullary rays are numerous and large; pores large, summerwood broad and dense.

The medullary rays of no wood in this or any other country are more utilized to commercial advantage than those of white oak. Quarter-sawing is for the purpose of bringing them out. They are the bright streaks, clearly visible to the naked eye in the end of an oak log, radiating from the center outward like the spokes of a wheel. Many are too thin to be visible without a magnifying glass. By quarter-sawing, the rays are cut edgewise and appear as bright streaks or patches, often called "mirrors," on the surface of boards. The woodworker knows how to finish the boards and treat them with fillers to bring out the figures.

White oak is a porous wood. Some of the pores are large enough to be visible without a glass, and twenty times as many more can be seen only when magnified. The direction of the pores is up and down the trunk of the tree, and they are seen to best advantage in the end of a stick, although they are always more or less visible on the side of a board when the cutting is a little across the grain. The pores thus cut diagonally across are taken advantage of by the finisher who works stains and fillers into them, and changes their natural color, thereby accentuating the wood's figure.

To be Continued

And the Saw's Still Running!



OF course, no one is entitled to *expect* a saw that is designed, tempered and fitted for cutting wood to cut metal. Under many conditions, striking metal will spell ruin to the best saw made. But occasionally, when conditions are favorable, we have a good opportunity to make some observations of the "character" of a saw by the effect on it of cutting metal.

The bolt and washer shown above, for instance, were cut by a Disston band saw in the plant of the Munising Company, Munising, Mich. The bolt was cut its entire length and the smoothness and regularity of the cut is shown by the parallel lines which indicate the progress of the saw.

Under this severe strain the saw was so slightly damaged that after straightening a few teeth

and reswaging, the saw was ready for the wheels again and is still in commission.

Mr. Joe Hayes is filer in this mill and Mr. Acker Superintendent, both of whom are loyal advocates of Disston Saws, which are used exclusively.

Prefers a Disston Repaired, to Any Other Make New

The following interesting communication was recently received from Mr. George W. Taylor of Westfield, Pa., who has sent the saw, to which he refers, back to the factory for repairs:

GEO. W. TAYLOR, Westfield, Pa.
April 2d, 1917.

HENRY DISSTON & SONS:,
Philadelphia, Pa.

Dear Sirs:

About a year ago I sent my circular saw to you to be repaired, received it in first-class shape, and it did perfectly for about two weeks. But it would not stand up to saw one of the iron head blocks only about halfway through before it broke four shoulders off, and then I thought I would try a cheaper grade of saws and I bought a new —— saw, but I would rather have the old Disston with all her shoulders broken than any, I have used four or five companies' makes. So now I want to send the saw back to you to be repaired again and would like to have the four broken shoulders brazed on again. Wish you would send directions for shipping saw to you.

Please let me know at once and how soon you can repair it, as I am in need of it.

Yours truly,

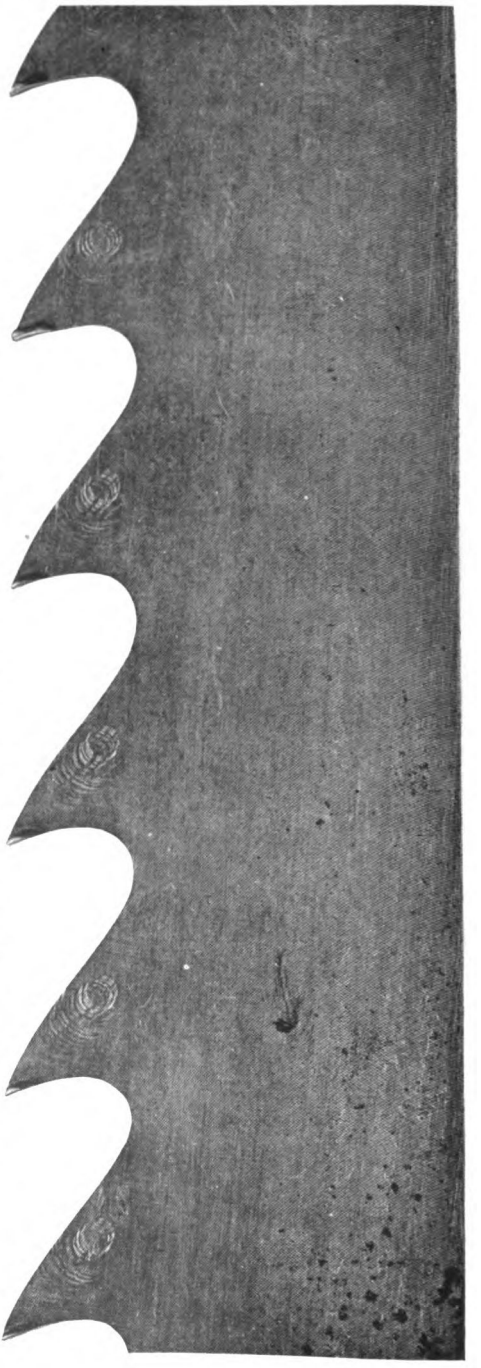
(*Signed*) GEO. W. TAYLOR.

This Was Once an 8-Inch Gang Saw

HERE is a section of an 8-inch gang saw worn down to less than 2¼ inches, as shown by the full-size photograph.

It was one of a set of gangs recently worn out and replaced in the mill of the Thompson Bros. Lumber Co., Trinity, Tex. The company had not intended running them down to this narrow width, but owing to a delay in securing new ones, found it necessary. The entire set ran perfectly right up to the time they were discarded.

That a set of gangs can be reduced from 8 inches to 2¼ inches by natural wear without affecting their efficiency is a wonderfully strong testimonial of the quality of steel in Disston Saws. Of course, it is always our aim and intention to supply our patrons with the very best material, temper and workmanship possible, but no matter how good the manufacturer may make the saws, unless they are properly handled they could not be made to give correct service, nor could they last



anything like a reasonable length of time. Therefore, this sample not only speaks well for the quality of the saws, but also equally highly of the skill, ability and industry of the men who filed and operated them.

This is another impressive demonstration of the oft-proved fact that the combination of Disston Saw and expert filer is an unbeatable one, so far as results are concerned. And this applies both to quality of lumber output, and efficiency and economy of saw service. For the man versed in the care of saws, Disston spells absolute satisfaction.

Tree Surrounded Another

Rare Occurrence is Disclosed When Ancient Oak is Felled

A STRANGE freak of nature was discovered in Glassboro, N. J., with the felling of a large oak tree on the Whitney estate, which is being cleared for building lots. When the big oak was cut down in its base was found the well-preserved trunk of another tree.

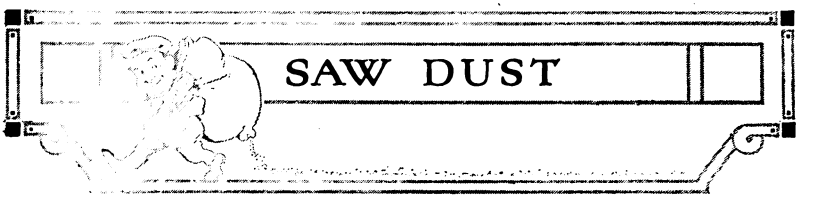
In its growth the oak had completely surrounded the trunk of the other tree, standing three or more feet above the ground. The rings in the oak showed that it was more than a century old. The older trunk had been well preserved by the growth of new wood around it.

Sugar maple is light, strong, hard, elastic and a lot of it goes into sleds and sleighs.

Quantities of box shooks are made from planing mill material that once went as waste into the dump.

A grim simile was that of the loser of several fingers on the saw when he said it was like shaking hands with lightning.

A bar of hickory is stronger against a pulling strain than a wrought iron bar of the same length and weight.



IN THE FUTURE

LONGLEY'S (in 1920)—We do all our cooking by electricity here.

CUSTOMER—Take this egg out and give it another shock.—*Record.*

TEACHER—Johnnie has spelled "assess" correctly. Now, Tommie, you may define it.

TOMMIE—"Assess" is—er—"assess" is a lady donkey.—*Life.*

WHY GO TO AFRICA FOR IVORY?

"How kind of you," said she, "to bring me these lovely flowers. They are so beautiful and fresh. I think there is some dew on them yet."

"Yes." said the young man in great embarrassment, "there is, but I am going to pay it off tomorrow."

A POINTED REMARK

"Oi'll work no more for that man Dolan."

"An' why?"

"Sure, an' 'tis on account av a remark he made."

"An' 'phat was that?"

"Says he, 'Casey,' says he, 'ye're discharged!'"

"Rastus, what's a alibi?"

"Dat's proving dat yoh was at a prayer meetin' whar yoh wasn't, in order to show dat you wasn't at de crap game whar yoh was."—*Life.*

CHRONIC

A man sitting next to me at a restaurant the other night, ordered ham. When it was served he complained to the waiter that it wasn't good. The waiter said:

"Why, it can't be very bad; it was only cured two days ago."

"Well," the man retorted, "it must have had a relapse."

VALUABLE BOY

SALESMAN—"How long will the manager be engaged?"

OFFICE BOY—"How long can you wait?"

CONSIDERATE

CLARENCE—"I passed by your house last night."

DOROTHY—"I thank you."

REGULAR

The tailor had called to collect his bill very frequently of late, but without success. Finally, in desperation, he said, vehemently, "Mr. Swift, I must insist that you make some definite arrangement with me."

"Why, surely," replied Mr. Swift, most agreeably. "Let's see. Well, suppose you call every Thursday morning."—*Harper's Magazine.*

LATE

PORTER (knocking on door)—"It's nine o'clock, sir!"

VOICE OF IRATE GENTLEMAN WITHIN—"Why didn't you tell me before?"—*Tiger.*

A QUICK CHANGE

A stranger walked into the private office of the Big Boss

STRANGER—"Say, can you lend me ten——"

BIG BOSS—"No——"

STRANGER—"——minutes? I think I can show you how to make some money."

BIG BOSS—"——trouble at all. You can have twenty if you want."

TWO WAYS OF LOOKING AT IT

A farmer of the olden type was inveighing against cream separators. "I tell you they ain't no good!" he said. "But," replied his more scientific neighbor, "they do save cream. You can make more butter. Anyone will tell you that." The farmer was not to be convinced. "If I wanted to get more cream," he said, "I'd rather get another cow."

THAT'S DIFFERENT

JOHNNY—"Oh, look, Mama, the iceman's kissing the cook."

(Mama starts for the kitchen.)

JOHNNY—"April Fool. It's only Dad."—*Illinois Siren.*

THE DISSTON CRUCIBLE

JUNE 1917

These are the largest Veneer Knives ever made, as far as we know. They are 205 inches in length, and when compared to small knife in center which is a regular 24-inch Planer Knife, it will be seen how exceptionally large they are.

They are made of our special lock-weld steel which is absolutely guaranteed not to pull apart. Holes are drilled—not punched. This assures knife fitting machine without adjustment.

All **Disston** Machine Knives are evenly tempered, and ground to micrometer gauge.

We can fill any machine knife order you give us.

THE DISSTON CRUCIBLE

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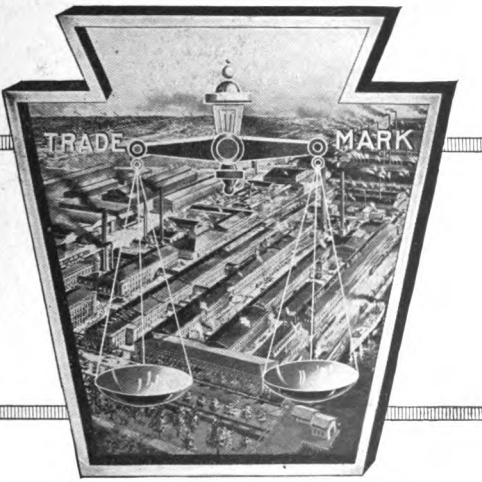

This Magazine is Published for the Advancement of the Interests of Millmen by

HENRY DISSTON & SONS

INCORPORATED

Keystone Saw, Tool, Steel, and File Works

PHILADELPHIA

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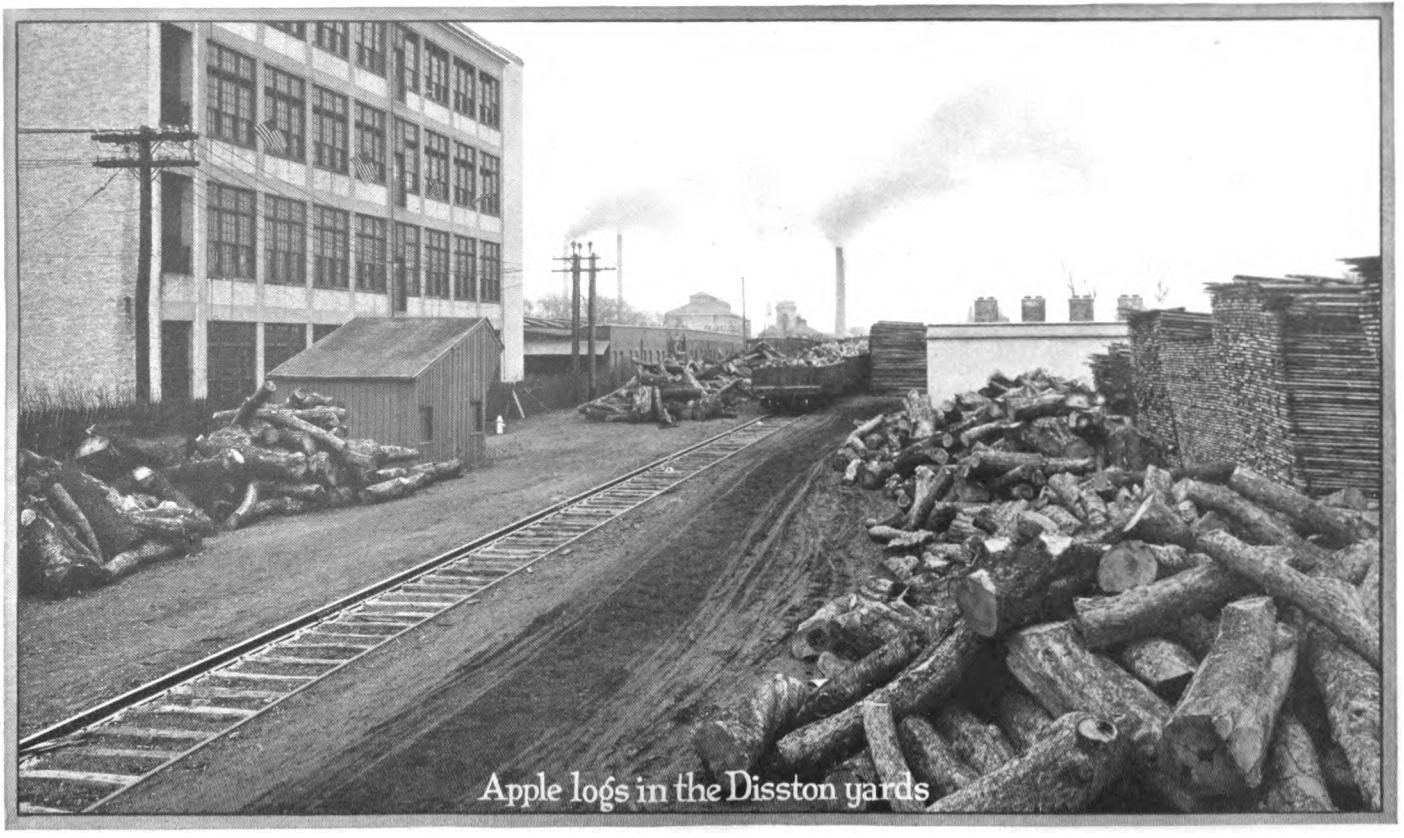


Apple logs in the Disston yards

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

Vol. VI | JUNE, 1917 | No. 5

EDITORIAL CHAT

Co-ordination

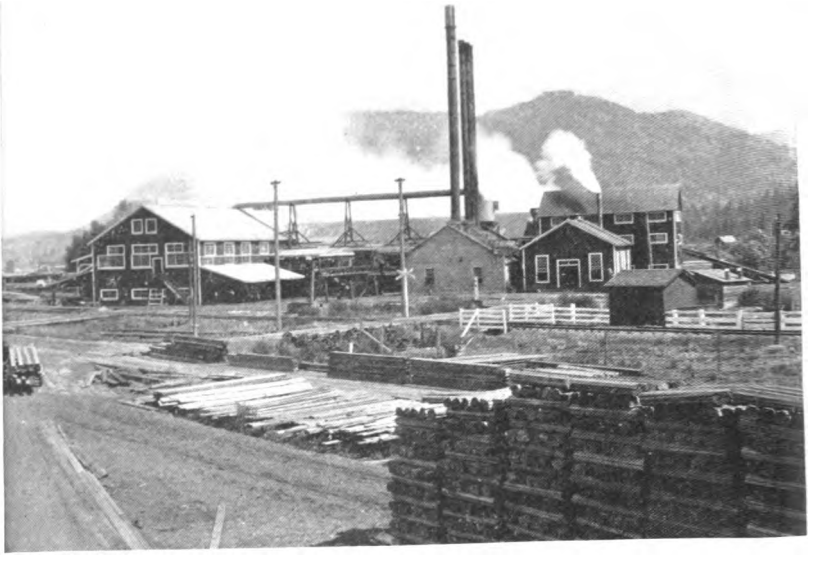
BUSINESS is, of course, the exchange of goods or service for profit. If a business is sufficiently simple or the transactions sufficiently infrequent, one person can produce the goods or render the service as the case may be, and handle the detail besides. It is a one-man affair and co-ordination plays no very heavy part in it. As soon as the business reaches such proportions that assistance is required, as soon as more than one human element is involved, co-ordination becomes one of the controlling factors in its destiny.

No business ever became great without a close co-ordination of the departments of its organization; a smooth, eager, harmonious unity of purpose in the service of a common ideal. No business stays great, indefinitely, without it.

A business is much like a clock whose mainspring is the administration and whose many wheels are the various departments—no one of value without the rest, and the whole valueless without co-ordination of all the parts. True, a clock may appear to run without some of the smaller wheels, but it is a failure as a timepiece.

Co-ordination is a good barometer of individual business. Where it is "high" in an organization, the chances favor a smooth and prosperous course. The converse is equally true.

Quality Tells



Okanagan Lumber Mills Co.

The Okanagan Saw Mills Company

TWO views are shown on the preceding page of the Okanagan Saw Mills Company's plant. This is one of Canada's many lumbering enterprises and is situated in the heart of some of the richest timber territory of that country. The mill nestles in the mountains of British Columbia. So heavily timbered are the company's holdings that at a conservative estimate a half century will be required completely to log the 70 square miles comprising their timber limits.

Fir, tamarack, cedar and pine are cut in the well-equipped mill of the company. The equipment includes a 12-inch double cutting band and two eight-inch band re-saws.

From the latest information at hand, the organization includes Messrs. F. S. Stevens, Manager; Milton Stevens, Superintendent; Wiley Barrows, Filer and A. Williams, Sawyer. Through the unusual degree of activity and push in this organization, they secure a greater production than many larger mills. They have a yearly output of 25,000,000 feet while the excellent volume of 138,500 feet have been made in a ten-hour run.

Another important factor in the maintenance of the high daily average is the fact that Disston Saws are used in the mill.

The Passing of the Steam Whistle

This is an age of invention, and with the incoming of the product of man's inventive genius, we see the passing away of some of those things which seemed to be indissolubly linked to the times, people and places where they have so long held sway. Some of us may feel a pang of regret at the passing of one of these relics, but the law of the survival of the fittest must be enforced. The steam whistle will soon cease to call the men to work, and will soon be but a memory in the mind of the veteran. The electric bell, sounding the call simultaneously in all the different departments, is fast taking its place.

—*The Wood Worker.*

Careful Attention to Narrow Bands a Good Investment

ESPECIALLY at this time when narrow band saws will be used to an unprecedented extent in ship building and allied industries, a reminder that they should receive as careful attention as any other saw is doubtless appropriate. So much more satisfactory results and such economy are effected by proper care that a consideration of some of the more common forms of abuse will be worth while.

Many a perfectly good saw has been ruined by defective or incorrectly adjusted guides or thrust bearing. Friction case hardens the back edge of the saw and results in breakage there which probably would have been avoided by a few minutes attention to the guides and bearing.

Another fertile source of difficulty is the use of very sharp cornered files in fitting. This, of course, makes a sharp angle in the gullet which has a tendency to weaken the saw. Only on extremely narrow saws with fine teeth is it necessary to use a very sharp cornered file. On saws of ¼-inch or more spacing, however, a round edge blunt band saw file should be used. If this practice is adhered to and the saws kept well set and sharpened the greatest single cause of breakage will be eliminated.

In many instances operators do excellent work in setting and sharpening, but make the error of attempting to run too long with one fitting. The saw cannot be produced which will be proof against breakage when run with dull edges. It is just as important to keep these saws really sharp as it is any other saws in the mill. The reason some operators run dull saws is doubtless to save time and trouble in fitting, but it is so much easier to sharpen *two* half dull saws than *one* which is excessively dull that labor is actually saved by changing frequently.

Of course, these points are recognized by every seasoned mill man, but it is such an easy matter to overlook them or to slight them for seemingly more important work, that printing them here may obviate a deal of trouble.

White Oak

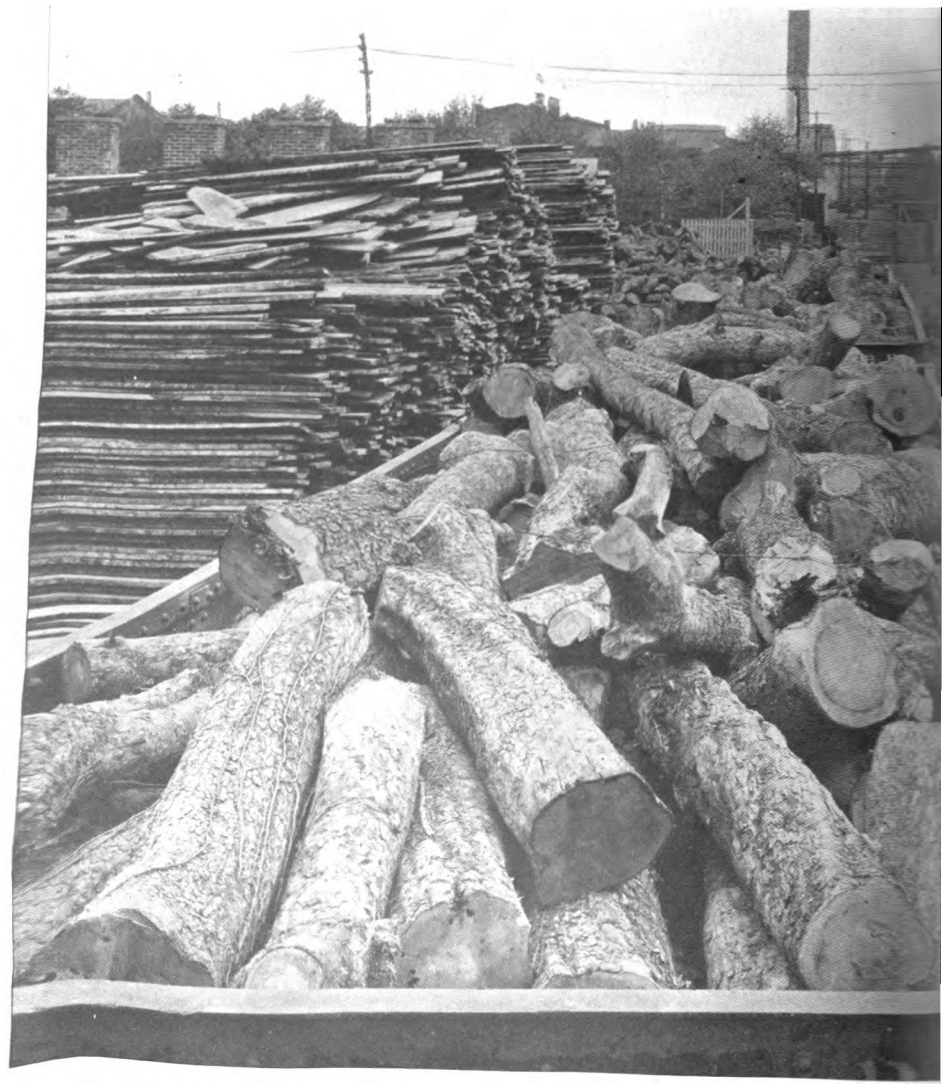
From "American Forest Trees" *Copyright Hardwood Record*

(Continued from May issue)

The possibilities of white oak are almost infinite. It is good for nearly anything for which any wood is used. It is not the best for everything, but does well for most. Hickory is more resilient, ironwood is stronger, locust more durable, white pine warps and checks less; but white oak has so many good qualities in a fair degree that it can afford to fall below the highest in some, and still rank above competitors on general averages. It ranks high in shipbuilding, general construction, furniture manufacturing, finish and fixtures, the making of agricultural implements, car building, vehicle stock, cooperage and many more.

It is one of the most important of American veneer woods. It is sawed very thin, and is glued upon cores of other wood, thus becoming the covering or outside part. The purpose of using oak veneer instead of the solid wood is twofold. First, it goes farther, and second, a well-built article with veneer outside and a core of other woods which stand well is superior to a solid oak article, except in cases where great strength is the object sought, or where deep carving is desired.

The continued use of white oak is assured. It is not necessary to seek new uses for it. The demand is as great as the supply can meet, but the supply is not assured for the distant future. There will always be some white oak in the country; but the best has been or is being cut. The tree grows slowly, and good quarter-sawed white oak cannot be cut from young trees. An age of about 150 years is necessary. Most good white oak lumber to-day is cut from trees 200 or more years old. When the present supply of venerable oaks has been exhausted, prime oak lumber will be largely a thing of the past. Fortunately, that time has not yet arrived. About eighty years are required to grow a white oak of crosstie size. Those who will grow oak for market in the future will probably not wait much longer than eighty years to cut their trees, and the result will be a scarcity of mature trunks for lumber and veneer.



Portion of Apple Logs in the Disston yards ready to be sawn into boards from which saw handles will be made.

Apple Logs

OF course, it is generally recognized that the Disston plant is a sizable institution and that a great many saws are made in it, but it is doubtful if the real magnitude can be grasped without some visual assistance. For instance, the frontispiece and center spread illustrations of this issue show portions of the Disston lumber yard. The logs shown are apple wood and they are coming in carload lots almost constantly from all sections of the East. This wood will eventually become handles for part of the Disston hand saws (most Disston hand saws have apple handles, but not all of them. Beech, rosewood, mahogany, cherry and gum also are used).

It will be three years, however, before handles are made from the logs in the photographs. First they will be cut into boards of suitable thickness and stacked up in the lumber yard to season for that period of time.

It is interesting to realize that the manufacture of saw handles is in reality commenced, probably long before any of the metal from which the steel of the blade will be made, have even been mined.

The purpose of this article is not to describe technically the production of hand saw handles but rather to call attention to some of you *other* mill men that Henry Disston & Sons also are members of the fraternity. Not so big in point of volume as some of the rest, but all this handle lumber and quantities besides which goes into the construction of many other Disston tools is manufactured in our own mill.

The point we wish to emphasize is that while Disston saws are designed and constructed along scientifically accurate lines, the theoretical is constantly checked by the practical in actual saw-mill service, in our own plant as well as in the field.

It might be said in passing that as in so many other mills, Disston saws are used here exclusively with entire satisfaction.

A North Carolina Mill

The Champion Lumber Co., Crestmont, N. C.

"Best Under All Conditions"

RUSSELLS CROSSING, WIS., January 31.

o HENRY DISSTON,
Philadelphia, Pa.

)ear Sirs:

I have been using different makes of cross-cut saws for the past 32 ears, but must admit Oriole Cross Cut Saw is the fastest cutting saw nder all conditions, especially in frozen timber, that I ever used.

N. RABEDEAU,
Contractor for Wachsmuth Lumber Co.

"Disston Saws the Only Ones for Hard Fibre"

The plant of the Eastern Hard Fibre Co., Merrimac, Mass., was recently purchased by the Commonwealth Toy Corporation. Mr. W. A. Jackson of the former company in a letter announcing the change to R. B. McKim Company, Disston's Boston representatives, had this to say of Disston saws:

". . . . we have always appreciated the quality of saws you have sold us in the past. Disston saws are the only ones we know of that stand up in the severe service that machining Hard Fibre gives."

Yours very truly,
EASTERN HARD FIBRE CO.,
(*Sgd.*) H. A. Jackson, Pres.

More Metal

March 1, 1917.

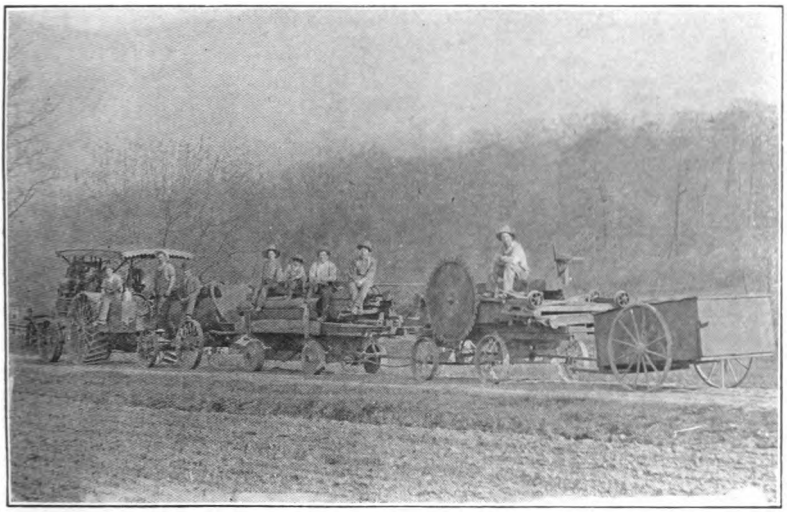
HENRY DISSTON & SONS, INC.,
Philadelphia, Pa.

GENTLEMEN:

Enclosed we hand you a nail which was nearly cut in two by one of your 14-inch Cut-off Saws. These saws are used by Bean & Simonds Co., East Jaffrey, N. H., and are used for cutting off match blocks. There was very little damage done to the teeth of saw, simply turning the extreme points a little. We thought it quite likely you would like to have this information.

Yours very truly,
R. B. MCKIM, INC.,
(Sgd.) A. E. Martin, Treasurer.

An Ohio Portable Mill



PERHAPS no other service subjects saws to such unfavorable conditions for satisfactory operation as the portable mill. All kinds of wood cut, exposure to all sorts of weather and hard knocks, the wear and tear of transfer from place to place are only a portion of the hardships falling to the lot of the portable mill.

No well-appointed filing-room to offer adequate facilities for refitting and rest at short intervals to the saw on the portable mill. It is on to stay just as long as the skill of the operator and its own inherent quality can make it stand up to the wide variety of trying work to which necessarily it is subjected.

The Disston Inserted Tooth Saw has attained wide popularity among owners of this type of mill because it is so admirably adapted to it. Its care requires practically no tool except the file and all adjustments of the teeth are easily made with the saw on the mandrel.

The saw in the illustration is one of these Disstons on a mill owned by Alfred S. Saurer of Apple Creek, Ohio, to whom we are indebted for the photograph. This is a particularly complete outfit of the portable type, and the Disston naturally affords the finishing touch to the efficiency of mill.

The Cabinet Maker

We have a cabinet maker in our town
Who learned his trade in Italy, and loves
More than the sight of some rare Chippendale
To reproduce a piece himself, with here
And there some little change that more refines,
Or scroll and pattern of his own design.
You cannot hurry him; he works by hand
And like an artist broods the plan, to saw
And scrape with happy haste when all goes well,
To put a job aside for weeks, perhaps,
When something else of more appeal turns up—
Which is not good for business, of course.
I often work beside him in his shop,
Using his tools and his advice, and while
I make some clumsy chair or mirror frame
He brings a lovely high-boy into life
And vents his scorn on furniture that comes
From "Meecheegan," turned out upon machines,
Or tells me how in Italy, at home,
"You want a t'ing, you tell the cabinet man,
He maka what you want, it is all yours;
And in his shop seventy-five, maybe,
Maybe a hundred boy all work and learn."
Alas! he has but one to learn from him;
The rest are turning lathes in "Meecheegan"—
Unthinking cogs in that machine which is
Our new industrial efficiency.

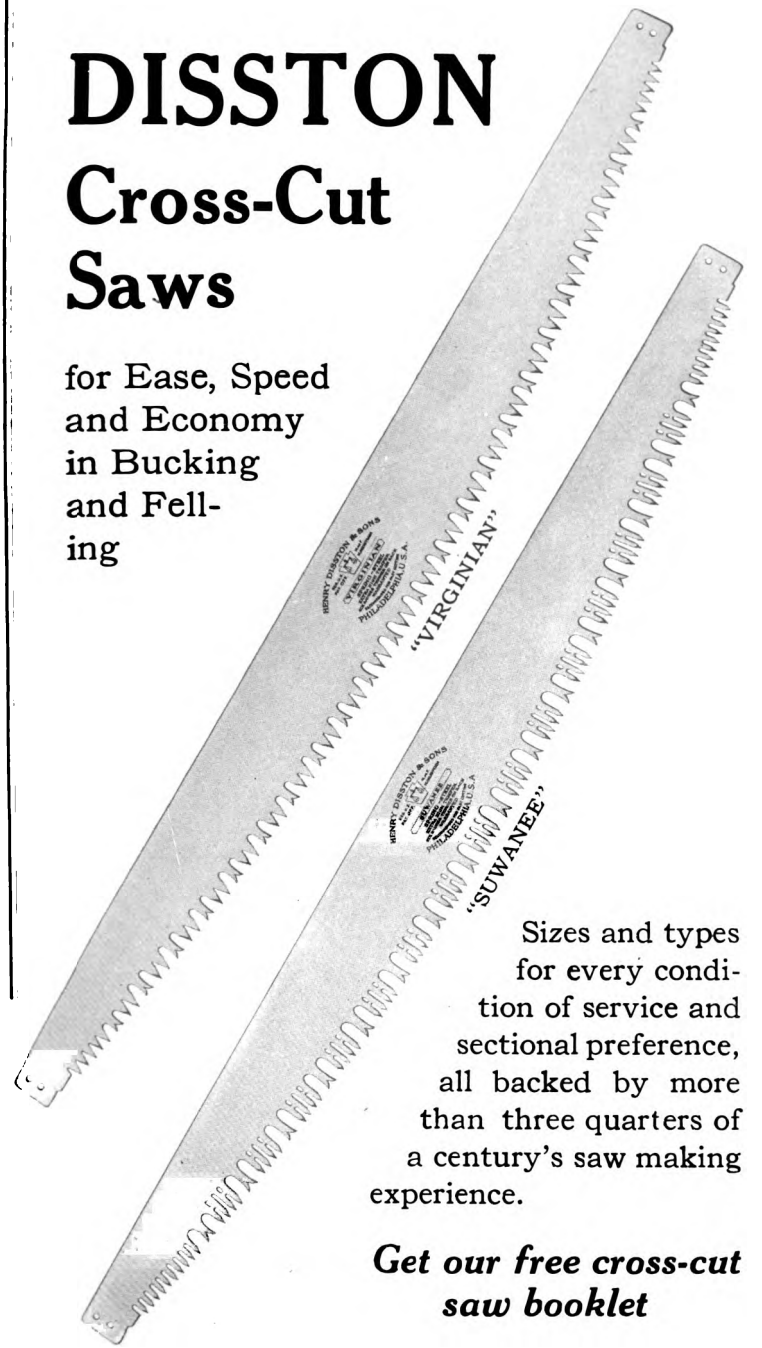
The other day, besides myself and Joe,
The lad, a third had come to tinker there,
So four of us were busy at our work.
The pungent shavings curled up through my plane,
Joe's saw was singing in a tight-grained board,
A hammer rang, a chisel bit the wood—
And Tony suddenly looked up and laughed:
"Some busy, eh?" he cried. "I like it so!
I like it when de shave dey pile up fast;
In my home, Italy, we work like dat,
Seventy-five, maybe, all make somet'ing
Himself, de legs an' arms an' seat an' back!"

