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The  
**DISSTON**  
**CRUCIBLE**

FEBRUARY

1922



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# DISSTON CRUCIBLE

A MAGAZINE FOR MILLMEN

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VOL XI.

FEBRUARY, 1922

No. 1

## EXTINCT VOLCANIC PEAKS SURROUND MEXICO CITY

**Disston Representative Secures Idols Which Were Deeply  
Imbedded in Lava Emitted From These Volcanoes  
During Active Period**

**T**HE Mexican Republic is one hundred years old. To be exact, the birthday of the nation was September 5, 1821. It was then, after many years of struggle, that the natives threw off the Spanish yoke and began to steer their own "ship of state."

Last September the Mexicans celebrated their centennial anniversary. It attracted people from all parts of the world. Persons who had not been to Mexico City before were impressed with the great peaks (extinct volcanoes) which surround the city.

(Continued on Page 123)



Idol No. 2.

Lower Idol No. 1. Upper Idol No. 3.

No. 4.

## REMINISCENCES OF A LUMBER JACK

### The Days Before the Cross-cuts and Cant-hooks



**I**F we were to bring back some of the old time loggers of forty or fifty years ago and introduce them to some of the modern logging facilities," says A. Meilema, in

*Pacific Coast Lumberman*, "they would be just as amazed as our more ancient ancestors. But to give credit where credit is due, we have to admit that the old timers did splendid work, considering the tools they had for logging. As far as skilled labor is concerned, I doubt if the average lumberjack of forty years ago can be beaten, especially in loading logs with a swift team in the cross-haul; or in the case of a churn butt or crooked log which required skilled cant-hook men to keep straight on the skids. It would be difficult to find a more interesting operation to watch than to see two good ground loaders guiding such logs up a pair of skids.

#### CROSS-CUTS AND CANT-HOOKS

"Before cross-cut saws came into use in the woods, men chopped the trees down and then chopped them into log lengths, and long after saws were used to saw the trees into logs, the axe was still used to fell the trees, and the butts sawn off to square them. Eventually, however, the loggers started sawing the trees down, using the axe only to chop a notch in the tree to guide it. Nowadays most sawyers saw the bottom of the notch before chopping, thus saving half the labor.

"When logging was in its infancy, all the loading implements that were used were a couple of skids placed at

each end of the sleigh, and the logs were rolled up on these by hand. 'Bulling them up,' it used to be called. Soon some genius invented the cant-hook and although it was only a rude affair compared with the cant-hooks of today, still it was a great improvement on handspikes.

"The next step was when they started using spiked skids; that is two flattened poles with a double row of spikes protruding from them to prevent the logs from slipping back. A further improvement was made when the loggers fastened the end of a chain to the sway-bar of the sleigh and passed the chain under the log and back over the sleigh, in that manner attaining a purchase that enabled them to load a log in a shorter time and with half the labor, and when they hitched the oxen to the end of the chain to pull the logs up, all that was necessary for the men to do was to guide the logs."

#### THE BIG WHEELS

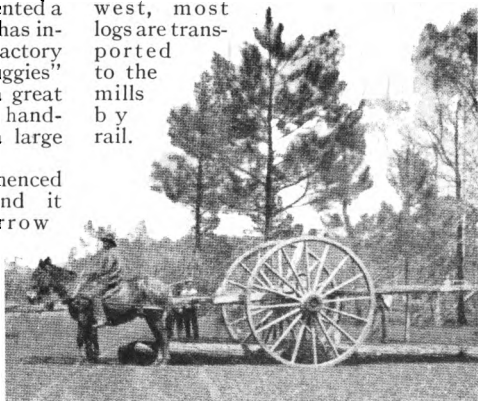
In those days all logging was done in winter, owing to the lack of facilities for transporting logs over bare ground; but soon the nine and ten feet logging wheels were devised and used for summer logging. These wheels were built high enough, and wide enough to be backed over a load of logs. Then the load was hoisted up under the axle and secured there until released by a trip. A great many accidents have happened in connection with these wheels. A teamster running down a hill in front of one of these cumbersome contrivances needs all his wits about him, and although they have



been in use a number of years, and are still used, no one as yet has invented a brake for them. The man that has ingenuity enough to invent a satisfactory brake for one of these "Sky-line buggies" will be the means of averting a great many accidents, facilitate their handling and no doubt will derive a large pecuniary benefit from it.

11-20-26  
E.B.  
When summer logging commenced most logging companies found it advantageous to build narrow gauged railways through their timber tracts, for although the "Big Wheels," as they are mostly called, did good work, they could not swing large enough loads under them for long hauls. Hence the entrance of railroads in logging, and today in the East and in many of the large

timber tracts in the West and Northwest, most logs are transported to the mills by rail.



Big Wheels Used in the Southern Pines.  
In the West and Northwest horses draw the big wheels.

## Extinct Volcanic Peaks Surround Mexico City

(Continued from Page 121)

One of these peaks, Popocatepetl, still emits smoke at intervals, although its last eruption was in 1664, while old Iztaccihuatl, (the white woman) with her snow-capped form, presents the same grim appearance today as she did when Cortez and his noble band first came to the valley of Anhuac in 1519.

The terrible and destructive belchings of lava from these volcanoes during the past centuries rival the fury of old Vesuvius. Like Herculaneum and Pompeii, a number of cities fell victims to the one time erupting volcanoes near what is now Mexico City, and lie buried beneath hundreds of feet of lava.

Different strata of lava indicate that these volcanoes had several periods of destructive activity, and most likely some day someone will succeed in determining how many years elapsed between these periods.

In the different strata have been found skulls and other bones of three distinct races of people, two of them supposedly prehistoric.

The idols shown on first page, which were secured by Mr. Charles Heiss, of

our organization, while on a recent trip to Mexico, may indicate the identity of these peoples. These idols bear the facial contour and other characteristics of peoples known to have lived in other parts of the world. For instance, idol marked No. 1 is distinctively Mongolian, as is shown by the oblique eyes. In idol No. 2 the Egyptian features can be readily recognized, while the mummy form is almost exclusively Egyptian. The Aztec, or Mexican, characteristics predominate in idol No. 3. Illustration No. 4 was probably a doll of a little lava victim.

It was Mr. Heiss' pleasure to be present in the office of Professor Niven, archiologist of Mexico City, when the Chinese Minister to Mexico read the hieroglyphics inscribed on a large urn which had been dug from one of the lava beds;—quite a unique experience indeed, to be privileged to hear this message from the prehistoric past.

Prof. Nivens, who has spent much time in trying to trace the identity of the first peoples who inhabited Mexico, is of the opinion that they were of Mongolian extraction. The fact that the Chinese Minister succeeded in deciphering the hieroglyphics on the urn would seem to verify Prof. Niven's opinion.

## HAMMERING AND ADJUSTING CIRCULAR SAWS —TENSIONING

This article is a reprint from *Disston Lumberman's Handbook*

**A**LL saws of whatever kind, if properly made, are what we call "loose," through or toward the center to suit the speeds and different kinds of work for which they are intended. The object is to keep the edge strained on a straight line, to prevent it from chattering or cutting a zig-zag kerf through the timber. The circular saw, however, is the most difficult to treat. Even after the most careful instructions, practical experience and close observation on the part of those having these saws in charge, is necessary before they can be successfully hammered.

The strain in running and the process of gumming will stretch the edge of the saw and it will begin to run snakey, rattle in the guides, and make bad

lumber. However, before concluding that the saw must be hammered to adjust the tension, see if there is not some other cause for the trouble, such as improper lining, the adjustment of the guides, the collars, the saw out of balance, and the dressing of the teeth. This means that it must be open sufficiently and properly from the edge toward the centre to suit the motion of the saw and the feed of the mill.

The tools required are—anvil, one round-face and one cross-face hammer, two straight-edges—one from 14 to 18 inches long, one about 48 inches long—and one try-mandrel. We find that these tools for fitting up saws are being put in many of the large mills. The men who handle the saws are making themselves proficient in the hammering



Fig. 71. Appearance of a saw having correct tension.

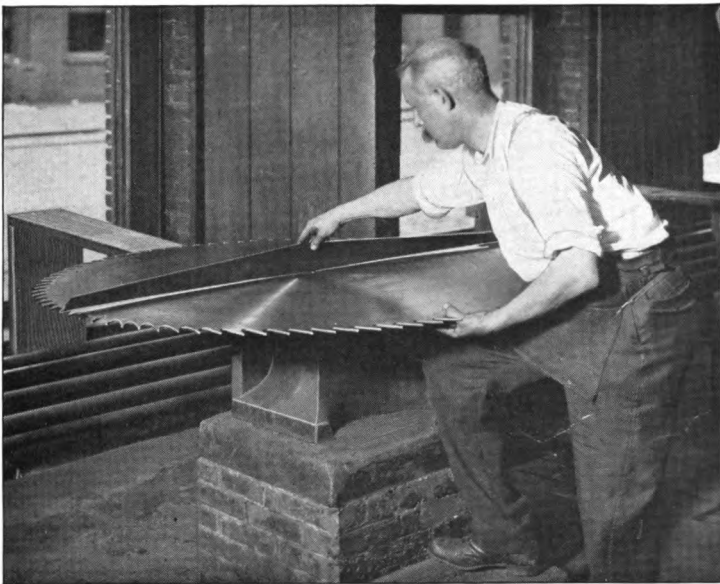


Fig. 72. Appearance of a saw that has lost its tension.

of the saws to suit their wants. This knowledge they have acquired by perseverance and practical experience, the only way in which it can be obtained.

In studying the subject of how to hammer circular saws, it would be well for those who have charge of the saws, to examine them when first received

for the tension, assuming that they are correctly tensioned for the speed and conditions given when they leave the maker. All the saws made by us are as true as it is possible to make them. Figure 71 shows a saw properly tensioned. It must be remembered, how-

(Continued on Page 127)

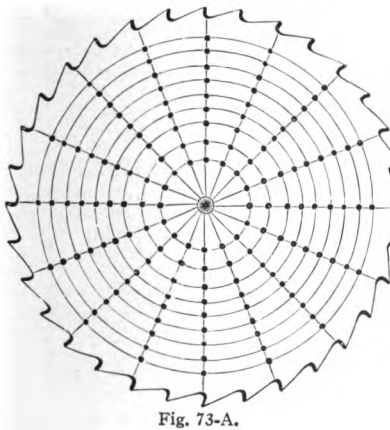


Fig. 73-A.

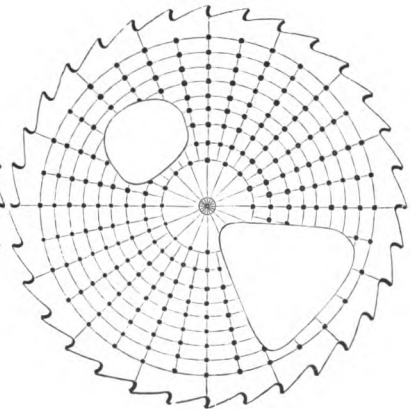


Fig. 73-B.

## FROM THE LOOKOUT TOWER

IN THE PICTURE ON THE FRONT cover, notice the concertina. We had a long, fierce argument about that picture with one of our fellow day-laborers. He said that in all his travels he had never seen a real, honest-to-goodness woodsman play a concertina.

IMAGINE TRYING TO TELL ME that no man out in a camp ever tells the world how happy, or how sad, he is by pumping out his story on a concertina. It is ridiculous to say that—just plain foolish.

IF SOME OF THE CONCERTINA-ists who read this have spunk enough to help us out, we're going to prove to the chap who made the statement how little he knows about the folk who work in the timber.

WHAT WE WANT TO KNOW IS—what is a concertina good for and why do you play it?

IF YOU PLAY A CONCERTINA and do not write us an answer to that; if you desert us, leave us stranded high and dry when we have started this argument in your defense, you are no true member of your craft.

IF THERE ARE ANY REAL CON-certina champions left, we are going to give on this page next month so many reasons why a concertina is a wonderful thing that scoffers will be forever silenced.

WHAT'S MORE, EVERY MAN loyal enough to write us a letter that we can publish; who stands by us when we need him, gets a Disston Watch Fob as a mark of respect and appreciation from us.

COME ON NOW, ALL OF YOU! There's the free offer 'neverything. What is it good for and why do you play it?

A. L. OSBORN, OF THE NORTH-ern Hemlock and Hardwood Association, appeared before the Interstate Commerce Commission the other day and asked for a reduction in freight rates.

WHEN ASKED WHAT COM-modity should be treated first, Mr. Osborn said, "Lumber, because nothing is needed as much in the United States as homes."

TO THIS STATEMENT, WE, from our little cubby-hole, say our feeble "Amen." Homes—Why, our landlord thinks the "five-rooms-and-bath" where we spend most of the time when we are not at the office, is the palace of some defunct king. He collects rent on that basis, too.

WE'VE GOT TO HAVE HOMES and, mark you, we're going to get them. A fact in which we who make saws, you who use saws to make lumber, and the folk who use our saws and your lumber to make homes, have a bit more than passing interest.

WE ARE NOT SUPPOSED TO put any advertisement on this page, but we are going to try to get past the censor.

ONLY BY USING THE BEST lumber can we build the best homes. Only by using the best saws can we make the best lumber. Disston Saws have been the best saws for 82 years.—*Advertisement.*

SOME FRIENDS OF OURS OVER in New York publish a magazine called *Hardware Age*. In the last issue there appeared the following bit of wisdom:

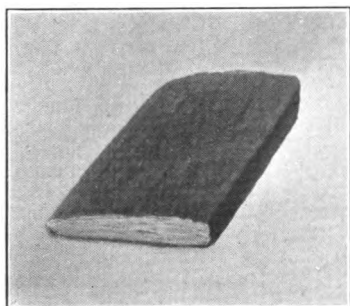
"Bootblacks and barbers, as a rule, have long, wavy, elegant hair. John D. Rockefeller has none, and Henry Ford's hair is nearly as thin as Thomas Edison's. There are practically no baldheaded men in the insane asylum. You can draw your own conclusions."

WHAT SAY YOU, BROTHERS?

### Piece of Slab Sawed Fifty-seven Years Ago, with a Disston Four-gauge Saw

The illustration below portrays a slab of yellow pine sawed in 1865 with a four-gauge Disston saw. Although fifty-seven years have elapsed since this slab was cut, it is remarkably well preserved.

We have seen saws of our make which cut slabs long before 1865, but it is indeed interesting to see and handle a piece of slab cut by one of them so many years ago.



Probably the splendid state of preservation of this slab is due to its having been submerged in water all these years.

It is through the courtesy of Mr. J. W. Sligh, superintendent of the Anniston Cooperage Company, of Alabama, admirer and user of Disston Saws, that we can present this curio to our readers. It was sawed by his father, Mr. Harrison Sligh.

### Chilian Lumber.

Lumber is one of Chile's most valuable resources and some day, due to the growing scarcity of available woods near to all the great markets of Europe and the United States, should take its place in importance beside minerals and nitrate as one of the country's leading export commodities.

From Concepcion south to Puerto Montt and Chiloe Island the country is rich in standing timber, and this

district can supply woods for almost any form of wood usage; from the finest cabinet work to heavy construction requirements.

Once, this source of supply becomes familiar to consumers, in the United States and Europe, and the suppliers in Chile become better acquainted with the requirements of the foreign markets, the field promises to be one of quick development and immediate success.

—Grace Log.

### Hammering and Adjusting Circular Saws—Tensioning

(Continued from Page 125)

ever, that different speeds and feeds call for different adjustment of tension. A saw that has lost its tension appears as that shown in figure 72 and needs hammering with a round-face hammer along the lines shown in figure 73-A. Before commencing to hammer to restore the tension, examine or test the saw all around with a straight edge. If any part of the saw between the rim and the centre falls away from the straight-edge, mark around this spot as shown in figure 73-B, and do not hammer as much, if any, at that place. In testing for the tension be sure to have the straight-edge at right angles with that part of the saw which rests on the board that extends back from the anvil and with the opposite edge which is being raised with the left hand. The straight-edge is held and gently pressed down with the right hand. Do not lean the straight-edge to one side but hold it straight up, or it will fall to the form of the saw and not show what is desired. A straight-edge reaching from the center hole well out to the edge of the saw is the best to use to judge the tension in hammering, and when this straight-edge is applied as above, the saw should fall away from a straight line. This will show that the centre of the saw is stiff, as it must always be to run properly and do good work. If a short straight-edge about 6 inches long were pressed directly over the centre it would show the saw to be nearly flat or of equal tension at that part. It is very seldom necessary to hammer a saw at the part covered by the collars.



## SAWDUST

### PECULIAR VISIBILITY

First Constable—"Did yer get that feller's number?"

Second Constable—"No, he was too gol-derned fast fer me. That was a perty-lookin' gal in the back seat, wasn't it?"

First Constable—"She shure was!"

### INSINUATING REPARTEE

There were two convicts, one in for stealing a watch, the other for stealing a cow. They disliked each other and their conversation was chiefly innuendo.

Thus the cow-stealer said to the watch-thief:

"What time is it, Jim?"

"Milking time, Joe," came the prompt reply.—*Exchange*

### CAUSE FOR WORRY

There was a man  
And all his life  
He'd worked in a shipyard;  
And he had a baby  
And it was going to be christened,  
And for a week  
He couldn't sleep nights  
Because he was worried  
For fear the minister  
Would hurt the baby,  
When he hit it with the bottle.

—*The Fore River Log.*

### A DRONE INSIDE AT THAT— MEBBE

They were on their honeymoon and were staying in a big modern hotel. The bride had been shopping, and coming back to the hotel, went direct to the room she believed hers and rapped a gentle little rap.

"Honey! Honey! Let me in."

A great bass voice came through the closed door, saying: "Madam! This is no bee-hive. This is a bathroom."

—*Exchange.*

### DANGER AHEAD

Speaking of white mule, two rustic sports were uncertainly flivvering their way home from the country seat.

"Bill," said Henry, "I wancha to be very careful. Fir'hing y' know you'll have us in a ditch."

"Me," said Bill in astonishment, "Why, I thought you was drivin."  
—*Exchange.*

### A PINCH HIT

An Italian who kept a fruit stand was much annoyed by possible customers who made a practice of handling the fruit and pinching it, thereby leaving it softened and often spoiled. Exasperated beyond endurance he finally put up a sign which read:

If you must pincha da fruit—  
pincha da cocoanut

### EBONY ELOQUENCE

Two darkies in a negro regiment were boasting about their company buglers. "G'long wit' you, boy," said one, "you ain't got no booglers. We is got the boogler, and when 'at boy warps his lip around that horn and blows pay-call it sounds jes' like that um Boston simphony band playin' 'The Rosary'."

"Yeh, I hearn you," replied the other. "Talk up, boy, talk up. Yo' is wadin' deep into trouble."

"An' when he sounds 'at tatoo the angile Gabriel hisself is lendin' a ear, boy. A ear is what I says."

"Well, if yo likes musik they is all right, but if yo' is yearnin' fo' food, yo' wants a boogler with an hypnotic note like we is got. Boy, when Ah hears ole Custard Mouth Jones discharge his blast Ah looks at mah beans and Ah says, 'Strawberries, behave yoselves; yo' is crowdin' the whip cream out o' mah dish.'"



The  
**DISSTON**  
**CRUCIBLE**

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MARCH

1922



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## Every Item on this List—

is just as good as the Disston products you are now using. Check off the things you use and the next time you buy specify "Disston"—you'll get that same satisfaction you have come to expect from Disston products.

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### Back Saws

#### Band Saws for Wood and Metal



Bevels  
Buck Saws  
Butcher Saws and Blades  
Cabinet Scrapers

#### Chisel Tooth Circular Saws

Circular Saws for Wood,  
Metal, and Slate

Compass Saws

Concave Saws, Circular

Cross-cut Saws

Cut-off Saws

Cylinder Saws

Dovetail Saws

Drag Saw Blades

Edger Saws

Files and Rasps

Filing Guides

Gang Saws

Gauges, Carpenters' Marking

Grooving Saws

Hack Saw Blades

Hack Saw Frames

Hand, Panel, and Rip Saws

Hedge Shears



Ice Saws  
Inserted Tooth Circular  
Saws

Keyhole Saws

Kitchen Saws

Knives—Cane, Corn, Hedge

Knives—Circular—for Cork, Cloth,  
Leather, Paper, etc.

Knives—Machine

Levels—Carpenters' and Masons'

Lock Corner Cutters

Machetes



### Mandrels

#### Metal-slitting Saws



Milling Saws for Metal

Mitre-box Saws

Mitre Rods

Nest of Saws

One-man Cross-cut Saws

Pattern Maker Saws

Plumbs and Levels

Plumber Saws

Post Hole Diggers

Pruning Saws

Rail Hack Saws

Re-saws

Saw Clamps and Filing Guides

Saw Gummers

Saw-sets

Saw Screws

Screw Drivers

Screw-slitting Saws

Scroll Saws

Segment Saws

Shingle Saws

Siding Saws

Slate Saws, Circular



Squares, Try and Mitre

Stair Builder Saws

Stave Saws

Straight Edges

Sugar Beet Knives

Swages

Tools for Repairing Saws

Tool Steel

Trowels—Brick, Plastering,  
Pointing, etc.

Veneering Saws

Webs—Turning, Felloe, etc.



This is a partial list. There are thousands  
of items in the complete Disston line.

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# DISSTON

## SAWS TOOLS FILES

# DISSTON CRUCIBLE

A MAGAZINE FOR MILLMEN

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VOL. XI.

MARCH, 1922

No. 2

## “LUMBERJACK” JACK McCALL MISSIONARY IN NORTHWESTERN LUMBER CAMPS

Twenty Years of Real Lumberjack Experience Before  
Entering Ministry—Was Familiar  
With Disston Saws

**L**UMBERJACKS, living their “rough-and-ready” out-door life in remote wooded sections, are just like their fellows in fertile farm-land districts and in the modern cities in that they have religious inclinations and are not averse to indulging them occasionally as opportunity presents itself.

This opinion was verified recently by “Lumberjack” Jack McCall, before a capacity audience in the Bryn Mawr, Pa., Presbyterian Church on their Home Missionary-day occasion, when it was the privilege of a Disston representative to hear him tell of his experiences, and interview him at the close of the service.

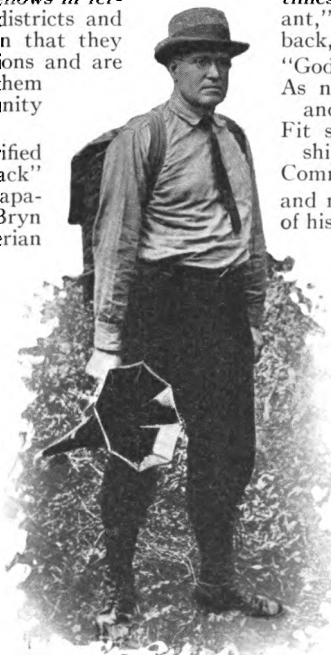
“Lumberjack” Jack McCall is associated with the Home Missionary Board of the Presbyterian Church. His name appears on their ministerial roster as the Rev. John McCall. He is well known in his denomination and is doing effective work

in the lumber camps of the Northwest, principally in the Spokane section.

He goes from camp to camp, oftentimes on foot, with his “assistant,” a phonograph, on his back, holding services in “God’s first temples \*\*\*\*\*” As now they stand, massy, and tall, and dark, Fit shrine for humble worshipper to hold Communion with his maker,” and ministering to the needs of his fellows. Frequently he deals with the individual.

He has an especial grip on the hearts of these sturdy sons of the forest due to his personal experience in camps and knowledge of lumbering.

For twenty years, Rev. McCall was actively engaged in the business, hence he knows the “game” from every angle; he understands the problems of the woodsman. This knowledge, plus his self-sacrificing spirit and intense earnestness, peculiarly qualifies



“Lumberjack” Jack McCall on way to Camp Summer with a phonograph on his back.



Modern lumber camp on cars, Humbird Lumber Company, Idaho. The cars are equipped with electric lights, shower baths, laundry, and dry room. Twelve men to one car. Spring beds, clean sheets and blankets are supplied.

him for his work, and many a lumberjack is a better man to-day because of his contact with this "sky-pilot."

At one time the Rev. McCall was engaged in the Michigan lumber tracts of the Hon. Russell A. Alger, Secretary of War in President McKinley's cabinet during the Spanish-American War.

Men of different nationalities and various religious beliefs comprise Rev. McCall's audiences from time to time. These men generally are reverent and considerate. One little incident, however, which seemed rather to amuse than to annoy the Reverend occurred on a certain occasion when at a pre-arranged signal, every man in the audience left the room in which the services were being held. Later, the man who planned this untimely dismissal confessed to the "sky-pilot" that it was "pulled" through sheer devilry and

not because he had any particular dislike for him or his work.

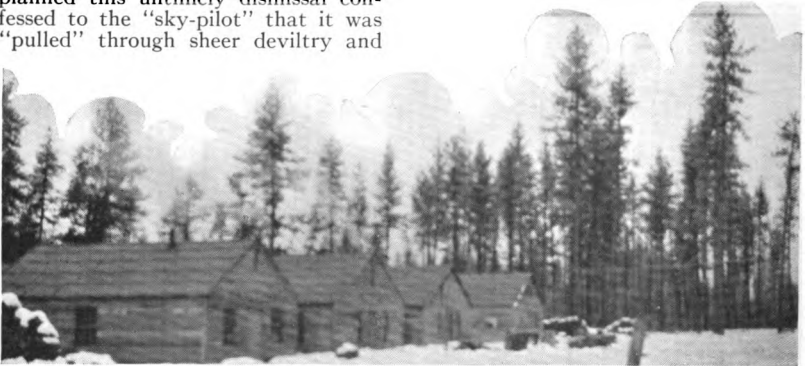
When asked, "What kind of men are the lumberjacks?" the Rev. McCall replied:

*"The lumberjack, as a rule is a large-hearted, honorable man,"*

and he volunteered the information that there were 16,000 of them in the district assigned to him.

When surprise was expressed at his very large "congregation"—so many lumberjacks in one section, the Reverend gentleman reminded the interviewer that the lumber industry is the second largest industry in the United States in value of output and third in number of employees. Over \$600,000,-

Continued on Page 15



Winter camp of the Humbird Lumber Company, Idaho.

## FROM THE LOOKOUT TOWER

Indications are that we have won our fight to secure for the concertina the respect that it deserves.

From New York, Tennessee, Virginia, Missouri, Pennsylvania, Oregon—from all quarters—we have received letters telling us what joy and contentment there is in a concertina. Here are some of the letters:

"Who is the chap that rashly said  
Concertinas are not played?  
Just send him to our logging camp—  
You bet he will be flayed.  
For when he hears us hit them up  
Of times now long gone by,  
He'll cock his ears at 'Home Sweet Home'  
And his eyes will not be dry.  
For if he is a tenderfoot,  
With kindness in his heart,  
He'll pray, 'Oh, don't— (when camp is struck)  
With our concertina part.'"  
—Alfred D. Clinch.

Here's another letter from a man who wants to say a good word for the concertina's big brother, the accordion:

"I never played a concertina, but Webster says a concertina is a small musical instrument of the accordion species—and when you say accordion, Oh, boy! I do not think there is anything better to help a lonely woodsman pass his evenings."  
—Chas. E. Tressler.

Another poet from good, old Virginia tells us about it in this way:

"A woodsman am I with axe and saw,  
Away in the woods with my pal, McCaw,  
When the katy-dids sing chee-chee-chaw,  
Then McCaw takes his fiddle with see-see-saw  
And I, with the concertina, play Me-Mc-McCaw.

This is part of the story, also the facts,  
We daily try out our pleasantest acts.  
McCaw takes the fiddle and some wax  
To help players and dancers make more tracks,  
While I play the concertina because of my knacks.  
We hold our music in place by racks  
And pull out the sounds by easy whacks."  
—T. H. Harris.

We said some time ago that we wanted to keep all advertising off of this page. It seems our friends won't let us. Read this:

"\*\*\*\*\*As I have been in the woods for thirty years getting out lumber and have never played the concertina I cannot say anything as to the merits of the instrument.  
But I have been using Disston Saws since

1893 and I know the merits of them. I think that from a full set of Disston Saws, properly tuned up you can get better, and more profitable music than from any other instrument used in the lumber camp."  
—B. B. Maupin.

From our old friend, Mr. J. D. Allen down in Memphis comes this interesting story of Civil War days:

"We had a Swede in our company that played the concertina very beautifully, but he was 'queer in his haid' (as the Southern darky expresses it) and would only play when he could get far away from camp. After a while his queerness developed into a notion to fish. So he cut him a pole and with line and hook, but no bait, he would sit on any grassy knoll near the guard lines and fish all day with no water within a mile of him. Finally, he was discharged for lunacy and when he was getting ready to leave for home one of the boys asked him why he acted so queerly as to sit out in the sun and fish on dry land. His reply was, 'I vas fishin' for my discharge out and, you see, I got him!'"  
—J. D. Allen.