His chisel bit the wood again, and he,
With smiling face and eyes that saw far off,
Began to sing, "Donna e mobile."

WALTER PRICHARD EATON
in N. Y. *Tribune*

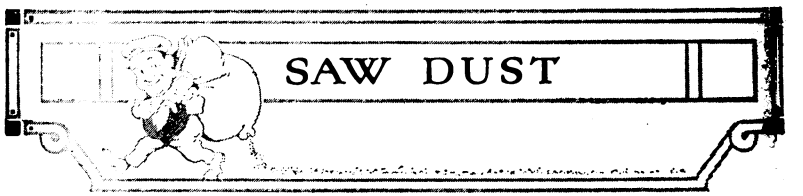
DISSTON
Cross-Cut Saws

for Ease, Speed and Economy in Bucking and Felling



Sizes and types for every condition of service and sectional preference, all backed by more than three quarters of a century's saw making experience.

Get our free cross-cut saw booklet



GOING SOME

Two negro roustabouts at New Orleans were continually bragging about their ability as long distance swimmers, and a steamboat man got up a match. The man who swam the longest distance was to receive five dollars.

The Alabama Whale immediately stripped, on the deck, but the Human Steamboat said he had some business and would return in a few minutes. The Whale swam the river four or five times for exercise, and by that time the Human Steamboat returned. He wore a pair of swimming trunks and had a sheet-iron cook stove strapped on his back. Tied around his neck were a dozen packages containing bread, flour, bacon and other eatables. The Whale gazed at his opponent in amazement.

"Whar yo' vittles?" demanded the Human Steamboat.

"Vittles fo' what?" asked the Whale.

"Don't yo' ask me fo' nothin' on de way ovah," warned the Steamboat. "Mah fust stop is New Yawk, an' mah next stop is London."—*McClary's Wireless.*

KEEPING MILK SWEET

Miss Julia James, the prettiest girl on the London stage, is an inveterate story teller. She tells an amusing story of a girl friend, named Betty, who, during her first lesson in domestic science, was asked to tell briefly the best way to keep milk from turning sour. Betty, who is a practical child, gave this recipe: "Leave it in the cow."

TELEPHONE AGAIN TO BLAME

YOUNG WIFE (at home)—"Hello, dearest."

YOUNG HUSBAND (at office)—"Hello, who is it?"

AUTOMATIC

"Mandy, what fo' you gib dat baby a big piece ob po'k to chaw on? Don' you-all know de po' chile'll choke on hit?"

"Dinah, don' you see de string tied to dat piece ob fat po'k? De oder end's tied to de chil's toe. Ef he chokes he kick, an' ef he kicks he'll je'k de po'k out. Ah reckon you-all don' learn me nothin' 'bout bringin' up chilluns."

SHE—"Can a man tell when a woman loves him?"

HE—"He can, but he ought not to."—*Yale Record.*

SAMANTHA WAS WILLING

A negro had made several ineffectual efforts to propose to the object of his affections, but on each occasion his courage failed him at the last moment. After thinking the matter over, he finally decided to telephone, which he did.

"Is that you, Samantha?" he inquired, upon being given the proper number.

"Yes, it's me," returned the lady.

"Will you marry me, Samantha, and marry me quick?"

"Yes," was the reply. "Who's speaking."—*The Co-Operator.*

BEAT THEM TO IT

An official of the Board of Health in town of Hayville notified a Frenchman that his license to keep a cow on the premises had expired. In reply to his letter the official received the following:

"Monsieur Bord of Helt I jus get youre notis dat my licens to keep my cow has expire. I wish 2 inform M'sieur Bord of Helt that my cow she beat you 2 it. She jest expire tree weeks ago; much oblige,

Youres wid Respeck,

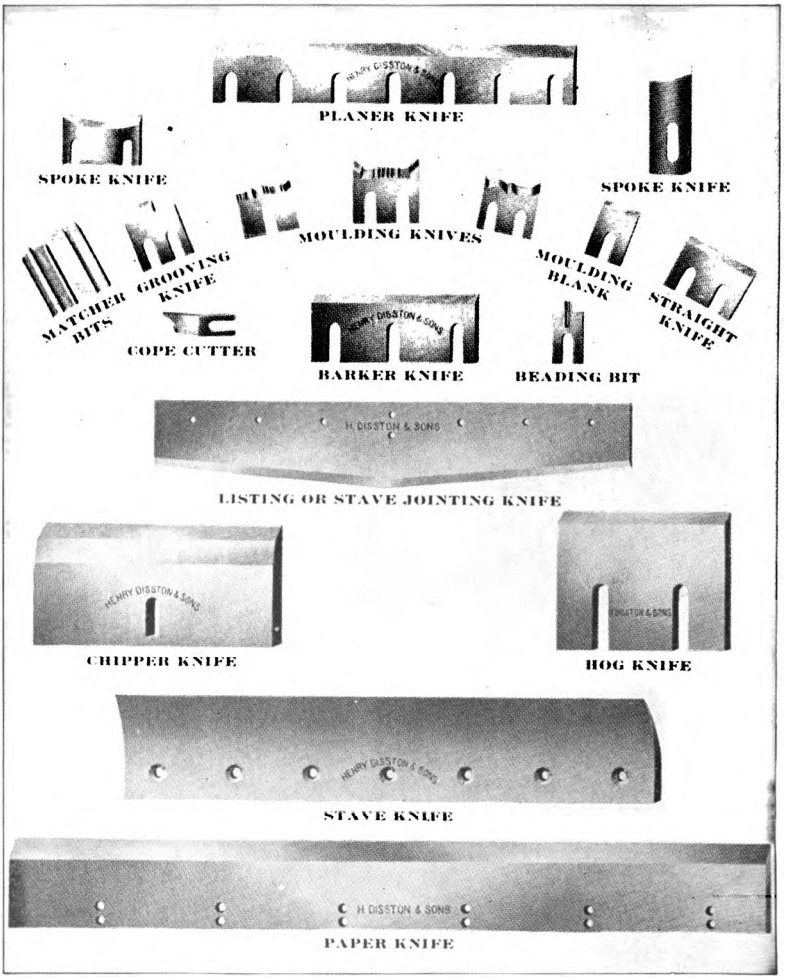
Pete La Tham.

—*Country Gentleman.*

THE DISSTON CRUCIBLE

JULY 1917

DISSTON
Machine Knives



These knives are made of Disston Crucible Steel under Disston improved methods. They afford a perfect combination of hardness, toughness and edge-holding quality.

THE DISSTON CRUCIBLE

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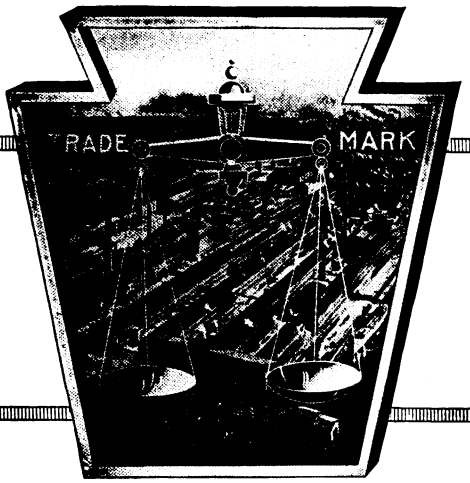

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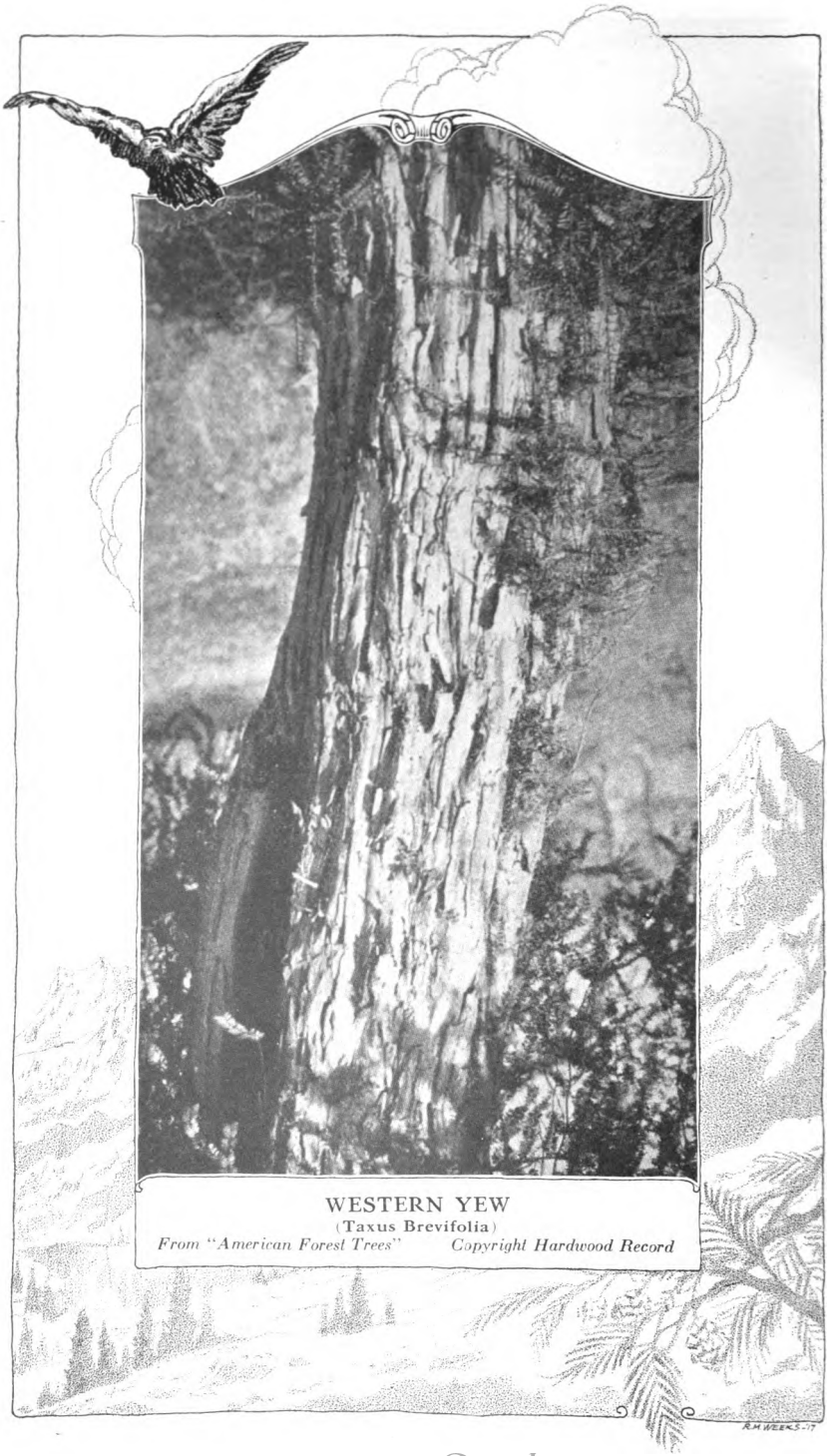


WESTERN YEW

(Taxus Brevifolia)

From "American Forest Trees" *Copyright Hardwood Record*

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

Vol. VI JULY, 1917 No. 6

EDITORIAL CHAT

Criticism

BROADLY speaking, there are just two kinds of criticism, CON- and DE-structive, and it is difficult to conceive that two brands of the same product could produce such diametrically opposite results.

The right kind of criticism, the constructive kind, has been a constant stimulus to progress since human endeavor began, for if possibilities of improvement had not been seen and indicated, there would have been no improvement. Constructive criticism is essential to development in every field of effort—art or science.

The other kind, the DE-structive kind, the mean, carping, flaw-finding variety that offers no substitute for that which it condemns, succeeds only in breeding discouragement and resentment and so clogs the wheels of progress. Enthusiasm cannot survive it, and without enthusiasm little is accomplished.

Stand and look at some great manufacturing plan. Ponder the fact that every step in its growth, every improvement in process or product, was the result of criticism—but don't forget which kind it was.

Quality Tells

The World's Largest "Log Cabin"

SO far as we know, the immense structure shown above is the largest ever built of logs. It was erected at the time of the Lewis and Clark Exposition at Portland, Oregon, and the wood ed is the famous Oregon fir.

Western Yew

(Taxus Brevifolia)

From "American Forest Trees" *Copyright Hardwood Record*

THE Pacific yew is an interesting tree, useful for many minor purposes, but it is not procurable in large quantities. Its north and south range covers more than 1,000 miles, from Alaska to central California; while the species occurs from the Pacific Coast eastward to Montana. It approaches sea level on some of the Alaskan islands, and toward the southern part of its range it reaches an altitude of 8,000 feet.

In Idaho it is called mountain mahogany, but apparently without good reason. Its color may bear some resemblance to that wood, but it is different in so many particulars that the name is not appropriate. The names western yew and Pacific yew are used interchangeably. Sometimes it bears the simple name yew; but since there is a yew in Florida, and another in Europe, it is well to give the western species a name which will distinguish it from others. The northwestern Indians called it "fighting wood," which was the best description possible for them to give. They made bows of it, and it was superior to any other wood within their reach for that purpose. In fact, if they could have picked from all the woods of the United States they could scarcely have found its equal. It is very strong, though in elasticity its rating is under many other woods. It is of interest to note that five hundred or more years ago the European yew (a closely related but different species) had nearly the same name in England that the northwestern Indians gave the western yew. It was called "the shooter yew," because it was the bow wood of that time, and "bow staves," where were rough pieces to be worked out by the bow makers, were articles of commerce. The search for it was so great and so long continued that yew trees were well-nigh exterminated in the British Isles. It was, next to oak, and possibly above oak, the most indispensable wood in England at that time. It is instructive to observe that Indians who used the bow found the western yew as indispensable in their life as the English armies found the European yew at a time when the bow was the best weapon.

The northwestern Indians put this remarkable wood to other uses. They made spears of it,

(*Continued on Page 93*)

Effect of Too Heavy Feed on Circular Saws

ALMOST invariably when breakage occurs at the center of circular saws it is only after they have been giving satisfactory service for periods ranging from one run to several months. Obviously, if there were anything inherently wrong in the make-up of a saw it would be almost impossible to get even one full run out of it. This leads to a consideration of operating conditions which might cause breakage across the center after the saw is in service.

By far the most common cause is too heavy feed and the mechanical effect of this on the saw is the subject of this article.

In the first place, saws broken from this cause are broken only after they have left the line and run out of the cut. As soon as this occurs the action is identical with that of a wedge driven between two objects; and the heavier the feed, the greater the force of the wedge, and consequently the strain on the blade.

No operator, of course, intentionally forces his saw out of the cut, but an anxiety for an extra large output for a record cut sometimes leads to an attempt to carry more feed than any saw could stand up under. The tremendous pressure brought on the blade as soon as it leaves the cut subjects it to strains entirely beyond its tortional strength.

When this occurs, one of three things must happen. Either the carriage would have to be pushed bodily off the track, the mandrel would have to be thrust endwise back from the log or the saw would have to give way. As the saw is by long odds the weakest point of the three, it is almost invariably the one to suffer under these conditions.

While this breakage usually does not occur during the early runs of the saw, it quite frequently happens that saws are slightly forced over the collar, and as a result take a bend at that point. This may happen several times before the breakage takes place, but the elasticity and strength of the saw is reduced with every bend and every hammering it receives.

It must be borne in mind that when the rate of feed is so heavy that the gullets of the saw cannot take care of and pocket the sawdust removed and a considerable portion of this dust is forced to

(Continued on Page 94)

The Saw Mill Man's Dream

(Contributed)

A saw mill man had a dream one night,
Several years ago,
When every saw mill man in the land
Was weighted down with woe,
And it was a very pleasant dream,
Of things as they ought to be,
And the saw mill man came in one day
And told the dream to me.

He dreamed that night of his debts, he said,
As he'd often dreamed before,
Only that night they'd all been paid
And bothered him no more;
And he could buy logs so very cheap
It made him smile to see,
"The very best logs that ever I saw,
Or ever will saw," said he.

He dreamt he sat on a hardwood throne,
In garments rich and rare,
And buyers came a-trooping in,
Buyers from everywhere,
And they doffed their hats and bent their knees,
And humbly pressed their claim
To any kind of stock he had
At any price he'd name.

They'd let him make the grade, they said;
They'd pay for the lumber green,
But he dreamt he treated them coldly;
He dreamt that he acted mean.
When he thought of the years that had gone before.
When he nearly starved to death,
He raised his prices every day,
While the buyers held their breath.

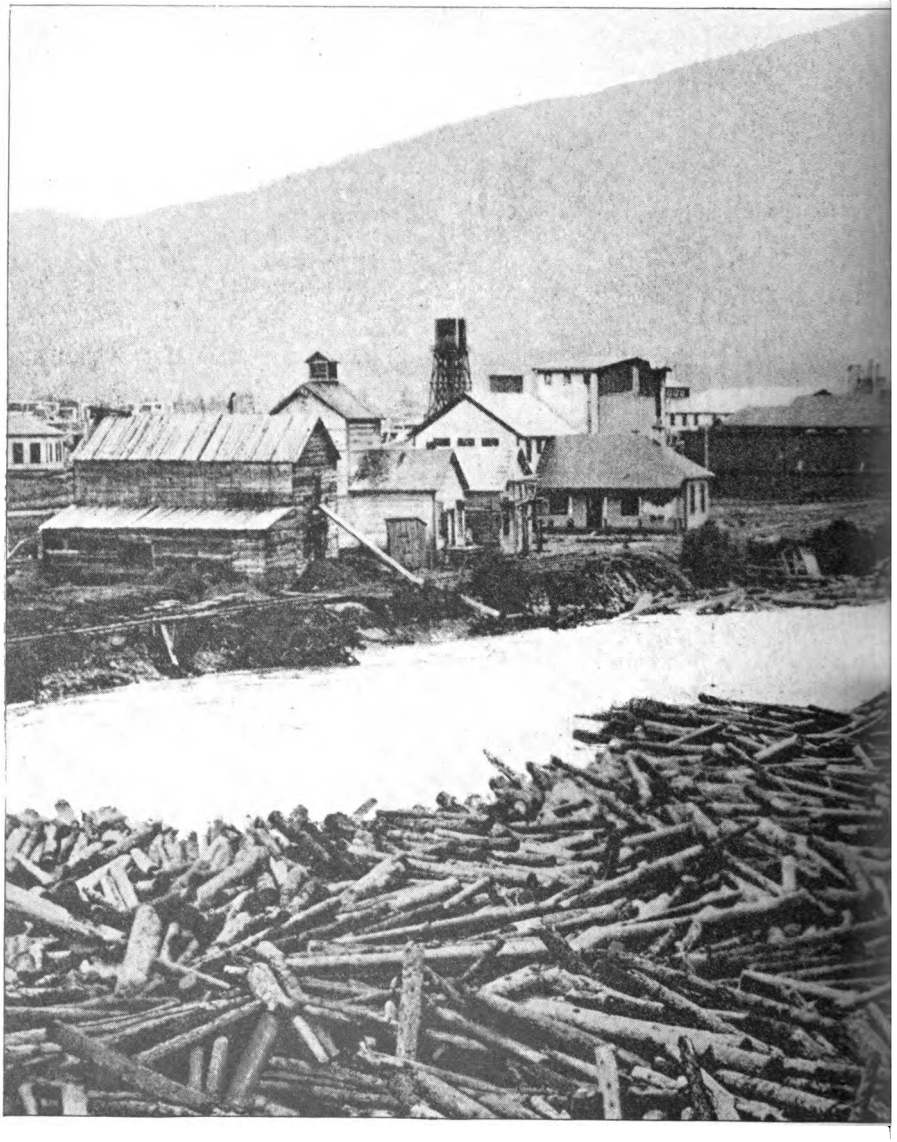
Then he dreamt that in a sneering way
He took their proffered gold
And gave them a little mill run stock,
None of it ten days old.
But all of it went for ones and twos,
All went shipping dry—
And he dreamt that when he was hungry
A nigger brought him pie.

He sent his boys to the colleges,
His girls to a boarding school.
He bought a grand piano,
And a grand piano stool.
He dreamt he lived on the best there was
And smoked three-for-a-half.
It tickled him so that you must know
He woke up with a laugh.

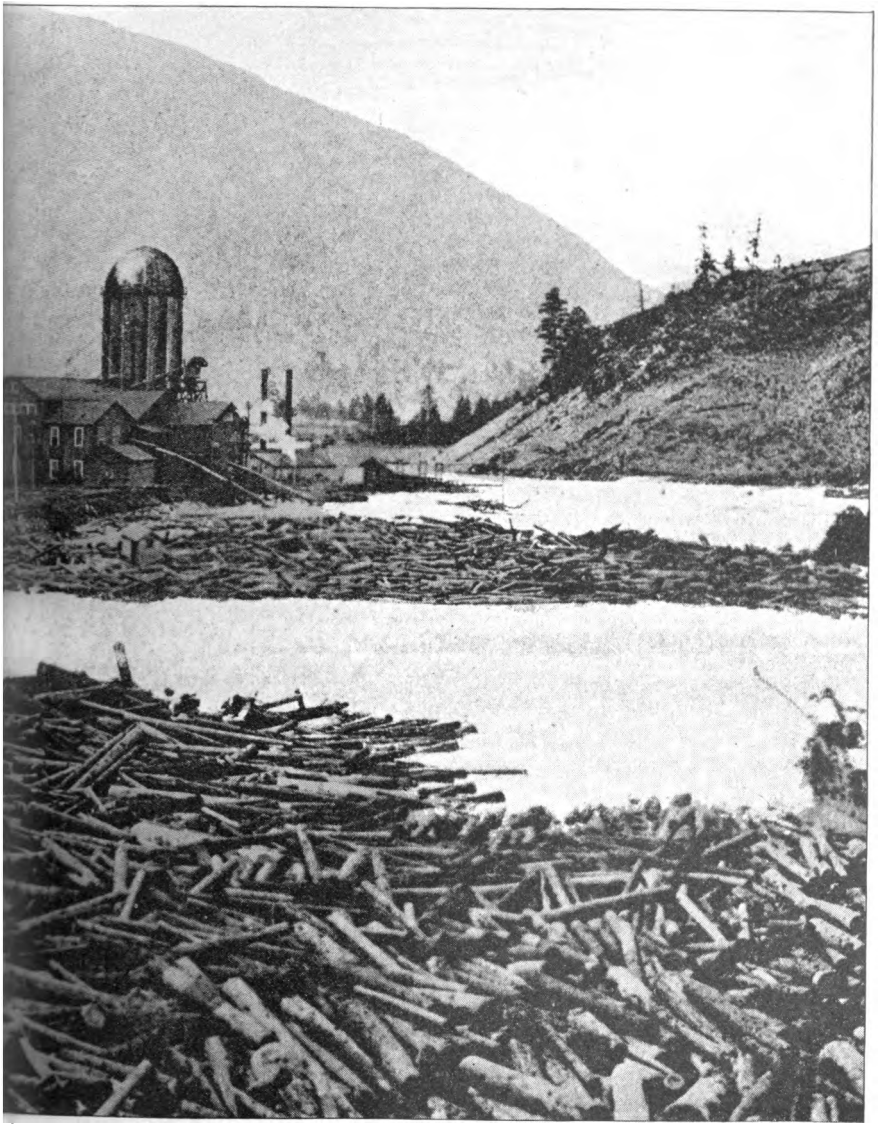
But as he told that splendid dream
He wept in sheer despair.
I did what I could to cheer him up
And lighten his load of care;
I let him smoke my pipe that day—
'Twas all that I could do.
"I'll give you an ad, some day," he said,
"If ever that dream comes true."

* * * *

This winter that man came in again,
Dressed in the height of style;
A diamond glistened in his shirt,
He wore a brand new tile;
But he shook my hand in the same old way,
And said: "Strode, howdy do!
I just dropped in to give you that ad,
Because that dream's come true."



Pond & Mills of the B. B



Company, Bonner, Mont.

Appreciation in the South

THIS company, The Tremont Lumber Co., located at Winnfield, La., of which Mr. W. W. Dantzler is superintendent, an illustration of which is shown on this page, is another of the many lumber companies to swear by the quality and service of DISSTON SAWS.

Mr. George W. Emory, head filer, expresses his satisfaction and enthusiasm in the following interesting letter:

EROS, LA., April 24.

HENRY DISSTON & SONS, INC.,
Philadelphia, Pa.

GENTLEMEN: For some time I have intended writing you in regard to the DISSTON SAWS we have here.

I wish to say in the beginning that they are as nearly perfect as skill can make them.

This is a two 12-inch band and a 10-inch band re-saw outfit. We have quite a number of DISSTON SAWS, and they are all giving the best of satisfaction. All the saws that we bought last year are still here in the filing room, worn down from 12 inches to widths ranging from 9¼ inches to 10½ inches. All have the factory braze, and **not a crack or extra braze in a one of the lot.**

I have here one saw that I ran continuously through 1912-13 and ran it as an "extra" through 1914. The saw is still doing extra work, and stands as much feed as a new saw. It also has only the factory braze with not a crack in it.

I have two regular saws and a "regular extra" that have been pulled off the mill while at full speed. One of them has been pulled off twice. I reworked them, and they are standing up as well as new saws, running every day.

The short side here has run twenty-two months without a crack.

Mr. V. L. Anderson is the sawyer. His home town is Duluth, Minn.

Now, I have some re-saws that I have worn out. Two of them were started in January, 1914, and are still running quarter on and quarter off.

We have some of the hardest timber in the country here—pine that has been tapped for turpentine. Practically all of the big logs are solid pitch on the butt cut.

The band mills "cant" from thirty inches wide on down, for the re-saw. The saws stand up and cut right through without moving on the wheels. There is no friction feed on the re-saw, so it has to take these wide cants the same as a narrow one.

The record cut for the mill is 162,480 feet in ten hours.

In conclusion please allow me to state that it is always DISSTON for mine. Have used many makes, but find DISSTON always proves superior to all others. Have been using DISSTON SAWS since 1902, and am highly pleased to date with the results.

Very truly yours,
GEO. W. EMORY, Head Filer.

Disston Employees Have Their Own Paper

"DISSTON 'BITS'" Made Debut July 1st as Internal House Organ

THE initial issue of a monthly publication of, by, and for the employees of Henry Disston and Sons made its appearance on the first of this month.

There are some thirty-six hundred members of the Disston organization and the purpose of the publication is to promote the welfare and good fellowship of this large body of men.

Ample evidence of talent in various forms has already appeared and there is no possibility of difficulty in continuing the original plan of securing all the material for the paper, both art and editorial, right from the employees themselves.

Disston has always been keenly interested in athletics and is represented in the various branches by league and interdepartment teams. Consequently generous space will be devoted in "Disston 'Bits'" to this department.

No hard and fast rules obtain as to the make-up of the paper and this will always be governed by the desires of the readers. It will not be frivolous, but will also not be used as a medium for heavy moralizing. In short, it will be just as live, breezy and interesting as the employees themselves want and will make it.

The company defrays all expenses, but dictates no policies. It is simply another innovation for the promotion of the welfare of the men.

"Disston 'Bits'" will appear on the first of each month.

Real Versatility

THE following correspondence was handed to us as bona fide and we reproduce it as such. It probably has occurred to the worthy secretary of the lumber company that he was being "spoofed" a bit, as they have it over in "Lunnon."

———, ARK., July 15, 1915.

MR. ———,
New Orleans.

DEAR SIR:

We have your favor of the 13th inst. with recommendation of the Southern Commission Co., Ltd., and in reply beg to inquire if you are a Remington operator. Please state what speed you have attained in dictation, also in transcribing.

In regard to salary will state that we have always paid $50 to $60 per month, according to capability, but this is a fair salary compared to the very reasonable living expenses at this place.

A single man can live on $15 per month; a married man, without family, can live on $30 or $40 per month.

You will readily see therefore that this is a very desirable place for a man who is anxious to save money.

We append a memorandum of the duties we would expect our stenographer to perform, and trust that you will kindly write us at once giving the above information, when we will be pleased to further consider your application with others now before us.

Yours truly,

——— LUMBER CO., LTD.

Memorandum of Duties: Dictation and transcribing—filing and indexing correspondence—operating the oscillating mimeograph occasionally—hitching pony to the cart and driving twice daily to town for the mail—sweeping and dusting the office every morning.

NEW ORLEANS, July 18, 1915.

MR. ———,
Secretary, ——— Lumber Co., Ltd.,
———, Ark.

DEAR SIR:

Yours of the 15th inst. to hand. In answer to your questions would state that I am a first-class Remington, Smith-Premier and Fox operator with a speed of 100 words a minute, stenographic dictation about 160 to 175 words a minute. Not having given you full information as to my capabilities in my letter of application, I beg to put them before you now.

As stated, I am forty-two years old, have had twenty-three years' active business experience, being connected with the United States Embassy at Madagascar, and feel confident that if you will give me a trial, I can prove my worth to you.

I am not only an expert biographer, proficient stenographer, excellent telegrapher and erudite college graduate, but have several other accomplishments which may make me desirable.

Real Versatility—*Continued*

The light duties that you enumerate in the capacity of stenographer, indexing clerk, mimeograph operator, stable boy and office porter, would not keep me busy, and would not be enough to keep me from getting homesick. I am an experienced snow shoveler, a first-class peanut roaster, have some knowledge of removing superfluous hair and clipping puppy-dog's ears, and have a medal for reciting "Curfew."

Am a skilled chiropodist and a practical farmer, can cook, take care of horses, crease trousers, open oysters, repair umbrellas, cane chairs, and am also the champion plug tobacco chewer of Louisiana; my spitting record is 38½ feet.

Being possessed of great physical beauty, I would not only be useful but ornamental as well, lending to the sacred precincts of your office that delightful charm that a Satsuma vase or a stuffed billy-goat would. My whiskers being very extensive and luxurious, my face would be useful as a penwiper and feather duster.

I could, after office hours, take care of the children and prepare them for bed, and having use of the pony and cart, I could act as public dog catcher on my way to and from the post-office.

I can furnish recommendations from Chauncey M. Depew, Jacob J. Coxey, Kaiser Wilhelm de Grosse, Captain Clark and Carrie Nation.

As to salary, I would feel I was robbing the widowed and swiping sponge cake from the orphans if I were to take advantage of your munificence by accepting the fabulous sum of $50 when my expenses would be but $40, and would be willing to give my services for $45, thus enabling you not only to increase your donation to the church, pay your butcher and keep your life insured, but also to found a home for indigent fly-paper salesmen, and endow a free bed in the Cat's Home.

Really, sir, your unheard-of bounties border on the supernatural, and to the unsophisticated must appear like reckless extravagance.

By the way, I might ask if it would be objectionable if I should practice on the cornet in the office during my leisure moments.

Hoping that this will appeal to you and that you will further consider my application, I beg to remain

Yours truly,

(Signed) ——— ———.

Western Yew—(*Continued from Page 85*)

and sometimes employed them as weapons of war, but generally as implements of the chase, particularly in harpooning salmon, which in summer ascend the northwestern rivers from the Pacific Ocean in immense schools. The Indians whitted fish hooks of yew before they were able to buy steel hooks from traders. Some of those unique hooks are still in existence and speak well of the inventive genius of the wild fisherman of the wilderness.

(*To be Continued*)

Effect of Too Heavy Feed on Circular Saws

(*Continued from Page 86*)

one side, the saw is likely to leave its line at any instant. As there is slightly greater chance of its going out of the cut than in and as it is next to impossible for the sawyer to check or reverse his feed before the damage is done, breakage is bound to ensue.

The only way to avoid breakage of this kind is to make sure that the saw runs true to its line at all times and particularly, under a very high rate of feed. This, of course, necessitates that the saw be tensioned, not only to the speed at which it is operated, but also in a manner that will offset the strains it is subjected to through carrying a high rate of feed.

It should be borne in mind when for one reason or another it is desired to force the output beyond the chambering capacity of the gullets that injury or breakage at the center is virtually inevitable.

The Beaver as a Woodsman

A young beaver in Regents' Park Gardens, London, was once placed at work upon a tree twelve feet long and two feet six inches thick, just as the town clocks sounded the hour of noon. The beaver began by barking the tree a foot above the ground. That done, he attacked the wood. He worked hard, alternating his labor with dips in his bathing-pond. He bathed and labored alternately until four o'clock in the afternoon, when he ate his supper of bread and carrots and paddled about in his pond until half-past five o'clock. Ten minutes later, when only one inch of the tree's diameter remained intact, he bore upon his work, and the tree fell. Before it fell the beaver ran as men run when they have fired a blast. Then, as the tree lay on the ground, he portioned it out mentally and again began to gnaw. He worked at intervals all night; cut the log into three parts, rolled two of the portions into the water, and reserved the other third for his permanent shelter. The work done, he took a bath.

—*Canadian Lumberman and Woodworker.*

Apple Logs for Saw Handles to be Cut Up in the DISSTON Mills

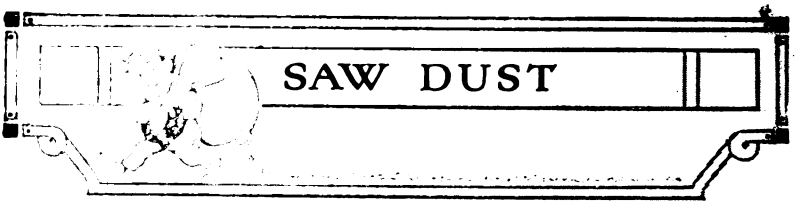
Portion of Apple Logs in the Disston yards ready to be sawn into boards from which saw handles will be made.

CARLOAD after carload of logs come into the Disston plant almost continuously to be made into handles for Disston hand saws and parts of other Disston tools.

These logs are sawn into boards *in our own saw mill.*

Thus, not only are Disston mill saws constructed along scientifically correct lines, but they are constantly subjected to practical test in the Disston plant.

Well made saws thoroughly tested are the saws for economy and satisfaction.



A QUESTION?

"That is my hired man asleep up there in the crotch of that oak tree," said honest Farmer Hornbeak. "You are entitled to one guess as to whether he climb up there to slumber or went to sleep on the ground on top of an acorn which grew up with him."

—*Kansas City Star.*

IN TABLOID DOSES

"Nurse," moaned the convalescent patient, "can't I have something to eat? I'm starving."

"Yes, the doctor said you could start taking solids today, but you must begin slowly," she said. Then she held out a teaspoonful of tapioca. "We must only advance by degrees," she added.

He sucked the spoon dry and felt more tantalizingly hungry than ever. He begged for a second spoonful, but she shook her head, saying that everything at the start must be done in similarly small proportions. Presently he summoned her again to his bedside.

"Nurse," he gasped, "bring me a postage stamp. I want to read."—*New York Times.*

One day, many years ago, the telephone in the office of the chief of police rang. Chief Speers answered. The call was from a new policeman on the Union Avenue beat. He said:

"A mon has been robbed down here, and I've got one of thim!"

"Which one have you?" asked the chief.

The reply came back: "The mon that was robbed!"

COHEN—So Sadie has broken der engagement. Did she gif you back der ring?

COHENSTEIN—No; she said diamonds hat gone up, but she would gif me vat I paid for it.—*Boston Transcript.*

A SHORTAGE SOMEWHERE

An advertisement of a popular spectacular play has this to say of two of its attractions:

5,000 People
4,000 Costumes

—*Ladies' Home Journal.*

There was a timid knock at the door. "If you please, kind lady," the beggar said, "I've lost my right leg——"

"Well, it ain't here," retorted the lady of the house, and slammed the door.—*New York Times.*

GONE, NOT FORGOTTEN

During the fighting a Highlander had the misfortune to get his head blown off.

A comrade communicated the sad news to another gallant Scot, who asked anxiously:

"Where's his head? He was smoking ma pipe."—*Tit-Bits.*

Some of the inmates of an asylum were engaged in sawing wood, and an attendant thought that one old man who appeared to be working as hard as any of them, had not much to show for his labor.

Approaching him the attendant soon discovered the cause. The old man had turned the saw upside down, with the teeth in the air, and was working away with the back of the tool.

"Here, I say, Jones," remarked the attendant, "what are you doing? You'll never cut the wood in that fashion. Turn the saw over."

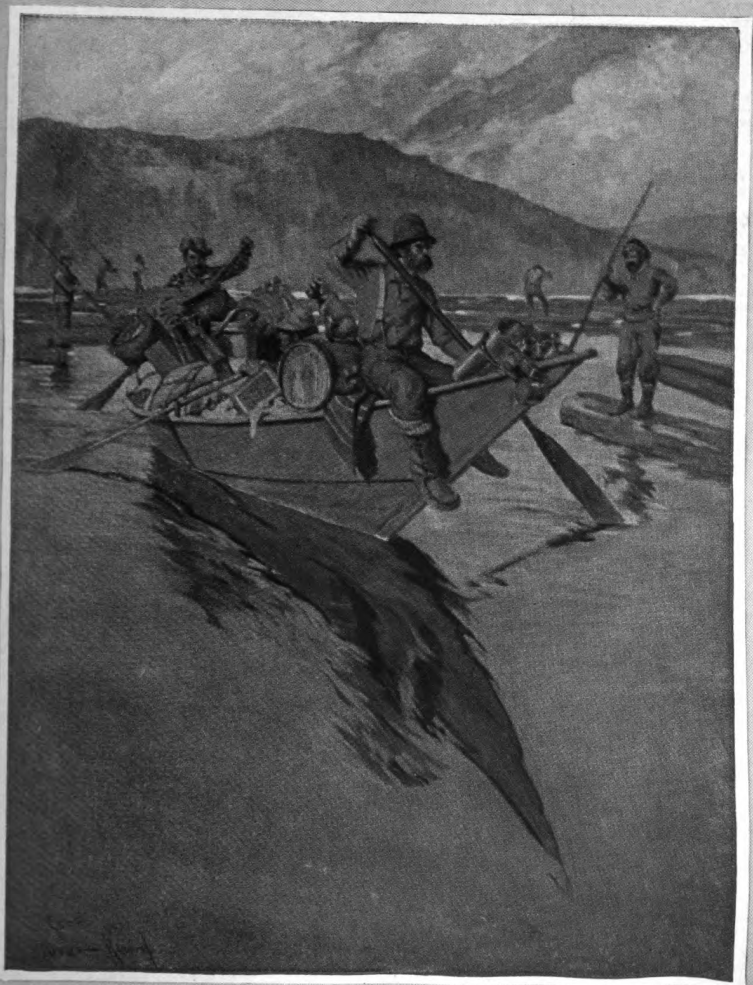
The old man paused and stared at the intruder.

"Did you ever try to saw this way?" he asked.

"Well, no," replied the attendant, "of course I haven't."

"Then hold your noise, man," was the instant reply. "I've tried both ways, and"—impressively—"this is easier."

THE DISSTON CRUCIBLE

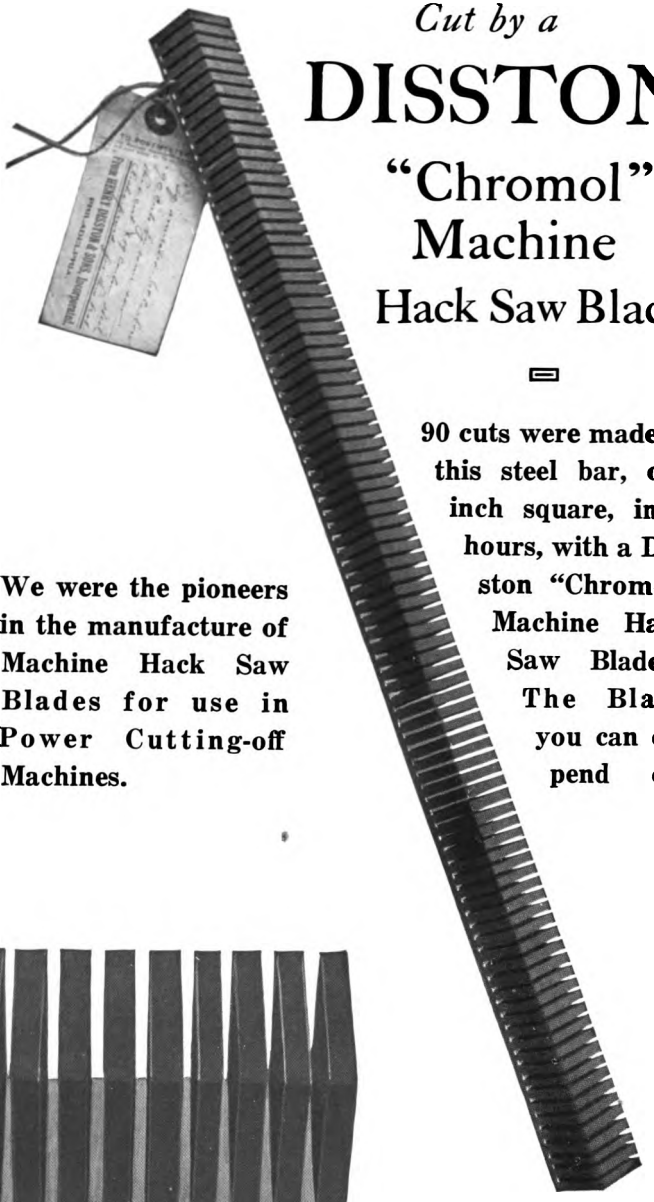


AUGUST 1917

Cut by a

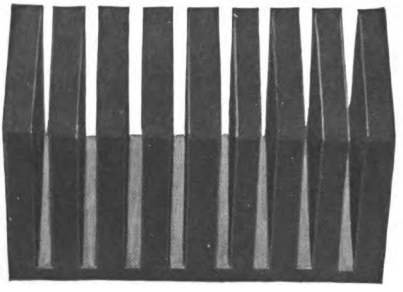
DISSTON

"Chromol" Machine Hack Saw Blade



90 cuts were made in this steel bar, one inch square, in 8 hours, with a Disston "Chromol" Machine Hack Saw Blade—The Blade you can depend on.

We were the pioneers in the manufacture of Machine Hack Saw Blades for use in Power Cutting-off Machines.



Actual Size of Bar

THE DISSTON CRUCIBLE

PRICE 10¢ PER COPY $1.00 YEARLY IN ADVANCE

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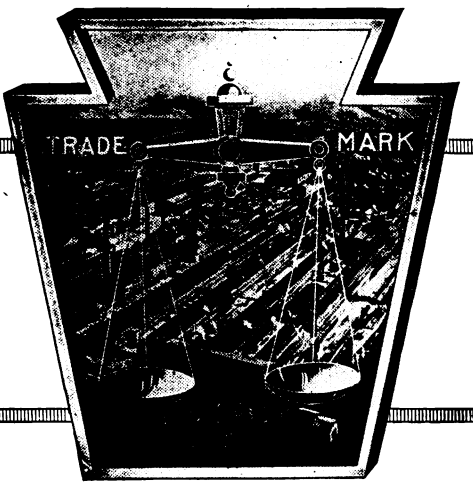

This Magazine is Published for the Advancement of the Interests of Millmen by

HENRY DISSTON & SONS

INCORPORATED

Keystone Saw, Tool, Steel, and File Works

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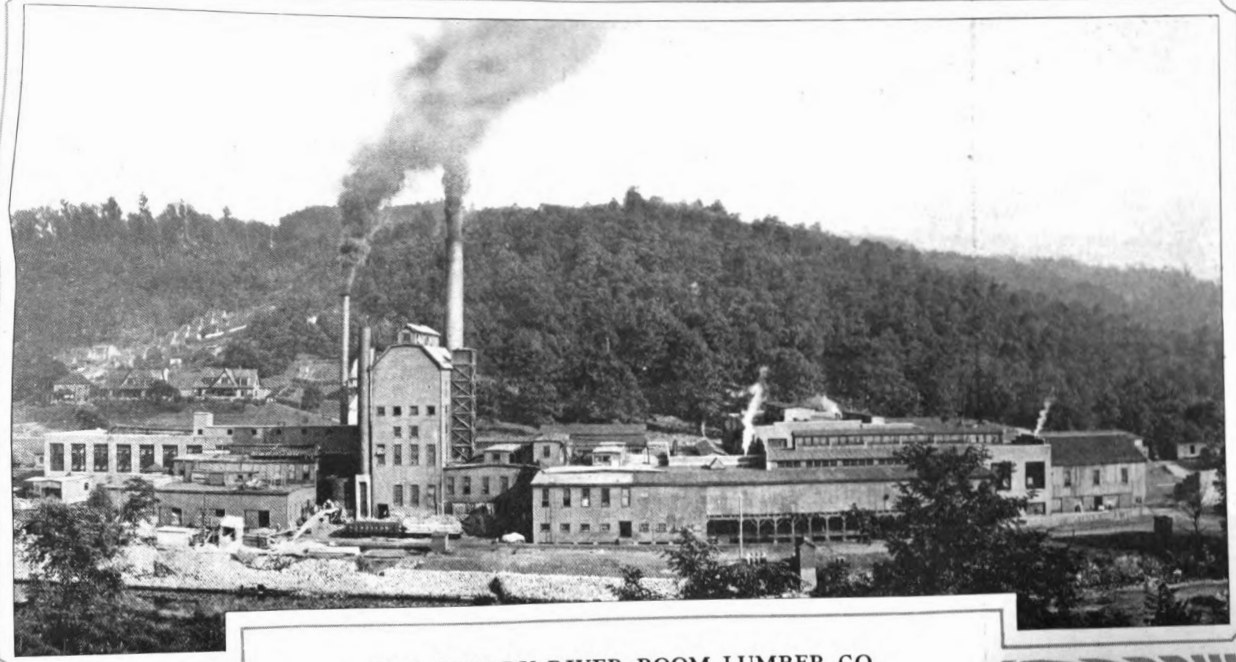


THE CHERRY RIVER BOOM LUMBER CO.

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VI AUGUST, 1917 No. 7

EDITORIAL CHAT

Tolerance

LIKE most other articles of extreme rarity, tolerance is almost invaluable.

Whether in individuals, industries or nations, tolerance is the priceless lubricant which keeps the wheels of constant contact running smoothly. A little tolerance of others' rights would have prevented the carnage and slaughter which for three years have racked Europe, and into which a million of our own youths are about to be thrown.

Tolerance is a trait of the individual. The tolerant church, firm or state is that one whose members have a tolerant respect for the rights and opinions of others. One way, then, for us to do our "BIT" toward lightening humanity's present heavy burden is to cultivate tolerance.

Tolerance carries no implication of weak servility or cringing submission. It is a strong word and demands a full recognition of its own rights, as it is willing to recognize others'.

Tolerance, then, is a reflection of individual strength of character. Let's develop it, but let us not confuse it with superciliousness, for that is the tolerance of the snob; and there is no bigness about a snob.

Quality Tells

A Perfect Specimen

THE saw shown above is presented as a fine example of masterly handling. Close scrutiny reveals with what infinite pains all semblance to the original shape of the teeth has been obliterated, and no two teeth in this saw have been left the same length, as so frequently happens in ordinary saws. The elliptical shape doubtless was imparted to make the saw run as unevenly as possible in the cut, thus obviating the monotonous "whang" of saws fitted along more conventional lines.

It is gratifying, of course, to manufacturers to have their saws so greatly improved after they are put into service. Perhaps it was for fear some of these unique features might be appropriated by the maker of this saw that it was sent to us for repair instead of the manufacturer. Perhaps the owner didn't want the original maker to get another whack at it and maybe spoil it.

Original Shapes of Band Saw Teeth Should be Maintained

LONG experience has definitely established the fact that any alteration of the shapes of Band Saw teeth affects the tension of the blade. This is particularly so in cases where the depth of gullets is increased. It obviously follows that the best service cannot be secured from a saw that has been subjected to such alterations until it has been properly re-tensioned.

The depth of gullets is a particularly important point. Quite a large percentage of filers in the initial sharpening operation on a new saw are inclined to put too heavy a pressure on the emery wheels in the gullets, before they put the saws in commission. Not only is the tension changed by deepening the gullets, but in many cases the extra pressure on the wheels causes case hardening in the gullets. This, with the altered tension, quickly leads to cracks in the saw, and to dissatisfaction.

The solution of the difficulty is extremely simple. *Keep the original shape and depth of the teeth.* The saw is properly tensioned by the manufacturer for just that depth of gullet. Keep the original shape, but *get the shape that is just suited to your conditions.*

Every order for a band saw should be accompanied by complete specifications, or a diagram. You will then have saws which require no alteration of the teeth or gullets; the tension consequently is correct; the danger of cracks from impaired tension and possible case hardening occurring when gullets are materially changed is eliminated, and a lot of unnecessary work for the filer is avoided.

Better results are secured from the saw; it lasts longer, and the filer's prestige as an expert is consequently augmented.

Even better than a diagram, if you are ordering Disston Saws, would be a steel template. This we will stamp with the name of your company and all future orders will be made from the template. Keep a duplicate for comparison.

In this way uniformity is assured, labor and trouble are avoided and the arrangement proves mutually profitable to millman, filer and ourselves.

Western Yew

(Taxus Brevifolia)

From "American Forest Trees"

(Continued from July Issue)

A PROPER crook was selected where a branch joined the trunk, and serviceable fish hooks were made without any cross grain. They were strong enough to hold the largest fish that ascended the rivers. Sometimes a bone barb was skillfully inserted. The Indians found a further use for this wood as material for canoe paddles. It is so strong that handles can be made small and blades thin without passing the limit of safety. The manufacture of boat paddles from yew continues.

More is used for fence posts than for any other one purpose. It is one of the most durable woods known where it must resist conditions conducive to decay. The name yew is said to be derived from a word in a north Europe language meaning everlasting. Yew fence posts are not named in statistics, and it is impossible to quote numbers. Their use is confined to the districts where they grow.

The manufacturers of small cabinets draw supplies from this wood, but the fact is not mentioned in Pacific States wood-using statistics. It is particularly liked for turnery, such as small spindles used in furniture and in grill work. It takes an exceptionally fine polish, and the wood's great strength makes the use of slender pieces practicable. Experiments have shown that this wood may be stained with success, but its natural color is so attractive that there is little need of staining unless the purpose is to imitate some more costly wood. If stained black it is an excellent substitute for ebony.

Western yew figures little in lumber output. It is not listed in the markets. The few logs which reach sawmills are never again heard of, but probably most of the lumber is disposed of locally to those who need it. The tree is not of good form for saw timber. Burls are said to make beautiful veneer. Trunks are seldom round, but usually grow lopsided. Most of them are too small for sawlogs. The largest are seldom two feet in diameter, and generally not half that large. They are short and branched, the tree often dividing near the ground in several stems. The average tree is scarcely thirty feet high, but a few are twice that. Its growth is

(Continued on page 109)

The Cherry River Boom Lumber Co.
and
Dodge Clothespin Co.

IN the frontispiece and on the following pages are shown views of the town of Richwood, W. Va., and the Cherry River Boom Lumber Co. The town is picturesquely situated in the mountains of Nicholas County, and has practically been built up by the lumber company.

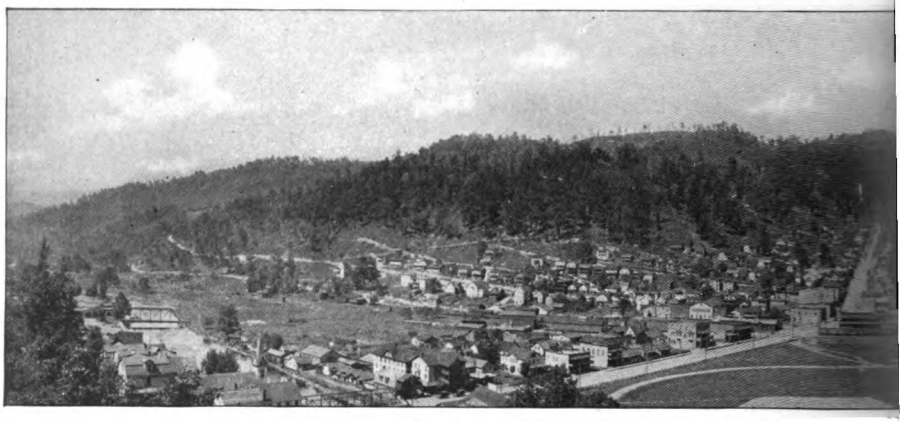
One of the photographs shows in the foreground the company's mill and log pond. The equipment of the mill includes two 8 feet bands and one 8 feet resaw. The capacity is about 120,000 feet per day on single shift, cutting spruce and hemlock exclusively. This mill has used Disston Saws for a number of years back.

The company owns a pulp and paper mill at Richwood, which also appears in the pictures. This plant is supplied almost entirely by the offal of slabs from the saw mill.

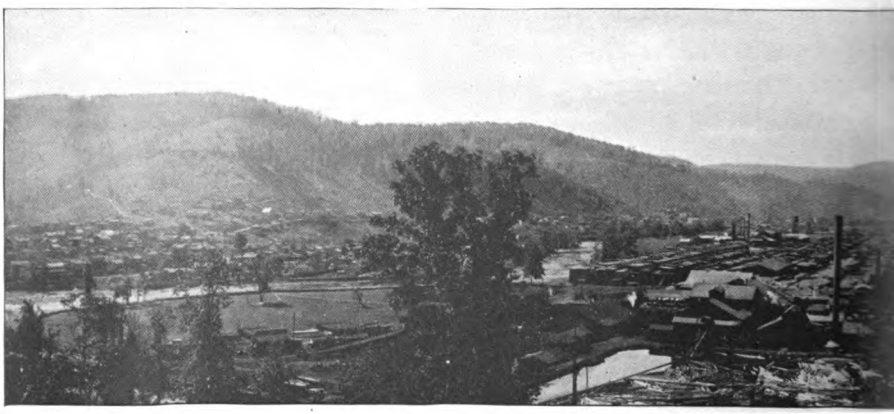
The company's lumber yard is shown in the extreme right.

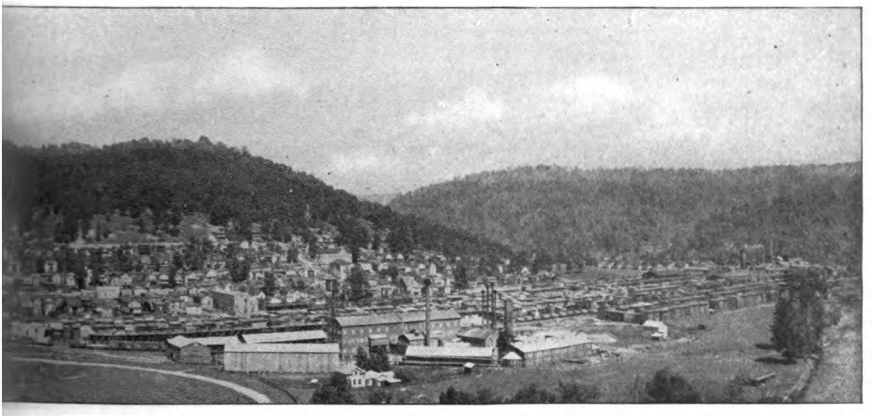
The athletic field which is seen in the view of the town is sustained by the various companies now located at Richwood.

Another Richwood concern is the Dodge Clothespin Company —also loyal rooters for Disston quality. It is interesting to know that this is one of the largest factories in the world producing clothespins. However, this is not their exclusive line, as they are also large manufacturers of wooden veneered trays. Disston band saws are used throughout. They are also large users of Disston small circular saws, veneer and special knives. They say that Disston spells satisfaction to them.



RICHWOOD, W. VA., SHOWING TH
AND THE DODG





HERRY RIVER BOOM LUMBER CO.
LOTHESPIN CO.

The Effect of too High Speed on Band Saws

WHILE we know there are still quite a number of operators who advocate high speeds, our own experience and observation has clearly shown that the band mills that run their log band saws at a speed of about 8,000 feet per minute are obtaining better results, both in quantity and quality of output of lumber than those who run at speeds of 10,000 feet per minute, or more.

This, of course, applies more strongly where the power is ample, the appliances in perfect order and alignment, and the saws are operated and taken care of by thoroughly competent sawyers and filers.

It is, of course, well understood that excessive speed tends to extra vibration, no matter how firm the foundation of the mill, or how thoroughly installed. When the saw is running at very high speed it naturally tends to the same vibration and waving motion that applies to highly speeded belts, and it is a rare thing to see a straining device that is sensitive enough to fully compensate for the excessive vibration in the blades. Consequently, under the feed pressure high-speeded band saws are more apt to deviate from a true line than those of a normal or moderate speed.

Quite a few operators still hold to the idea that high speed means high capacity, but it does not always follow by any means, for unless the *apparent* excess elasticity occasioned by the high travel of the saws can be absolutely compensated for by extra weighted and highly sensitive straining devices, the feed must necessarily be reduced per revolution of saw, or, in other words, it is possible to carry a sufficiently higher rate of feed per revolution of the saw on a moderate speed to amply compensate for a reduction in speed.

To specify more plainly, take for an illustration a 50-foot band saw, making 200 revolutions per minute, which equals 10,000 feet.

If this saw was cutting continuously at the rate of 12 inches per revolution that would equal 200 feet of feed per minute. Our experience has shown that it is easier to maintain a feed of 14 inches on 180 revolutions of the same saw than it is to maintain a feed of 12 inches on the 200 revolutions, and a very little figuring will show you that a rate of 14 inches feed on the 180 revolutions is greater than 12 inches on the 200 revolutions, to say nothing of the wear and tear on all machinery, belts and saws, beside enabling the operators to produce better manufactured lumber.

This principle will hold good at a materially less speed than 8,000 feet per minute, and to those who have not gone into this point thoroughly, and are inclined to feel a little skeptical on the subject, we will mention in mills where the practice of quick stopping the band saws at saw changing time by sawing a few lines from a "cant" left on the carriage for that purpose, it will be noted that as the speed of the saw decreases the feed per revolution of saw is increased, and this, too, at a time when the saw is dull, and therefore in a poor condition to stand the higher rate, but this is made possible only by the absence of vibration in the blade.

Of course, it is understood that we never advocate a reduction of speed at the expense of leverages in driving and receiving pulleys, as that would be sacrificing power, but a decrease in the size of the driver or an increase in the size of the receiving pulley to bring about the desired reduction in speed of saw without reducing leverages of pulleys and traction power of belts, is bound to give better results, all other conditions being up to a good standard.

This Assortment Ought to be Convincing

Mr. W. A. Lines, filer for the C. C. Mengel Bros. Co., of Louisville, Ky., wrote the following letter recently to our Cincinnati branch:

LOUISVILLE, KY., July 6, 1917.

THE HENRY DISSTON SONS CO.,
Cincinnati, Ohio.

DEAR SIRS:

I am sending you to-day a record of one of the Henry Disston Sons' saws, 12-inch blade, 15 gauge, which I am using in C. C. Mengel Bros. & Co.'s mill at Louisville, Ky.

This band saw was put in service three weeks ago and was put on the mill eleven times and has cut seven chain dogs off just like the two I sent you to-day, one run three nails, one run two wire spikes, made one run dull, and after cutting all of this iron and steel I still have eleven-inch blade left in good shape. This record surely shows the quality of steel used in Disston Band Saws.

I don't know what you might call this, a lucky or unlucky one. We cut many more chain dogs within the last three weeks, but this saw in particular got h—l each run.

Yours respectfully,
W. A. LINES.

Of course, a wood saw is not supposed to cut metal, but anybody who is wrecking a saw every time metal is struck had better switch to the Disston. Doubtless Mr. Lines, whose address and connection are given above, would be inclined to endorse such a suggestion.

Western Yew—(*Continued from page 102*)

very slow. A six-inch trunk is seventy-five or 100 years old, and the largest sizes are from 200 to 350 years. It is evident, therefore, that efforts to grow western yew for commercial purposes will be few. Wild trees will be occasionally cut as long as they last, and they will probably last as long as any of their associates, for they are scattered sparingly over several hundred thousand square miles of country, and some of it rough and almost inaccessible. The best development of the species is in western Oregon, Washington and British Columbia.

The leaves of western yew are one-half or five-eighths inch long. The fruit consists of red pulp enclosing a hard seed. Birds devour it eagerly. The fruit is not poisonous, as the yew berries of the Old World are. It ripens in September and falls in October. The wood is fine grained, near rose red, becoming gradually duller on exposure. It weighs 39.83 pounds per cubic foot. Its fuel value is high.

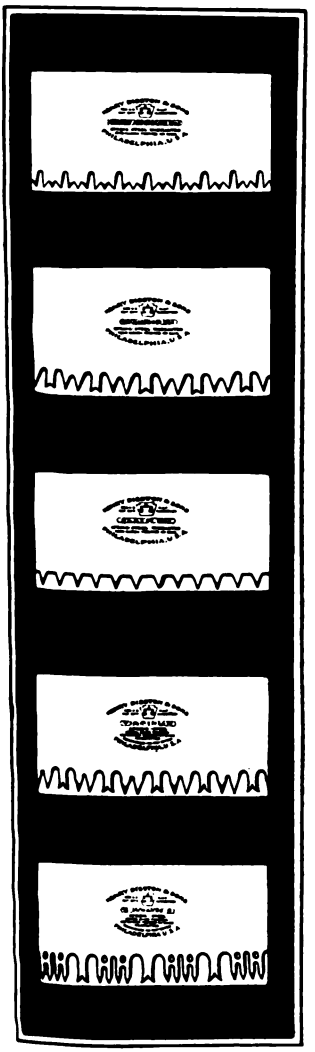
FLORIDA YEW (Taxus floridana) is extremely local in its range and small in size. Few trees are more than twenty-five feet high and one foot in diameter. They are bushy and of poor form for manufacturing. The only reported use is as fence posts. The wood's durability fits it for that place. The species is found in Gadsden County, Florida. The leaves are one inch or less in length; flowers appear in March and the fruit ripens in October. The wood is moderately heavy, hard and narrow-ringed, for the trees grow slowly. Its color is dark, tinged with red, the thin sapwood being whiter. There is little prospect that the wood of this yew will ever be more important than it is now. It is often spoken of locally as savin, which name is likewise given to the red cedar (Juniperus virginiana), which is abundant in this yew's range.

CALIFORNIA NUTMEG (Tumion californicum) is an interesting tree which ranges over a considerable portion of California, but is at its best in Mendocino County and the coast region north of San Francisco. It occurs also on the western slope of the Sierra Nevada mountains, in central California, at altitudes up to 5,000 feet. It receives its name from the resemblance of its seeds to nutmegs. Their surface is shriveled, but they do not have the nutmeg odor. The wood and the leaves, when bruised, give off an odor not altogether pleasing. On account of this the tree has been called stinking cedar. In some localities it is called yew, and in others California false nutmeg, and coast nutmeg. Trees are generally small, with trunks of irregular form. The crown is open and usually extends to the ground; but in crowded situations a rather shapely bole is developed and the crown is small. The usual size of the tree does not exceed a

height of fifty feet and a diameter of twenty inches. More trees are below than above that size; but in extreme cases the tree may reach a height of eighty-five feet and a diameter of four. The leaves in form and size resemble the foliage of yew, but their points are stiff and sharp, and if approached carelessly they will wound like cactus thorns. The fruit is an inch or more in length, a pulpy substance surrounding the seed. The wood possesses properties which ought to make it valuable, though reported uses are strictly local, such as small cabinet work and skiff making. It is bright lemon, yellow, rather hard, takes good polish, is of slow growth, with bands of summer-wood thin but distinct, and medullary rays small, numerous and obscure. Its weight is 29.66 pounds per cubic foot; it is not stiff or strong. It cannot attain high place as a manufacturing material, because it is too scarce, but it possesses a beauty which must bring it recognition as a fine furniture, finish and novelty wood. A few sawlogs go to mills in the region north of San Francisco, but the lumber is probably mixed with other kinds and it goes to market without a name. It ought to be put to a better use.

FLORIDA TORREYA (Tumion taxifolium) is often called Chattahoochee pine in the region where it grows. That name is generally given to the tree when planted for ornament in yards, parks and along streets of towns in northwestern Florida. It is known also as stinking cedar, stinking savin and fetid yew. These names are generally applied to the forest-grown tree, particularly by those who cut it for fence posts, which is its principal use. Its range is local, being confined largely, if not wholly, to Gadsden County, Florida, where it grows on limestone soil. It can never have much importance as a commercial timber, because it is too scarce. In fact, it is in danger of extermination. Post cutters never spare it, and its range being so limited, there is not much hope for it. The interesting and beautiful tree is making a game fight for life. Many seedlings appear in the vicinity of old trees, while stumps, and even prostrate trunks, send up sprouts which, if let alone, grow to tree size. Sprouts on logs and stumps send roots to the ground as the seedling yellow birch does in damp northern woods. The yew-like leaves of Florida torreya are one and a half inch or less in length. The tree blooms in March and April, and the drupe-like fruit, an inch or more in length, is ripe by midsummer. The tree is from forty to sixty feet in height and one to two feet in diameter. It is clothed in whorls of limbs, beginning near the ground, and tapering to the top. The wood is clear, bright yellow, the thin sapwood of lighter color; soft, easily worked and susceptible of fine polish. It is very durable in contact with the soil. The green wood and the bruised leaves and branches give off an odor suggesting the tomato vine. The texture and color of the wood indicate that it is well suited for fine cabinet work, but it is not a figured wood.

DISSTON
SAWS AND TOOLS



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Have you found the type of cross-cut saw best suited to your particular requirements? In the 77 years since Henry Disston began making saws, Disston experts have co-operated with cross-cut saw users in all parts of the world in devising saws which will do different classes of work with the least expenditure of time and labor. There are Disstons for the East and for the Pacific Coast, for large trees and small, for hard woods and soft woods, for green woods and dry woods, for felling and buck sawing.

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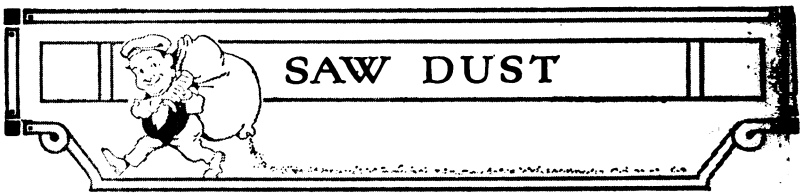
Send for FREE Booklet

Cross Cut Saws

HENRY DISSTON & SONS, INC.

PHILADELPHIA, U. S. A.

Canadian Works: Toronto, Canada



NIFTY

He was running a small provision-store in a newly developed district, and the big wholesale dealers found him very backward in payment of his accounts.

They sent him letter after letter, each more politely threatening than the last. Finally they sent their representative down to give him a sporting chance.

"Now," said the caller, "we must have a settlement. Why haven't you sent us anything? Are things going badly?"

"No. Everything's going splendidly. You needn't worry. My bankers will guarantee me all right."

"Then why haven't you paid up?"

"Well, you see, those threatening letters of yours were so well done that I've been copying them out and sending them round to a few customers of my own who won't pay up, and I've collected nearly all outstanding debts. I was only holding back because I felt sure there must be a final letter, and I wanted to get the series complete."—*Harpers.*

HIS ADVICE

CUSTOMER (in restaurant)—Waiter, my cocoa is cold.

WAITER—Well, sah, why don't yo' put on yo' hat, sah?

FIRST SURGEON—What did you operate on patient Number Two for?

SECOND SURGEON—Five hundred dollars.

FIRST SURGEON—You don't understand. I mean what did the patient have?

"Five hundred dollars."—*Life.*

WAR PORTIONS

"My plate is damp," complained a traveler who was dining in a London hotel.

"Hush!" whispered his wife. "That's your soup."

BONEHEAD

"G'wan, nigger, you-all ain't got no sense nohow."

"Aain't got no sense? Whut's dis yere haid for?"

"Dat thing? Dat ain't no haid, nigger; dat's jes er button on top er yo body ter keep yer backbone from unravelin'."—*The Lamb.*

SURROUNDED

A drunken man threw his arms around a telegraph pole and then began to feel the pole with his hands. Round and round he went. Finally he gave it up and muttered: "No use. Walled in!"

"Now, Willie," said the teacher to rather a stupid country boy, "listen to me very carefully. If I had five eggs in this basket and I laid three on the table, how many would I have?"

"Eight," said Willie brightly.

FIFTY-FIFTY

CO-OP. CLERK—"This book will do half your work."

STUDENT—"Give me two—quick."

An explanation of why some men never advance may be found in this man's idea of industry and progress. He wrote for the price of a sawmill. He got it, and responded: "If I had $5,000, what would I want of a sawmill?"

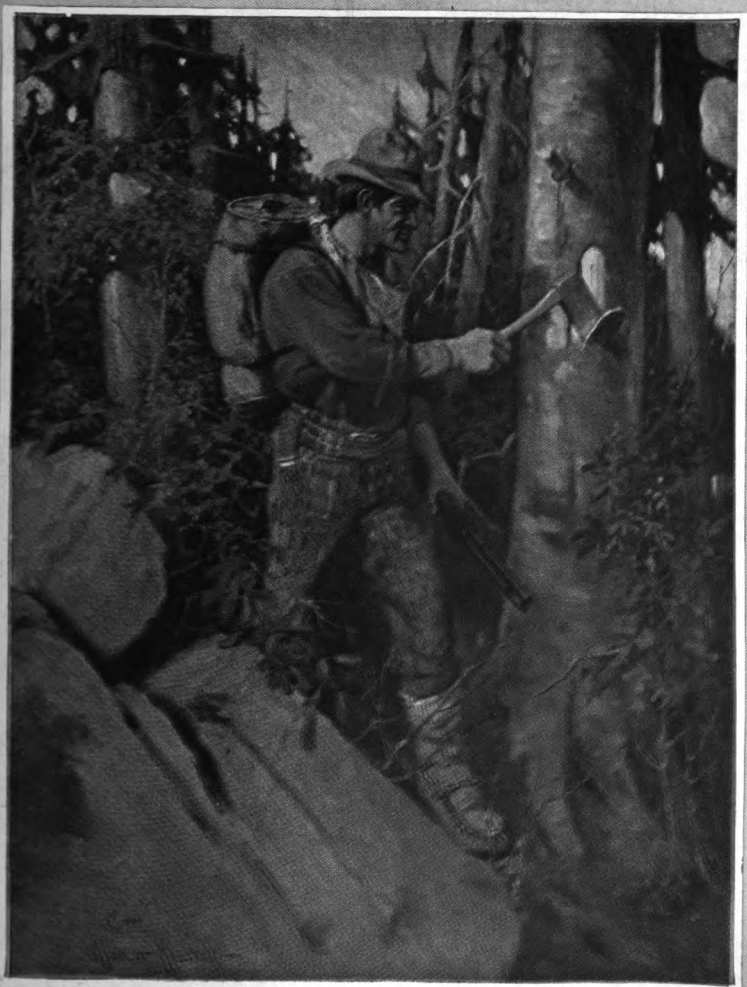
UNLUCKY MOTORIST (having killed the lady's pet puppy)—Madam, I will replace the animal.