Some of our friends want to know why we are pulling so strongly for the concertina. We'll tell about it. We tramped down to the station, boarded old Number Eight, and rode into Oshkosh almost every Monday morning for a year. There never was a train quite as dirty, or as slow, or as jerky as Number Eight. But every Monday we were sure to find old Pop Craven with his concertina and his songs of the Sunny South, enthroned up in the corner of the "smoker." It was only Pop and his music that made that three-hour ride endurable. We'll never be able to thank him properly or to pay the debt we owe him and his concertina—but we'll fight for 'em both.

In spite of the fact that many friends helped us out on the concertina argument, we were a bit disappointed in our mail. Remember the little note down in the corner of the page taken from a magazine published by a friend of ours saying—or rather, *inferring* that fellows with long, wavy hair usually are not overly intelligent

Continued on Page 13

## REMINISCENCES OF A LUMBERJACK

### A Cockney Yarn—



"An amusing blunder," says A. Mellema, in *Pacific Coast Lumberman*,

"in connection with a canthook, happened one day in a camp where I was working. Our crew was strengthened by the addition

of a Cockney Englishman. He worked among us for several days, and one afternoon it happened that the skidding teamster broke a canthook stock. As there happened to be no spare one at hand at the time, he sent the new arrival to the camp to get one. About an hour later we heard a crashing coming through the underbrush, and we were inclined to think that a tornado was about to strike us. We were surprised and puzzled when the threatened disaster proved to be nothing but our apprentice swamper returning with an old muley ox which he was driving before him.

The teamster was the first one to recover his breath. "What in blazes are you doing with old buck?" he yelled.

"Well," replied the Cockney in a deprecatory tone, "this is the only thing Hi can find haround this blarsted camp that can't 'ook."

#### Horses versus Oxen

In those days horses had as yet not been introduced into the lumber woods, and one can well imagine the amount of trips a team of oxen would make on say a five-mile sleigh haul, and here is where they first lost prestige and were voted too slow for hauling. They were replaced by horses for this purpose, but oxen were still used for skidding and loading. Then it was found that light

weight horses also gave better satisfaction for skidding. This caused a lot of difference of opinion and controversies between the teamsters.

*Some of the old ox teamsters maintained that, although the oxen were a great deal slower than horses, they could work in places where horses could not.*

No doubt but they were right in some instances. Oxen will wallow through deep snow or soft, swampy places where horses would get mired. It required several contests to convince the bovine champions that horses were also better for skidding, and although oxen were used a number of years longer for loading, they were eventually eliminated from the lumber woods entirely, and horses took their places for some time. Then the steam loader and steam skidder were invented, and horses, like their predecessors, the oxen, were dispensed with.

Most changes and improvements in logging facilities have come about gradually. In skidding, for instance, the logs used to be drawn by attaching a chain to the end of the log by the aid of a round hook that was attached to one end of the chain. Very often it kept one man busy digging holes under the end of the logs to enable the chain to be passed under them, but when swamp-hooks came into use, these were used to roll the logs onto the chains. Next some genius strung two swamp-hooks on a short piece of chain and hooked one at each side of the end of the log, thereby obtaining a lower draught as well as doing the work more expediently. From that it was only a short step to the skidding tongs, doing away with the chain altogether, except where perhaps logs were difficult to reach.



## Sam Southern Recovering From Fractured Hip

Still in Evanston, Ill., Hospital

"Sam" Southern is recovering as rapidly as can be expected is the latest report from the Evanston, Ill., Hospital.

On January third, while on the way to his home from the office of Henry Disston & Sons, Inc., Chicago, Mr. Southern slipped on an icy pavement and fractured his hip. He was taken to the Evanston, Ill., hospital where he has received every attention. However, "Sam" has had a tedious time of it. For a man of his activity, it is quite some grind to be confined to one room and in practically the same position for so long a time.

Probably no man is better and more favorably known to the mill-saw business than Mr. Southern. He has called on the trade time and again, and in addition to selling saws, he has made a friend of every customer.

We know that his large circle of friends join his fellow employees in well-wishes for his speedy and complete recovery.

Mr. Southern is associated with the Chicago Branch of Henry Disston & Sons, and has worked for the firm in the factory and "on the road" for the past forty years.

## Liberty Bonds

The United States Treasury Department states that the Department is holding \$8,316,587.00 interest money due holders of Liberty Bonds. Without doubt, thousands of workers who bought Liberty Bonds have overlooked collecting their interest. We advise our readers, who may own bonds to examine them and if they have unpaid coupons, clip them off and cash them at the bank.

It is also reported that there are 7,471,171 separate Liberty Bonds (temporary certificates) that have not been exchanged for permanent bonds. Holders of temporary certificates should take them to their bank and exchange them for permanent bonds.



## Lumberjack Fights His Way into Harvard

Frederick R. ("Kid") Wedge, of Prescott, Ariz., 40 years old, former lumberjack and prize fighter, was admitted to Harvard University as a student of the Graduate School of Education recently. He had come across the country in freight cars to register, only to find that he was uncertain of admission.

Wedge's admission to Harvard marks the latest step in his fight for an education. After battling his way out of the Wisconsin lumber camps by his boxing prowess, he became a fairly successful participant in battles of the prize rings in Nebraska, Colorado and other Western States. Then, under the influence of the young woman who became his wife, he has said, he turned to obtaining an education, obtaining a degree from the University of Arizona, and acting for a year as principal of a high school at Prescott.

"Our delay in admitting Mr. Wedge," Dean Henry W. Holmes, of the School of Education at Harvard, said today, "has had absolutely nothing to do with the fact that he was formerly a prize-fighter. His remarkable struggle for an education counted in his favor."

## From The Lookout Tower

Continued from Page 11

Now we have a bit more than the usual allotment of long hair and we certainly hoped some of our long-haired brothers would come to our assistance. We claim that many a good brain operates under a copious covering of wavy hair. What say you?

Oh, yes—our friend Mr. Clinch reminds us that P. T. Barnum offered one thousand dollars for a bald-headed fool and never found one.

## BRAZING BAND-SAWS

### Much Depends upon Properly Joining the Ends of a Bandsaw Instructions in Detail for this Operation Care of Brazes

This article is a reprint from the *Disston Lumberman's Handbook*

**T**HE process of joining the ends of a band-saw is called brazing. When cutting off the ends be sure to allow for the proper spacing of the teeth.

Square the ends of the saw carefully, then prepare them to be lapped by bevelling the upper side of one end and the lower side of the other, by filing, grinding, or milling. The laps must be uniform, smooth, flat, and must taper to a knife edge. Test with a straight-edge and remove, with a file, any high spots, for the closer the laps fit, the less solder will remain in the joint and the stronger it will hold.

Saws up to 7 inches wide should have  $\frac{1}{2}$  inch laps; 8, 9, and 10 inch saws,  $\frac{5}{8}$  inch laps; 11 to 14 inch saws,  $\frac{3}{4}$  inch laps, and saws over 14 inches,  $\frac{7}{8}$  inch laps, though, of course, wider laps may be used, at the discretion of the filer.

After the ends have been scarfed or bevelled, place one end at the center of the brazing clamp, directly over the irons with the back of the saw against the ledge of the clamp. Then tighten the end clamp to hold the blade in place. Position the other end in the same manner. The back edge of the saw must be straight and even. The point of the top lap must cover and fit the lower lap perfectly, and the points of the teeth must be spaced properly. When the ends are secured in position, raise the top end and clean the laps

with a diluted muriatic acid, and wipe dry with clean white waste, or a rag. Cut a strip of silver solder a trifle longer, and  $\frac{1}{8}$  of an inch wider, than the laps. Clean the solder in the same manner as the laps and place it carefully between the laps. Fit the irons, which must be straight and even, in the clamp, to raise the saw slightly at the brazed point.

Place the irons in the furnace, and bring them to an even cherry-red heat. Just before the irons are ready for application, cover the inside of the laps with zinc chloride flux or borax paste. As the irons come from the furnace, wipe off the scale. Apply them quickly, as originally adjusted, and secure the clamp firmly and evenly.

As soon as the clamp is tightened, loosen the other clamps which hold the saw in position. This is to allow for expansion, and insures better finish when the braze is dressed. Remove the irons as soon as they are black and cool the brazed part of the saw with oil. At the hammering bench, file off the excess solder.

As the heating has made the blade very fast at the brazed point, open it well with a roll or hammer to fit the tension gauge. Trace the lumps with a straight edge and flatten them with a hammer. Reverse the saw and hammer the other side of the blade until the saw shows the same on both sides—with a straight edge for flatness, and with a tension gauge for tension. When sat-

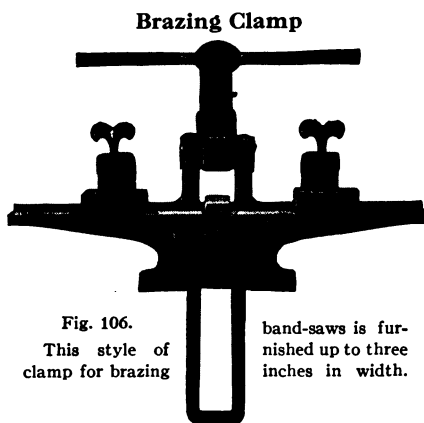
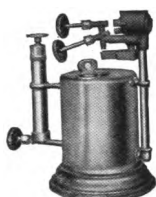


Fig. 106.  
This style of  
clamp for brazing

band-saws is furnished up to three inches in width.





Brazing Torch

A convenient and powerful heating apparatus.

ified that the saw is properly flattened and tensioned, place a curved block under the brazed portion. Clamp the saw to the bench on each side of the block. Then file the surface carefully and polish it with emery cloth. Use a wire gauge to measure the thickness of the blade and do not reduce it too much. When this operation has been completed, test with a straight edge and flatten if necessary.

Next, cover the brazed part with a heavy oil and heat carefully with a blow torch until the bright part turns a straw color. This will stiffen the braze and prevent bending while it is being handled.

Refit and the saw should be ready to run.

### Care of Brazes

The brazed part of a band saw and about an inch of the metal on each side of the braze is a little milder in temper than any other part of the blade.

For that reason this part of the saw is more subject to bends when saws are being changed or handled in the filing room. Also the brazed part is more liable to "pull-tension" than any other part of the blade.

Irregularity of tension or bends in a band saw are two of the most common causes of cracks. It is, therefore, of great importance that the brazes in every band saw should be examined at the end of each run. If any bends are found in the brazes, or if the tension has pulled to any extent, the bends should be straightened and the tension restored before the saws are

allowed to make another run. This will save time, money, and annoyance, for it must be remembered that the brazed part is the weakest part of a saw, and unless the brazes are kept in proper condition, the chances of cracks in the saws and possible serious accidents will be greatly increased.

## Prune Tree Planting in California

Three million prune trees will be planted in California in 1922, according to an estimate prepared by Elmer Bros., a nursery firm of San Diego. It also is predicted that 400,000 apricot trees and many thousands of pear trees will be planted during the year.

—*The Timberman.*

## "Lumberjack" Jack McCall Missionary in Northwestern Lumber Camps

Continued from Page 10

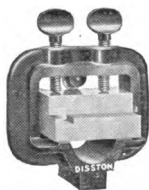
000 is invested in saw-mills and standing timber; 735,000 men are employed at wages of \$367,000,000 a year, supporting 3,500,000 dependents; the production value is over one and a quarter billion dollars annually.

According to the Secretary's report at the twelfth Pacific Logging Congress held recently in San Francisco, the mileage of the logging roads of the far West is equal to the distance from San Francisco to New York and back again as far as Omaha, and each year it is increasing—or 5,240 miles.

The rolling stock of these roads are:

Logging trucks.....	8,362
Flat cars.....	4,039
Steam shovels.....	101
Locomotive cranes.....	62
Geared locomotives.....	725
Direct connected locomotives	240

Upon being asked if he had used Disston Saws while he was engaged in lumbering, Rev. McCall replied: "Disston Saws? O, yes!" and a smile wreathed his countenance as if the memory of an old friend had been revived.



Lap Filing Vise

It is essential, for a good joint, that the "laps" of band-saws should be accurately and uniformly filed. With the assistance of this vice the filing is easily made square and true. Made of grey iron, japanned, hardened steel blocks.



## SAWDUST

### HIS FATHER'S SON

"Tell me truly, does the baby really take after his father?" asked Mrs. Jones.

"Yes, indeed—why, when we took the darling's bottle away, he tried to creep down the cellar stairs."

—*Team-Work.*

Little Spencer let no grass grow under his feet, when uncle came for a visit, before rushing up with this:

"Uncle, make a noise like a frog."

"Why?" asked the old man.

"Cause when I ask daddy for anything he says: 'Wait till your uncle croaks.'"

### TO BE EXACT

"James, have you whispered today without permission?"

"Only wunst."

"Leroy, should James have said wunst?"

"No'm, he should have said twict."

—*Winnipeg Tribune.*

### A MODEST START

"Has your new son-in-law any live-stock to begin farming with?" inquired the village gossip of Uncle Jeremiah Snodgrass.

"Well, he's got my goat," replied Uncle Jeremiah, as he gave the off horse a vindictive cut and went rattling out of town.

### NUFF SED

"Did you ever have the telephone bell ring when you were in the bath and there was nobody else at home?"

"Oh, yes," replied the family man.

"What did you do?"

"Well, I play a little golf and I have also addressed a few remarks to a punctured tire, so you can draw your own conclusions."

Officer (to sailor who has rescued him from drowning)—"Thank you, Smith. Tomorrow I will thank you before all the crew at divisions."

Sailor—"Don't do that, sir; they'll 'arf kill me."—*Sketch.*

A fly and a flea in a flue were imprisoned; so what could they do?

Said the flea, "Let us fly!"

Said the fly, "Let us flee!"

So they flew through a flaw in the flue.

### NO NEWS TO HIM

A regimental band was about to be organized at one of the war-time cantonments and, after the first rehearsal the officer in charge was signing up the candidates.

"Your name?" he asked the trombonist.

"Sam Jones," returned the embryo trombonist.

"Your station?"

"Camp Devens."

"Your rank?"

"I know it," sighed Sam.

—*American Legion Weekly.*

### A CORRECTION

The village paper intended to eulogize the local veteran as "one of the most distinguished of our battle-scarred heroes" but a lapsing proof-reader let it be printed "battle-scare'd." Of course the irate colonel demanded an apology and correction.

The following issue announced that by mistake reference had been made to Colonel Brown which failed to express the high esteem in which he was held by his fellow-citizens, and that the sentence should have read: "Colonel Brown is one of the most distinguished of our bottle-scarred heroes."