INDIGNANT OWNER—Sir, you flatter yourself.—*London Opinion.*

AS LITTLE AS POSSIBLE

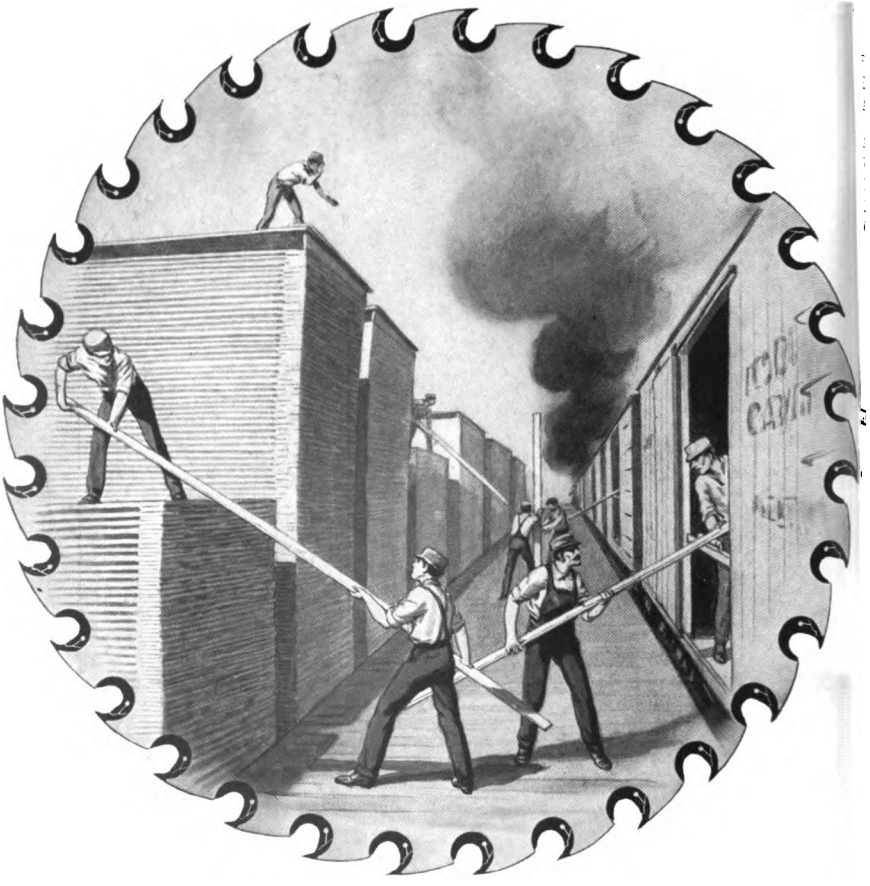
"Man needs but little here below," remarked the new arrival in Hades as he hurriedly removed his overcoat.—*Widow.*

THE DISSTON CRUCIBLE



SEPTEMBER 1917

Well Manufactured Lumber Is Half Sold



Use

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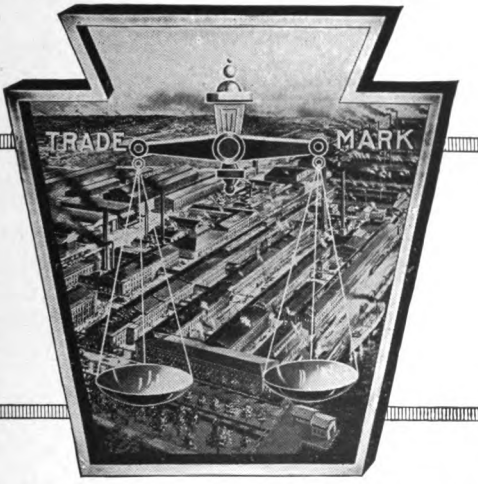

This Magazine is Published for the Advancement of the Interests of Millmen by

HENRY DISSTON & SONS

INCORPORATED

Keystone Saw, Tool, Steel, and File Works

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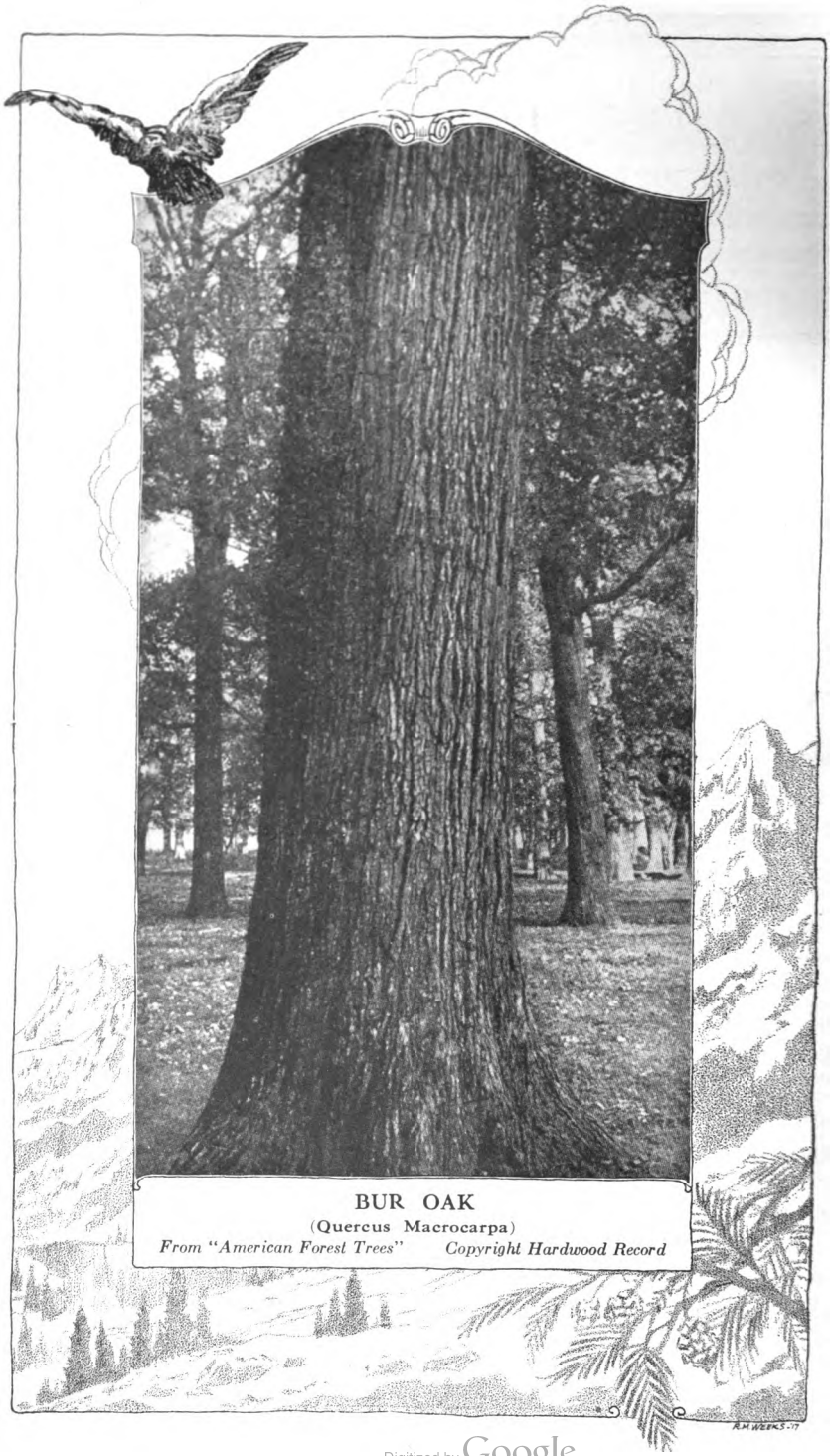


BUR OAK

(Quercus Macrocarpa)

From "American Forest Trees" *Copyright Hardwood Record*

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VI SEPTEMBER, 1917 No. 8

EDITORIAL CHAT

Confidence

CONFIDENCE, and two companion attributes, initiative and persistence, comprise the irresistible trinity of success. Given this happy combination and success in some measure is assured; the degree depending upon the degree of confidence, initiative and persistence back of the undertaking.

As a rule the other two qualities are not present when confidence is lacking, for there is little incentive to start anything and stick at it when there is no assurance of success for the effort. On the other hand, confidence usually is the result of previous success which was, in turn, based on initiative and persistence. Confidence, therefore, pre-supposes initiative and persistence, and thus seems to be the most important element of achievement.

Confidence must be backed by judgment, otherwise it becomes over-confidence. We are living through (many of us are *not*) a terrible example of what over-confidence can do to a people so wrapped up in their own ideals of militaristic domination as to blind themselves to the power and extent of opposition.

But the results of the genuine kind of confidence are on every hand. Every industry, every attainment, every step along the long road of progress in art and science has been effected by it.

Isaiah Tells

Answer to "Saw Mill Man's Dream"

By W. B. MARTIN

The following verses have been received from Mr. W. B. Martin, Cass, W. Va., in reply to the poem "The Saw Mill Man's Dream," which appeared in the July issue of the CRUCIBLE:

I have read your dream and I wish to say
  I have seen your dream come true,
For I worked for that man many a day
  The long ten hours through.

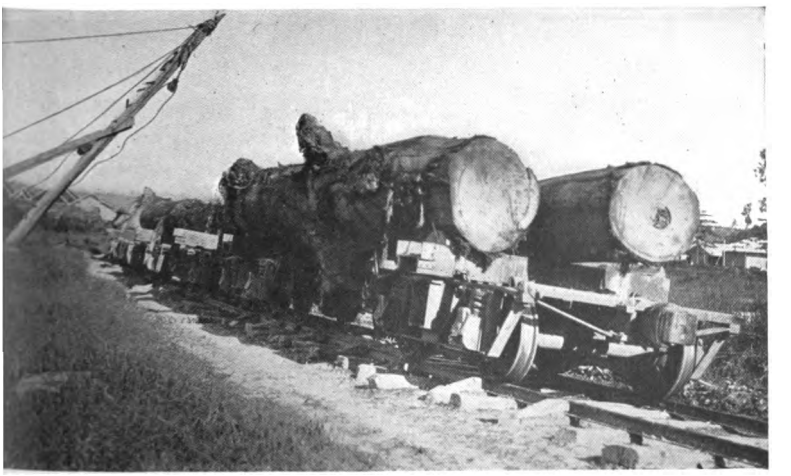
And when the money came tumbling in—
  In bales like hay by the ton,
I got the same old seven per day
  As formerly I had done.

This may be right between man and man
  Or it may be wrong as well—
For now the owner gets two for one
  And I get the same old ——— (deleted).

An Oriental Mill

These two photographs are doubly interesting from the fact that they come rom the opposite side of the world. They have travelled a long way since hey were taken on an island in the far-off Indian Ocean. They were sent by ne of our foreign sawmill friends from Sinabang, North West Sumatra.

Here American Saws (DISSTON, by the way) and American sawmilling ıethods are being rapidly introduced in lumbering and sawing. The upper hotograph shows the mill, which has been replaced by a larger one that is ılly equipped with the most up-to-date American machinery and is perated under the most approved American methods. At the bottom of the age appears a trainload of teak logs, on their way to the mill, which will ive a good idea of the timber Disston Saws are successfully felling and utting up.



Watch the Braze

THE braze is the weakest part of a band saw, and as such should be subjected to constant and close inspection. The reason why it is the weakest part of the saw is because the braze itself and about one inch each side of it is bound to be milder in temper than the rest of the saw—a quite common opinion among filers to the contrary notwithstanding.

It would seem that a slight consideration on the part of those who contend that a braze can be fully tempered would suffice to dispel the impression, but it seems to persist. As the temperature necessary to prepare the braze for a high temper would melt the solder, it is obvious that only a comparatively mild temper can be secured.

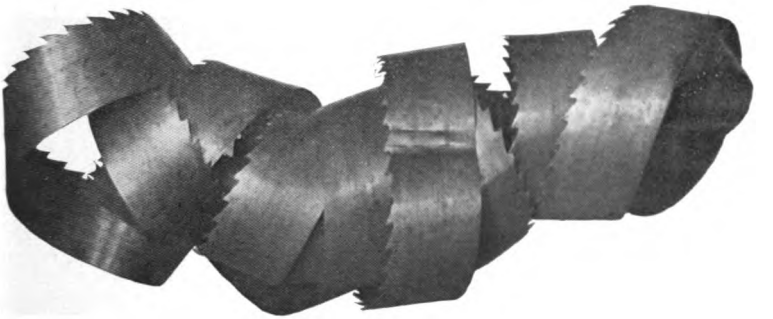
The original temper of the saw is drawn by the hot irons in brazing. After this all that can be done is to finish the braze and then stiffen it, but it is impossible to secure the original high temper.

As the material right at the braze is milder than the rest of the saw, it naturally follows that the braze will pull tension quicker than any other part. It is also liable to bends when changing saws on the wheels or handling them in the filing room; therefore the braze should be carefully examined after every run. If necessary it should be levelled and tensioned before placing on the wheels again, otherwise a crack in the braze will quickly result. When this occurs, the braze should be immediately re-made, as there is always much more danger attending a crack of this kind than one in the body of the saw.

Some filers follow the practice of punching a crack in the braze just as in any other part of the saw. While this sometimes proves successful it is not good practice because it usually does not overcome the trouble and subjects the saw to great risk of further breakage at the braze besides placing the operators in danger of serious injury.

Breakage at the braze will be practically eliminated if rigid inspection is made after each run and any indication of weakness or tension pulling corrected before it has a chance to develop.

Not a Fracture!



Twisted Band Saw

THIS saw, through an accident in the mills of J. H. Hightower, Atlanta, Ga., was bent and twisted in the shape shown in photograph. The fact that it is now practically a spiral coil without a fracture shows the great tenacity and elasticity of the steel in the "Disston Band Saws."

Elbert Hubbard on Initiative

The world bestows its big prizes, both in money and honors, for but one thing.

And that is Initiative.

What is Initiative?

I'll tell you: It is doing the right thing without being told.

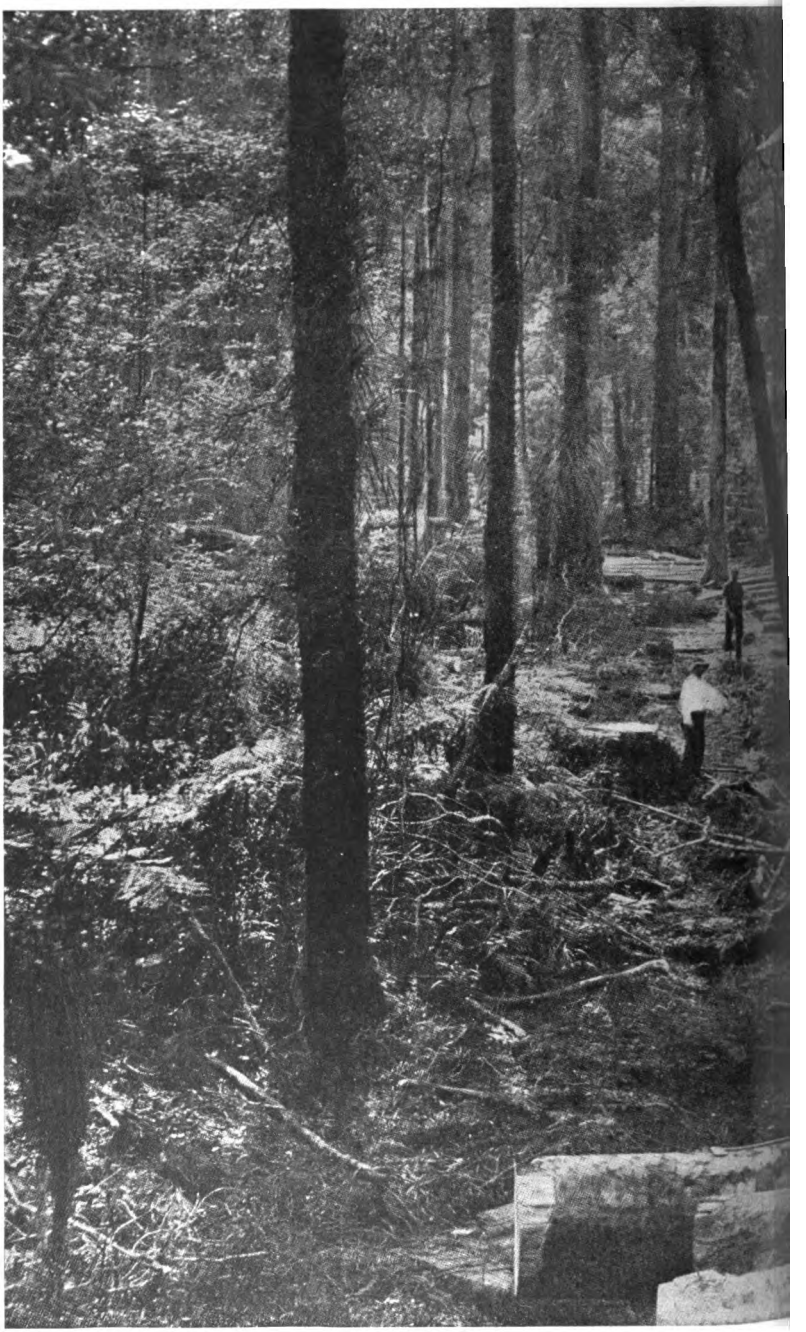
But next to doing the thing without being told is to do it when you are told once. That is to say, carry the Message to Garcia: those who can carry a message get high honors, but their pay is not always in proportion.

Next, there are those who never do a thing until they are told twice: such get no honors and small pay.

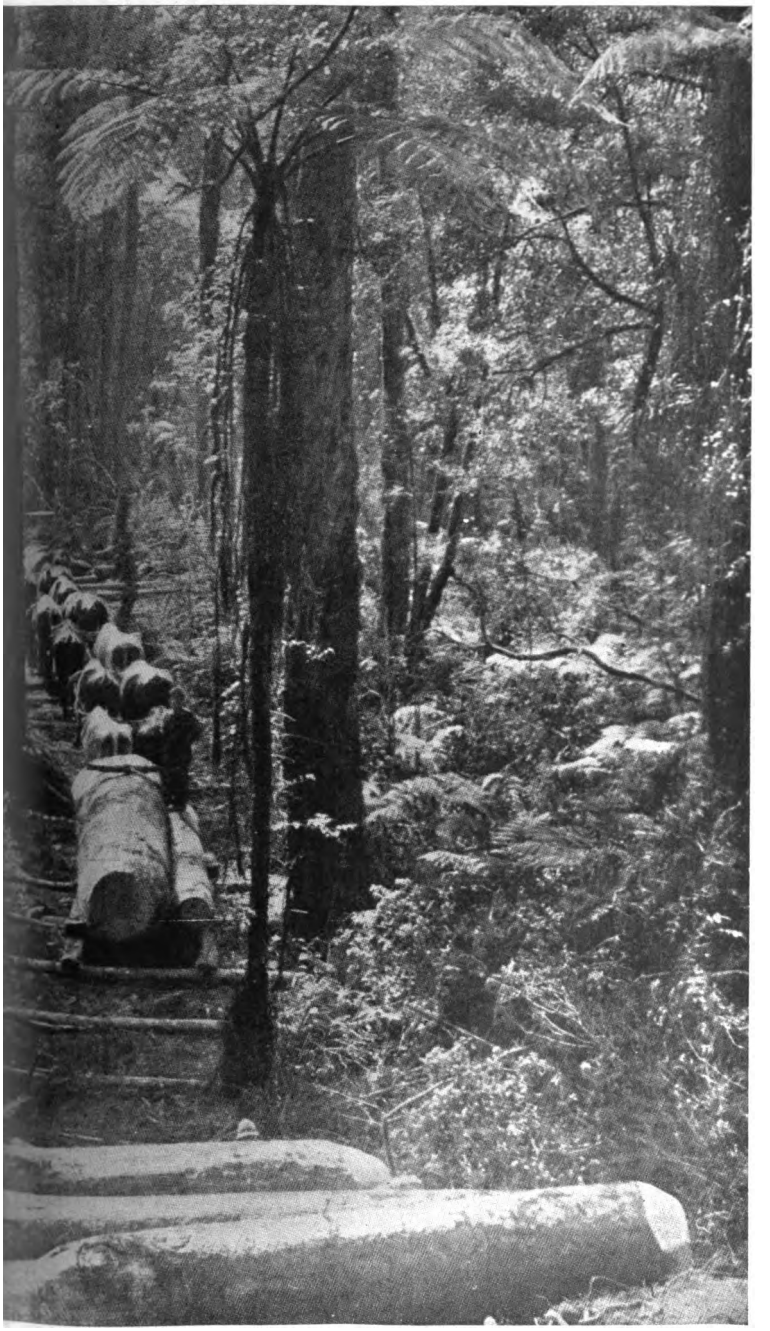
Next, there are those who do the right thing only when necessity kicks them from behind, and these get indifference instead of honors, and a pittance for pay. This kind spends most of its time polishing a bench with a hard-luck story.

Then, still lower down in the scale than this, we have the fellow who will not do the right thing even when someone goes along to show him how and stays to see that he does it: he is always out of a job, and receives the contempt he deserves, unless he happens to have a rich Pa, in which case Destiny patiently awaits around the corner with a stuffed club.

To which class do you belong?



Clearing the forest in New Zealand, hauling logs
of the No



a corduroy road in the beautiful bush country
sland

(Courtesy Auckland Weekly News

Bur Oak

(Quercus Macrocarpa)

From "American Forest Trees"

THIS splendid oak was named by Michaux, a French traveler and botanist who visited many parts of eastern and southeastern United States more than a century ago. The botanical name *macrocarpa,* means "large fruit." The bur oak bears small acorns in the North, and very large ones in the South. They are sometimes two inches long and one and a half inches wide, and "large fruit" oak is an appropriate name for the tree in the South, but would not be near the northern limit of its range.

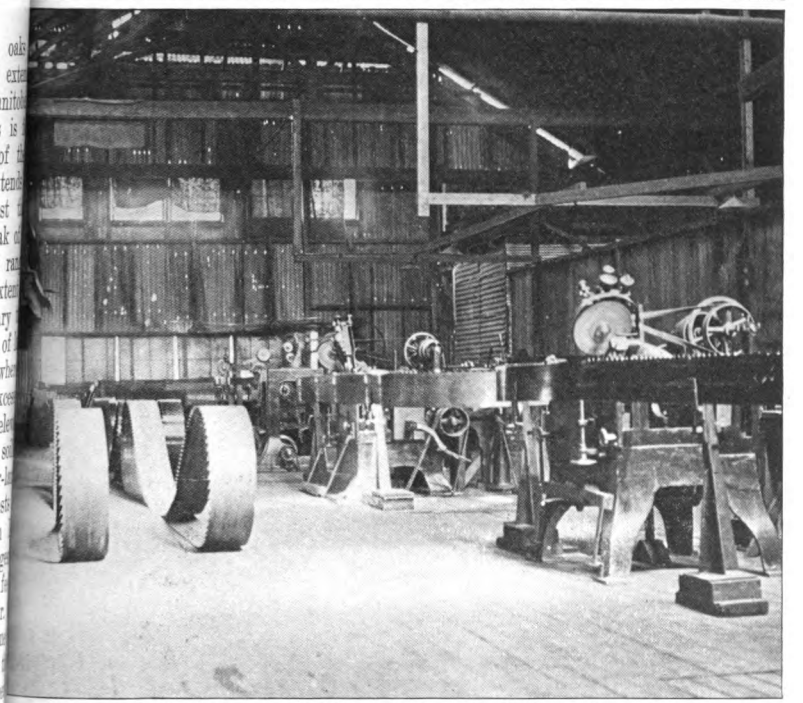
It is known in different regions as bur oak, mossy cup oak, overcup oak, scrub oak, and mossy cup white oak. Bur oak is a name suggested by the acorn, which has a fringe round the cup like a bur. This is the oak which gave name to James Fenimore Cooper's book, "Oak Openings," a romance of early days in Michigan. Oak openings were areas where fires had killed the old timber, and a young growth had sprouted from stumps and roots, or had sprung up from seeds buried in the ground beyond the reach of the fire. Some of those tracts were very large, and they were not confined to any one state. They existed in Michigan, Wisconsin, Minnesota, Dakota and elsewhere. Bur oak, because it is a vigorous species, was able to take possession of such burned areas, to the exclusion of most others.

Few American oaks h wider range. It extends Nova Scotia to Manitoba, the United States is fou most states east of the Mountains. It extends f west and northwest than other commercial oak of th lantic states. In a range great geographical extent th oak finds it necessary to itself to many kinds of land prefers low tracts, where is sufficient but not excessive it grows well in more elevate uations, provided the soil i tile. It is not a poor-land In the primeval forests it tained largest size in Indi and Illinois. The largest were from 150 to 170 feet and 4 to 7 in diameter. S varied from that extreme d to the other extreme near the skirts of its range, where growth was stunted. Large qu tities of very fine logs have b cut from trunks from two four feet in diameter, and fo to sixty feet to the limbs.

The leaves of bur oak are f six to twelve inches long, sim and alternate; the petioles thick with flattened and enlar bases; the leaves are wed shaped at the base, and have fr five to seven long, irregular lob the terminal one very large a broad. They are dark green color, and are smooth and shi above, silvery white and pub

(Continued on page 126)

An Antipodean Filing Room



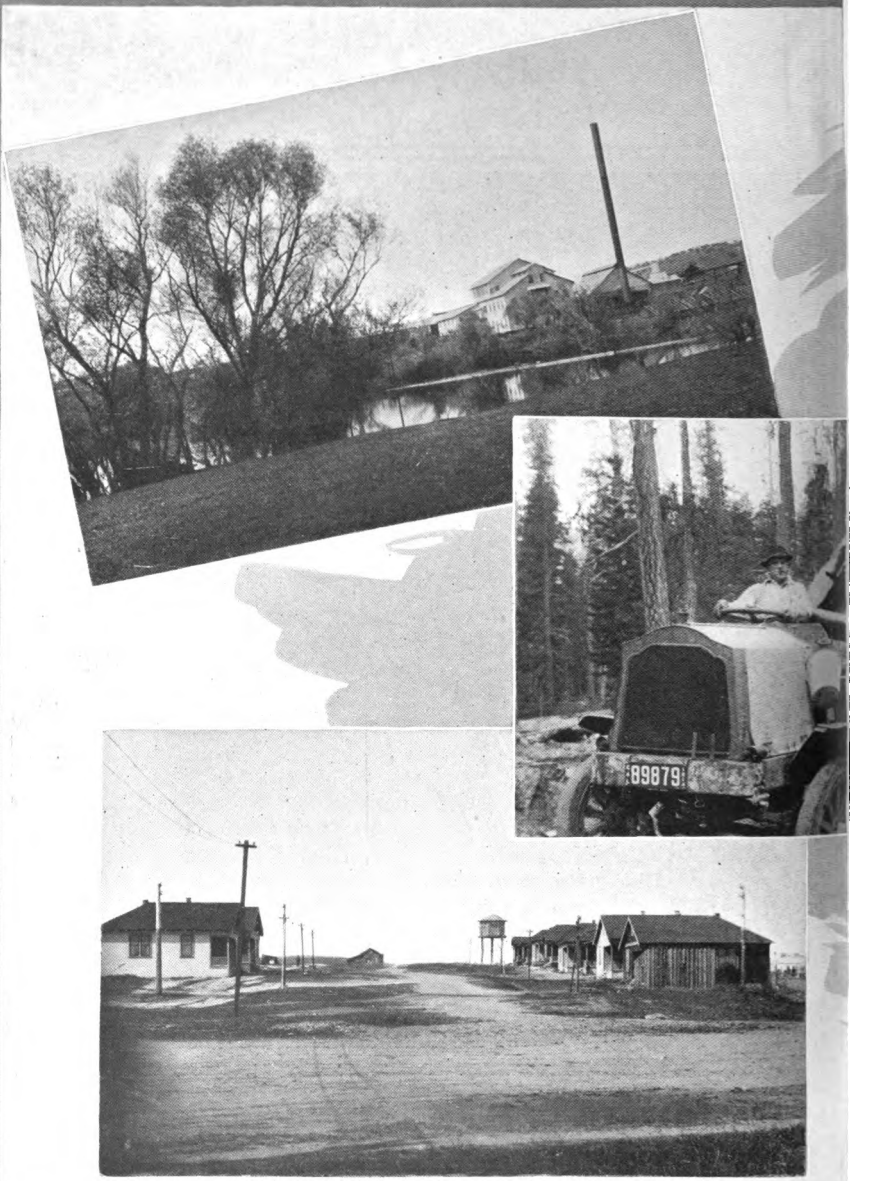
Filing Room of Geo. Hudsons & Sons, Ltd., Sydney, Australia

Disston's Tug-of-Warsmen

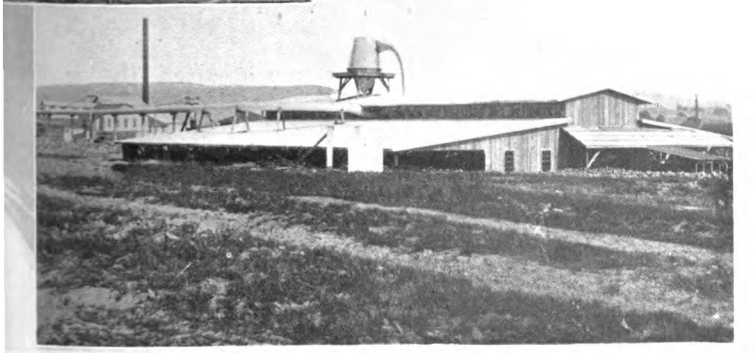
WHILE they have not as yet had an opportunity to meet outside competition, the tug-of-war team of the Disston Steel Works is firmly of the belief that it is invincible. In all inter-department contests in the Disston Plant the Steel Works team has carried off the honors with hardly an exertion. They would be glad if arrangements could be made for outside competition in the tug-of-war and will welcome any correspondence which might lead to a match.

It should be borne in mind by any team that takes these men on, that they get their exercise pulling 100-pound crucibles from the furnaces, and that the big demand for Disston Saws gives them plenty of training.

Address communications to the Advertising Manager.



Yosemite Lumber Co., Merced Falls, Cal.,



Equipped with Disston Saws from the Outset

Bur Oak—(*Continued from page 122*)

cent below. The edge of the leaf is notched somewhat like chestnut, but the teeth or notches are not so sharp.

The twigs are provided with corky wings, or flattened keels of bark, along their sides. Some of the wings are an inch or more wide. They are apt to escape notice when the tree is in leaf, but in winter the bare twigs look rough and ragged.

The weight of bur oak is approximately the same as white oak, and the two woods are much the same in strength and elasticity. The bands of summerwood are broad and dense, and the spring wood is filled with large pores. The medullary rays are broad, but not numerous in comparison with white oak. They are sufficiently conspicuous to show well in quarter-sawing.

Bur oak nearly always goes to market as white oak, or simply as oak, and it is difficult to ascertain all the uses found for it. Some factories which make furniture, finish, vehicles, and other articles that figure in the country's trade, attempt to identify the woods they use. That is done as carefully in Michigan as anywhere else, though comparatively few of the factories carry out the plan even in that state, where many of the best wood-using establishments of the country are located. In a report issued in 1912, which gave statistics collected from more than eight hundred Michigan factories, bur oak received separate consideration. The uses there are doubtless representative and will hold throughout the country wherever bur oak is fairly abundant. It is listed as baseboards, billiard table rims, bookcases, clay working machines, filing cabinets, furniture, hand sleds, hay balers, interior finish, molding, tinplate boxes, wagon sills, work benches. The amount of wood used in the state was nearly 900,000 feet, according to the reports; but it certainly does not include all. What it does show, however, is that bur oak is one of the substantial woods of that region, and that it possesses properties which fit it for many important places in the country's industries.

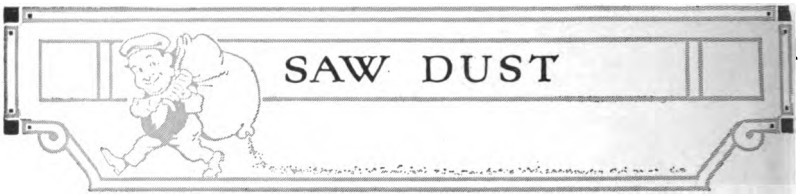
Bur oak contributes to the output of cooper shops. Slack coopers class it with many other hardwoods for the manufacture of barrels for vegetables and various other commodities, while the makers of barrels for liquids put bur oak in with white oak.

The future of bur oak does not promise much after the trees which now remain have been cut. That does not mean that the species will become extinct, for that is improbable; but when the mature trees which developed during two or three hundred years of forest conditions have passed away, there is not much prospect of others being left to grow to the age and size which will make them valuable as lumber. Woodlot owners will not wait much longer than the seventy-five or one hundred years required to grow trees of crosstie size.

DISSTON CROSSCUT SAWS

For Speed,
Ease,
Economy
in Felling and Bucking

DISSTON
SAWS AND TOOLS



At a Caledonian banquet in London a Scotsman who had settled in the metropolis made a speech, in which Scotland and all things Scottish were so fulsomely praised that an Englishman who sat next him said when he had finished:

"If Scotland is all that you Scotsmen say it is, why don't you stay there instead of coming here?"

"Weel," answered the Scotsman, "Ah'll tell ye hoo it wis wi' me. When Ah wis in business in Fife Ah fand a' the fowk wis just as cliver as mesel', an' Ah cudna gar the two en's meet. Sae Ah came awa' Sooth, an' sin' syne, man, Ah've been daein' rale weel."

Men sit around a tool-chest quarreling about saws and planes and chisels. They are not building anything, they are debating about tools. They are fit to be a theological seminary.—*Beecher, Adapt.*

INQUISITIVE GENTLEMAN — Dear me! Have you been wounded?

TOMMY—Oh, no; I was cleaning the bird-cage, sir, and the canary kicked me.

MORE LIKELY

"Any rags? Any old iron?" chanted the dealer, as he knocked at the suburban villa. The man of the house himself opened the door.

"No, go away," he snapped, irritably. "There's nothing for you. My wife is away."

The itinerant merchant hesitated a moment, and then inquired: "Any old bottles?"

King Solomon and King David
Led merry, merry lives,
With many, many lady friends
And many, many wives;
But when old age crept over them,
With so many, many qualms,
King Solomon wrote the Proverbs
And King David wrote the Psalms.

THIS WAS IMPORTANT

He was a very small boy. Paddy was his dog, and Paddy was nearer to his heart than anything on earth. When Paddy met swift and hideous death on the turnpike road his mother trembled to break the news. But it had to be, and when he came home from school she told him simply:

"Paddy has been run over and killed."

He took it very quietly. All day it was the same. But five minutes before he had gone to bed there echoed through the house a shrill and sudden lamentation. His mother rushed upstairs with solicitude and pity.

"Nurse says," he sobbed, "that Paddy has been run over and killed."

"But, dear, I told you that at dinner. and you didn't seem to be troubled at all."

"No; but—but I didn't know you said Paddy. I—I thought you said daddy!"

A CHILLY DAY

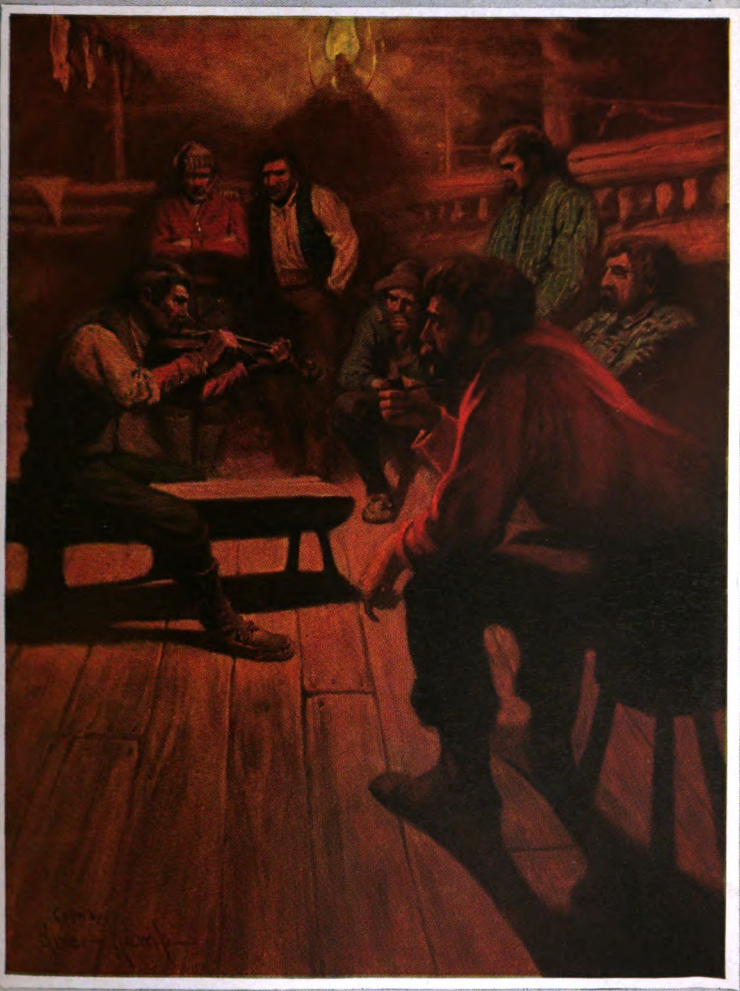
Little Willie from the mirror
Licked the mercury all off,
Thinking in his childish error,
It would cure the whooping cough.

At the funeral, Willie's mother
Sadly said to Mrs. Brown:
"'Twas a chilly day for Willie
When the mercury went down."

A little girl whose father was a commercial traveler sat on the porch holding a kitten and, creeping close, her mother heard this:

"Kitty," said the young miss, "I know you an' I know your mamma, an' I know all your little brothers an' sisters, but I ain't ever seen your papa." Then, after a brief pause, "I spec' he must be a commercial traveler."

THE DISSTON CRUCIBLE



OCTOBER 1917

THE DISSTON CRUCIBLE

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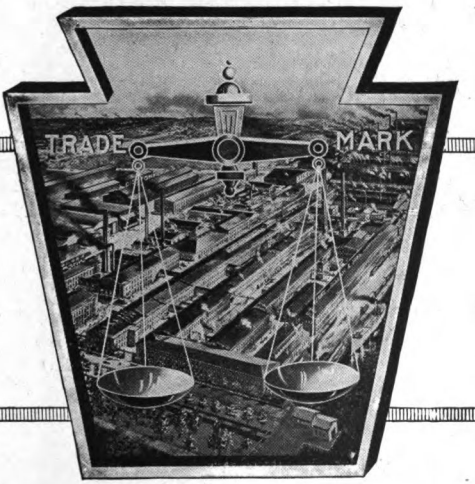


This Magazine is Published for the Advancement of the Interests of Millmen by

HENRY DISSTON & SONS

INCORPORATED

Keystone Saw, Tool, Steel, and File Works

PHILADELPHIA

BRANCH HOUSES:

Chicago, Ills. Boston, Mass. Cincinnati, Ohio. Seattle, Wash. Portland, Oregon. New Orleans, La. Memphis, Tenn. San Francisco, Cal. Sydney, Aus. Vancouver, B. C. Canadian Works, Toronto, Canada.

LIVE OAK—(Quercus Virginiana)

From "American Forest Trees"

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VI | OCTOBER, 1917 | No. 9

EDITORIAL CHAT

IF we had put a title on this editorial it would have killed its chances of being read because it's on the ancient and venerable subject of co-operation, so much talked about—and largely taken out in talk. That's why it still holds the world's long distance title for inspired effusions.

From a purely selfish standpoint, a man's best chance of progress and success lies in an intelligent dovetailing of his own efforts with those of his colleagues. If this were only understood there would be no dearth of co-operation; the element of selfishness is fairly common.

Let those who are relying entirely in their individual efforts ask themselves what they would think of an army sent into battle without any training. Their own chances are no better on the battlefield of business. The army is drilled and trained until every order is executed with the utmost precision of concerted action. Then it is fit for effective service. Could the armies of the Kaiser (*strafe* him) have held out for three years against the rest of the world if the individuals composing them had not been schooled for years in the most intense kind of co-operation?

Co-operation isn't relaxing individual effort and drifting along on the momentum of the organization. An army would not be particularly formidable whose men each relied on the rest to do the work. It's individual effort that keeps it from being annihilated and also that wins promotion and honor, but it is individual effort intelligently striving for the objects of the whole.

Consider your own organization in the light of an army. Don't deprive it of any part of the full measure of your support by failure to work in complete harmony with the other units of the organization. Supremacy in the field of commerce demands unity of purpose and action just as on the field of battle. And don't forget that the richest rewards are shared by the most successful—in both cases.

Dudley Tells

Pioneer Lumbering and its Development

By an old timer, W. E. DUDLEY

JUST a few minutes over the old trail outlining the development of one of the largest industries in the United States, the lumber industry, aggregating approximately an output of forty-five billion feet, with the salable value of Nine Hundred Million Dollars annually, also citing the important part the manufacturer has taken in the developing of improved devices in logging and saw mill equipment.

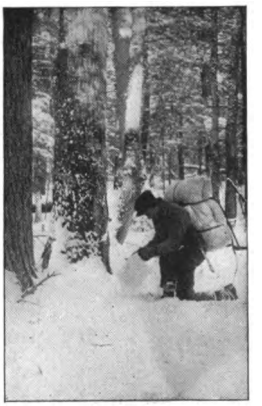
The Lumberman, unlike the average manufacturer, while living and working close to nature, left development of improved devices to the manufacturer of the various lumber equipments and they in turn submitted the equipment to him for his approval. When approved by him it was adopted for the lumberman's general use. One of the pioneers in these developments, working and bringing forth most essential logging and sawmill equipment was Henry Disston, the developer of the cross-cut saw, circular saw and band saw.

To relate in detail the whole story would take volumes to print and days to read, so we will just cite a few of the essential means of the progress of the lumberman in the last fifty years.

The most important man in the history of the lumber business is The Timber Cruiser, shown in the illustrations. A hardy, courageous and fearless man, who knew no limit to his endurance and integrity. His word was his bond, and was relied on with as much faith as our Government bond is to-day. He is a character that has become almost extinct, and it is a rare treat when you have an opportunity nowadays to shake the hand of one of the old veterans.

His duties were to roll up his blankets and cooking utensils, attach his packing straps and shoulder a one-hundred pound pack of provisions and in company with his compass-man, he would either walk or canoe his way up the various streams into the virgin forest to be gone days and months, looking over and estimating the timber and the chances for logging the following winter. On his return to his employer, he would render his report of the amount, quality and chances to log, upon which depended whether the lumberman would send his logger with a crew that fall into that particular section. If he stated that it was a good lay-out and everything favorable, then the lumberman would

figure on that particular tract for his year's supply and if not, he would set out to look up one that was favorable. The success of the lumberman those days depended wholly upon the cruiser's word and judgment. Then came the outfitting for the winter's work.



The lumberman would call in his foreman. He, as a rule, was "*some man*," for he had to be to gain the title of a woods foreman. He had to possess excellent stature and physique and to have absolute control over his men to keep harmony and peace among a crew of hardy frontiersmen, in the woods, miles from civilization from September to the following June, was no easy task. It was a rare occasion, that a man ever came down or quit in the meantime. Speaking of the great pine forests of Michigan, Wisconsin and Minnesota fifty years ago, the lumber-jack those days made a specialty of woods work and took pride in striving to be the best man in his particular line.

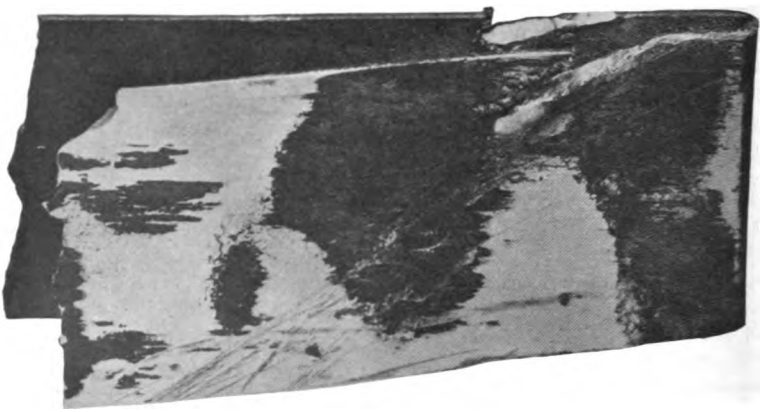
We reproduce here an exact likeness, recently taken in Lincoln County, Wisconsin, of the lumberjack of fifty years ago, in the act of felling timber with an improved, up-to-date Disston high-grade cross-cut saw.

Speaking of the foreman's orders, when called in, the lumberman would say: "Well, Bob, we are going to log on the Tomahawk this winter, and you will bank your logs at the Half Breed Rapids. I think that would be the proper place to build your camps, but you can decide when you get there. You need about fifty men and eight yoke of cattle. Now get things together in a hurry and get up there as soon as possible and see if you can make a record for yourself this winter." These being his final orders, he starts to round up his men and teams. After getting them all together, picking out the best of them to pole the canoes loaded down with their winter supplies, consisting of salt-pork, beans, prunes, flour, molasses, and Peerless tobacco, they start out, some of the men driving the cattle along the old toat-road which followed the river banks and the canoe-men working their way slowly up the stream, stopping at the various portages where all hands turned in and packed their supplies and canoes around the rapids. It was not uncommon for a lumber-jack to carry a 200-pound barrel of pork on his shoulders over the portage. Eventually arriving at their destination they would roll up their log camps for the winter, cut and put up hay in stacks along the river bottoms for the cattle during the winter, and prepare in general for the winter's work.

They used the fireplace to cook, heat and light with. Their logging tools consisted of axes, peavys, chains and travoys. The axe was used exclu-

(*Continued on page 142*)

Spring Steel Hit by a Disston



THIS piece of flat spring steel was encountered by a Disston Saw in the box factory of George E. Keith Company, Campello, Mass. The saw was a 19-gauge band resaw. The only damage done was to take the corners off the teeth. The saw was reground and refitted, and when again put in service showed no worse for the experience.

This is considered the more remarkable as the test was much more severe than if the metal had been solid. The vibrating and chattering of *both* sides of the spring would have destroyed any but a saw of highest quality.

Live Oak

(Quercus Virginiana)

From "American Forest Trees" *Copyright Hardwood Record*

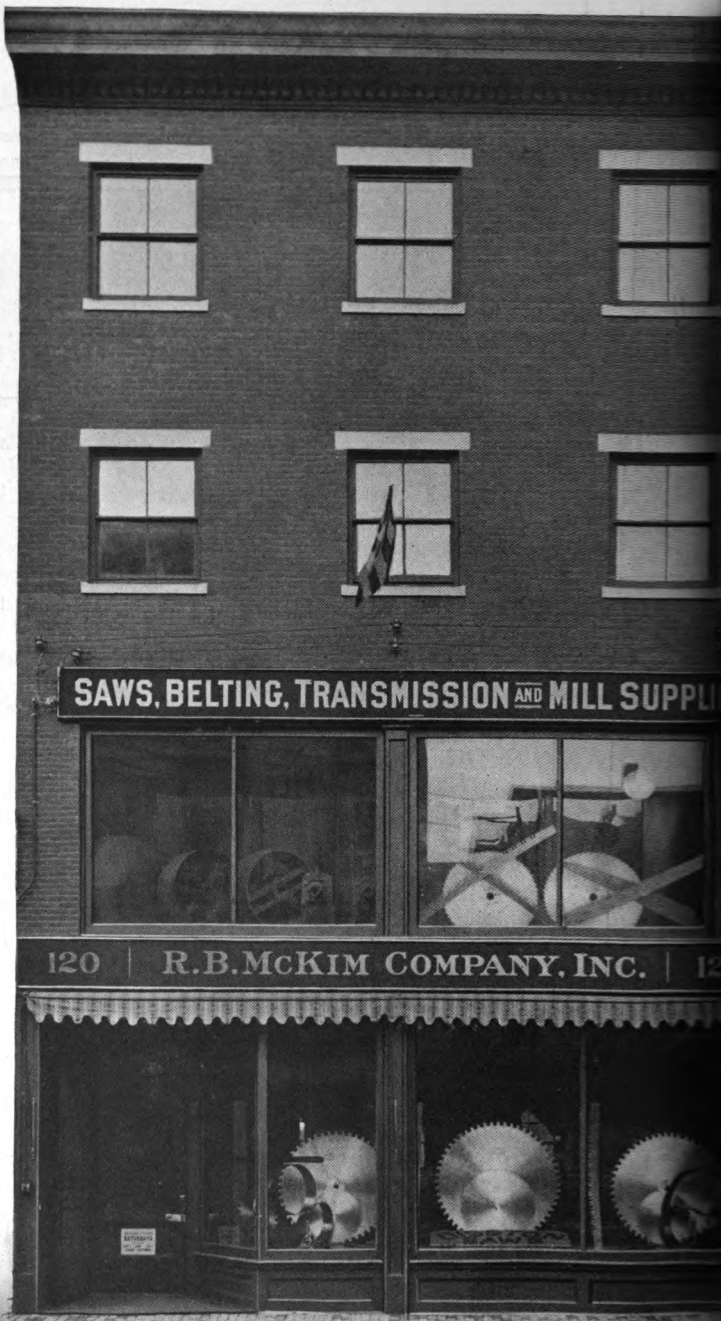
THE history of this live oak is a reversal of the history of almost every other important forest tree of the United States. It seems to be the lone exception to the rule that the use of a certain wood never decreases until forced by scarcity. There was a time when hardly any wood in this country was in greater demand than this, and now there is hardly one in less demand. The decline has not been the result of scarcity, for there has never been a time when plenty was not in sight. A few years ago several fine live oaks were cut in making street changes in New Orleans, and a number of sound logs, over three feet in diameter, were rolled aside, and it was publicly announced that anyone who would take them away could have them. No one took them. It is doubtful if that could happen with timber of any other kind.

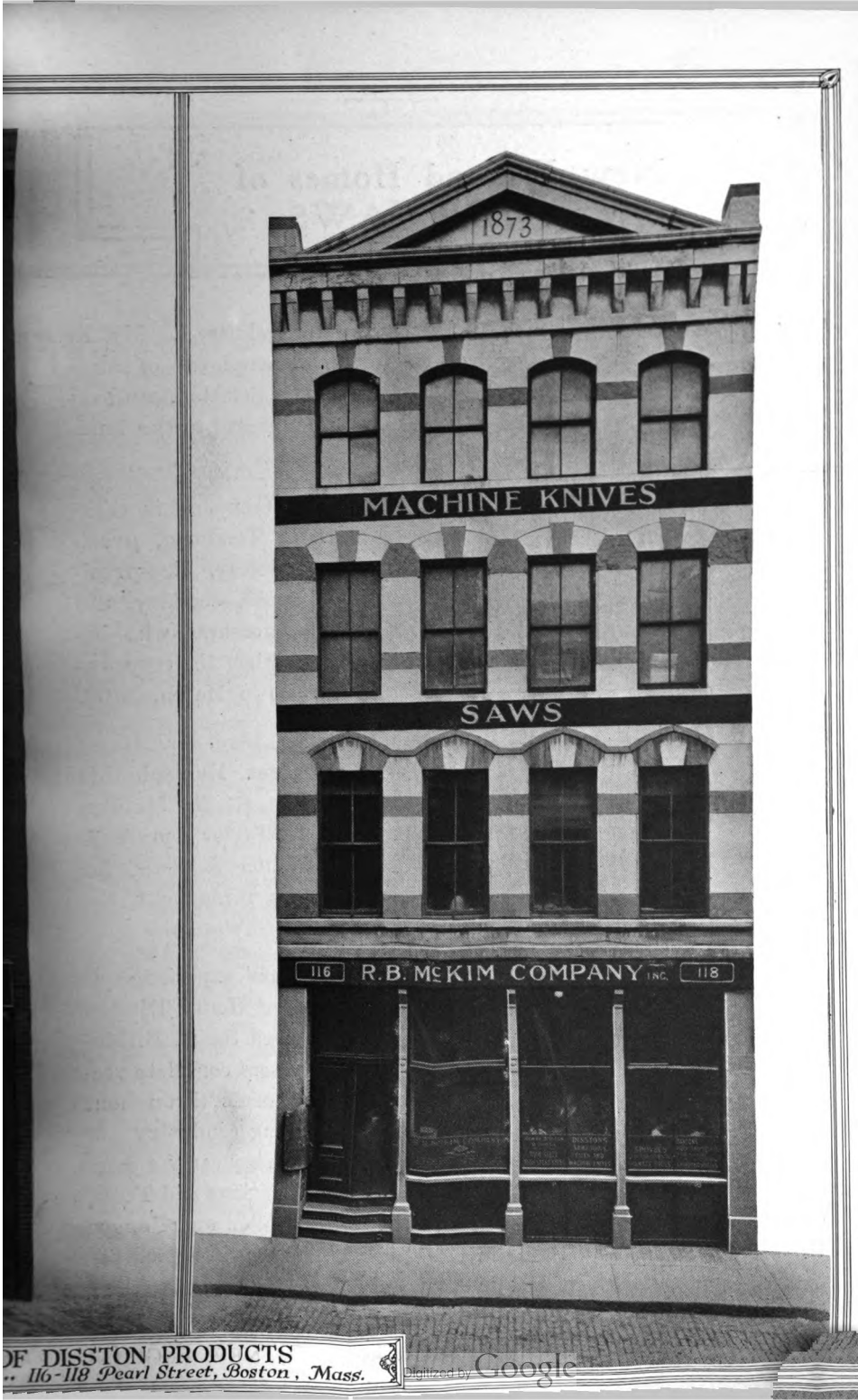
The situation was different 120 years ago. At that time live oak was in such demand that the government, soon after the adoption of the constitution, became anxious lest enough could not be had to meet the requirements of the navy department. The keels of the first war vessels built by this government were about to be laid, and the most necessary material for their construction was live oak. The vessels were to be of wood, of course; and their strength and reliability depended upon the size and quality of the heavy braces used in the lower framework. These braces were called knees and were crooked at right angles. They were hewed in solid pieces, and the largest weighed nearly 1,000 pounds. No other wood was as suitable as live oak, which is very strong, and it grows knees in the form desired. The crooks produced by the junction of large roots with the base of the trunk were selected, and shipbuilders with saws, broadaxes, and adzes cut them in the desired sizes and shapes.

When the building of the first ships of the navy was undertaken, the alarm was sounded that live oak was scarce, and that speculators were buying it to sell to European governments. Congress appropriated large sums of money and bought islands and other lands along the south Atlantic and Gulf coast, where the best live oak grew. In Louisiana alone the government bought 37,000 live oak trees, as well as large numbers in Florida and Georgia. In some instances the land on which the trees stood was bought.

Ship carpenters were sent from New England to hew knees for the first vessels of the navy. The story of the troubles and triumphs of the contractors and knee cutters is an interesting one, but too long for even a summary here; suffice it that in due time the vessels were finished. The history of those vessels is almost a history

(Continued on page 141)





OF DISSTON PRODUCTS
116-118 Pearl Street, Boston, Mass.

New England Homes of DISSTON SAWS

NEW ENGLAND is rightfully known as the playground of America. Her mountains, lakes, seacoast and fine roads bring thousands of visitors yearly to the hosts of resorts dotting the countryside. Its scenic grandeur is considered by many its greatest asset, yet before the advent of the Lumber Barons, wooded hills and mountains and shaded valleys offered greater beauties.

The woodworking industry of New England in normal years produces and manufactures timber and lumber valued at $100,000,000. Santa Claus uses in his toy shop wood products valued at $6,000,000. And the shipbuilding industry of New England uses wood to the value of $5,000,000.

Immediately after the great Boston fire in 1872, H. O. Stratton established the New England headquarters for the Disston Saws on Oliver Street. Successive locations followed at 159 Franklin Street, 112 Pearl Street, and in the year 1897 the business was located at 118 Pearl Street. Mr. R. B. McKim was employed as salesman by H. O. Stratton, and in July, 1894, succeeded to the business by purchase.

The present Company is composed of C. D. Woodman, president; J. A. McKay, vice-president; W. H. Banks, secretary, and A. E. Martin, treasurer, who became members when the corporation was formed in March, 1909.

In November, 1916, Mr. Abner Taylor, of Bangor, Me., sold his business to the R. B. McKim Company. Mr. Taylor represented Henry Disston & Sons for thirty-one years throughout the State of Maine.

Forty-five years' experience as representatives of Henry Disston & Sons have given the R. B. McKim Company very complete records of requirements throughout the woodworking industry of New England. They carry a complete stock of our Saws and Tools, both in their Boston and Bangor stores, and are thus in a good position to give the trade excellent service.

It's a Bear!

WE heard indirectly that H. J. Otten, one of our New England salesmen, was having some interesting experiences down in Maine. We wrote and asked him to drop us a line about em, and the following letter is his reply. Otten certainly can't complain of uneventful monotony:

BANGOR, ME., Sept. 1, 1917.

HENRY DISSTON & SONS, INC.,
Philadelphia, Pa.

GENTLEMEN:

Some of the roads in Maine east and north of Bangor are cut through real wild lands, and a Disston saw salesman driving the "machine," or, as we term it here (our source of menial labor) through the woods, will have some novel and interesting experiences.

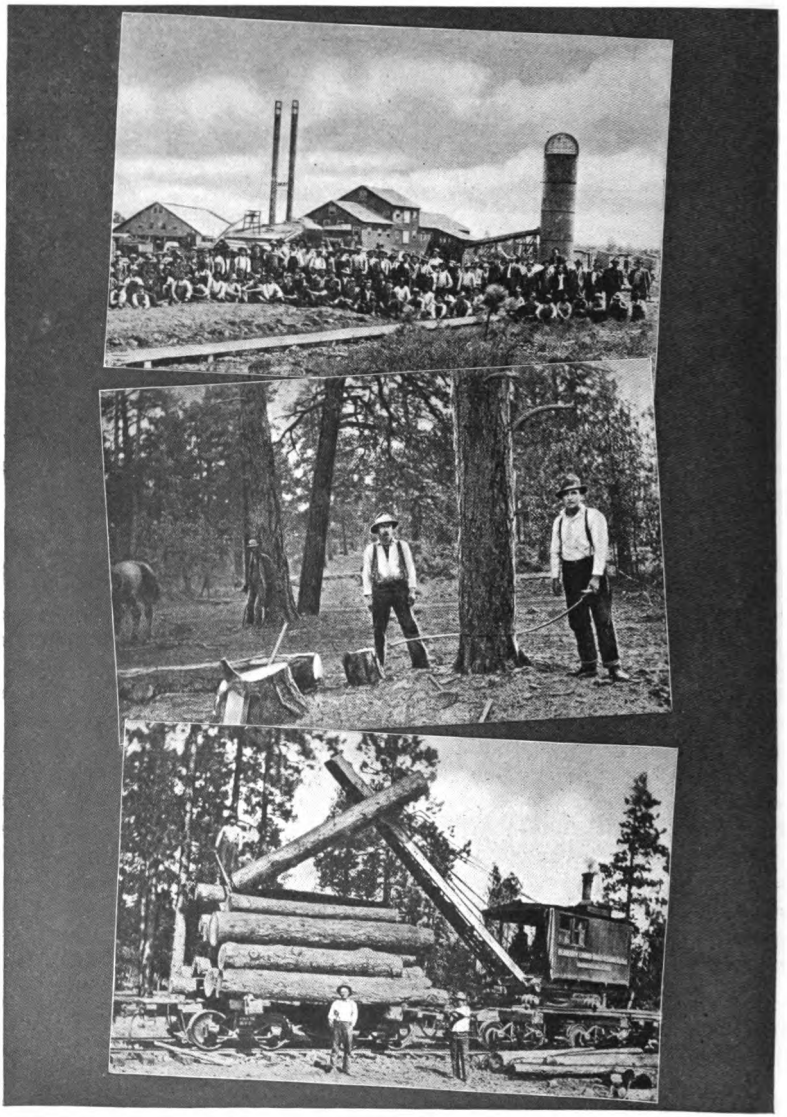
This is the "Closed Season" on most birds and beasts, and to illustrate how bold the "denizens of the forest" are at such times, Victor A. Peavey and I rode in the Ford from Portage Lake to Ashland and "Started" a splendid buck, who was in the clearing at the edge of a woods, and ran across our road to another clump of woods at least 150 yards. His horns were in "velvet," and it will be a long time ere we again see so pretty a sight. Again; while driving the "Overland" through Island Falls woods, from Smyrna Mills to Island Falls, I was driving slowly over the rough road in the woods, and just as I turned a bend in the road I came upon a splendid specimen of black bear. Although "gunning" for orders for Disston Saws, I had no rifle with me, so stopped the machine and left the engine running slowly and awaited "Bruin's" pleasure or displeasure. Bro' B'ar pretended to take very little notice of anything, and as casually as you please he began to walk up the road a little, then being sure that he had clear sailing he dodged into the woods like a flash. I waited about five minutes more before again starting the car—or, rather, it took me that long to get over the "rise" that beast took out of me, and called that another experience.

Thus while roaming on the "firing line," preaching the gospel—Disston Saws *ARE* better! witness some of your salesman's experiences.

Yours very truly,

H. J. OTTEN.

Flagstaff Lumber Mfg. Co. and Scenes Near Flagstaff, Ariz.



Live Oak—(*Continued from page 135*)

of the early United States navy. Among their first duties when they put to sea was to fight French warships, when this country was about to get into trouble with Napoleon. They then fought the pirates of North Africa, and there one of the ships was burned by its own men to prevent its falling into the hands of the enemy. "Old Ironsides," another of the live oak vessels, fought fourteen ships, one at a time, during the war of 1812, and whipped them all. Another of the vessels was less fortunate. It was lost in battle, in which its commander, Lawrence was killed, whose last words have become historic: "Don't give up the ship." Another came down to the Civil War and was sunk in Chesapeake Bay.

The invention of iron vessels ended the demand for live oak knees. The government held its land where this timber grew for a long time, but finally disposed of most of it. Part of that owned in Florida was recently incorporated in one of the National Forests of that state.

Live oak is a tree of striking appearance. It prefers the open, and when of large size its spread of branches often is twice the height of the tree. Its trunk is short, but massy, and of enormous strength; otherwise it could not sustain the great weight of its heavy branches. Some of the largest limbs are nearly two feet in diameter where they leave the trunk, and are fifty feet long, and some are seventy-five feet in length. Probably the only tree in this country with a wider spread of branches is the valley oak of California. The live oak's trunk is too short for more than one sawlog, and that of moderate length. The largest specimens may be seventy feet high and six or seven feet in diameter, and yet not good for a sixteen-foot log. The enormous roots are of no use now. When land is cleared of this oak the stumps are left to rot.

The range of live oak extends 4,000 miles or more northeast and southwest. It begins on the coast of Virginia and ends in Central America. It is found in Lower California and in Cuba. In southern United States it sticks pretty closely to the coastal plains, though large trees grow 200 or 300 feet above tide level. In Texas it is inclined to rise higher on the mountains, but live oak in Texas seldom measures up to that which grows further east. In southern Texas, where the land is poor and dry, live oak degenerates into a shrub. Trees only a foot high sometimes bear acorns. In all its range in this country, it is known by one English name, given it because it is evergreen. The leaves remain on the tree about thirteen months, following the habit of a number of other oaks. When new leaves appear, the old ones get out of the way.

The wood is very heavy, hard, strong, and tough. In strength and stiffness it rates higher than white oak, and it is twelve pounds a cubic foot heavier.

(*To be Continued*)

Pioneer Lumbering—(*Continued from page 133*)

sively for felling and cutting up. The chain and travoy were used for hauling the logs to the river banks. In the spring, when the ice went out the logs were started down the river by the same crew as a rule, and driven to the mill, there to be cut the following summer and rafted into fleets and floated to St. Louis, the great lumber market of that day.

The first improvement was to change from cattle to horses. That took several winters to decide which was the best. Eventually the horses won out. Then came ice-roads and large sleighs. The cross-cut saw was introduced, which they finally "allowed" was all right to cut up with but was no good to fell the timber. It was a crude instrument at that time, but the continued progressive spirit of Henry Disston, the founder of the saw manufactory, soon had a saw made in such a neat, light, fast-cutting form that finally it was adopted generally. Now the axe is used very little in falling and cutting timber. In the mills they were using the up and down jig-saw, driven by water power. Finally the mill manufacturer was introduced to a circular saw made by Henry Disston, who had to devise a mill that would turn a circular instead of an up-and-down saw. Then came the manufacturer of logging machinery who had devised the steam machinery to log and skid on the ground, also over-head on cables to the railroad track, doing away with the river driving, enabling the lumberman to log the year round and not have to carry a year's stock of logs ahead and sometimes, on account of low water during seasons of drought, be unable to get sufficient logs down to his mill. Also the progressive saw manufacturer was studying means of cutting logs faster than the circular and effecting a saving in the saw curf, so, while in France in 1866, Henry Disston brought back with him the first band saw ever made—⅜-inch wide, and with this he experimented until he introduced to the mill-manufacturer an up-to-date band saw which compelled the mill manufacturer again to devise a machine to use the band saw instead of the circular saw which is now in use throughout the world.

Henry Disston & Sons have been walking hand-in-hand with the lumberman all through this progressive era, and by close co-operation with the lumberman, giving him the benefit of his success as a saw-maker, the lumberman has been the means of the Henry Disston & Sons becoming the largest saw manufacturers in the world.

In another photograph is shown an up-to-date lumber-jack making, in forty-two seconds, a cut in a hemlock 24 inches in diameter. This indicates the extent to which the cross-cut saw has been developed, to the mutual benefit of the lumbermen and Henry Disston & Sons. To-day they have for the lumberman high-grade cross-cut saws so finely manufactured in every detail that the average sawyer can saw off a cut in less seconds than an average expert axeman could ever cut in the same number of minutes.

Wants Disston "Somewhere in France"

IT'S kind of tough to be way over in France and be homesick for a Disston Saw. The following clipping from the Paris edition of the New York *Herald* indicates how strongly "U. S." felt on the subject.

In ordinary times he could have got one "around the corner" in France as easily as he could here, because the Disston reputation and distribution is world-wide. What with submarines, embargoes, etc., however, stocks of Disstons in France are probably a little depleted.

WANTED: AN AMERICAN SAW

PARIS, Feb. 12.

TO THE EDITOR OF THE HERALD:—

DEAR SIR—Can any of your readers tell me where I can buy an American saw, preferably a "Disston"? I don't mind sawing wood. The exercise is excellent, but a French saw rather tries my patience. I have never found one that was properly sharpened and pointed. U. S.

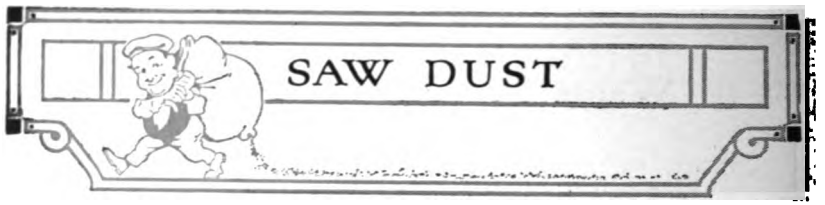
SUPPOSE

If all that we say
In a single day,
With never a word left out,
Were printed each night
In clear black and white,
'Twould prove queer reading, no doubt.

And then just suppose
Ere one's eyes he could close,
He must read the day's record through.
Then wouldn't one sigh,
And wouldn't he try
A great deal less talking to do?

And I more than half think
That many a kink
Would be smothered in life's tangled thread,
If one-half that we say
In a single day
Were left forever unsaid.

—*Author unknown.*



CATASTROPHE

An old negro was riding on the train and fell asleep with mouth wide open. A mischievous drummer came along, and, having a convenient capsule of quinine in his pocket, he uncorked it and sifted it well on the old negro's palate and the root of his tongue. The old darky, awakening, became much disturbed. He called for the conductor and asked: "Boss, is there a doctor on this here train?"

"I don't know," said the conductor. "Are you sick?"

"Yes, sir, I sure am sick. I sure am sick."

"What's the matter with you?"

"I dunno, sir; but it tastes like I busted my gall."

A music publisher the other day received from a young girl in one of the small towns a touching little ballad of her own composition, entitled, "I Wonder if He'll Miss Me?"

He returned the effort to the sender with the following note:

"Dear Madam: If he does, he ought never to be trusted with firearms again."

A woman owned a fine greenhouse, but she was rather ignorant of her flowers by their botanical terms. One day she was showing the greenhouses to a woman friend who did know the flowers by their Latin names, and she thought she would have some fun.

"Have you any 'Septennis Psoriasis'? asked the friend.

"No," answered the woman, not to be stumped; "I had it and gave it to our minister, and it came out beautifully in the spring."

But, after her friend left, she went to a Latin dictionary to see what "Septennis Psoriasis" meant. She found out! It meant the seven-year itch!—*Ladies' Home Journal.*

"There was a man who loved the bees.
He always was their friend;
He used to sit upon their hives,
But they stung him in the end."

DRAMATIC BRICKLAYER

Otis Skinner narrates an incident in support of the idea that the poetic spirit is sometimes contagious. A Shakespearian company was rehearsing for an open-air production of "As You Like It" near Boston, and the garden wherein they were to play was overlooked by a rising brick edifice. As the players recited their lines, the workmen continued to lay their bricks. One afternoon, during a silent pause in the rehearsal, the players were startled to hear a voice from the building exclaim with the utmost gravity: "I prithee, Malapert, pass me yon brick."—*Argonaut.*

NOMINATION DECLINED

An Italian, having applied for citizenship, was being examined in the naturalization court.

"Who is the President of the United States?"

"Mr. Wils'."

"Who is Vice-President?"

"Mr. Marsh'."

"If the President should die, who then would be President?"

"Mr. Marsh'."

"Could you be President?"

"No."