—*McClary's Wireless.*

PRINTED IN U. S. A.

# Why You Should Use Disston Saws

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## *A Few of the Reasons for Disston 82 Years of Leadership*

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**D**ISSTON SAWS are manufactured *completely* in the Disston factory.

---

**D**ISSTON workers are, for the most part, expert craftsmen. A great many of them have grown up—in many cases, have followed their fathers—in the Disston factory and are truly experts in saw-making. Eighty men in the Disston factory have worked here *more than 40 years!*

---

**T**HE steel used is made in the Disston Steel Works—within the factory wall—because, to insure *constant* good quality, it is necessary to control *absolutely* the quality of all steel used.

---

**Y**OU have undoubtedly heard of Disston-made Saw Steel. It is known for its good quality wherever saws are used. This is because it is made from a formula developed by Henry Disston back in the fifties, and from which, ever since, superior saw-steel has been made.

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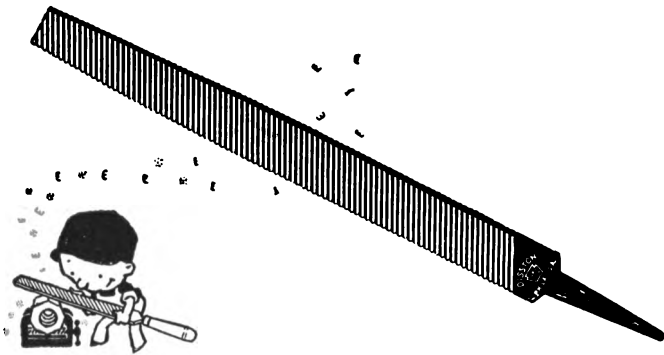
**D**ISSTON SAWS are *uniformly* and *properly* hardened and tempered. The processes by which this is done were developed by Disston and are used exclusively by Disston.

---

**D**ISSTON SAWS are ground by a special method which gives a thickness and taper to the saws that is exceptionally accurate and uniform.

---

*These are some of the reasons why every  
Disston Saw is a good saw. They are also reasons  
why so many users have found that it pays to specify "Disston."*



“As hard as fire and  
water can make them”

—*The Disston file-maker*

Disston makes between sixteen and eighteen million files a year. Some weigh a tiny fraction of an ounce. Others 135 lbs. Some are for a lady's fingernails. Some for gigantic chunks of steel.

The supreme test of a good file is in filing the teeth of saws—steel cutting steel. And nearly a half-million Disston Files are used yearly in making Disston Saws. No wonder Disston Files eat through the work in quick time! No wonder the experienced filer enjoys the feel of a Disston File as it bites into the toughest metal!

Disston Files are Disston-made from the steel to the packing case. They are of good, true steel, “as hard as fire and water can make them.”

HENRY DISTON & SONS, Inc.  
PHILADELPHIA, U. S. A.

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**DISSTON**  
**SAWS TOOLS FILES**

The  
**DISSTON  
CRUCIBLE**

APRIL

1922



# Spiral Cut-off Saws

SOME TIME ago, Disston built the largest circular saws in the world. They were spiral tooth cut-off saws nine feet in diameter. They are in use at the Coats Shingle Mill, at Hoquiam, Washington.

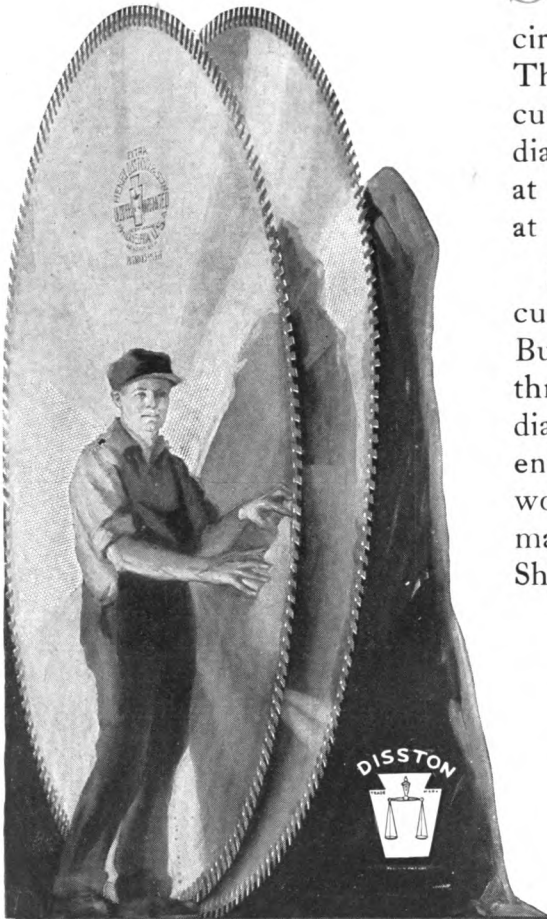
Few mills have use for cut-off saws as large as this. But whether you use saws three feet or nine feet in diameter, the same experience, equipment, and expert workmen that enabled us to make saws for the Coats Shingle Mill bigger than had ever been made before, enable us to make the best saws for *you*.

**Henry Disston & Sons**

Incorporated

General Offices:

Philadelphia, U. S. A.



**DISSTON**  
**SAWS AND TOOLS**

# DISSTON CRUCIBLE

A MAGAZINE FOR MILLMEN

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APRIL, 1922

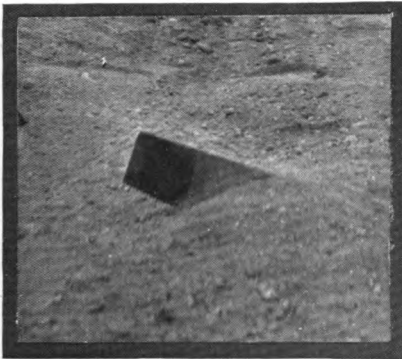
No. 3

## YOU CAN'T KEEP A GOOD SAW DOWN!

### Some Ship's Carpenter is Minus His Disston

**Saw is sunk in ocean.  
Driven ashore.  
Buried in steel-eating salt sand.  
Discovered and dug up.  
Rust scale scraped off.  
Now the hero of another man's tool chest.**

That's the story of a Disston Saw that was dug out of the ocean beach near Ocean City, N. J., on the 4th of July, 1921.



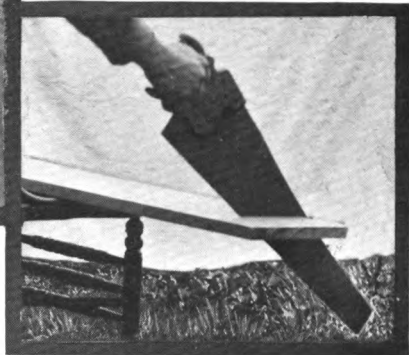
Point of Disston Hand Saw sticking out of the sand on beach at Ocean City.

J. O. Young, a resident of Ocean City, and some friends were taking a hike along the seashore at low tide following a stiff sea blow, when one of the party stumbled upon a piece of crusty metal sticking out of the sand. Thinking it would be safer for other beach walkers, particularly children, to have the piece of steel removed he dug down and uprooted it, finding it

to bear the general outlines of a hand saw, apparently in advanced stage of rusty ruin.

"Just for fun let's see what brand of saw it is," said one of the party, so he took a stone and beat the thickest rust scales off and then grubbed away at the handle until he came to a round brass disk. Further rubbing and scraping of this disk revealed a keystone mark. "It's a Disston," two of them said in unison.

A member of the party said, "Do you suppose the thing will still cut?" So they kept at the rust with a flat



The saw as it is on the job today, the hero of the tool chest it occupies.

stone and some wet sand and then tried the teeth on a piece of drift wood.

(Continued on Page 24)



### MR. GEORGE J. CHARLAN FILER

**T**WENTY-NINE years ago Mr. George J. Charlan, whose picture graces this page, started to learn the filing "game" under the tutelage of his father, who was then filing a four band mill for the Cleveland Lumber Co., at Marquette, Michigan. The elder Charlan was a master filer, and at the impressionable and ambitious age of fifteen years, the younger Charlan buckled down to business, hoping, some day, to be worthy of having the mantle of his father fall on him.

At the end of a "five-year apprenticeship" which was characterized by study, observation, and application, the young man was equipped to start out on his own initiative—not an automaton, but a real honest-to-goodness filer, one who could think and act, one who knew the business, and could apply his knowledge.

It is interesting to follow the journey of Mr. Charlan through the years of his filing career.

His first stop was at the R. McCoy Lumber Company, Helena, Arkansas. Here he tarried for two years, when he moved on to the W. D. Reeves Lumber Company, Leland, Miss. His stay with these people was short, for several

months later we find him on his way to the Bradley Lumber Company at Warren, Arkansas, where he remained for six years. The Natalbony Lumber Company, Kentwood, La., then secured a six-month lease on his services. Charlan now began to long for good, old Arkan-s-a-w again, and accordingly hit the trail for the Crossett Lumber Company, at Crossett, Ark. After four years with his firm he thought it would be well to heed the advice of Horace Greely, and so during the next twelve months we find him plying his trade along the West Coast.

Then the call of the Southland sounded loud and long, and in the Spring of 1917 he returned to the Natalbony Lumber Company, Kentwood, La. The burning of this plant in 1921 terminated his services here, and after a short stay with the Bowie Lumber Company, St. James, La., he anchored with the Great Southern Lumber Company, Bogalusa, La., in December 1921.

Mr. Charlan's home is at Kentwood, La. He has four children. We thank him for this trip over the route of his filing activities, and wish him and his, many years of health, happiness and prosperity.

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Protection from fire must be assured before conservative forest management is practicable.

The first apartment house in America was erected in 1869, at 142 East 18th Street, New York.



## FROM THE LOOKOUT TOWER



A friend of ours, a young chap just out of school who likes to use big, mouth-filling words, asked us about "labor conditions" at the factory.

Now "labor" means work. Personally, when talking about work—we prefer to say "work." But there are some who prefer to say "labor" and there is no harm done.

But when the word "labor" is used to describe men and women it becomes one of the most dangerous and hateful words ever coined.

\* \* \* \*

Folks who work are not "labor" and should not be called "labor." We work—occasionally—and we don't want anyone to sneak around behind our back and call us "labor."

Our grand-father and our father worked and they are as proud of it as we are. Our grand-father went out to a wilderness and helped to clear the ground, build the homes, and plant the crops that transformed it into a beautiful and bountiful farm land. His back was tired, his hands were calloused, his brow was wet—he worked.

But he was not "labor." Call him a worker and you make him proud. Call him "labor" and chances are you will make him fighting mad.

\* \* \* \*

Here at the Disston factory we do not have "labor."

We have Disston workers. A few of us work in the office and a lot of us work in the factory—but neither in the office nor in the factory is there any "labor."

Only the best of workers can make anything good enough to maintain world leadership for 82 years as Disston products have done. Workers have done it. "Labor" could not have done it because "labor" lacks the desire, the *will* to do the best that marks the real worker.

36 men have worked in the Disston plant more than 50 years, 927 have worked here more than 10 years. Men like that are a part, an inseparable part, of the organization. Every Disston Saw, Tool, or File that is made

is a better product because of them. But they are not "Labor."

\* \* \*

Our school-boy friend couldn't understand what we meant when we told him that we had no "labor" in the Disston plant; when we told him that Disston Saws, Tools, and Files could never be made by "labor."

We wonder if he will understand after he has read this.

### Enter Base Ball, 1922

Wednesday, April 12th, was the great day in base ball for the 1922 season. The big league teams, fresh from the training camps, were in fine fettle. The players pranced around like two-year olds awaiting the call of two words of much import to them—play ball!

These two words started a contest which will continue until the waning sun of September shines down upon the bleacherites once again.

All teams started out with a clean record. All of them were bent on winning the pennant. The excitement is on; the fans are happy; and the players are full of hope.

During the season the unexpected will happen many a time. Seasoned players will fall down, while rookie makes good. Some one will boot a ball when the game is just about won; and again, some one will do a brilliant stunt right on the minute. One day the player's work will cause a din of applause, while the very next day it will cause a deluge of withering jibes and denunciation. But a little thing like this does not effect a dyed-in-the-wool ball player; he, like the little Ford, "rambles right along."

In base ball as in business, and as in almost any enterprise, profession or position, we all start with a clean record and bright hopes, bent on winning the pennant of success. We don't get very

(Continued on Page 22)

## INSTRUCTIONS FOR SETTING AND SHARPENING (OR FITTING) CIRCULAR SAWS

**T**HE best saw that could be made would not manufacture lumber in a satisfactory manner, nor be safe from possible vital injury unless kept properly set and sharpened. It is therefore very necessary that all saws should be kept in the best possible condition. The contrary is too often the case. The most general cause of trouble is a dull or improperly fitted saw.

There are two styles of "fitting" rip saws; the "swage-set and square dress," and the "spring-set and briar or slightly beveled dress."

The swage-set is best adapted to and recommended for mills of moderately large feed and capacity, while the spring-set and briar dress is best adapted to mills of light power and capacity. The reason for this is found in the fact that one tooth of the swage-set and square dress style practically equals in capacity two teeth of the spring-set and briar dress pattern. It thus follows that up to its limit of capacity a saw with the spring-set and briar dress fitting will run easier than a saw containing the same number of teeth that are swage-set and square-dressed.

To properly fit up a rip saw with swage-set: first see that the saw is perfectly round. No saw will give good results if it is "out of round."

Each tooth in the saw should do the same amount of cutting. If the saw has long and short teeth, the long tooth will be subjected to a strain that should be equally divided between two, three, or four teeth. This renders the saw liable to accident, and at best largely reduces the capacity of the mill and turns out poorly manufactured lumber.

If the saw is not round it should be made so by "jointing," until all the teeth are of the same length. In the absence of a saw-sharpening machine, the jointing can be accomplished best by holding a piece of grindstone against the top of the teeth while the saw revolves at a medium or moderate speed. If a piece of grindstone is not available, take a piece of soft emery wheel or any other kind of stone that will grind the long teeth down to a common length.