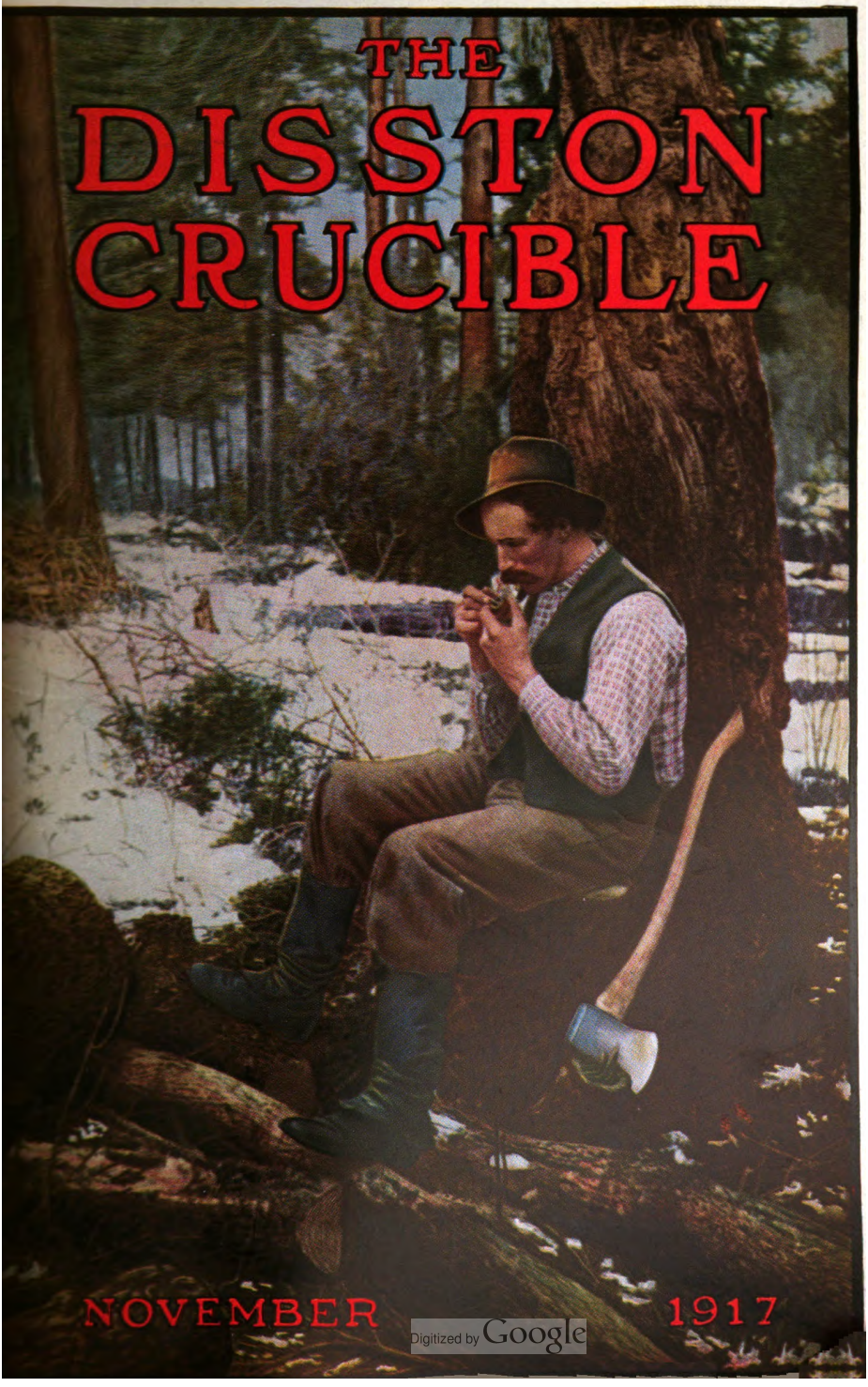
"Why?"

"Mister, you 'scuse, please. I vera busy worka da mine."—*Everybody's.*

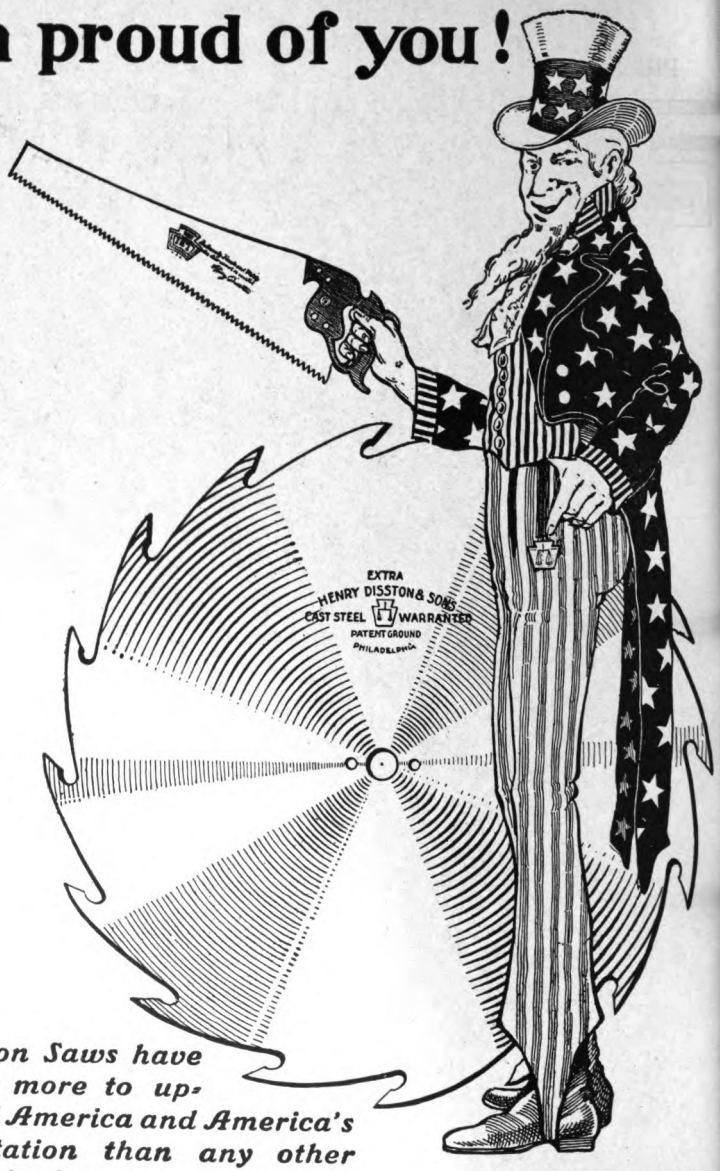
SOFT MUSIC, PLEASE

Willie loved mother and hated to leave her,
But what could he do with typhoid fever?

For two weary hours the small boy had howled, and the other occupants of the crowded railway carriage were getting tired of it. "Oh, dear," moaned the young mother distractedly, "I really don't know what to do with the child." A sudden gleam of hope shone in the eyes of the old bachelor opposite. "Shall I open the window for you, madam?" he inquired politely.



I'm proud of you!



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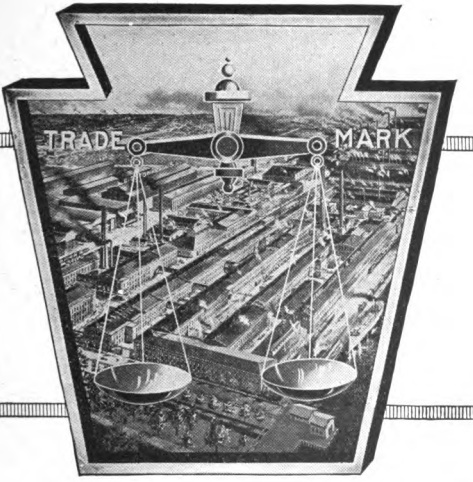

This Magazine is Published for the Advancement of the Interests of Millmen by

HENRY DISSTON & SONS
INCORPORATED

Keystone Saw, Tool, Steel, and File Works

PHILADELPHIA

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Delano Mill Company, Portland, Maine

(See page 148)

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VI NOVEMBER, 1917 No. 10

EDITORIAL CHAT

Teamwork

A VITAL necessity for the continued success of any organization or association, whether it be business, sports, social, political or otherwise, is the "pulling together," mentally and physically of all concerned.

Style it teamwork, co-operation or whatnot, there must be on the part of all a long pull, a strong pull and a pull all together, time after time, until finally there is gained the powerful, continuous stroke that gives, maintains and ever increases the mighty impetus which carries all before it.

The man who by his actions creates the impression that teamwork means he is simply to hold the reins while the others are to act as horses, he is the one who puts out every spark of life. But, given an active, considerate leader or director whose whole heart and soul is in the work, his very zeal and industry has a compelling power in producing a like interest by the team, engendering that spirit of enthusiasm and activity which lightens the heaviest task and causes each and everyone to willingly perform his full share of the work.

The concentration of real skill, earnest and strong individual effort under the direction of practical experience and high intelligence, forms a combination of force that is irresistible in any undertaking.

Quality Tells

A Bit of History

THE Delano Mill Company, Portland, Me., has a history extending back some sixty years. This Company is the outgrowth of the Bethel Steam Mills Company which began its business career on Commercial Street in the early fifties, Mr. Samuel W. Larrabee then acting as treasurer. A few years later the name of the concern was changed to S. W. Larrabee & Co., then to C. N. Delano Co., again to Delano & Winslow, then again to W. L. Delano & Co. Incorporated at this time, the Company did business under the name of the Delano Planing Mills Co., and lastly, a reorganization, the Company is now known throughout New England as the Delano Mill Company. Mr. F. C. Dudley is the present president and treasurer, with Mr. Richard D. Shea directing its management.

The Company has enlarged its plant several times and now they have entirely outgrown their present quarters and a new mill, a model in its way, is now being constructed on St. James Street. This mill will be one of the largest wood working mills in the State. Its location, near the Maine Central Railroad, will make perfect its shipping facilities, inasmuch as its customers are scattered all over the New England States. The Company employ at this time about seventy-five experienced workmen and when finally located in their new plant this number will be greatly increased.

The Delano Mill Company manufacture practically everything in the building line for houses, stores, banks, churches, public buildings, etc.

About the J. H. Snyder handsaw stamped with steel die "HENRY DISSTON" which was shown to "Billy" Markland, January 24, 1917

"My, my," said Mr. Markland, when he took the saw out of the bag, "this is an old one. Look at the stamp, that tells its age. See the old-style screws! Even the handle shows that it was made in the days of hand-made handles.

"This saw is at least sixty years, and I can't say how much older. I would like to have a dollar for every one I branded with that stamp in my boyhood days."

He looked it over, bent it, sighted down the teeth, and it would have done your heart good to see how this veteran sawmaker fondled the old saw, then, finally, bending the blade, he put the point through the hole in the handle, saying, as he let the blade spring out straight, "that's what you call Disston temper.

"And what a great advance they have made in the work. In the early days the blades were hardened in a furnace having a bed of red-hot coals covered with a sheet of steel or iron which crinkled up from the heat, then the man grasping the saw blade with a pair of long-handled tongs placed it in the furnace, turned it over and over a number of times, pulled it out for examination now and then and, finally, when his experienced eye determined the color was right—a cherry red—he plunged the blade in the hardening bath. And what a peculiar shaped blade it was when taken out—all curled and twisted. Why it took a smither those days anywhere from twenty minutes to an hour to straighten one of these old-time hardened and tempered blades, while with the Disston method to-day they come out almost flat and require only a little smithing, and that's all the better, for the less hammering in smithing the better for the blade.

WILLIAM MARKLAND
85 years
When I started, Henry Disston employed but a mere handful of men.

"I remember, years ago, one of the men was curious enough to count the number of blows he had to give one of these twisted blades and it was over three thousand. Think of it. Over three thousand blows, and this only on one operation. Why if they had to make saws the old way now, they would cost their weight in gold, because so few could be turned out in a day."

Looking at the saw again, he started laughing. "Well, well," he said, "this certainly brings back old times. There's good stuff in the Disston saws, I'll vouch for that, for I've handled many thousands of dozens of them."

"Billy" Markland commenced working for Henry Disston in 1850, and some few years ago retired on the honor roll of long service.

The Care of Saws

WHATEVER the nature of the business considered, the prime essentials for success are practical experience and adequate equipment. The former can be acquired in time by patient study of the subject, greater and quicker progress being gained by a knowledge of the general experience of others, backed by personal experiment and practice: while the latter may be purchased from manufacturers of tools and machinery, whose particular duty and aim is to ever improve their own product.

Lack of proper equipment and facilities, however, is a great handicap, no matter how skilled or able a man may be. This applies with especial force to the filing room.

With these facts in mind and also considering the diversity of opinion and methods, often controlled by individual ideas and theory, in writing this article on the "Care of Saws," the information and instructions here given are based on actual working conditions and are the result of long practical experience.

Conditions, of course, vary and it is impossible to lay down hard and fast rules covering every contingency; nevertheless these instructions are fundamental and applicable with modification according to the circumstances.

Though the many large saw mills have up-to-date and completely equipped filing rooms and expert filers, it is surprising to note the number of medium size and small mills that lack even the most necessary appliances for refitting their saws.

No matter how small the mill and output, it will be found advantageous to have a man connected with the mill who has a good understanding of repairing and fitting saws, and where the production approximates 15,000 feet daily, or 10,000 feet for a saw and planing mill, the employment of a good filer with proper equipment certainly pays, especially if his duties include those of mill foreman.

In any event, every saw and knife must be re-sharpened and given attention from time to time, whether the work be done at the mill or by an outside filer.

In the case of sending them outside for repairs, then it is a safe guess the saws and knives will be kept at work on the mill until they are so dull they will not cut freely, which is the principal cause of breakage. Little or no consideration is given to the liability of the dull saw cracking, nor the lessened output, or poor quality of product which is the inevitable result. The operators' chief idea seemingly is that of keeping the saw running until it can't go any longer.

It must be remembered that the life and efficiency of the saws depend as much on the accuracy of the setting and sharpening as upon the quality of the material and temper in them. Further, all working parts of the machine should be in true alignment, all bearings well babbitted, properly adjusted and lubricated.

A little thought and figuring will show that running dull tools is extremely costly; for the summing up must include the loss in production, the difference in value of the poorly manufactured lumber, the extra waste, the forcing of the saw or knife racking the mill or machine, lessening its term of life or causing breakage, and then eventually a greater expense for refitting the saw or knife which must be done sooner or later.

On the other hand, given a well-equipped filing room in connection with the mill, and a capable filer, it is an easy matter to maintain the saws and knives in such excellent condition that the mill is kept continuously running and giving the maximum output of well-manufactured lumber. This satisfactory state of affairs can be attained only by exercising due care and promptly refitting the saws and knives *at the first sign of becoming dull.*

Less work is required to resharpen a half-dulled saw twice than a very dull saw once, and if resharpened when only half dull the saw is continuously nearer the 100 per cent. efficiency mark as to fitting and results.

It cannot be too strongly urged that saws and knives, as well as any other cutting implement, must be kept sharp to do good work. Not only do they cut

to better advantage, but the work of refitting, if done at the proper stage, tends to promote the life and efficiency of the entire outfit—the men included.

To those employed in a saw mill the scene is so familiar that it apparently lacks in significance, yet the swiftly revolving, keen-toothed circular saws entering the huge logs as though no obstruction whatever stood in their way, zip and a section is cut off with ease and celerity; the quick motions of the men and the working of the various machines in converting the logs into staves and heading in the modern cooperage mill, all form a curious and wonderfully interesting sight to the visitor.

First we see the great quantity of logs on the mill pond or skidway, then glancing along we see them, one after another in continuous procession taken up the incline, by means of a conveyor chain. Reaching the mill deck, the log is "kicked" off the haul-up chain by a steam appliance known in saw mills as a "kicker" or loader. Sideways, the log falls on the conveyor chain or "hedgehog" and is fed under the drop saw.

In the cooperage mill there is a scene of intense action. The drop sawyer apparently acting as though stepping on hot stones, hops on a foot lever, then on another, at the same time pulling a lever on the right, next shoving one on the left, in the endeavor to keep the log in continuous motion; down drops the swiftly revolving 72-inch circular saw, cutting off in few seconds a 20-inch or 30-inch section of the big log; forward goes the log, pushing along the section; a kick of the foot brings up the "stop," which quickly kicks up the cut section; and while in mid-air, as it were, it is grasped by a man with pike and hook and without pause is rolled or bounced to either the bolters or the heading machines, which is determined by the length of the section.

The bolting operator grabs the section of log with a hook, places it on the carriage of the bolter, a quick acting short-log saw mill, and here again is a swiftly revolving 60-inch circular saw which first splits the short log in half, then in quarters, sixths or eighths, as required. These are called "Bolts."

The shorter section is passed to the sawyer operating the heading saw, where the stock is reduced to suitable thickness of board for slack barrel heads. This is usually accomplished by a horizontal or a pendulous carriage machine. With the latter, the section of log is placed on the carriage, which is swung by hand-feed toward the saw and a board is rapidly cut off, then the carriage swinging back again, the stock is moved into position for another cut, and so on until the stock is entirely cut up. This machine is capable of making twenty or more cuts a minute.

Some understanding of the push and activity on this work may be had from the fact that the bolting and heading sawyers are trying to keep up with the drop sawyer, and the latter always endeavoring to get ahead of the former; and as it takes but a few seconds to cut off a section of log, that neither falls far behind shows they are going some.

While for general sawing, 10,000 feet rim speed per minute of a large saw is considered the maximum, in a cooperage mill the conditions are different and the duty required of the saw extremely difficult, for here the speed is high, the action fast and the lumber hard; the saws being subjected to a severe shock every time they start a cut—the large saws making as many as six to ten cuts per minute through a log.

Bearing on the matter of speed, in some cooperage mills, the drop saws 60 inches or larger in diameter, are run at about 700 revolutions per minute; the 56-inch heading saws at 1,300 revolutions per minute; the "lay down" bolter saws at 750 revolutions per minute, and the upright bolters at 850 revolutions per minute, while the stave choppers are making 160 cuts per minute. In referring to this, however, it must not be construed that we advocate such excessive speed of saws.

Under these circumstances, therefore, it naturally follows that it is absolutely necessary to have the saws "put up" and continuously maintained in the best possible condition for highest results and longest life.

"BUZZ"

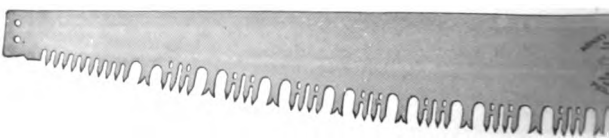
A New Record for DISSTON

In the illustration will be seen a section of a white oak tree, which started to grow in the State of New Jersey in 1827. It grew on the grounds of the Interstate Fair Association at Trenton, N. J., and was felled for the purpose of making demonstrations of Disston high grade cross-cut saws at the annual fair held September 24 to 29, 1917.

The section in the illustration measures 15½ inches, and was cut by a six-foot Disston Suwanee Cross-Cut Saw in the record time of nineteen seconds; later on in the tests when the tree had been reduced to a section measuring 13½ inches, a piece was cut from it with a Buzz Cross-cut Saw in fourteen seconds. The sawing was done by the Dudley brothers of Henry Disston & Sons, and illustrates the possibilities of the Disston high grade cross-cut saws.

This tree is the hardest kind of

"SUWANEE"



"BUZZ"

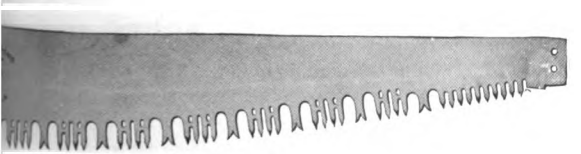
High Grade Cross-Cut Saws

white oak, and the cutting, approximating 1 inch a second, demonstrates the advisability of the use of a high-grade saw of this character, when the operator desires to save time and labor.

"Fitting the teeth"—a very important item—was accomplished with the use of the Disston Imperial cross-cut saw tools, the hand anvil and the No. 1 setting hammer and the 7-inch Imperial cross-cut saw file.

All of the demonstrations by the Dudley brothers at the Fair were watched closely by large interested crowds of spectators, many of whom admitted that they would have deemed such rapid cutting an impossibility had they not seen it with their own eyes.

Many of the spectators were not satisfied until they had tried the saws themselves, and all were delighted at the ease of the cutting, and the rapidity with which the saw dropped through the log.



"SUWANEE"

Extracts from letter of Walter Gebhart

From "Somewhere in France"

Walt is one of the many boys taken by Uncle Sam from Disston Saw Works.

IT'S a long, long way from "home," and, believe me, I know it. A full month without news from town, so one realizes how wide the Atlantic Ocean is. We have located in a lovely part of France. The weather is about the same as when we were in Phila.

I must say we knew something when we linked up with the French people. They are the greatest people you ever ran into. Can't do enough for you. Actually, I never was showered with so much hospitality in all my life. They are exceedingly polite. We are in very comfortable quarters here and as an instance of hospitality, there is an old woman here at the barracks, I would say not less than seventy years old, and when, after dinner, we took our dishes to the kitchen to have them washed, she almost was indignant over the fact that we started to wash them ourselves. She said in French, "My boys, my boys," took the dishes from us, a crowd of about twenty, washed them and then thanked us for letting her do it. They are giving us the best of food. Today for dinner we had beef soup full of bread, beef steak and mashed potatoes. For supper we had meat and potato stew and beef soup again. The beef soup is called bouillon and they have it every meal. Now you can tell why we are in good health. They serve beer with all meals; at breakfast you can have coffee, so you can figure on me not drinking anything for meals for some time. I just finished talking to two French soldiers. They walk along the halls of our barracks, look in the door and just wait for you to ask them to come in. I asked these two boys and they jumped in like bullfrogs. Have talked with them about half hour. It may seem funny to say I talked, but nevertheless I did. You see, I bought a French conversation book while in England and it helps out a great deal. Then again there are a few French soldiers who have gathered the English language from being near where it was spoken the last three years and they are willing to sit by the hour and teach you French. It is hard to understand but I am getting along real well. Last night one of my Masonic friends went out with me for supper. We had two suppers apiece of roast pork, mashed potatoes, all the bread you could eat and he had a quart of wine. The four suppers and all cost us $1.25; now can you beat that? Don't worry about us getting thin. I think I am gathering close to the 170-pound mark at this writing. Now, I tell you that is some flesh. You should see me eat.

The French officers are the greatest fellows you ever met. Just as anxious

to help us out as one of the privates of the army. Was talking with one last night for about half hour.

You should come to France if you care to see flowers. The flowers here beat anything that I have ever seen, and, ahem! I've traveled some. But the fact is they are great. Roses are wonderful. Their farms I say cannot be surpassed. There are some unique facts about the farms of England, but for real farms France takes the ribbon. If I could write all I knew and have seen it would take you a week to read my letter, but the trips, etc., must be well guarded and it's up to us boys to keep them so. Saw a building today that is over three hundred years old.

The churches are immense buildings. They have everything in America skinned to a frazzle. I used to think the Cathedral on Eighteenth Street above Race was some big church, but it's only a primary room to what they have over here. If the people of America could get a glimpse at them, they would not quiver every time they were asked for a hundred dollars to get the roof fixed or something like that. You could set our church in the entrance of the church which is very near us. Am going to a service this Sunday if I get a chance. I imagine that it will be worth seeing.

Just over my head is a great saw. They have taken pieces of steel and filed teeth in them. Drilled holes in the backs of the pieces and then nailed them on a piece of board. You should see it. Some saw.

Am writing by the light of a good, old-fashioned American lamp. I have charge of quarters tonight, which accounts for my being in.

The wine shops are a great thing. Open right out on the streets. No windows; just open, that's all. Walking along the streets as I did last night, all you need do is just walk in from the pavement and you're there. Gay old places.

So far I have written at least once a week. You may get them all together, but we should worry.

Played baseball this morning. Can run now as good as ever I could, so you know this life is building me up inside and out.

Tell everybody you heard from me and that I was asking about them. George White and his car would go good now.

Am getting sleepy, so think I shall steal a nap.

Answer to "Saw Mill Man's Dream"

By W. B. MARTIN

The following verses have been received from Mr. W. B. Martin, Cass, W. Va., in reply to the poem "The Saw Mill Man's Dream," which appeared in the July issue of the CRUCIBLE:

I have read your dream and I wish to say
  I have seen your dream come true,
For I worked for that man many a day
  The long ten hours through.

And when the money came tumbling in—
  In bales like hay by the ton,
I got the same old seven per day
  As formerly I had done.

This may be right between man and man
  Or it may be wrong as well—
For now the owner gets two for one
  And I get the same old ——— (deleted).

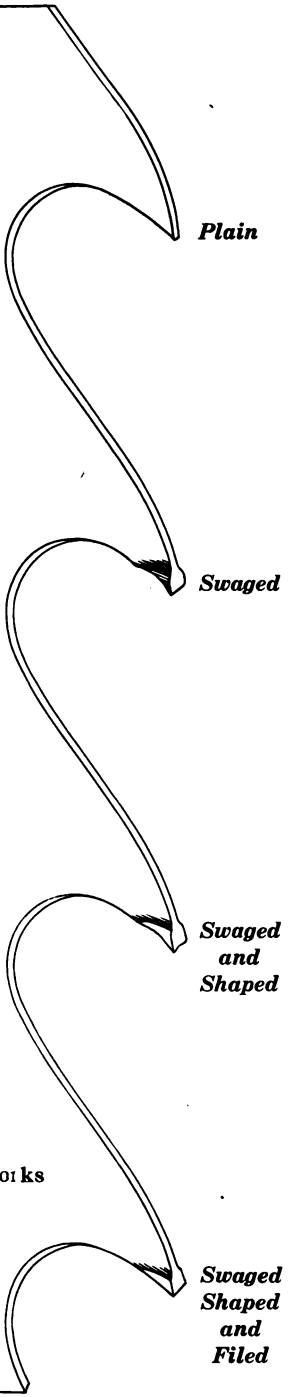
The above appeared in September issue of Disston CRUCIBLE and is repeated for the reply of Mr. W. S. Wood, of Lawrence, Kansas, as follows:

"Mr. Martin possibly forgets how regular HIS PAY HAS BEEN, no matter whether the stock he manufactured was selling or not. If he had gone without his SEVEN in the time when the owner was making no living, then he might have a valid claim to some of the profits coming when the mill output began to move with a good margin."

"Above is all very true,
  But Martin must remember, too,
That when the owner was blue, blue, blue,
  And never could squeeze for himself a sou,
Martin got his seven just when 'twas due,
  And could sleep through the night
With no GHOST to say 'SHOO!!
  Get up here quick and pay that TWO!!!' "

A superior quality of saw steel must possess to the highest degree that perfect combination of ductility and toughness which will enable it to successfully withstand the extremely severe strains given in the "fitting-up" processes of swaging and shaping the teeth.

That's DISSTON QUALITY



Henry Disston & Sons, Inc.
Keystone Saw, Tool, Steel & File Works
Philadelphia, U. S. A.

Live Oak

(Quercus Virginiana)

From "American Forest Trees"

Continued from October

THE sapwood is light in color, the heartwood brown, sometimes quite dark. The pores in the sapwood are open, but many of them are closed in heartwood. The annual rings are moderately well defined. The large pores are in the springwood, and those of the summerwood are smaller, but numerous. The medullary rays are numerous and dark. Measured radially they are shorter than those of many other oaks. They show well in quarter-sawed lumber, but are arranged peculiarly, and do not form large groups of figures; but the wood presents a rather flecked or wavy appearance. The general tone is dark brown and very rich. It takes a smooth polish. When the wood is worked into spindles and small articles, and brightly polished, its appearance suggests dark polished granite, but the similitude is not sustained under close examination. Grills composed of small spindles and scrollwork are strikingly beautiful if displayed in light which does the wood justice. Composite panels are manufactured by joining narrow strips edge to edge. Selected pieces of dressed live oak suggest Circassian walnut, but would not pass as an imitation on close inspection. It may be stated generally that live oak is far from being a dead, flat wood, but is capable of being worked for various effects. Its value as a cabinet material has not been appreciated in the past, nor have its possibilities been suspected. It dropped out of notice when shipbuilders dispensed with it, and people seem to have taken for granted that it had no value for anything else. The form of the trunks makes possible the cutting of short stock only; but there is abundance of it. It fringes a thousand miles of coast. Many a trunk, short though it is, will cut easily a thousand feet of lumber. Working the large roots in veneer has not been undertaken, but good judges of veneers, who know what the stumps and roots contain, have expressed the opinion that a field is there awaiting development.

Published reports of the uses of woods of various states seldom mention live oak. In Texas some of it is employed in the manufacture of parquet flooring. It is dark and contrasts with the blocks or strips of maple or some other light wood. It is turned in the lathe for newel posts for stairs, and contributes to other parts of stair work. In Louisiana it is occasionally found in shops where vehicles are made. It meets requirements as axles for heavy wagons. Stone masons' mauls are made of live oak knots. They stand nearly as much pounding as lignum vitæ. More live oak is cut for fuel than for all other purposes. It develops much heat, but a large quantity of ashes remains.

The live oak is the most highly

valued ornamental tree of the South, though it has seldom been planted. Nature placed these trees where they are growing. Many an old southern homestead sits well back in groves of live oak. Parks and plazas in towns have them, and would not part with them on any terms. Tallahassee, Florida, is almost buried under live oaks which in earlier years sheltered the wigwams of an Indian town. Villages near the coasts of both the Gulf and the Atlantic in several southern states have their venerable trees large enough for half the people to find shade beneath the branches at one time. Many fine stands have been cut out in recent years to make room for corn, cane, and rice.

Many persons associate the live oak with Spanish moss which festoons its branches in the Gulf region. The moss is no part of the tree, and apparently draws no substance from it, though it may smother the leaves by accumulation, or break the branches by its weight. Strictly speaking, the beard-like growth is not moss at all, but a sort of pine apple (*Dendropogon Usenoides*) which simply hangs on the limbs and draws its sustenance from water and air. It is found on other trees, besides live oak, and dealers in Louisiana alone sell half a million dollars worth of it a year to upholsterers in all the principal countries of the world.

CASEY JONES, THE LOGGER

(Author Unknown)

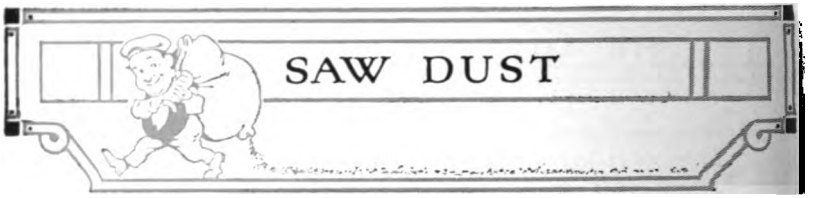
Come all you woodsmen if you want to hear
About a B. C. Logger who had no fear;
He knew his duties, but made one mistake—
He chopped down trees, and shoved 'em in the lake.
He was a modest Logger, all unknown to fame;
The price he got for logs was a downright shame;
But if heroes are rewarded as their deeds command,
He is logging off timber in the Promised Land.

When the whistle blew each morning at half-past four
Casey left his wife at the cook-house door,
Picked up his peavey, started down the track;
Never had a notion that he wouldn't come back.
The skidroads one day got greasy—cable wouldn't work;
Engine got to bucking and pulling with a jerk.
When logs began a-jamming, Casey he just said:
"We'll get them in the water or we'll all be dead."

The logs started down the skidroad hill—
Casey jerked the whistle with an awful thrill;
The engineer knew by the whistle's moans
That the man on the wire was Casey Jones.
The logs came 'round the first turn of the road—
And, coming down hill, made a mighty heavy load.
The haul-back broke with a whirr and a hum—
And Casey Jones departed for the Kingdom Come.

"I'm sorry," said Casey, just before he died,
"There's a few logging camps that I haven't tried."
The hook-tender said: "Casey, what haven't you seen?"
"Sure I never worked at Bellingham, nor down at Aberdeen."
Mrs. Casey, in the bunk-house, spoke with much regret
Of the troubles she had had since she and Casey met.
"Go to bed now, children, he was one gay deceiver.
The next dad you get's goin' to be a shingle weaver."

—*Forestry Kaimin.*



SOME GEESE—AN ESSAY

Friends, Romans, countrymen, lend me your ears, and I will bring them back as soon as I tell you about a low-geared bird, called Geese.

A Geese is a low, heavy-set bird with small ground clearance, composed mostly of meat and feathers.

His head is set on one side and he sets on the other.

Geese has got two legs and they set far back on his running gear.

Geese ain't got any holes between his toes, and always has a toy balloon in his stummik to keep him from sinkin'.

Geese can't sing much on account of the dampness of the moisture.

Some geese when he gets big is called ganders.

Ganders don't have to set and hatch, but just have to eat and go swimmin', so if I was a geese, I would rather be a gander.

Geese ain't like white people, always in debt, 'cause he can liquidate his bill.

Geese don't give milk, but gives eggs—but for me, give me liberty or give me death!—*Commonwealther.*

Jim Perkins had purchased a horse, which he found afterward to be afflicted with heaves. Now, of all the misfortunes that might come to a horse, in Jim's opinion, heaves was the worst: so he advertised his horse for sale, describing him as being an unusually fine horse in every particular. A prospective buyer appeared in answer to the ad.

"Isn't he a corker? Hasn't he a fine coat?" exclaimed the owner enthusiastically.

"H'm! His coat is all right, but I don't like his pants," murmured the other.

The train it is a wicked thing,
The engine smokes all day,
And drags along the chew-chew cars,
And tanks up by the way.
—*Illustrated World.*

THEY DON'T PICK ON THE BULLDOG ALL A-GROWL AND PREPARED, BUT KICK RATHER A QUIVERING POODLE

By Grantland Rice

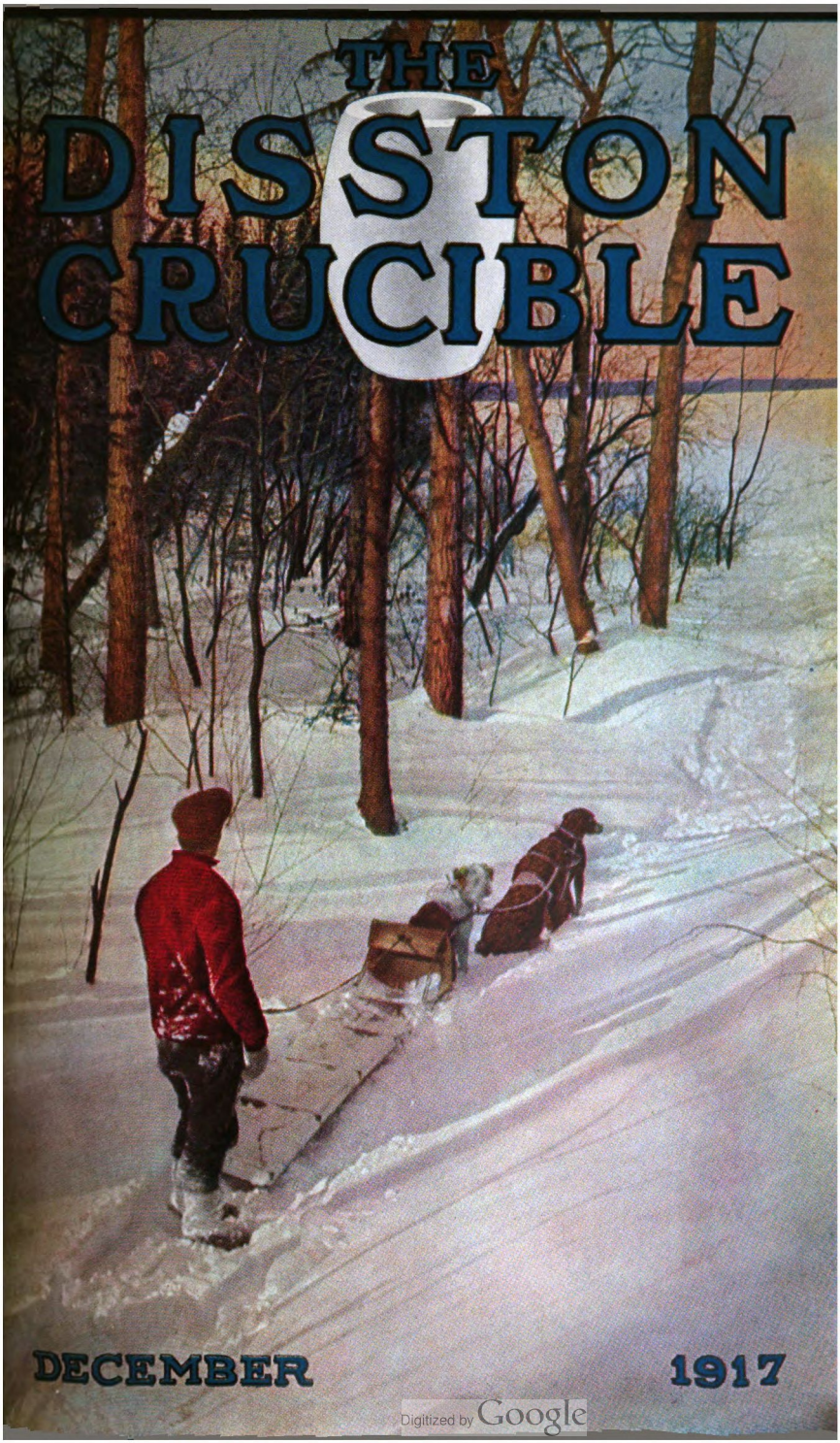
On Being Ready

The man who is there with the wallop and punch,
The one who is trained to the minute,
May well be around when the trouble begins,
But you seldom will find he is in it;
For they let him alone when they know he is there
For any set part in the ramble,
To pick on the guy who is shrinking and soft
And not quite attuned to the scramble.