After jointing, file all the teeth to a keen point, taking care merely to file out the marks of the stone, thus leaving all the teeth of the same length, and as nearly as possible the same shape. The teeth cannot be swaged or upset to advantage unless filed sharp and to the proper shape. To do this without a gauge requires considerable practice and experience. A gauge, like that



Fig. 11. Spring set briar dress



Fig. 12. Swaged teeth

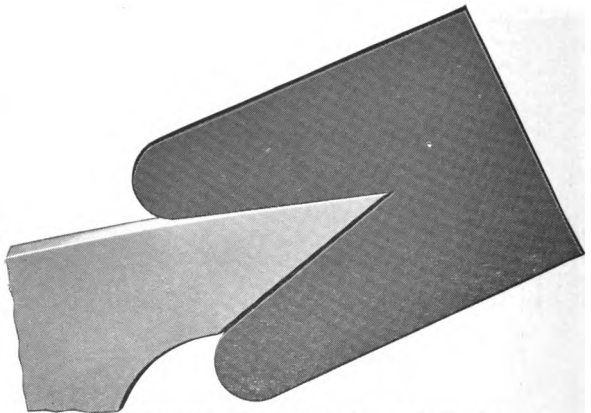


Fig. 13. Gauge by which to file and regulate the shape of the saw teeth of large saws

shown in the illustration, is furnished gratuitously upon application and one is included with every swage.

The next operation is "swaging" the teeth for clearance, which, under ordinary conditions, should be two gauges on either side of each tooth. Taking for granted that the back of the tooth is in good shape, the swaging must be done from the front or *under side*. This gives the proper "rake" and saves unnecessary reduction in the diameter of the saw.

Swaging consists, first, of holding the convex side of the swage or up-set on the tooth, striking it half a dozen or more firm hammer-blows until the tooth is spread to the desired width. Then use the straight or flat jaws. By moving the swage from side to side, two or three blows will flatten or square up the tooth, and bring the corners out full.

In swaging, care must be taken to hold the swage at such an angle that the lines or contour of the backs of the teeth are not changed as the swaging marks should show principally on the fronts of the teeth where practically all the filing will be done. The operator must also be careful not to hold the swage at materially different angles as this would have a tendency to fracture the teeth. It would also

make the saw badly out of round by driving some teeth down and others up.

Another method of swaging is by means of the Eccentric Swage, the eccentric dies of which exert a powerful pressure which rolls and spreads the edge of the tooth. As the tool is mechanical, every tooth is given a uniform swage.

Following swaging, the saw must be jointed again and each tooth then filed or ground until brought to a keen point. If filed by hand, due care must be taken to file square across the teeth so that all cutting-edges will be at right angles to the side of saw. If the saw is not filed square it will "lead" in or out of the log according to the side of the saw bearing

the high corners. High corners on the log side of a saw mill will cause it to run into the log, and vice versa. It is also important that the same "hook" or pitch line and general shape of teeth be maintained. This article is taken from Disston Lumberman's Handbook. Free to millmen.

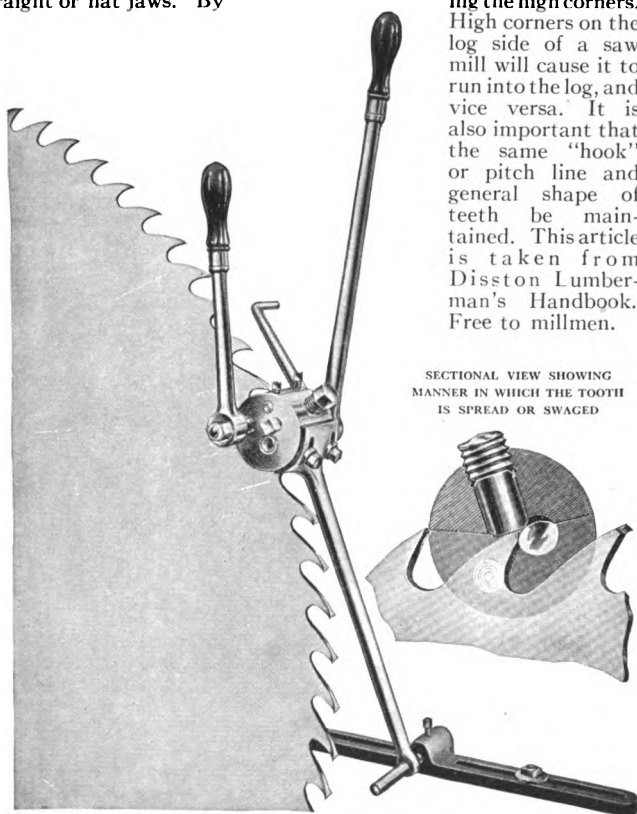


Fig. 14. Disston Eccentric Swage No. 0.  
Adapted for circular saws from 6 to 12 gauge in thickness.

## Willow Shoot Industry

There are planters in our East and South who are conducting patiently tests of various species of willow and have already succeeded in growing shoots of such excellence that they compare favorably with the product obtained by the highly specialized cultivation of Europe.

In order that it may be of the best basket material a willow shoot must be slender, tough, pliable, and cylindrical. In this country, it is said, no two soils will produce the same quality of willow. Every planter is, therefore, of necessity compelled to experiment and to select the species best adapted to his particular soil and climate.

Importations of the best white willow shoots of Europe placed in American soil will frequently show great deterioration, becoming, indeed, quite worthless, brittle switches. In the East there is the willow rust to contend with.

While the willowshoot industry in the United States is an important one, it may, in a sense be said to be still in its infancy. Should it be developed to the proper extent, the result would be an enormous saving to American manufacturers of basket goods, since then they would, of course, derive most of their raw material from domestic growers.

## California Palm Park

Congress has been acting favorably on plans to set aside a tract of 1,600 acres 60 miles southeast of Riverside, California, as a national monument for the purpose of preserving large groves of natural wild Washington palms.

## Enter Base Ball, 1922

(Continued from Page 19)

far, however, before we learn that many of our efforts do not result in grand stand plays. In our eagerness to succeed we will occasionally boot a ball, drop a fly, get caught napping, be run down between bases, etc., and rooter-like our opponents will give us the ha, ha! and will say and do things that tend to depress. But if we are made out of real base ball timber, these experiences will spur us on to greater efforts and closer application, and some days we will stage a stunt that will almost take our opponent's breath, and

force an "Atta boy!" from one who hitherto has been indifferent to us.

This will cause Mr. Public Opinion to unconsciously slap on the knee, Mr. Adverse Criticism, his grandstandchum, and exclaim, "Ho-leesmokes! Wasn't that a peach of a play?"

"Take it from me!" old Adverse agrees, and forthwith explains that he has had his eye on that kid for some time (a real truth) and he is

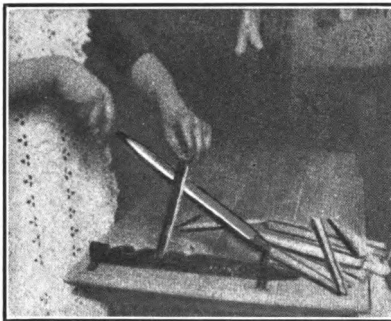
turning out just as he had expected (a d— lie).

"By the way," retorts Mr. P. O., "comes to me just now that that boy is a distant relative of mine, and I'm going to see that he gets his salary increased."

The salary is increased, alright, the kid develops into a good drawing card, and some day we see him on the team that wins the world championship. He shares the spoils with his team mates.

There are many splendid points in the great national pastime which if applied to business, profession, or

(Continued on Page 24)



Germany is having complete disarmament. Gaze upon the picture of a Haus Frau splitting wood for the kitchen fire with an invention which takes from the bloody bayonet of the soldier its war time dread. Here we see the latest kitchen article made from the war instrument.—*International Photo.*

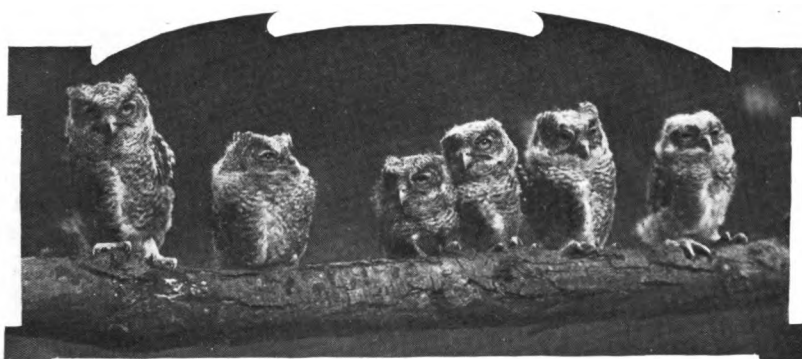


Photo. of Owls. Courtesy of *American Forestry*.

## A SCREECH OWL FAMILY

### Our Sedate-looking, Tufted-eared, Yellow-eyed, Friends Are Expert Mousers

**D**O you remember when you were a kid with your bed right under the rafters, and you and Buddy lay there arguing which one of you two could run the fastest, dive the deepest, throw the farthest, spell the best, etc., and all of a sudden you heard a tremulous, wailing whistle, followed by a slower refrain-like call? It seemed to be just outside the window, and it put a nasty puncture into your argument. And do you remember how you inched up to Buddy, and Buddy inched up to you, and your eyes began to bulge, and your heart started a tattoo on your breast bone, and your imagination worked overtime, and stealthily the covers began to creep up over your heads? Then you whispered: "Gee, Kid! Did you hear that?" and you both felt as if

"The Goblins will git ye.  
Ef you don't watch out!"

The next morning upon telling mother your experience, how surprised you were when she informed you that the peculiar noise you heard, was only the screech of an owl.

Yes, only an owl! But many a boy, and many a man has experienced a creepy sensation upon hearing the peculiar wail of a screech owl when in a lonely place. And it is probably because of this peculiar characteristic of

these nocturnal prowlers that they are considered by superstitious persons as birds of ill-omen. This may also account for the peculiar satisfaction this class of people find in killing owls.

Our big-eyed, feathery friends are also dubbed other names than birds of ill-omen, which are very much more appropriate, viz.:—

"Birds of Wisdom"  
"Woodland Mousers"  
"The Barn Cat," etc.

The screech owl is a fine mouser. He even makes tabby hustle to retain her title as champion of this art. When hunting, Mr. Owl moves along like a shadow, so silently does he pass in the darkness. He is also a great hunter of insects and cut worms, and only at times in winter does sharp hunger drive him to kill little birds.

Of two hundred and fifty-five stomachs of screech owls examined by Dr. Fisher for the Department of Agriculture, one hundred contained insects; ninety-one, mice; thirty-eight, birds; eleven, other mammals than mice; nine, crawfish; seven, miscellaneous food; five, spiders; four, batrachians; two, lizards; two, scorpions; two, earth worms; one, poultry; one, fish; and forty-three were empty. Why in the name of all that is economic and humane, should this valuable ally of the farmer be so persistently shot?



## SAWDUST

The light in the eyes of a gossip is of several scandal power.—*Ex.*

### HE KNEW

The class in natural history was reciting. Finally the teacher asked, "Where is the home of the swallow?"

Long silence and then a hand waived.

"Robert, you may answer."

"The home of the swallow," declared Robert, seriously, "is in the stumick."

### TOOK NO CHANCES

"What shall we do tonight?" asked one college man of his chum.

"Let's toss for it," suggested the other.

"All right," agreed the first. "If it's heads we'll go to a dance; if it's tails we'll go to the movie; if it stands on edge, we'll study."

### GOOD NIGHT!

"And now," said the monocled gentleman who had borrowed a match from the traffic cop, "I suppose you would like to know who I am?"

"Sure."

"I am Sir T. Willy Rockinghorse, Knight of the Bath, Knight of the Garter, Knight of the Double Eagle, and Knight of the Golden Cross."

"And I," said the cop, "am James Murphy, tonight, last night, tomorrow night, and every other night."

### Enter Base Ball, 1922

(Continued from Page 22)

trade would prove conducive to success.

To paraphrase a well-known saw—

Succeed, and the public is with you,  
Fail, and you fail alone.

### BETTER ENUNCIATION, PLEASE

Husband (reading paper)—"I see Green's shirt store has burned down."

Wife (slightly deaf)—"Whose?"

Husband—"Green's shirt store."

Wife—"Dear me, who tore it."

—*Atlantic Reflector*

### TROUBLE IN ALL DIRECTIONS

An eastern editor says that a man out West got himself into trouble by marrying two wives. A western editor replied by assuring his contemporary that a good many men in that section have done the same by marrying one. A northern editor reports that quite a number of his acquaintances found trouble by merely promising to marry without going any further. A southern editor says that a friend of his was bothered by simply being found in company with another man's wife.

—*Farm Machinery-Farm Power.*

### You Can't Keep a Good Saw Down!

(Continued from Page 17)

It cut through like an old veteran!

It is the kind of "saw most carpenters use," hence the headline, which was based upon the theory that the saw, with its wooden handle keeping it semi-buoyant, worked ashore by the action of the waves along with some pieces of ship rigging found nearby.

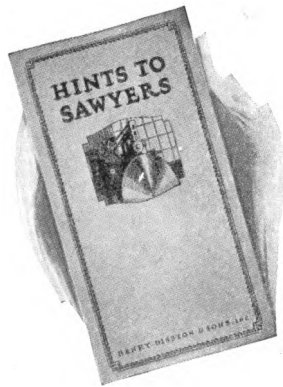
Salt water sure does eat steel but even that couldn't spoil this Disston.

You can't keep a good saw down.

*By the way, how many companies have a base-ball team of their own? A team is a great thing to have in any organization. Here at the House of Disston we have always had ball teams and it has been great sport for the fellows who played, and for all the rest of us.*

PRINTED IN U. S. A.

# A Booklet You Should Have



## A Book of Information For the Users of Circular Saws

**T**HE new "Hints to Sawyers" booklet is just what the name implies—a compilation of useful hints for men who are operating circular saws. Some of the chapter headings are :

- "Saws Out of Round"
- "Setting the Carriage Track and Husk or Saw Frame"
- "Lining the Saw With the Carriage"
- "Saw Guides"
- "Proper Speed of Saws"
- "Fitting Saws and Maintaining Them in Proper Condition"—Etc.

# Hints to Sawyers Booklet

Real brass-tack information that should be of value to all users of circular saws. We will be glad to send the book free of charge.

*Write for it. Address —*

**HENRY DISSTON & SONS, INC.**  
DEPARTMENT O  
PHILADELPHIA, U. S. A.

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# Investigate —

You, who are using a Disston Saw, or File, or Saw-set, or whatever it is (and like it so well you wouldn't use any other kind), look over this list! Every item on the list is just as good as the Disston products you are now using. Check off the things you use and the next time you buy specify "Disston"—you'll get that same satisfaction.