The one who is fixed for whatever they start
Is rarely expected to prove it;
They pass him along for the next shot in sight
Where they take a full wind-up and groove it;
For who wants to pick on a bulldog or such
Where a quivering poodle is handy,
When he knows he can win with a kick or a brick
With no further trouble to bandy?
—*Phila. Evening Ledger.*

Mike Curley tells a story about the war. When the war first started the Germans had never seen a Scotch regiment with their kilts on, and on their first appearance they threw down their guns and ran to embrace them, thinking they were women. It is needless to say the Germans were all taken prisoners.—*Disston Bits.*

"A half hour a day spent on a particular line of study is the best investment any man can make."
—Andrew Carnegie.



That you may have

A Merry Christmas

and A Happy and

Prosperous New Year

is the sincere wish of

Henry Disston & Sons

THE DISSTON CRUCIBLE

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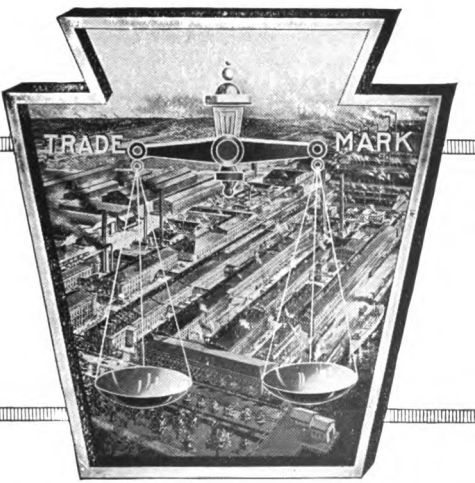

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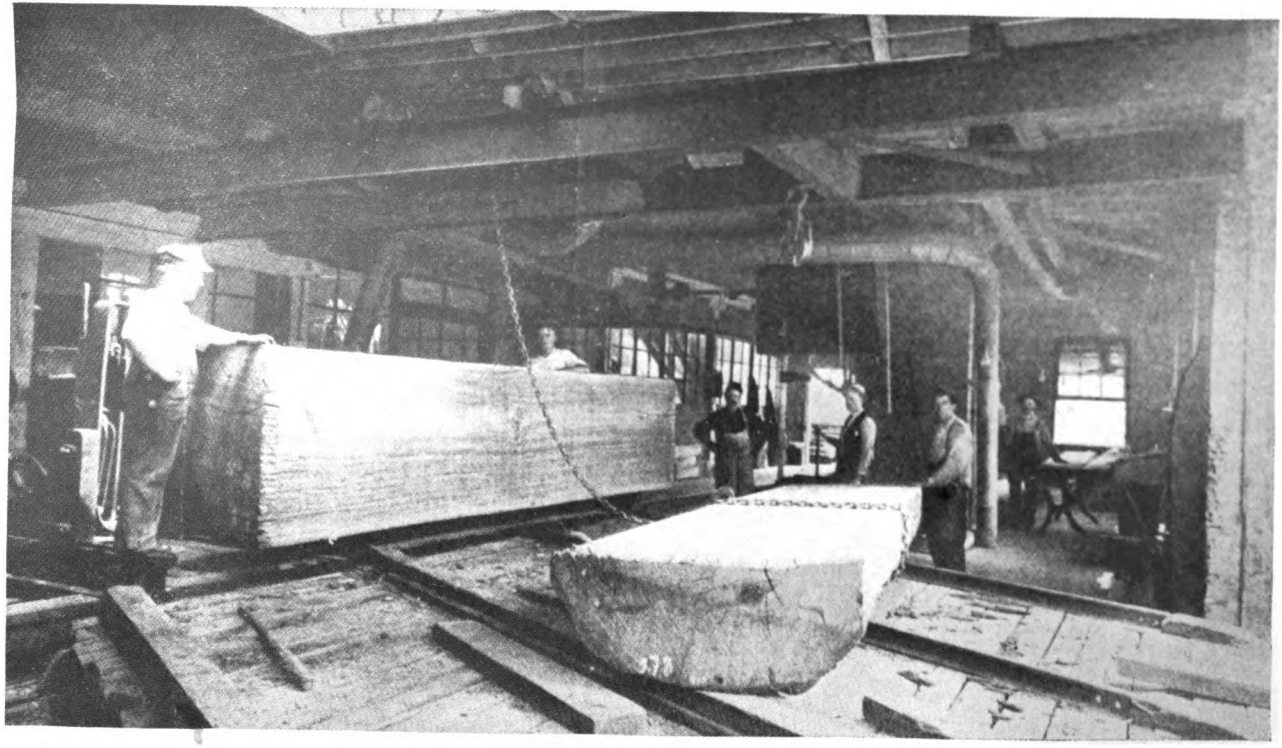
New Orleans, La. Memphis, Tenn. San Francisco, Cal. Sydney, Aus. Vancouver, B. C.
Canadian Works, Toronto, Canada.



Opening Up a Mahogany Log on an Eight-foot Band Mill
The Dean Spicker Company, Chicago, Ill.

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VI | DECEMBER, 1917 | No. 11

EDITORIAL CHAT

Greeting

ANOTHER year is fast speeding to a close. Time in its onward march will soon record it as an era of the past. Considering this, what more fitting or suggestive questions could one ask himself than: How have I prospered during the past year? What has been left undone that I could have done for myself and others? But do not let it rest with the asking. Your conscience will tell you how to act in the future.

There is today an awful crisis. Nearly the whole world is at war. A fearful and wide destruction of life and property is going on. As yet, the peoples of this country do not, cannot, appreciate the frightful calamity that is almost overwhelming other nations—even those whose relatives have lately joined our own army and navy fail to realize the full extent of the horribleness of the warfare, for to us at home the world, seemingly, is still at peace.

Our own Nation is now involved. It has entered the fight, unselfishly and nobly, for the protection of the rights of the masses as against the domination of a few. It concerns you, your family and your home. Though your personal influence may be slight, yet if each and every individual willingly takes up his full share of the burden, working in unity, in full accord and co-operation with the administration, the combined effort will result in such a powerful force that this Nation will irresistibly sweep on to a glorious victory.

Giving this help, then and then only can we ask for, expect to have and really enjoy

A Merry Christmas and a Happy New Year.

Quality Tells

Sawmills a Factor in the World War

Wood Necessary to House Our Troops, Hold Supplies and Build Ships

Airplane Propellers Take Many Millions of Feet of Spruce, Fir and Birch

MANHATTAN, KAN., Nov. 17.—"The sawmills of the United States are fighting for world democracy," said R. S. Kellogg, the secretary of the National Lumber Manufacturers' Association, in an address to the students in the engineering classes of the Kansas State Agricultural College.

"Few people realize the extent to which wood is a necessary material in modern warfare. Without the great forest resources of the United States we could be of little immediate help to our allies, who are fighting to overthrow the worst military despotism the world has ever seen. Our National Army now under training is comfortably housed in wooden barracks in sixteen great cantonments built in record-breaking time and requiring a total to date of some 900 million feet of lumber, with more to follow as additions are made to these camps. No other available material could afford such speedy, economical and satisfactory construction.

"The rapidity with which these buildings has gone up is almost beyond belief. In preparation for the officers' training camp at Fort Sheridan eighty-six buildings were erected in ten days, and for a similar purpose at Fort Oglethorpe 135 buildings were put up in twelve days.

"Similar records have been made in the construction of the still larger buildings required at the cantonments for the National Army. Then there are sixteen National Guard camps in the Southern States for which large quantities of lumber are necessary for tent floors, walks, supply buildings, etc.

"The ordinary wooden packing box is usually given little consideration, yet humble though it is, the multitudinous supplies for the army and navy could not be handled without such means of protection and transportation, hundreds of millions of feet of lumber going into such boxes and also for the packing of munitions. The army transport wagon is a model of strength and serviceability, into which enter the best grades of pine, oak and hickory. Thousands of these wagons are now under construction for the army.

"Since the beginning of the war the cry has been for ships, and still more ships and hundreds of wooden ships are under construction on both the Atlantic and Pacific coasts, many of which will soon enter service. Every such ship requires at least a million and a half feet of timber, either the yellow pine of the South or the Douglas fir of the West, while for parts subject to unusual strain there is nothing so good as white oak, and last of all the heavy planks are held to the frames by trenils of locust.

"Perhaps even more important than ships are airplanes, a sufficient preponderance of which will quickly determine the outcome of the war. Our engineering experts have standardized and enlarged an engine of wonderful possibilities, but airplanes in their present stage of development cannot be built without wood, for no other structural material possesses such a combination of light weight, strength, elasticity and resilience.

"Airplane propellors are built up of laminated layers of mahogany, walnut or birch, while for frames no other wood has yet been found to equal the Sitka spruce of the Pacific Northwest. Many millions of feet of absolutely perfect spruce lumber free from all defects and straight grained are being cut for airplane stock and in order to increase the supply of

(*Continued on page* 165)

From the Forest Service, U. S. Department of Agriculture

WASHINGTON, October —.—It is announced by the Forest Service that it has been able to comply in full with the request of the War Department for assistance in securing qualified lumbermen and foresters to serve as officers for the forest battalions which are to comprise a part of the American overseas forces. Three hundred and nine men have been recommended for commissions in the grades of major, captain, first lieutenant, and second lieutenant. Of these, two-thirds are practical lumbermen or sawmill operators and one-third are trained foresters with long woods experience. Some of the lumbermen who were recommended have also had theoretical training in forestry and many of the foresters have had experience in logging or sawmilling.

In the selection of qualified lumbermen the Forest Service has had the close co-operation of a subcommittee of the Lumber Committee of the Council of National Defense and of fourteen committees of lumbermen in different parts of the country. Almost every man selected was interviewed by a lumbermen's committee or by the Forest Service officials. Many private foresters and forest schools have assisted in finding technical foresters suitable for commissions. All of the men recommended have, by successful experience, shown themselves capable of handling some important phase of lumbering, sawmill or technical forest work, according to officials of the Forest Service. All have proved by experience their qualities of leadership and their ability to handle men in large numbers.

Every timber region of the United States has contributed its share of the men who have been nominated for officers and it is believed that every class of lumbering, from the smallest portable mill operation to the largest and most up-to-date plant, is represented. Among those selected are men experienced in logging and sawing every merchantable wood growing in this country.

The age limits set in the beginning required that all officers of the forest battalions should be thirty-one years of age or older. Because of the difficulty of finding men suitable for lieutenants, the age limit for this grade was later lowered to twenty-five years. The bulk of the men recommended as lieutenants range in age from twenty-five to thirty-five, as captains from thirty to forty and as majors from forty to fifty.

Men who have been recommended have been notified that all further action as regards physical examination, the issuance of commissions, and the order in which the successful applicants will be called for service rests with the War Department.

Sawmills a Factor

(*Continued from page* 164)

quickly available material both the Allies and our own government are turning to Douglas fir, of which there is more standing timber than any other kind in the United States.

"The first twelve months following our entry into the war may take as much as three billion feet of lumber for purposes of national defense. This is a big figure and a quantity hard to realize, and yet after all, less than 7 per cent of the normal annual lumber production of the country. We have the standing timber and the manufacturing capacity to take care of all the ordinary demands of the trade for building material and to supply also every bit of timber needed for war purposes. The only trouble is that of sufficient labor to man the operations. The labor situation, of course, will be a difficult one so long as the war lasts, but a means will be found to furnish all the material necessary for the prosecution of the war."—*The Philadelphia Inquirer.*

When Band Saw Wheels Should Be Refaced

THE answer to this is, Whenever they need it. Wheels wear most at the front or edge nearest the teeth. This is due largely to the teeth running back on that portion. If the saws crowd back in the cut the wheels will wear rapidly and, therefore, need attention.

A badly worn wheel causes cracking trouble by reason of the saw not having an even bearing on the surface of the wheel, particularly when the wheels are so worn on the front edge as to give little or no bearing at all. This results in an uneven strain, which is a most prolific cause for cracks and badly manufactured lumber.

The amount of wear may be ascertained by measuring with a steel tape line the circumference at front and back edges and noting the difference. A small straight-edge will show, when held across the face of the wheels, how badly worn they are, but the steel tape line should be used to insure both edges being the same diameter when ground. Use a straight-edge to ascertain their flatness, or if crown is desired the straight-edge can also be used to advantage. The amount should be very small, not over 1/64-inch.

There are several good grinding or rubbing machines on the market for this purpose, which can be bought at small cost. It will pay any band mill or re-saw mill to have one on hand, and use when the wheels require grinding. The writer knows of several filers who make a business of doing this work, furnishing their own grinder.

Recently one of our good customers was having more cracking trouble than he should. He appealed to us for help. Our examination disclosed badly worn wheels. We advised grinding and recommended a filer in his vicinity. The owners called on him, and we were later informed that the work done had resulted in greatly reducing the cracking and much better lumber.

Try it, re-saw owners; get acquainted with your mills, by examining it occasionally, and making necessary repairs. The habit of operating the machine until it won't go is most unprofitable. On the other hand, the habit of studying the machine and keeping it up to the requirements by making small repairs before they become large items will keep you in a good humor, for you will run your mill so smoothly that its singing through the cuts will be sweet music to your ears.

G. M. C.

Living the Life

IF I live a life that is clean and square,
And I love my fellow man,
And I lend him a hand to help him bear
His burden whenever I can,
I need not fear what the future holds,
Nor what the reward shall be,
For the mighty love that all enfolds
Will most surely care for me.

If I speak a good word of cheer to one
Whose sorrows have borne him down,
And I give him new hope to journey on,
And change to a smile his frown,
I shall not dread when the shadows fall
And the end of life draws near,
For that wondrous love that shelters all
Will drive away my fear.

For my life is measured by what I mete,
And I earn my own reward,
So the love I give makes my heart complete,
And through it I gain the award.
For whether I dwell in a house by the road
Or far from the haunts of men,
If only my love makes bright the abode
No fear shall enter it then.

—*Author Unknown.*

Three Kinds of Men

FIRST. The man who is a Help. He is one who takes a keen interest in the whole concern. He is glad when the company has plenty of business. He is proud when he hears the company praised. He really feels that he is part of the firm. Every now and then he suggests some improvement. He often does more than he is expected to do. He tries to help. When he is given a job to do, he does not enlarge on the difficulty or "impossibility" of it. He just sets to work and does it. He's the kind who is qualifying for a better job.

SECOND. The Man who is a Habit. He is a good worker. He takes an interest more or less in his job, but he seldom concerns himself in the least about the company generally. He has learned to do one thing and does it well, his work is all a matter of habit. He hates to be shifted from one job to another. He is industrious but not adaptable. He is a good, useful man but he prevents himself from being promoted by the fact that he has nailed himself to a routine, and sees in anything outside that routine only a nuisance and not an opportunity.

THIRD. The Man who is a Hindrance. He is the one who dislikes his job. He does not want to work and he almost feels he has a grievance against the company for giving him a chance to earn money. He never has a good word for his superior or for the company. He is strong on objecting, great on refusing. He is against every new change and improvement. He starts suspicion. He hinders. He is a man who can never be promoted, and has sometimes to be discharged, no matter for whom he may work.

Business experts who have studied employees in relation to efficiency claim that in most firms of any size there are ten per cent of men who help, eighty per cent who are a habit, and ten per cent who are a hindrance.

Has the classification of workers ever struck you in this light? If so, in what class would you put yourself?—*By Water Magazine.*

Talk About Quick Work. If You Can Beat Th

An order was received 7.30 Saturday morning, November 10. Immediately th afternoon, that same day, mind you, 402 cases, or 115,000 pounds of Disston ha on their way to the United States Expeditionary forces in France. The good

Here's the names of the Disston men through whose untiring energy such a larg Harry Batty, John Arnold, Elmer Roberts and Joseph Biles:

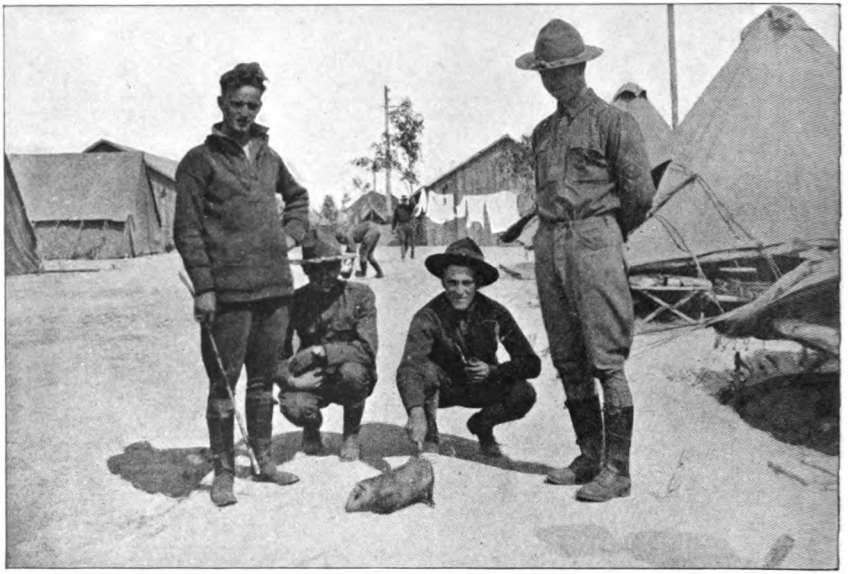
John Allen
Wm. Barrman
Fred Beans
Frank Bracken
Robt. Brown
Louis Brummer
Chas. Bushnell
Edward Cassons
Albert Coates
John Davis
John Deardon
John Degan
Norman Doltz
Frank Donnelly
Chas. Farno
Richard Fields
Frank Fisher
Jos. Garner
Geo. Gilman
Danl. Glickman
Robt. Graham
Wm. Hass
Wm. Helverson
Theo. Holeman
Sam. Hornbaker
Wm. Howarth
John Kane
J. Kern
Jos. Kennedy
Harry Kilpatrick
John Knoeller
Samuel Kugler

You'll Be Going Some, and Then Some More

s of men in the picture were drafted from the shops and by 5 o'clock in the s and crosscuts were made up, packed, loaded into the two box cars and sent these Disston saws are to do there will make another interesting story. le shipment was effected in so few hours, under the generalship of Geo. Gebhart,

rry LaGrande	Raymond Morris	David Rorison	Edward Thompson
H. McIntire	Russell Musnuff	Jos. Schultz	George Tyzack
rrest Marks	Dan. Myers	John Schwartz	Albert L. Uhl
n. Meisler	John Ness	Amos Shallcross	Spencer Vane
rry Miller	Edw. Newman	Wm. Schauffler	Thos. Winsom
w. Minnick	Frank Penn	Jack Shields	George Webster
rry Minon	Julius C. Rau	John Stevens	Herbert Webster
rry Moore	S. T. Roberts	William Terry	

A Letter From Camp Hancock



A Mascot

November 10, 1917.

Possibly you think that most of the Disston boys at this camp are suffering from an attack of "pen paralysis," and this being election day, a holiday throughout camp, they have elected me to tell you just how we are being trained for the big adventure.

In the first place, the War Department picked out an ideal camp site for the Pennsylvania Guardsmen and dumped us here late one night in September. A battalion of gnats formed the reception committee and a nice, new mess shack full of wood shavings and Georgia mud was our shelter on that memorable night. It was certainly a time that tried men's souls. Sergeant Biemüller was particularly fortunate, being the stoutest man in the company. He didn't mind sleeping on a wooden table. Sergeant Kunstman had a beautiful grouch on, too, and we could hardly blame him for Harry Dorsey insisted upon walking on his chest every two hours when he charged the guard. With all these discomforts we slept soundly and well, due to the fifty-two hours we were on the train, having a picnic all to ourselves. The next day was wonderful and we awoke to our first good view of Georgia.

We were in someone's cotton field, and those in the company who had been through the mill last year could see how much work would be necessary to make a presentable company street.

The first thing we did was to clear a space for our big pyramidal tents and then erect twelve of them. By the time the cots were unpacked and the men's equipment put in the tents, to which they had been assigned, our stove was in good working order, and we dined on a boiled potato, corned beef sandwich, and iced tea.

We are willing to skip over the first week or two. It was nothing but scrap up weeds, chop out roots and grade the street, but the result was payment enough for the labor. Now we have a company street which compares favorably with any in the division, and, incidentally, with those at home. Where, in Tacony, would you find sixty men going over the street and, like a fine tooth comb, spotting every match stick, cigarette, paper and smallest piece of waste material. That is what happens every morning, and woe to the man who makes any unnecessary dirt.

After we had settled down somewhat we began to get the real army "stuff;" up at 5:30; exercise, breakfast, police duty and then work and drill. It was "fall in" at 7:30 A. M. and stay "in" until 11:30 A. M. After mess we go to it again, starting about one o'clock and stopping about four o'clock. From that time until nearly five o'clock, Lieutenant Lewis tries to make contortionists of us, putting us through calisthenics which strain every muscle we ever heard of, and every one we haven't heard of. From that time on we have nothing to do but stand retreat while the flag is lowered, wash up and eat. It may sound easy but for the last month we have hiked on an average of ten miles every other day. It is great to be hardened but the process hurts a little. During the past two months we have done everything from bricklaying to carpentry, and when we reach home will probably be jacks of all trades.

Last week we learned that our schedule of work is to be changed, and will include night work three nights a week. With all of that we are getting stout and you can find very few boys who are homesick, except when they get letters from "the one" at home. Harry Dixon has even reached the stage where he is afraid to step on the scales to be weighed.

Someone named this the Sunny South and we are laying for him. To hear the teeth knocking together in the morning you would think they were false, with badly fitting plates. True, we have been given wooden floors and sides, but the stoves are somewhere in the U. S. A., and there is no known method of heating a barn without fuel. In each tent seven men live in charge of a sergeant (who is generally tolerated), and the combined hot air arising when they do chin duty doesn't make it warm.

Another Mascot

Limbering Up

Durburrow, the Riverton man who breaks the ice in the Delaware for his daily plunge, has nothing on us. When we jump under our showers these days, we are certainly playing polar bears. The only way we can stand it is to wait until noon, when the sun is out strong and then it isn't so bad.

Life isn't all work here. The folks at home are missing some of the finest sights and scenes which are taking place in the country. Whenever we do guard duty and are off the following day, we can see part of the 30,000 men drilling in other parts of the camp. If Willie Hohenzollern could see the boys here practising bomb throwing, machine gun drill, bayonet practise, going "over the top," and every other phase of military work, he wouldn't feel confident as to the result of this war.

Then we have many amusements. Any forms of recreation. Nearly every night there are band concerts, vaudeville or boxing. The performances given in this camp equal anything seen on the stage in Philadelphia. We have singers, comedians, dancers and short sketches which are worth going miles to hear and see, and our military bands don't allow us to forget that popular music still exists.

It would be a lesson in hospitality and kindness to see how the Augustans are treating the Pennsylvania boys. They have opened their homes to us, arranged dances and entertainments, and have succeeded in making us feel at home, in contrast to the custom up North where the man in uniform is not always welcome. It is no strange sight to see the back privates riding around town in the cars of the wealthiest people here, and the majority of the boys don't want to leave Augusta. Everytime we get ambitious and go to church someone takes us in hand and provides a big dinner. Rand says that he has been eating better than he ever did at home.

"Somewhere a Voice is Calling" and it is our tin bugle sounding "mess." The boys send their best wishes to all and ask to be remembered to those who are not taking this fresh air course under the direction of Uncle Sam.

Paul Biemüller sends his best regards to the boys.

Sergeant Russell C. Roney,
Field Hospital No. 110,
Camp Hancock, Ga.

"Tote Road and Trail"

IF it's men for your ships, if it's men for your shore,
If it's men for your guns on the borders,
If it's guards for your firesides, or fighters for war,
We are ready and waiting your orders.
We will lay down the axe, we will hang up the saw,
We will come from the rafts on the river;
And we'll fight for the land and we'll fight for the law
And the Star Spangled Banner forever!

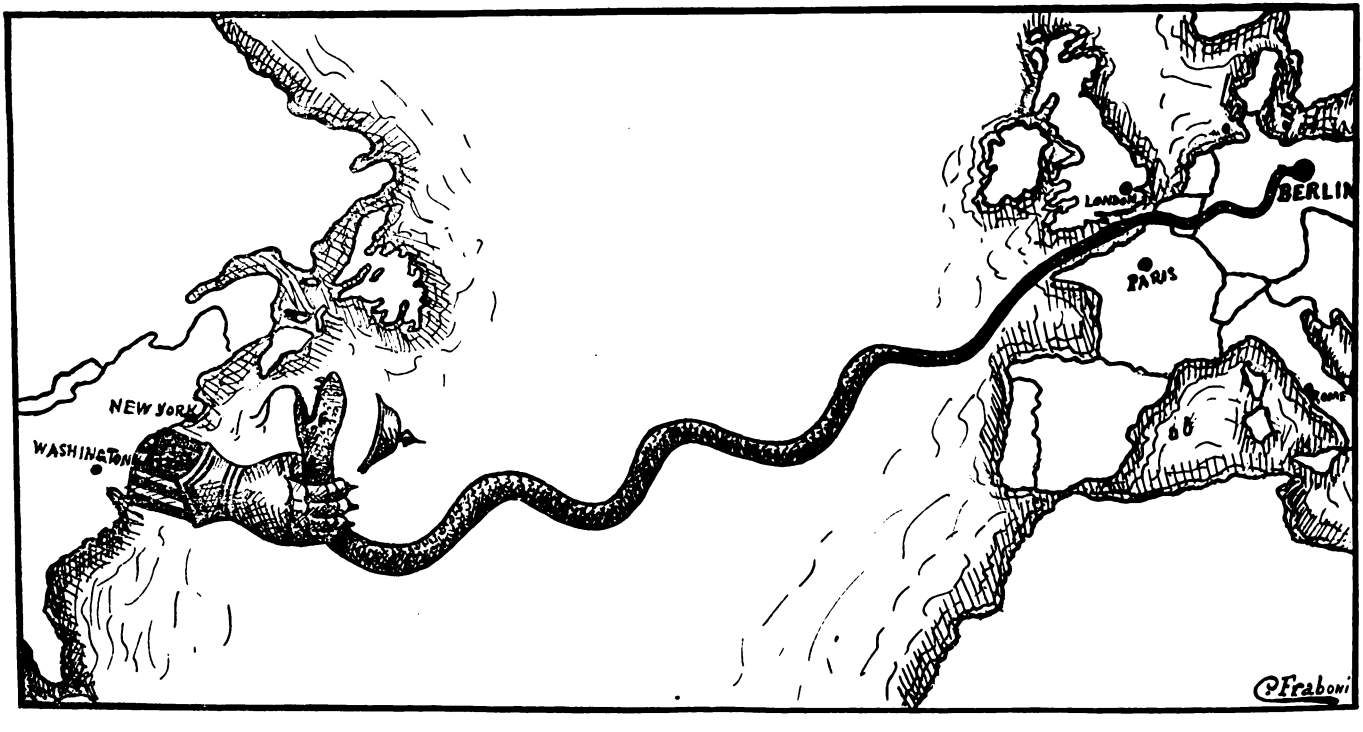
If it's men for the sea, we have river-rats here
Who are kings of the drive and the water;
If it's men for the line, we have swampers to cheer
All the louder when matters get hotter.
If it's over the sea you would have us to go,
There to conquer the foe our endeavor,
We are ready—and only one ditty we know,
That's the Star Spangled Banner forever!

We have handled a saw, we can handle a gun;
We have made us a trail through the timber,
And we'll swamp you a road to a place in the sun,
For our arms and our axes are limber.
The man in the town is a fancier guy,
The man in the town may be clever,
But we're ready to fight and we're ready to die
For the Star Spangled Banner forever.

—*Douglas Malloch, Laureate of the Lumber Camps*

Japanese sawyer splitting log—that is, making lumber. The saw shown is the standard used here for that purpose. Caught him in the act at the Okita Mill Co. Plant, Noshiro, Japan

THE IRON HAND

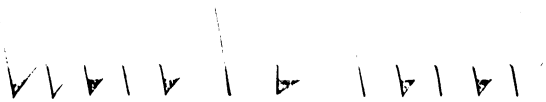


A New DISSTON SAW and a WINNER

Patent Applied For

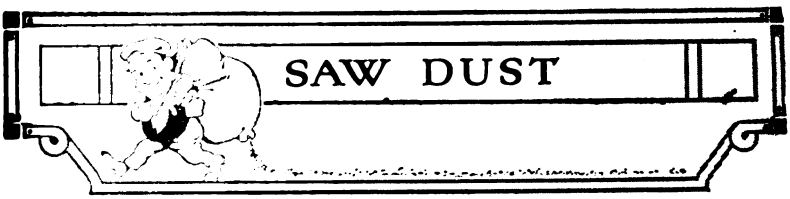
This Double Duty saw far excels any other pattern ever made for use in general construction work of all kinds—studding-up houses, shoring for sewers, making forms for concrete buildings, railroad work, millwright, farm use, and in fact for all general purposes.

VIEW OF SECTION OF TEETH



When the saw is used for crosscutting, the rip teeth act as "cleaners" in clearing out the kerf. In ripping there is double action. The cross-cut teeth make a scoring cut on each side of the kerf which enables the rip teeth to cut with greater ease and rapidity, not only in ripping, but in cutting on an angle or diagonally across the grain, which is its specialty.

Send for descriptive circular of D-17 Handsaw



BUT THEN

"But isn't your son rather young to join the army?"

"Well, he is very young, but then he's going to join the infantry."—*Boston Transcript.*

If a hose is a man's excuse for wetting the walk, then hosiery is a woman's excuse for walking in the wet.

Someone has suggested a smokeless day as an opportunity for men to do their bit. Then would the country see genuine sacrifice with real suffering attached.

Why all the fuss about a standard loaf when the vacation period has been fixed this long while at two weeks?

There are many whose doings are made up mostly of instructions to others.

The reason why some men are so clever is that they haven't been married long enough for their wives to get on to them.

Many a man would have gone further in life if he hadn't tried to have all the fun before he started.

—*From Trolley Tips.*

A lady who had run down a man with her car was blaming him for carelessness. He insisted it was her fault.

"My fault!" she shot back, "why, man, it's impossible. I've been driving a car for seven years."

"Well, you haven't anything on me," he replied. "I've been walking for thirty-six years."

Mrs. ——— could only find two aisle seats—one behind the other. Wishing to have her sister beside her, she turned and cautiously surveyed the man in the next seat. Finally she leaned over and timidly addressed him.

"I beg your pardon, sir, but are you alone?"

The man, without turning his head in the slightest, but twisting his mouth to an alarming degree and shielding it with his hand, muttered:

"Cut it out, kid—cut it out! My wife's with me."—*Public Service Chat.*

A MODEL YOUNG MAN.

The fussy old gentleman asked the chance traveling companion: "Have you any children, sir?"

"Yes, sir; a son."

"Does he smoke?"

"Ah, sir, he never so much as touched a cigarette."

"So much the better, sir; the use of tobacco is a poisonous habit. Does he frequent clubs?"

"He has never put his foot in one."

"Allow me to congratulate you. Does he never come home late?"

"Never. He goes to bed directly after dinner."

"A model young man, sir; a model young man. How old is he?"

"Just six months."

—*Philadelphia Record.*

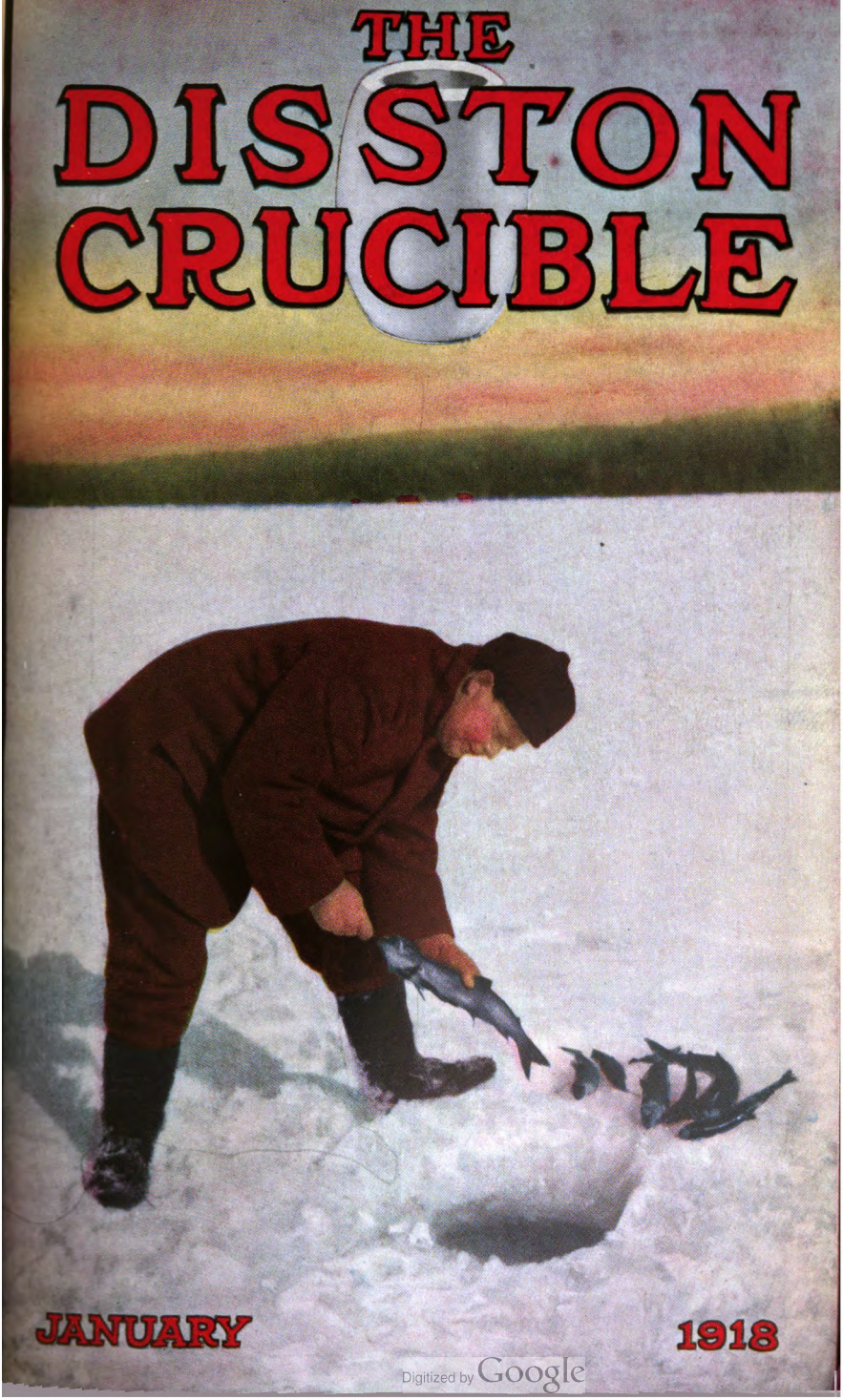
Why do cartoonists make all wives fat?

BARBARA FRITCHIE UP TO DATE

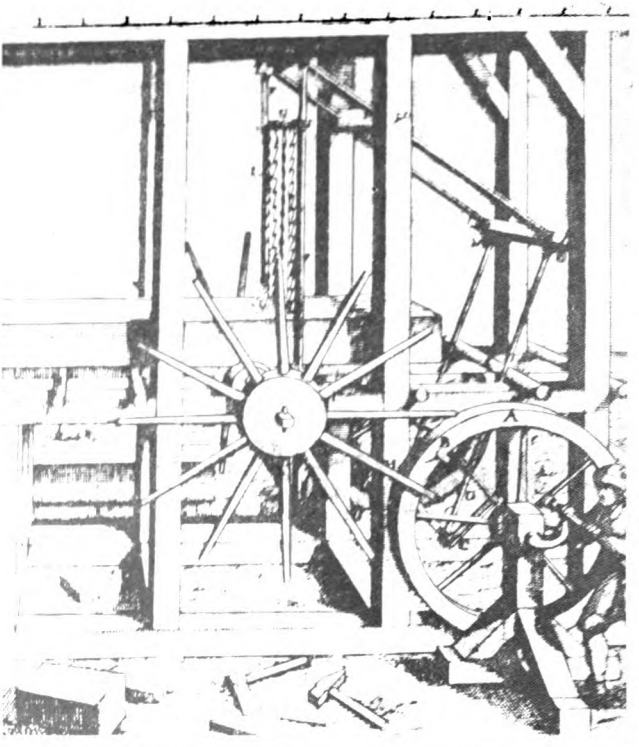
Shoot if you will this old gray dome,
Said Uncle Sam in warlike role.
I will not keep my ships at home
Nor paint them like a barber's pole.
Said Uncle Sam, one day, said he,
I do not want to fight,
But if you pull my old goatee
GOOD———NIGHT.

—*Exchange.*

THE DISSTON CRUCIBLE



JANUARY 1918



OLD TIME MILLS. No. 1

This is one of the earliest power mills on record. While it is operated by hand, nevertheless it was quite an improvement over the Pit Saw method of making lumber.

THE DISSTON CRUCIBLE

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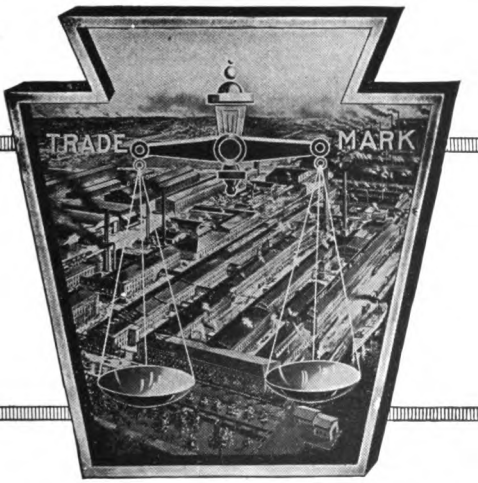

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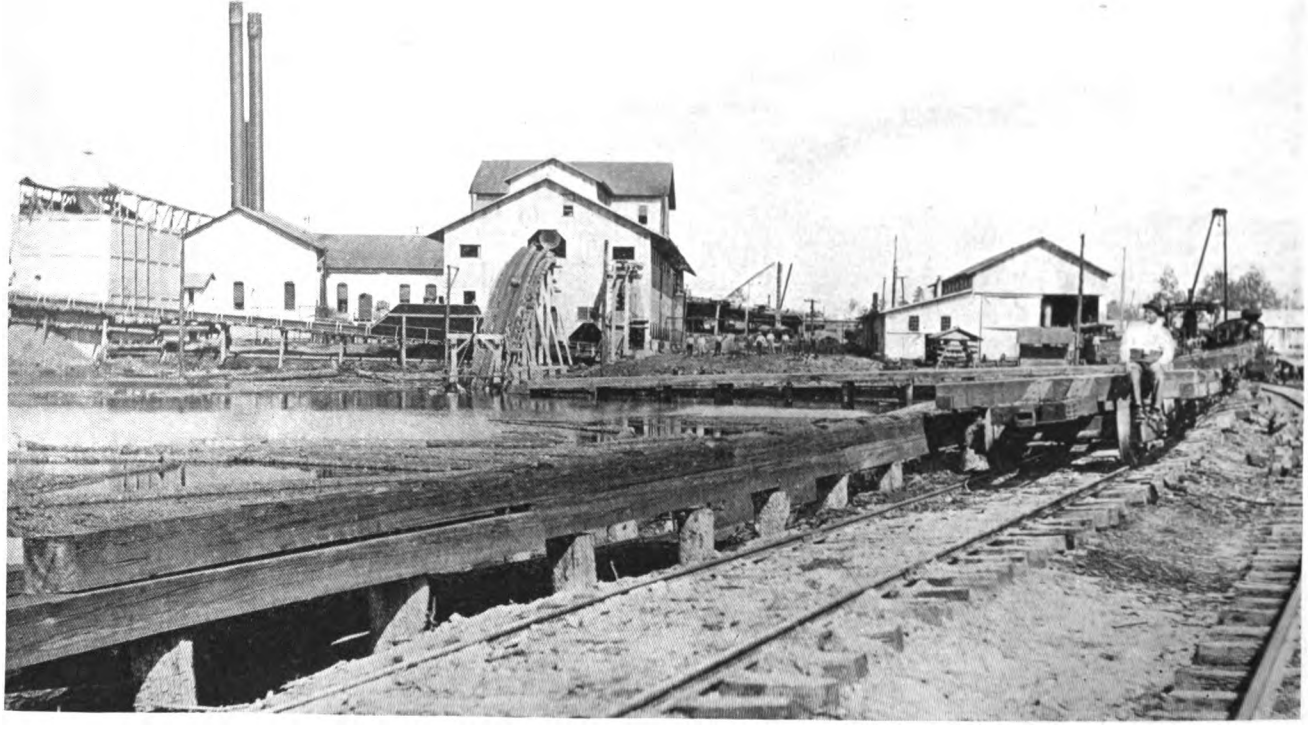


KNOX LUMBER CO., HEMPHILL, TEXAS

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VI JANUARY, 1918 No. 12

EDITORIAL CHAT

Service

SERVICE cannot be bought. That is, the real, loyal, thoughtful service of employees. Its value is immeasurable, it is beyond price.

Many business houses, now successful and well established, had a long and hard struggle to obtain a standing. There were troubles and difficulties which seemed almost insurmountable, but the battle was won with the help and effort of assistants who not only sacrificed their time willingly, but gave of the best in them without thought of recompense. THAT IS SERVICE.

It is an indisputable fact that the success of every establishment was, is and will continue to be due to the faithfulness of its workers.

It is so with us. We frankly acknowledge dependence on our employees, and upon their honest endeavors rests the maintenance and continuance of the high prestige of Disston products.

Quality Tells

Time for All of Us to "Speed Up"

THE time has come to drop the word "slacker" and apply "traitor" to every man and woman in the country who is not intent upon some work useful to the cause for which the country is at war.

There is no excuse for idleness now upon the part of any American able to perform some part of some task needed to promote a speedy, successful termination of the war in which we are engaged. This applies to women as well as men, and it applies to boys and girls who are able to work.

There is no occasion to feel shocked at the news from Washington that there has not been the needed speed in providing the essentials of war by the officials of the Government. Too many of the people back of the office-holders have held back. The spirit of inaction has been quite general.

The time has passed for all this. The time for action is past due, and there must be a speeding up that will make up for the time that has been lost.

Thousands of our young men have gone to war. Thousands at home, the mothers and fathers, brothers and sisters of those who are in uniform, have been too prone to feel that they were well enough represented in the war business to sit back and await results. The time for that sort of feeling is also past. The loved ones about to enter the firing line are going to have less chance to come out alive if those of us who remain at home do not produce the arms, the ammunition and the other things essential to the success of this war and the saving of their lives.

It is time that all of us took this war business more seriously. If we do not, we will have it forced upon us very soon, and we will then not fail to realize that the death list might not have contained the names of our loved ones, if we had been more prompt in doing the part now incumbent upon every human being who has strength enough to contribute something to the work of winning the war.—*Philadelphia Record.*

The Ten Commandments

FIRST—Don't lie. It wastes my time and yours. I am sure to catch you in the end, and that will be the wrong end.

SECOND—Watch your work, not the clock. A long day's work makes a long day short, and a short day's work makes my face long.

THIRD—Give me more than I expect, and I will give you more than you expect. I can afford to increase your pay if you increase my profits.

FOURTH—You owe so much to yourself, you cannot afford to owe anybody else. Keep out of debt, or keep out of my shops.

FIFTH—Dishonesty is never an accident. Good men, like good women, never see temptation when they meet.

SIXTH—Mind your own business, and in time you'll have a business of your own to mind.

SEVENTH—Don't do anything here which hurts your self-respect. An employee who is willing to steal for me is willing to steal from me.

EIGHTH—It is none of my business what you do at night. But if dissipation affects what you do the next day, and you do half as much as I demand, you'll last half as long as you hoped.

NINTH—Don't tell me what I'd like to hear, but what I ought to hear. I don't want a valet for my pride, but one for my purse.

TENTH—Don't kick if I kick. If you're worth while correcting, you're worth while keeping. I don't waste time cutting specks out of rotten apples.—(*Selected.*)

W. J. Newman Letter

(From Industrial to Military Life)

CAMP Q. M. OFFICE,
CAMP MCCLELLAN,

ANNISTON, ALA., November 22, 1917.

My Dear Mr. "Mac,"

Just a few lines to let you know that I appreciated your sending me a Handy Saw Kit No. 104.

You cannot imagine how truly "Handy" one of those sets can be to a "feller." I was asked by nearly all of the men to get more for them, for they sure do fill the bill for us Jacks of all trades, for that is what we are getting to be. Anything that can be made which will make a tent more habitable we go ahead and make, from tent floors to shelves, and from desks and chairs to sewing. Am getting to be quite some little artist with needle and thread, likewise with hammer and saw. It's a great life, believe me. Then, too, it feels great to find out what you really can do and put up with when you have to.

I can't give you such an interesting lot of news as Walt Gebhardt gave you in "Bits," as life here, as far as I am concerned, is nearly the same as before; the only difference being that I am in uniform and live in a tent, my work being along business instead of military lines. For a while I was assistant to the captain in charge of forage and fuel and now, owing to the scarcity of available officers, I was given charge of two warehouses full of the greatest bunch of "junk" I ever saw. The "junk" consists of tableware, kitchenware, stoves, bed linen, blankets, cots, mattresses, plumbing tools, lamps and lanterns picks and shovels, wheelbarrows, etc., etc. and etc. *Some* collection?

Saw a great sight Monday which, I believe, would have interested you—the entire division passing in review before the Governor of New Jersey. It certainly was a wonderful sight to see regiment after regiment turn into the parade ground, about two miles distant, and then form in a line of brigades ready to pass the reviewing stand, in column of companies—250 men to a company, making a company front of nearly 125 men.

Well, Mr. Mac, knowing that you are a very busy man, I will ring off, and with many thanks and kind regards, I am,

Yours in the Service,

W. J. NEWMAN,
Second Lieutenant, Q. M. C.

From the Forest Service, U. S. Department of Agriculture

Forester Reports Progress in Wood-using Studies

WASHINGTON, December 17.—Substantial progress in the study of the uses of wood and its by-products was made during the past fiscal year by the investigators of the Forest Service, according to the annual report of the Forester. Assistance was rendered to various departments of the Government and to manufacturers of war orders, and there was effective co-operation with other agencies on many wood-using problems.

Work was done, the report states, at the Forest Products Laboratory of the Forest Service on a wide range of projects. Investigation of the best methods of preservative treatment for wood-block pavements was continued. Several factories and insurance companies co-operated in the development of preservatives to prevent decay of structural timber used in cotton mills. Furniture, lumber and woodenware manufacturers and railroads were given advice regarding dry kilns and methods of kiln drying. Commercial demonstrations of roofing and various paper products from hemlock bark were made. It was shown that by the use of an improved process developed at the laboratory, operating expenses in the production of ethyl or grain alcohol from wood waste can be reduced by $300 per day.

Approximately 10,000 additional tests of mechanical properties of various species of wood were made during the year, which brings the total number of tests of the character up to about 130,000. Among other things, the data obtained make possible scientific grading rules for structural timber, such as those already perfected for southern pine and under development for Douglas fir and hemlock.

Prior to the beginning of the war tests on methods of kiln-drying lumber were continued as in the past. A process was perfected under which hemlock shiplap can be dried to shipping condition with practically no loss of grade in forty to forty-eight hours. Satisfactory results were also obtained with Douglas fir and white fir. The time for drying maple shoe-last blocks was reduced from twenty-one to two months, and losses were reduced from 15 to 6 per cent. Work was largely completed on spruce and ash for airplane material, the problem being to dry the material in the minimum time without loss of strength and toughness, as compared with air-dried stock.

At least 50 per cent. of the commercial wood distillation plants, according to the report, are attempting to use the method of controlled distillation developed by the Forest Products Laboratory. Experiments indicate that the yield of naval stores can be increased by 30 per cent. or more the first year by cutting two narrow streaks, rather than one broad streak per week, as is commonly done in commercial practice, and that the net returns can be increased by about $450 per crop.

Further study of the utilization of various waste barks, for the manufacture of pulp and paper products, were made on eight species. Tests under the soda process of making paper were continued for thirteen species, while under the sulphate process eighteen species were tested and a good quality of kraft pulp, suitable for a high-grade wrapping paper, was obtained from each.

While the principal activity of the Office of Industrial Investigations was on war problems, other lines of work were carried on as well. In co-operation with the National Lumber Manufacturers' Association, data on the lumber production of 1916 were collected and a report issued. The production of lumber was estimated at approximately 40,000,000,000 board feet from over 30,000 sawmills. For the first time since 1911 statistics were compiled and a report issued on the number of crossties and poles purchased in the United States. Data were collected in co-operation with the American Wood Pre-

(*Continued on page 189*)

Knox Lumber Co. History

KNOX LUMBER CO., Hemphill, Texas.

THIS is one of the most modern mills ever erected in Texas, or the South in fact. When Mr. Knox decided to put up a mill to cut his vast holdings of long-leaf yellow pine he issued instructions to his mill builder to buy only the best machinery, etc., that could be bought. He having used DISSTON saws for years, it was not necessary to cast around for the best in that line, as he knew from experience what he wanted there, so adopted DISSTON throughout. This mill has a capacity of about 150,000 feet of yellow pine in ten hours, is equipped with two single cutting bands and a gang edger, trimmers, edgers, cut-off rigs to match.

Mr. and Mrs. Knox are active Managers. Edd Bird, Mill Foreman; R. H. GeBott, Head Filer; Robt. GeBott, Helper; W. P. Craig, Planer Foreman.

Mrs. Knox enjoys the distinction of being the only lady taking an active part in the operation of a large sawmill in Texas.

Mrs. Knox saw the advantage of having modern houses, play grounds, etc., for their men, so made them as modern as the mill itself. They have a park covering ninety acres, with dancing pavilions, etc. They have about twenty pet deer in another large park. She did not overlook the beauty of the place in laying off the town. She had several cars of beautiful flowers shipped in which are kept up by a regular gardener. Taking it from every angle, it is a very desirable place to live, with all the advantages of a city except street cars.

(*See illustrations pages 178 and 184-85*)

Long Leaf, La., Oct. 13, 1917.

C. T. PATTERSON COMPANY,
New Orleans, La.

Gentlemen:

Your Mr. S. H. Penny will readily back me up in my claim that I have filed Disston 8-gauge saws for Crowell & Spencer for six years and eight months and have never had one taken off because it would not stand the feed of a 12-inch shot gun, which goes to show that they are the best of saws, and receive the best care I know how to give them.

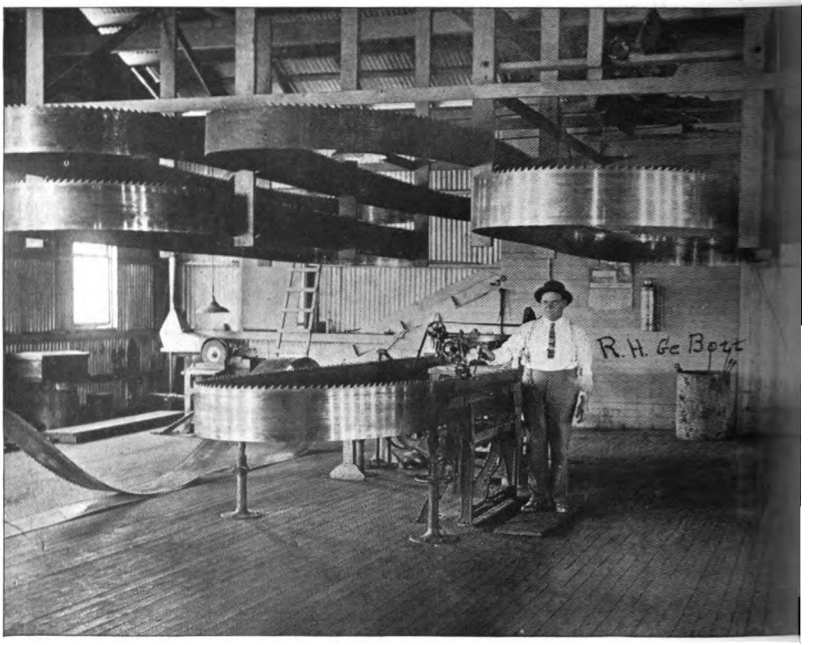
Very truly yours,

WILL W. PARRY,
Circular Filer.

P. S.—We will put on your 14-inch, 2-inch space Band Saws next week, and know they will hold up as they have in the past.—W. W. P.

Filing Room of th

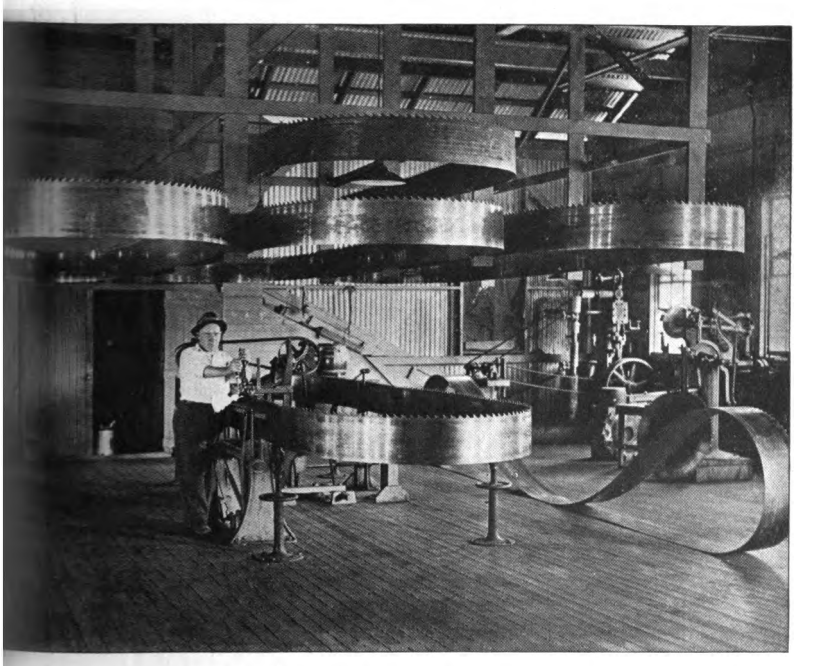
Hempl



Mr. R. H. GeBott is head filer and his son Bob is his helper. Mr. GeBott is
to filing saws he knows just what to do to make them stand the cut and get rest
he was under the impression that any of the leading brands of saws were just ab
was just a little better than any of the others, taking them year in and year

Knox Lumber Co.

Texas



e old school filers that believes in doing things just right, and when it comes filed for years in Michigan, Minnesota, British Columbia and Texas. For years a equal basis, but after thorough tests he finally came to know that DISSTON now strictly a DISSTON man from every angle.

Ice Harvesting

IT may be interesting for users of circular saws and readers of the "Crucible" to learn something of the circular saw as an ice-cutting tool, for while many mill men have seen circular saws cutting up plate ice (which is a manufactured product), they are not familiar with the fact that saws are now being used extensively in harvesting natural ice.

Many natural ice-harvesting operators who have heretofore used the horse-drawn plow in cutting grooves in the "field" or pond ice, which cuts a groove about 2 inches deep at one cut, or passing, are using the rotary "field" plow, as the latter will cut a groove any depth desired up to 15 inches by going over the ice once, traveling at a rate of feed of 100 feet to 250 feet per minute.

The rotary "field" plow consists of a circular saw, with a gasoline engine for power, mounted on a sled, with an arrangement for letting the saw down into the ice to the desired depth, this being governed by thickness of ice.

For instance, if ice is 15 inches thick, the groove is usually cut about 10 inches deep, the "field" is plowed or grooved in checker-board fashion, then large sections of grooved ice, called floats, are barred off, and floated to the conveyor chains that deliver the cakes of ice from the water to the ice house, after the cakes are barred off.

An ordinary sized float is about 16 feet wide by 50 feet long, and once it is grooved, can be easily floated to conveyor chain, where the cakes are barred off by striking in the groove with a steel-pointed bar, and when ice is properly grooved, with weather and other conditions normal, one man can bar off 2000 tons or more in one day.

Another method of harvesting ice is the use of "basin" saws, used in connection with field saws or plows. The "basin" rig consists of two gangs of circular saws, having five or more saws in each gang, similar in principle to a sawmill slab slasher, one gang being set to cut at right angles to the other.

When this method is used the floats of ice are usually cut from the "field" with the "field" saws or plows in sizes about 16 feet square, but not grooved, as these ungrooved floats are passed under the "basin" saws, which groove them for making cakes of desired sizes.

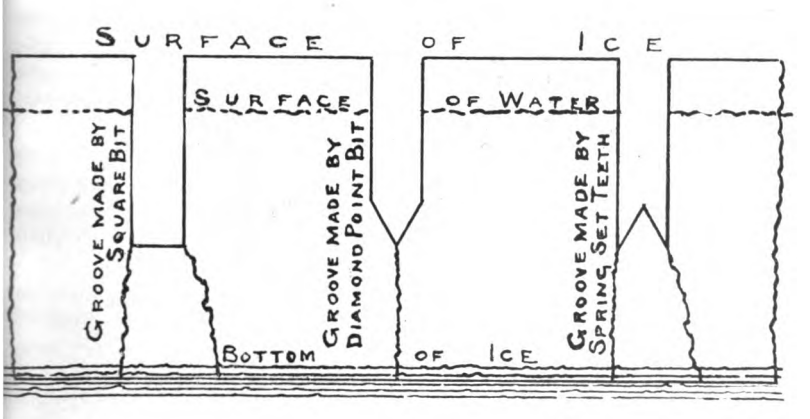
While the "basin" saw method of harvesting is the most rapid, operators of this rig have experienced more or less trouble with breakage of saws, whereas a "field" saw is seldom if ever broken.

The floats are passed through the "basin" saw rig at a rate of feed of about 20 feet per minute, with five or more saws cutting at one time, and it is not uncommon for one gang of saws to cut several hundred lineal feet of floats before they are allowed to come out of the cut, a thin coating of ice adheres to each side of the saws, making saw and coating of ice as thick as the cutting edges of teeth, thus reducing the clearance of saws, which give them little or no chance of properly doing their work.

This has the effect of deflecting saws from a straight line, which causes severe lateral strain, and often breakage of one or more saws.

This breakage can be prevented to a great extent if saws are allowed to run idle occasionally in the water for a few seconds, which removes the ice coating from side of saws, gives them their usual clearance and greatly reduces chances of breakage through saws binding in the grooves, and thus running out of line, or deflecting the floats, and at the same time make the cakes more uniform in size, shape and weight.

Almost any ordinary shaped tooth in rotary saws will cut a groove in ice, but the inserted tooth saw has advantages over the solid tooth saw for this work, and while the ordinary inserted chisel-tooth saw does good work in plowing or grooving ice, the diamond point inserted tooth has many advantages over teeth with square-swaged or spring set, for the diamond point tooth having an inverted-V-shaped point, requires less power than the square point tooth, for the reason that it makes a shearing cut, and as it leaves the bottom of the groove V-shaped, when the cakes are barred off the breaking point occurs at the point of V at bottom of groove—see illustration.



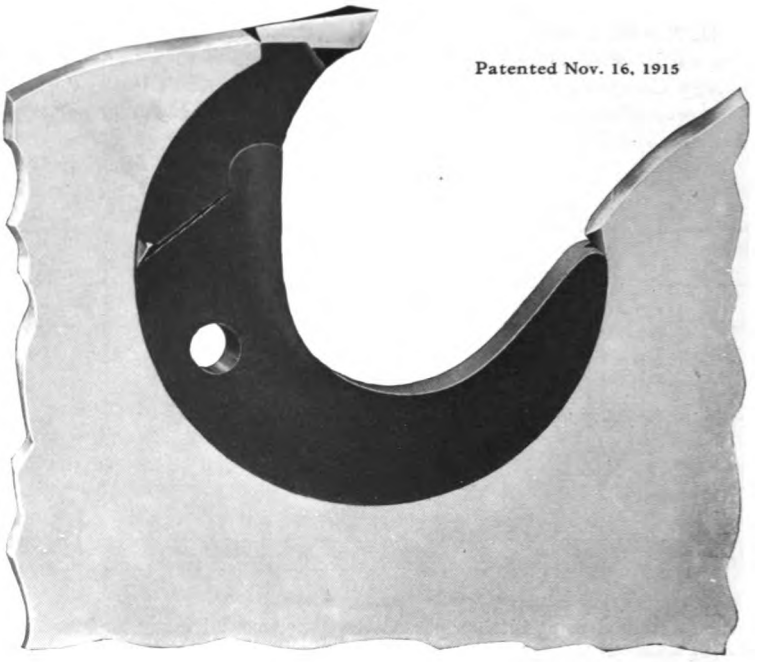
The diamond-point bit has passed the experimental stage and has proven to be the most desirable ice-cutting tooth in use, for aside from its easy cutting qualities, it reduces the percentage of "cripples" (irregular shaped cakes of ice) to a minimum.

In one particular ice-harvesting operation where the ice was 22 inches thick and grooved or plowed with the square-point bit, there were fully 10 per cent. "cripples," necessitating the services of several men and a two-horse bob-sled to haul these cripples to the scrap pile, but when the diamond-point bits were inserted in the same saws grooving same ice, there was less than 1 per cent. "cripples," the ice barred off much easier and the bob-sled was no longer needed, as there were so few "cripples" they were easily disposed of by sinking them under the ice.

While the use of the diamond-shape point ice saw in field work will reduce the flanging to the minimum, at the same time basin saw rigs should be provided with a guide bar of sufficient width, and so placed as to absolutely prevent the flanged part of the floats coming in contact with any other part of the float than the upper or sawed edge.

If the guide bar is so placed, or is not wide enough to prevent the flanged part of float coming in contact with any part of the bar, the float will be deflected, which will throw lateral strains on every saw in the gang and greatly increase chances of breakage.

CHAS. H. COOPER.



DIAMOND-POINT INSERTED TOOTH
CIRCULAR ICE SAW

What Makes a Man

IF you can give in when you find you're wrong,
And know that some mean little fellow will sneer;
If you can admit that you've made a mistake,
And can pay up the price of it, however dear;
If you stand solid and swallow the things
Your opponent's going to say,
And bear up with courage the shame that it brings
When a fellow must give in that way;
If you can do this, you are built on the plan
They start out to build, when they're making a *man!*

If you can come down, just as meek as a lamb
After you've blustered and snorted around,
And knowing you're wrong, *say* you're wrong and be calm
And humble yourself to the ground;
If you can descend from the stand that you took,
In whate'er the dispute may have been,
And never condemn your smart foe when you look
At the triumph that rests in his grin;
If you can do this, then we'll stand off and scan
From your head to your feet, what the Lord made a *man!*

If you can make up your mind not to care,
When you find that you're wrong for sure,
But just to admit it, and stand up and bear
All the loss and the shame you endure;
If you can go bravely on and face the whole truth,
And give in and pay what you must
In land or in dollars, in joy or in youth,
You're the kind that the world's going to trust,
You're the kind they intended to mould when they ran
The metal they use when they make a real *man!*

—From the *Baltimore American.*

Forest Service Report—(*Continued from page 182*)

serving Association, showing the quantity of preservatives used and the amount of wood treated in the United States in 1915. Statistics compiled in co-operation with the Newsprint Manufacturing Association showed that in 1916 the 230 pulp-making plants reporting used 5,228,558 cords of pulpwood, or 17 per cent. more than in 1914, the last year for which figures had been obtained.

The increased activities of wood-lot owners, lumbermen and wood-using establishments, their interest in markets and the care and preparation of material and their efforts at closer utilization were, the report states, reflected in the increased number of requests for information from all parts of the United States.

"DAD"

WE happened in a home the other night, and over the parlor door saw the legend, worked in letters of red: "What Is Home Without a Mother!" Across the room was another brief, "God Bless Our Home!"

Now, what's the matter with "God Bless Our Dad!" He gets up early, lights the fire, boils an egg, wipes off the dew of the lawn with his boots while many a mother is sleeping. He makes the weekly hand-out for the butcher, the grocer, the milkman and the baker, and his little pile is badly worn before he has been home an hour.

If there is a noise in the night, dad is kicked in the back and made to go downstairs and find the burglar and kill him. Mother darns the socks, but dad bought the socks in the first place, and the needle and yarn afterwards. Mother does up the fruit; dad bought it all, and jars and sugar cost like the mischief.

Dad buys the chickens for Sunday dinner and serves them himself and draws the neck from the ruins after every one else has been served.

"What Is Home Without a Mother?" Yes, that's all right; but what is home without a father? Ten chances to one it's a boarding house. Father is under the sod, and the landlady is a widow. Dad, here's to you—you have got your faults—you may have lots of them—but you are all right, and we will miss you when you are gone; and dad also puts up for insurance, so we'll have some money if he gets knocked out. He buys the best while he's about it, too; he joins the artisans.—*Progressive Ideas.*

Somewhere in France

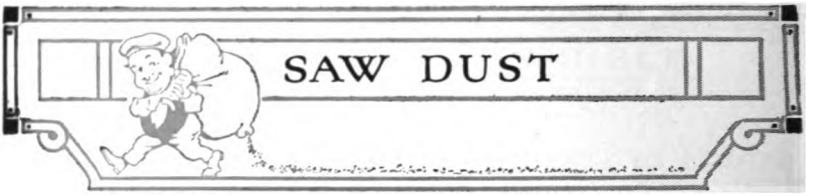
DEAR DAD:

Received your letter to-day after a long wait. It was forwarded to me from our regimental headquarters in Aberdeen. It is very cold over here and we suffer something cruel with our kilts, but we are fast gaining ground out here, our enemy, the Germans, hate to see the Scotch and Canadians coming at them with cold steel, I mean the bayonet. Sometime ago I was transferred in what is known as the Bombing Section, our business is to charge and bomb the Huns in their trenches. I can't say that I enjoy it very much. I must say that I have been very lucky so far, as some time ago we had orders to attack a trench near ——— and out of our company of bombers some 20 men, 1 officer and 3 privates answered roll call. I got mine, but nothing serious. I am now in a rest camp. Write soon and let me know how things are going in Disston's; also the football team. You know I was in the hospital in July, 1916. Well, I rejoined my regiment in September, when I went out again I stayed until I was struck on the 26th of December. I am feeling all right again. I am beginning to think I have had enough of hospital. While in France I was in the American Red Cross Hospital and I was treated fine. I will have to stop, as my head is beginning to hurt. When writing to me, address all letters to our regimental headquarters. With love and best wishes to all.

Your son,

HARRY MACAULEY, 10053,
8th Gordon Highlanders,
Aberdeen, Scotland.

Some Nut Crackers



In honor of a visit paid to his plant by the governor of the State, an automobile manufacturer once had a complete car assembled in something like seven minutes.

Some weeks after this feat was heralded in the daily papers, the phone at the factory rang vigorously.

"Is it true that you assembled a car in seven minutes at your factory?" the voice asked.

"Yes," came the reply. "Why?"

"Oh, nothing," said the calm inquirer, "only I've got the car."

—*The Yellow Strand.*

THE SISTER'S REPLY

He was a young subaltern. One evening the sister had just finished making him comfortable for the night, and before going off duty asked: "Is there anything I can do for you before I leave?

Dear little Two Stars replied: "Well, yes! I should like very much to be kissed good-night."

Sister rustled to the door. "Just wait till I call the orderly," she said. "He does all the rough work here."

—*London Opinion.*

VALET—A lady called while you were out, suh.

BACHELOR—Was she young?

VALET—No, suh! No, suh! She was an experienced lady.—*Life.*

ONE OF OUR OFFICE GIRLS, NO DOUBT

"As soon as I get to camp I am going to send my girl a rifle and bayonet and a sword." "Is she collecting souvenirs?" "No, but she enjoys having arms about her."

—*Detroit Saturday Night.*

"Where's your little brother?"

"He hurt himself."

"How?"

"We were seeing who could lean out of the window the farthest, and he won."—*The Rumbler.*

The proofreader on a small Middle Western daily was a woman of great precision and extreme propriety. One day a reporter succeeded in getting into type an item about "Willie Brown, the boy who was burned in the West End by a live wire."

On the following day the reporter found on his desk a frigid note asking: "Which is the west end of a boy?"

It took only an instant to reply: "The end the sun sets on, of course."

KEEPING UP WITH FATHER

It was a Pike County woman who indited a note to the teacher concerning the punishment of her young hopeful. The note ran thus:

"Dear Miss ———: You rite me about whippin' Sammy. I hereby give you permission to beat him up any time it is necessary to learn his lesson. He is just like his father—you have to learn him with a club. Pound nolege into him. I want him to get it—and don't pay no attention to what his father says—I'll handle him."—*Reading Eagle.*

THE ONLY WAY

The Irish sergeant had a squad of recruits on the rifle range.

He tried them on the five-hundred-yard range, but none of them could hit the target. Then he tried them on the three-hundred-yard, the two-hundred and the one-hundred-yard ranges in turn, but with no better success. When they had all missed on the shortest range, he looked around in despair. Then he straightened up.

"Squad, attention!" he commanded.

"Fix bayonets! Char-r-ge!"

—*Everybody's.*

"What have you in the shape of cucumbers, this morning?" asked the customer of the new grocery clerk.

"Nothing but bananas, ma'am," was the reply."—*Christian Register.*