---

---

## Back Saws

### Band Saws for Wood and Metal



Bevels  
Buck Saws  
Butcher Saws and Blades  
Cabinet Scrapers

### Chisel Tooth Circular Saws

### Circular Saws for Wood, Metal, and Slate

Compass Saws  
Concave Saws, Circular  
Cross-cut Saws  
Cut-off Saws  
Cylinder Saws  
Dovetail Saws  
Drag Saw Blades  
Edger Saws  
Files and Rasps  
Filing Guides  
Gang Saws



Gauges, Carpenters' Marking  
Grooving Saws  
Hack Saw Blades  
Hack Saw Frames  
Hand, Panel, and Rip Saws  
Hedge Shears



Ice Saws  
Inserted Tooth Circular  
Saws  
Keyhole Saws

Kitchen Saws  
Knives—Cane, Corn, Hedge  
Knives—Circular—for Cork, Cloth,  
Leather, Paper, etc.  
Knives—Machine  
Levels—Carpenters' and Masons'  
Lock Corner Cutters  
Machetes

## Mandrels

### Metal-slitting Saws



Milling Saws for Metal  
Mitre-box Saws  
Mitre Rods  
Nest of Saws

### One-man Cross-cut Saws

Pattern Maker Saws  
Plumbs and Levels  
Plumber Saws  
Post Hole Diggers  
Pruning Saws  
Rail Hack Saws  
Re-saws

### Saw Clamps and Filing Guides

### Saw Gummers

### Saw-sets

### Saw Screws

### Screw Drivers

### Screw-slitting Saws

### Scroll Saws

### Segment Saws

### Shingle Saws

### Siding Saws

### Slate Saws, Circular



Squares, Try and Mitre  
Stair Builder Saws  
Stave Saws  
Straight Edges

### Sugar Beet Knives

### Swages

### Tools for Repairing Saws

### Tool Steel

### Trowels—Brick, Plastering, Pointing, etc.

### Veneering Saws

### Webs—Turning, Felloe, etc.



This is a partial list. There are thousands of items in the complete Disston line.

**HENRY DISSTON & SONS, Inc.**  
PHILADELPHIA, U. S. A.



# The DISSTON CRUCIBLE

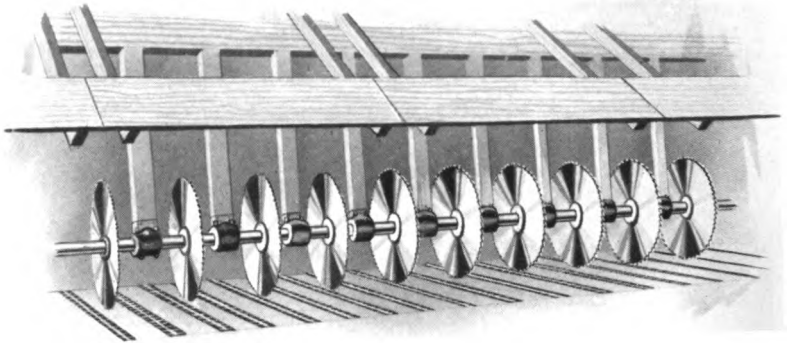
MAY

1922



# DISSTON

## SLASHER SAWS



Disston Slasher Saws have many exclusive qualities that will recommend them to the mill operator. They are made from a special quality of the famous Disston-made Steel which experience has shown is best for this purpose. The hardening and tempering—very important in Slasher Saws—is done by exclusive Disston processes. The design and workmanship is based on 82 years of saw-making experience and knowledge of what is necessary to make the best.

The result is an exceptionally tough, long-wearing Slasher Saw. If you are not now using Disston Slashers, it will pay you to investigate them.

**HENRY DISSTON & SONS, INC.**  
**PHILADELPHIA, PA.**

**BRANCH HOUSES**

CHICAGO, ILL.  
NEW ORLEANS, LA.  
SEATTLE, WASH.  
NEW YORK

BOSTON, MASS.  
MEMPHIS, TENN.  
CINCINNATI, OHIO  
SYDNEY, AUSTRALIA

BANGOR, MAINE  
SAN FRANCISCO, CAL.  
PORTLAND, ORE.  
VANCOUVER, B. C.

CANADIAN WORKS: TORONTO, CANADA

# DISSTON CRUCIBLE

A MAGAZINE FOR MILLMEN

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VOL. XI.

MAY, 1922

No. 4

## THE ISLAND OF SUMATRA

The Home of Good Coffee and Finely Flavored Tobacco—  
Long Famous For Its Pepper Plantations

**R**ECENTLY, Mr. A. S. Hunt, who is making an extensive trip in the interest of the House of Disston, visited the island of Sumatra. After business hours he found time to do a little sight-seeing, and to send for Crucible use, some interesting photos which portray styles of architecture, modes of travel, types of inhabitants, and various industries of the island. Some of these photos

we reproduce here for the edification of our readers.

In looking over these photos the editor was reminded of the splendid coffee and tobacco which is grown on the Sumatran Island, and consequently the Crucible *sanctum sanctorum* has on several occasions, become scented with the imaginary aroma of these two products; while an imaginary sneeze or

(Continued on Page 30)



No. 1. Houses of the Bataks.  
No. 4. The Sado.

No. 2. The rickshaw man.  
No. 5. A Batak family.

No. 3. Storing tobacco.  
No. 6. Batak mother and child.



### MR. M. G. READY, FILER

**T**HIS month we are introducing, as our "Well-Known Mill Man," Mr. M. G. Ready, who is filer for the Wm. Cady Lumber Company, McNary, La. Mr. Ready has had wide and varied experiences in almost every line of saw mill work, and he will tell us his life's story so far as it relates to his work:

"I was born in the year 1870, in Manitowac Co., Wisconsin. My parents moved to Shawano Co., Wisconsin, five years later. Here I attended school until 1888. As this was then a saw mill country it was natural for me to take to this kind of work. Accordingly, I got a position with the Upham and Russell Company of Shawano, Wisconsin, as a timber cruiser. I worked for this firm until 1892 when I went to Beaumont, Texas. These were the days immediately preceding the '93 panic, and times were hard and work scarce. For some time I worked at anything I could get in the saw mill line—from the lowest to the highest position in the mills.

"In 1899 I took up filing, and as seems to be the custom of most new filers, I too, made several changes in the next few years. However, during the past thirteen years, I have held but

two positions. In all I have had twenty-three years of filing experience, during which time I have used many makes of saws. The Disston saws always measured up to requirements; they are my favorites.

"During my career as a mill man in Texas and in Louisiana, I have seen many thousands of acres of the finest yellow pine cut into lumber.

"If I have met with any degree of success in saw mill work, it can be attributed to hard work, and close application."

**"In all, I have had twenty-three years of filing experience, during which time I have used many makes of saws. The Disston saws always measured up to requirements; they are my favorites."**

—Ready

It is a good guess that in addition to close application, hard work, and good saws, there are four other reasons for Mr. Ready's success, viz.: a wife and three children.

We can conceive of no greater incentive to success than the married life and the resultant home ties. A loyal wife and good children are a constant impetus for a real man to do his best in all phases of life.

Mr. Ready probably is now at the zenith of his experience and skill, and we hope that for years to come he may be able to apply both of these attainments to the mutual benefit of himself and employer.

# FROM THE LOOKOUT TOWER



The cover on this issue of Crucible made us recall some of our fishing experiences. We know there is no reason why it should, but it did. We like to fish. But even more than that, we like to tell fish stories—and try to make our friends believe what we tell 'em.

\* \* \* \*

Some good fish stories should be printed in the Crucible, but we do not dare to write them. We get in enough trouble telling them. We shudder when we think what might happen if we wrote some of our favorites down on paper.

\* \* \* \*

Under the circumstances, the only thing we can do is to call on our readers. We know that almost every one of you have a "pet" fish story that you have carried around for years. If you have, pass it along to the Crucible. And, remember every one who sends in a story that we can use gets a Disston watch-fob as a mark of appreciation from us.

\* \* \* \*

A good many of our concertina stories came in too late to be printed. Get your fish story in the mail early.

## SPRIG

Whab is thib joyous feeling,  
Thid woddrous, woddrous thig?  
Oh, could it be the combig  
Of gladsob, gladsob sprig?  
Wudz bore the buds will be in bloob,  
The balby air of sprig  
Will bake the youngsters habby,  
Ad bake the birdies sig.  
I've waiteb for the subber  
To smell the fragrat roze.  
By then I pray to gooddness  
Thab I won't hab this colb.

—Rosalie Virginia.

(From the Chicago Tribune)

Folks around the factory saw a meteor the other night. A hugh ball

of fire came sweeping across the sky and passed over Philadelphia. It appeared first as a soft glow then, increasing in size as it came nearer, it looked like a ball of fire shooting through the heavens, throwing off enormous sparks. With an explosion that shattered windows along the coast, the meteor plunged into the ocean just off the New Jersey coast.

\* \* \* \*

We didn't see it. But we remember Halley's comet. We got up out of a warm, comfortable bed about two o'clock in the morning, went up on the roof of a tall building, stood there and shivered for nearly half an hour trying to locate the widely advertised comet. Finally we saw it.

\* \* \* \*

And when we did see it—well, comets and meteors are for the other fellow to gaze at—not for us.

\* \* \* \*

Just about six minutes from now, when we finish this last paragraph, we start to play hookey. We're going to shut up the old desk for the first time in a blue moon and go away.

\* \* \* \*

We are going to have a good time, too, because we will be meeting and talking with new people, new friends of the House of Disston—and making new friends is about the most interesting business in the world. What we like best about the Crucible is that we are always meeting new folks through the stories about them and through their letters.

\* \* \* \*

And now we know why we thought of fish stories when we started to write. This business of going away did it. We hope there will be a lot of good fish stories here when we get back. We'll have one or two of our own but, as we said before, we probably won't dare to print them.

# COBBS & MITCHELL, INC., CADILLAC, MICHIGAN,

## Operate Two Lumber Camps, Two Sawmill

**C**OBBS and Mitchell, Inc., of Cadillac, Michigan, is one of the largest and most successful lumber companies of the middle west. For almost half a century they have enjoyed an enviable reputation for square dealing and good lumber.

This Company does not consist principally of lumber camps, timber tracts, saw and planing mills, but of an official and managerial personnel of exceptional qualifications—men of integrity, men of keen business acumen, men who know how to put things across, men of heart and soul, who (from the President down to the gang foreman) in dealing with their subordinates are largely controlled by the brotherhood-of-man spirit. This is the real Cobbs & Mitchell, Inc., hence their extensive and substantial industry.

Mr. W. E. Curry, General Manager, and Mr. J. W. Locke, General (woods) Superintendent, are the motive force of the company. These men have evolved systems which keep the "wheels" moving in camps and mills with practically no friction.

The two lumber camps near Boyne Falls, Michigan, in the

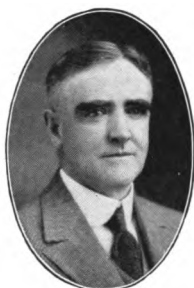
heart of the Company's 6,000 acres of timber (principally maple), are modernly equipped—electric lights, bath, telephone, running water, etc., so that the lumbermen enjoy the comforts of the city home, plus the tonic of the woodlands, and God's good, fresh air.

These camps are operated continuously throughout the year, and they produce and load on cars each day, 100,000 feet of logs, which are delivered by the Company's railroad to the G. R. & I. railroad at Boyne Falls. This road in turn transports the logs to the mills in Cadillac, a distance of seventy-seven miles.

It requires one hundred 40-foot flat, steel cars with patent bunk and stake equipment to convey the logs from camp to mill. They are assigned

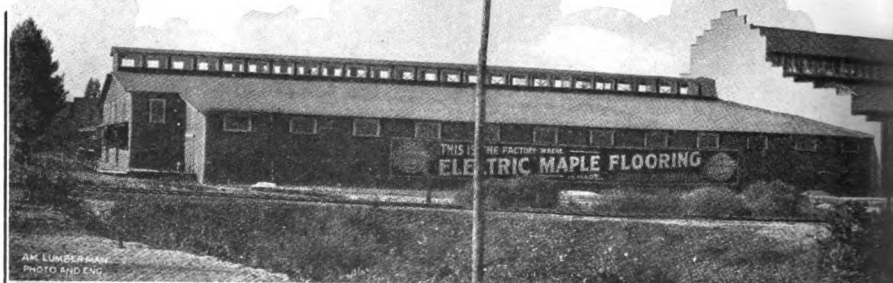
to the Company's service by the G. R. & I. Co.

The logging railroads of Cobbs & Mitchell Inc., comprise twenty-five miles of main line and about twenty-five miles of branches. They own and operate on their railway tracks, five locomotives and seventy-five cars of various



Mr. Walter E. Curry,  
General Manager,  
Cobbs & Mitchell, Inc.

F. J.
I
C. T. M
V.-Pres
G. G.
S
W. E.
Gen
Estn
I
Incor
I



The Hardwood Flooring Plant of Cobbs & Mitchell, Inc.

# PROMINENT LUMBER COMPANY OF MIDDLE WEST

## Hardwood Flooring Plant, Store, and Hotel

descriptions. These cars are used principally for hauling cordwood, camp and store supplies.

At Cadillac, Michigan, the mills are located—two sawmills, and a hardwood flooring plant. These mills produce Michigan hardwood and hemlock and "electric" maple, beech, and birch flooring. The combined capacity of the two saw mills is equal to the logging capacity of the two camps—100,000 feet

per day. The daily average production of this modernly equipped hardwood flooring plant is 40,000 feet per beech flooring.

The total

lumber camps, in machine shop, logging railway, etc., is 200, and in the Cadillac Mills and yards, 250.

The Company's store is located at Springvale, Michigan. It is stocked with a large line of general merchandise. The camps and the general public are supplied from this store. Mr. James Mulford is the genial manager and purchasing agent.

The Company also own and operate a first-class hotel at Springvale. This town is one of the beauty spots of Northern Michigan in the summer-time, as the Company takes



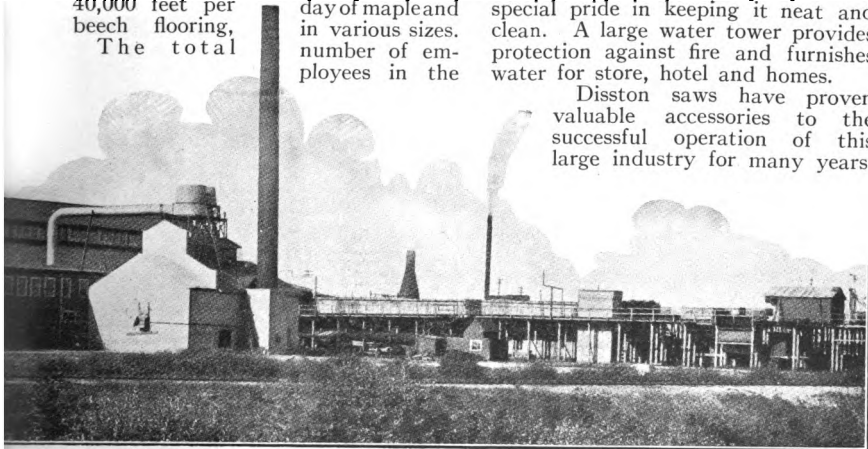
One of Company's Steam Loaders

- 1—Clyde Golf, Chemical Wood Custodian.
- 2—Loranzo La Brosse, Log Soaker.
- 3—Clarence Jocke, Camp Foreman.
- 4—J. W. Locke, General Superintendent

day of maple and in various sizes. number of employees in the

special pride in keeping it neat and clean. A large water tower provides protection against fire and furnishes water for store, hotel and homes.

Disston saws have proven valuable accessories to the successful operation of this large industry for many years.



Mitchell, Inc., Cadillac, Michigan.

IBS,  
HELL,  
reas.  
OWN,  
RY,  
fr.  
ed  
ted

## Big Lumber Order



### California Fruit Growers Make Huge Contract with Government

**L**AST month the largest single order for lumber ever negotiated with the government was placed by the Fruit Growers' Supply Company of Los Angeles. It was for 946,000,000 feet of timber in the Lassen national

reserve. The present value of the stumpage is \$3,500,000. The lumber will be used to make boxes for oranges and lemons.

The footage contracted for is sufficient to build frame bungalows on fifty-foot lots on both sides of a street 326 miles long. The order is 30 per cent. more than the annual imports of lumber at Los Angeles harbor, which is credited with being the largest lumber import port in the world.

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## The Island of Sumatra

(Continued from Page 25)

two could have just as readily been staged by a stray particle of the finest pepper in the world, another famous product of the Island.

Sumatra is one of the largest and most important islands of the East India Archipelago. It stretches northeast to south-west for a distance of 1047 miles. The greatest breadth is about 230 miles.

Mr Hunt reports that the Island is rich in minerals—gold, tin, coal, iron, oil, etc., but that its principal exports are coffee, tobacco, and pepper.

He informs us that there are various tribes on the Island, principally in the interior, but that the large portion of the population is Malayan. Some of

the tribes still border on the semi-savage state, notably the Kubus, and the Bataks. In many points the latter tribe is quite different from the Malayan. The average stature of the man is about 5 feet, 4 inches; of the woman 4 feet, 8 inches. In general build they are rather thick set, with broad shoulders, and are fairly muscular.

Some Americans and Europeans have settled on the Island, but long before their arrival Sumatra was famous for its great pepper plantations, and many folks in different parts of the world could have testified to the fine flavor of its coffee and tobacco. Benzoin was at one time almost exclusively obtained from this Island.

Modes of transportation are still quite primitive and it will be some time before the automobile will supplant the sado (carriage drawn by a horse), and the rickshaw man, who furnished motive power for a top sulkey.

However, modernism is slowly gaining a foothold on the island, and probably in another generation most of the primitive methods will be history, only.

### My Work

Let me but do my work  
From day to day  
In field or forest,  
At the desk or loom,  
In roaring market place  
Or tranquil room.

Let me but find it  
In my heart to say:

"This is my work,  
My blessing, not my doom;  
Of all who live

I am the one by whom  
This work can best be done  
In the right way."

HENRY VAN DYKE.

Success is the art of being useful to others and making others useful to you.

Co-operative effort is the keynote of effective fire protection.

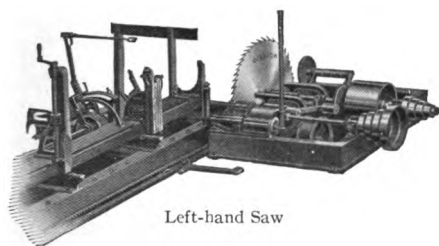


## HOW TO ORDER CIRCULAR SAWS

### Important to Follow Directions Given Below

When ordering circular saws it is essential to give definite data concerning the kind of saw desired.

There are circular saws, and there are circular saws—many sizes, gauges, and styles of teeth.



Left-hand Saw

If Disston patrons will complete in detail the following directions, which were formulated for their special benefit, there will be no question about their receiving just the saw for their particular needs:

- Diameter in inches.
- Thickness or gauge at centre.
- Thickness or gauge at rim.
- Right or left-hand (see illustrations).
- Rip or cross-cut tooth.
- Style of tooth.
- Solid or inserted tooth.
- Number of teeth.
- Size of mandrel hole.
- Size of pin holes.
- Distance from centre to centre of pin holes.
- Greatest feed at each revolution, in inches.
- Kind of timber to be sawed.
- Number of revolutions per minute.

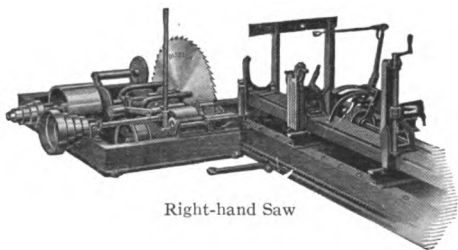
Horse power of engine.  
Daily output of mill.

All stock saws, 40 inches in diameter and larger, have 2-inch mandrel holes and  $\frac{5}{8}$ -inch tug-pin holes, 3 inches from centre to centre. If a different arrangement is wanted, send full pattern of holes.

### A GOOD SAW

Disston Saws stand at the head of the market on their merits, and although they are unequalled for quality of material, workmanship, toughness and elasticity, it is quite important that they should be adapted to the speed of the mill and the kinds of timber they have to cut. Upon the saws, to a large extent, depends the capacity.

To secure proper quality and quantity of output, saws must be resharpened before they become so dull that they "drag and pull." The time spent in keeping saws properly set and sharpened is most important, and is one of the best investments connected with a woodworking establishment.



Right-hand Saw

If you go out determined to own the earth, don't kick if some folks throw mud at you.

Don't ask for a raise on the theory that the boss ought to give you more; make yourself worth more than you're getting, and then ask what you are worth.

Those who fire at random seldom hit it.

Some folks actually enjoy telling bad news.

There is a difference between marrying anyone you please and pleasing anyone you marry.



## SAWDUST

### SPEED RECORDS BROKEN

"Coming home from downtown on the street car last night," said Sandy to Jim, "the car turned a corner suddenly and I covered three laps in one minute."

### YOU TELL 'EM

"Is a chicken big enough to eat when it is a month old?"

"No, of course not."

"Well, then, how does it live?"

### MISSING

Has anyone seen Pete?

Pete who?

Petroleum.

Kerosene him yesterday and he hasn't benzine since.—*Ex.*

### BOARDIN' YARDS

Sing a song of sawdust  
About your morning ration;  
Funny kind of breakfast food  
For millman mastication.  
If the sawyer saw the board,  
And doughnut please the crew,  
Don't despair—a bill o' fare  
Of planing-chips will do.

—*Charles O. Olsen.*

"I want a shave," said the determined looking man, as he climbed into the barber's chair. "I don't want a hair cut nor a shampoo. Neither do I want any bay rum, witch hazel, hair tonic, hot towels or face massage. I don't want the manicure lady to hold my hand, nor the bootblack to fondle my feet. I just want a plain shave with no trimmings. Do you understand that?"

"Yes, sir," said the barber. "Will you have some lather on your face, sir?"—*New York Sun.*

"I thought the sale of that novel was prohibited."

"It is; I got it from a booklegger."

—*Boston Transcript.*

### IT WILL FINISH HER OFF, ALRIGHT

Mrs. Brown: "I hear the vicar thinks your daughter has a real genius for reciting, Mrs. Smith."

Mrs. Smith: "Yes. All she wants, he says to me, is a course of electrocution, just to finish her off, like."

—*McClary's Wireless.*

### VERY SIMPLE

A New Yorker was spending a night at a "hotel" in a Southern town, and told the colored porter that he wanted to be called early.

The porter replied: "Say, boss, I reckon yo' aint familiar with these heah modern inventions. When yo' wants to be called in de mawnin', all you has to do is jest to press de button at de head of yo' bed. Den we comes up and calls you."—*De Laval Monthly.*

### SAFETY FIRST

During a fire prevention campaign the teacher had impressed upon her pupils the slogan, "Don't use matches carelessly. Remember the great Chicago fire."

Later, during a healthy campaign the slogan, "Don't spit," was introduced.

"Why do we use this slogan, Johnny?" asked the teacher. "Don't spit—remember the great Johnstown flood," gravely answered Johnny.

—*National Safety News.*

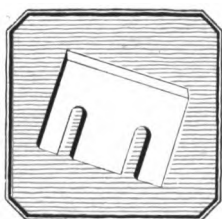
PRINTED IN U. S. A.

# HOG KNIVES

OF

## SOLID OR LAID STEEL

Disston Hog Knives are made of solid or laid steel to fit all styles of machines. In the laid steel knives, the steel face is fastened in the back with the Disston Dove-Tail Weld which makes the knife absolutely rigid and fast, and at the same time allows for use of more of the steel cutting edge.



The important thing required of a hog knife is—*strength*. It is unusual strength and toughness that has made Disston Hog Knives popular in so many mills. They can be depended on. They are made of a special Disston Steel. They are especially hardened and tempered for this particular work.

## HENRY DISSTON & SONS, INC.

### PHILADELPHIA, PA.

#### BRANCH HOUSES

CHICAGO, ILL.

NEW ORLEANS, LA.

SEATTLE, WASH.

NEW YORK

BOSTON, MASS.

MEMPHIS, TENN.

CINCINNATI, OHIO

SYDNEY, AUSTRALIA

BANGOR, MAINE

SAN FRANCISCO, CAL.

PORTLAND, ORE.

VANCOUVER, B. C.

CANADIAN WORKS: TORONTO, CANADA

# How Many of the Products On this List Can You Use?

## Back Saws

Band Saws for Wood and Metal



Bevels  
Buck Saws  
Butcher Saws and Blades  
Cabinet Scrapers

Chisel Tooth Circular Saws

Circular Saws for Wood,  
Metal, and Slate

Compass Saws

Concave Saws, Circular

Cross-cut Saws

Cut-off Saws

Cylinder Saws

Dovetail Saws

Drag Saw Blades

Edger Saws

Files and Rasps

Filing Guides

Gang Saws

Gauges, Carpenters' Marking

Grooving Saws

Hack Saw Blades

Hack Saw Frames

Hand, Panel, and Rip Saws

Hedge Shears



Ice Saws

Inserted Tooth Circular  
Saws

Keyhole Saws

Kitchen Saws

Knives—Cane, Corn, Hedge

Knives—Circular—for Cork, Cloth,  
Leather, Paper, etc.

Knives—Machine

Levels—Carpenters' and Masons'

Lock Corner Cutters

Machetes



## Mandrels

Metal-slitting Saws



Milling Saws for Metal

Mitre-box Saws

Mitre Rods

Nest of Saws

One-man Cross-cut Saws

Pattern Maker Saws

Plumbs and Levels

Plumber Saws

Post Hole Diggers

Pruning Saws

Rail Hack Saws

Re-saws

Saw Clamps and Filing Guides

Saw Gummers

Saw-sets

Saw Screws

Screw Drivers

Screw-slotting Saws

Scroll Saws

Segment Saws

Shingle Saws

Siding Saws

Slate Saws, Circular



Squares, Try and Mitre

Stair Builder Saws

Stave Saws

Straight Edges

Sugar Beet Knives

Swages

Tools for Repairing Saws

Tool Steel

Trowels—Brick, Plastering,  
Pointing, etc.

Veneering Saws

Webbs—Turning, Felloe, etc.



This is a partial list. There are thousands  
of items in the complete Disston line.

# DISSTON

## SAWS TOOLS FILES

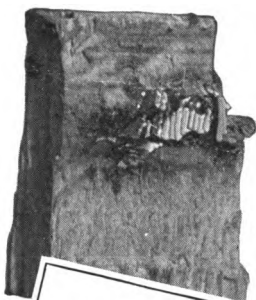
# The DISSTON CRUCIBLE

JUNE

1922



S



Photograph of the block described in letter below, showing saw teeth embedded in the wood.

ADD. A. W. MARTIN, PRESIDENT

W. D. BODDY, GEN. MGR.

A. L. HANLEY, MGR. & TRK.

**THE DEFIANCE BOX COMPANY**

MANUFACTURERS OF  
**WIRE BOUND BOXES, POTTERY CRATES, POULTRY COOPS,  
 BOX SHOOKS, WHEELBARROWS, ETC.**

HEAD OFFICE  
 DEFIANCE, OHIO

WALKS AT  
 ULLIN, ILL.  
 DEFIANCE, OHIO

ULLIN, ILL., April 11th, 1922,  
ALL ORDERS ARE SHIPPED BY EXPRESS, ACCORDING TO OTHER CLAUSES SETFORTH OUR CONTRACT.

The Henry Disston's Sons Co.,  
 Cincinnati, Ohio,  
 Gentlemen:—

We are sending you under separate cover a block of wood with a number of band saw teeth wedged by a heavy spike-nail. We do not know whether or not this will be of any value to you as an advertisement of the quality of your saws, but it seems to us a remarkable piece of steel that would stand this strain without cracking the saw plate.

This was one of your 6" 19 ga. Band Saws running at a speed of approximately 7,000 ft. per minute. We give you this in appreciation of the service we have obtained through the use of your saws and hope it may prove to be of some good to you. We are at this time operating five band saws in our plant here and we find more service in your saws than any we have tried.

Very truly yours,  
**THE DEFIANCE BOX CO.,**  
 L. H. NEEDHAM  
 Supt.

**More about the quality of the famous Disston-made Steel**

# DISSTON CRUCIBLE

A MAGAZINE FOR MILLMEN

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VOL. XI.

JUNE, 1922

No. 5

## NINTH NATIONAL FOREIGN TRADE COUNCIL

**Held in Philadelphia May 10, 11, and 12, 1922. Hundreds of Prominent Business Men Attend**

**T**HE Ninth Annual Convention of the National Foreign Trade Council was held in Philadelphia May 10, 11, and 12, 1922. Hundreds of leaders in industry, commerce, and finance from all parts of the United States, and from many foreign countries, were present at the sessions in the Academy of Music and at the Convention's headquarters in the Bellevue-Stratford, to discuss means for financing and expanding foreign trade.

The Convention's work was done in general and group sessions. The latter covered every specific phase of foreign trade conditions, and the problems affecting the individual manufacturer and shipper.

Probably the most impressive session of the convention was the banquet at the Bellevue-Stratford, which wound up the three days' activities. Governor William C. Sproul, of Pennsylvania and James A. Farrell, leader in the steel industry and chairman of the National Foreign Trade Council, were among the speakers at the banquet. Mr. Farrell outlined a foreign trade policy, and Governor Sproul pointed out the importance of international trade to United States industry. Indorsement of the activities of the National Foreign Trade Council were also made by Governor Sproul,

who viewed the operations of the body not only as business promoting, but patriotic, in that greater foreign trade meant peace as well as prosperity.

Mr. S. Horace Disston, Vice-President in charge of sales of Henry Disston & Sons, Inc., was a member of the General Committee, and Mr. H. C. Ellis, Manager of Disston's Export Department, functioned on the Trade Advertisers Committee.

Being held at a time when the world at large is beginning to recover from one of the most serious commercial declines in history, the sane, practical deliberations of the Council cannot help but prove an added impetus to the revival of business.

The National Foreign Trade Council was organized in May, 1914, as a

result of a meeting called at Washington by the American Manufacturers' Export Association, the American Asiatic Association, and the Pan-American Society of the U. S. The Council has since grown to such proportions that with thousands of members it now is America's dominant factor in shaping foreign trade matters.

Through its Committees the Council is constantly investigating, and from time to time publicly reports upon problems arising in over-sea commerce.



Mr. S. Horace Disston  
Member of Gen'l Com.

## GIANT REDWOOD MOVED WITHOUT FELLING

**P**ERFORMING a feat said to be without parallel in the logging industry, lumbermen of Freshwater, Calif., recently moved a giant redwood tree, 210 feet high and weighing 315 tons, a distance of 20 feet without lowering it from the vertical position.

The loggers wished to use the tree as a lead pole for pulling in large logs and

slackening the guy lines, a powerful donkey engine moved the tree two feet at a time along the skids to the desired position.—*Popular Science*.

### Useful Information

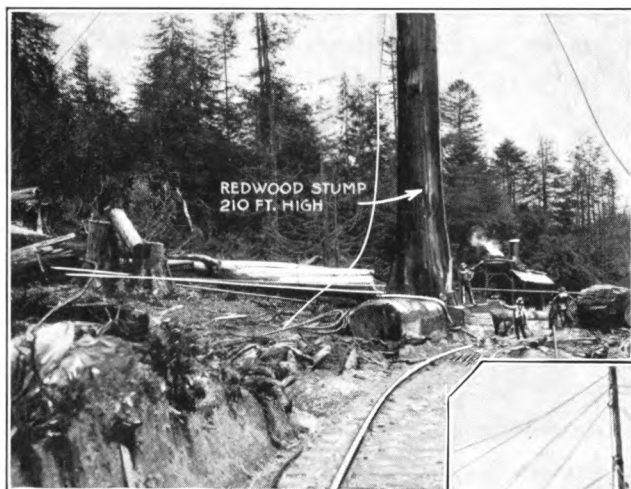
To find the circumference of a circle multiply by 3.1416.

To find diameter of a circle multiply circumference by .31831.

To find area of a circle multiply circumference by .7854.

To find area of a triangle multiply base by half perpendicular height.

To find solidity of a sphere multiply cube of diameter by .5236.



Above is the redwood starting its journey. By tautening and slackening guy ropes, a donkey engine moved the tree slowly along on skids.

loading them onto flat cars at the terminus of the logging road; but it stood 20 feet from the right of way, and to move the tracks was not practicable. Felling the tree and then raising it again seemed a waste of effort, so the men determined to move the giant without lowering it.

First they guyed the trunk of the tree with six  $1\frac{1}{4}$ -inch cables, then sawed it halfway through on one side, and blasted the stump away below the cut. Skids were placed under the edge of the butt, the rear guys were slacked two feet, the front guys drawn taut, and the tree sawed clear through.

Then, by a process of tautening and



At its destination, the tree, firmly "planted," served as a lead pole for pulling and loading logs at the terminus of the logging road.



## FROM THE LOOKOUT TOWER



In this morning's mail came an invitation to attend the twenty-fifth annual convention of the National Hardwood Lumber Association. It is to be held in Chicago this year, at the Congress Hotel, June 22 and 23.

### N. H. L. A. Convention

In times like these, when every man has his full share of business worries, conventions are more than ordinarily helpful. Any exchange of opinions and experiences by business men helps to simplify the problems of business. The best place we have found to "listen in" on an exchange of opinions and experiences is at a business convention. The N. H. L. A. always have a business convention, and a mighty good one. It should be a profitable meeting and we imagine that every member of the Association will pack up his troubles and go to Chicago this year.

How many know that Henry Ford, of automobile fame, was at one time a lumberman? Ford, who was born in 1863, was the son of a farmer. When he was 24 years old he left the farm and went to work in a sawmill. He didn't stay long in this business, however. At the age of 26 he took a job as night-shift engineer in a power plant. The first Ford automobile was not built until he was 39 years old, and not until a year later was the present Ford Motor Company organized.

### Another Lumberman

The building revival goes steadily on. Here in Philadelphia the registry of activities was greater than any recorded for May since

### For Four or Five Years

1914. The total value of operations started during the past five months is more than 39 million dollars, a gain of some 28 millions over the same period last year. In commenting on this great increase, the *Public Ledger* says: "The stagnation (of building) during and after the war created a trying situation without precedent in this city\*\*\*\*\*To accomodate its growth in other lines, it

will be necessary for building figures for the next four or five years to surpass all pre-war standards." Just to catch up, building operations must surpass all pre-war standards for *four or five years*—something to think of in that statement.

The *Crucible* was late in the mails last month and, for that reason, the fish stories asked for will not come in in time for this issue. We will print them in the next—the July—issue.

### The Fish Story

This forces us to do what last month we said we would not do—tell a story of our own. But we will not take any chances. We will tell a true story; a new one, of things that happened since the last issue was written. The story:

After deciding to go to the river for some fish, we packed the Ford with equipment—canvas for a tent, army cots to sleep on, lanterns, poles, lines, bait, fish baskets, minnow trap, hunting coats, hip boots, and more other stuff than we can mention. No, we did not plan to stay a week. We were coming back the next day, but we took enough equipment—plenty. We started. After a fourteen mile drive, we arrived at the river and by dusk had our line out and were after our first fish. At midnight we were still there—and were still after our first fish. Just a few minutes later we caught what appeared to be a fish. By the light of our flashlight we inspected our catch. By careful measurement, tip to tip, it spanned (watch us here) exactly three inches. It was not a fish, it was a minnow.

Feeling that our efforts were not being appreciated, we went back to camp and fell asleep. A few hours later we were awakened by the sound of thunder. By the time our eyes were open it was raining. After hustling around in the wet to get everything in under the canvas, the rain stopped. We hurried

(Continued on Page 38)

## LONGSTRETH MEDAL AWARDED INVENTOR OF DISSTON INTERLOCKED INSERTED TOOTH METAL-CUTTING SAW

### Mr. Samuel T. Freas Honored by Franklin Institute for the Efficiency, Durability, and Simplicity of this Saw

**T**HE Franklin Institute of the State of Pennsylvania recently presented to Mr. Samuel T. Freas, of Trenton, N. J., one of our Assistant Superintendents, the Edward Longstreth Medal in recognition of his invention of the Interlocking Tooth Metal Cutting Saw.

An important branch of the Institute's work is that which is now conducted by the Committee on Science and the Arts. It is the duty of this Committee "to examine and make report on all new and useful ma-



Mr. Samuel T. Freas and his Sectional Interlocked Inserted Tooth Metal-Cutting Saw.

chines, inventions, and discoveries submitted to them." This Committee fills an urgent need "felt by inventors and discoverers, of some competent, trustworthy and impartial body, to whom they could safely appeal for advice, and on whose judgment they could confidently rely for an opinion as to the usefulness of their inventions and discoveries."

The Edward Longstreth Medal is awarded by the Institute on the recommendation of this Committee for "inventions of high order and for particularly meritorious improvements and developments in machines and mechanical processes."

The presentation of the medal to Mr. Freas was made upon the recommendation of the Institute's Committee on Science and the Arts after a very complete investigation of the development of the inserted tooth circular metal cutting saw.

The report of the Committee included photographs and drawings showing progressive steps in inventions of this type of saw since the inception of the idea about thirty years ago.

In presenting Mr. Freas to the Institute, a member of the Committee said:

"The use of circular saws for metal cutting, while not new, is becoming increasingly extended. The inserted tooth saw allows faster and more economical cutting, but the intense stresses set up in the teeth of a saw doing heavy

work has made it a difficult problem to hold the teeth in place, and at the same time have them readily removable and replaceable. The medalist (Mr. Freas) has done this by a very simple but unusual combination of wedges.

"It is in consideration of this excellence of design resulting in the extended and successful use of this saw that the Franklin Institute, through the Committee on Science and the Arts, has awarded the Edward Longstreth Medal to Mr. Samuel T. Freas."

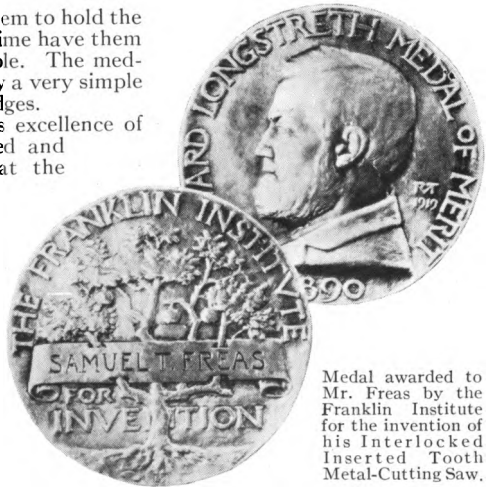
In the findings of the Committee, the practical merits of the saw were reported in part as follows:—

"Several users of the Interlocking Tooth Saw were written to for their opinions and very favorable replies, which are on file, were received in every case.

"In conclusion, the results of this investigation indicate that the inventor was the first to fully realize the stresses developed in a metal cutting saw and to use this knowledge in inventing an inserted tooth metal saw which operates effectively in the many uses to which it is applied, and has become a commercial success."

Mr. Freas, the inventor, has been associated with Henry Disston & Sons, Incorporated, of Philadelphia, for the past twenty-one years. The saw was designed and developed by him in the Disston factory and is manufactured as a standard Disston product. It is made in two different styles.

One is called the Disston Sectional



Medal awarded to Mr. Freas by the Franklin Institute for the invention of his Interlocked Inserted Tooth Metal-Cutting Saw.

Interlocked Inserted Tooth Metal Cutting Saw and is designed for use in cutting irregular shapes, hard steel rails, gates and risers for steel castings, and wherever a very fine pitch of tooth is needed. The other style, called the Disston Interlocked Metal Cutting Saw, is designed for use in cutting heavier work, such as large steel forgings, etc.

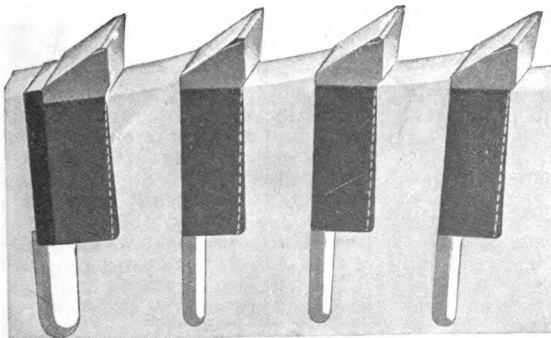
The conclusions of the Franklin Institute as to the merits of Mr. Freas' invention is another endorsement of the up-to-date Disston manufactures.

Since 1840 the House of Disston has been manufacturing saws, and the experience of all these years plus the skill of experienced employees are elements which enter into their present day saws and which cannot be duplicated.

The material used in these saws is the result of Mr. Henry Disston's efforts to produce a steel which would meet the requirements of his high ideals and practical knowledge.

Back in the fifties—after several years of experiments and inves-

(Continued on Page 38)



Enlarged section of the Sectional Interlocked Inserted Tooth Metal Cutting Saw.

## Disston Band Saw Withstands Unusual Strain

In Defiance, Ohio, and Ullin, Illinois, the Defiance Box Company operate large up-to-date factories. They specialize in wire bound boxes, pottery, crates, poultry coops, box shooks, and wheelbarrows, and are one of the large producers in their line.

The factories of the Defiance Box Company are equipped with Disston Saws. Recently one of their Disston 6", 19 gauge Band Saws was put to a very severe test. Running at an approximate speed of 7,000 feet per minute, the saw encountered a large spike-nail in a piece of lumber which was being sawed, and thirteen teeth were ripped off without cracking the saw plate.

Supt. Needham wrote of this incident as follows:

"We are sending you under separate cover, a block of wood with a number of band saw teeth wedged by a heavy spike-nail. We do not know whether or not this will be of any value to you as an advertisement of the quality of your saws, but it seems to us a remarkable piece of steel that would stand this strain without cracking the saw plate. We give this in appreciation of the service we have received through the use of your saws.\*\*\*\* We are at this time operating five bandsaws in our plant here and we find more service in your saws than any we have tried."

On the inside front cover page we reproduce a photo of the block of wood containing the spike. The twelve teeth shown are hooked on to the spike, while another tooth is deeply embedded in the block.

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### From the Lookout Tower

(Continued from Page 35)

to the river and started once more after our first fish. At the same time it started to rain again. In sheets, by the buckets full—in every possible way—the rain descended for an hour. We were out in all of it. By this time the water in the river was muddy and fishing for the day was over. So we started home and made the return trip on some of the worst roads we have ever

seen. We covered the first three miles in three hours and after that lost count of time. The point is, we enjoyed it. Do we qualify? Are we a fisherman? What say you?

Our story is not spectacular enough for a fish story. We have told better ones, but we are sure this one is true. We hope to have real fish stories for July. Have you sent yours?

How  
About Yours

---

## Inventory of Forest Cruises

An inventory of forest cruises since 1910 is being conducted by the forest management department of the United States Forest Service this winter. This will be a revision of the timber estimates on all the national forests in Oregon and Washington and will be based upon various cruising and mapping jobs that have been done in the last few years, into a comprehensive type map with estimates summary for each forest in the district. One of the technical assistants of each forest has been assigned to the work. This will put the forest service in a much better position to know authoritatively the amount of each kind of timber the national forest contains.

—The Timberman.

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### Longstreth Medal Awarded Inventor

(Continued from Page 37)

tigations, he evolved a formula from which the famous Disston-made steel was produced.

In addition to improvements of material there have been many improvements in methods of tempering, grinding and polishing, and designing teeth best adapted to sawing various kinds of material. Consequently patent after patent was granted Disston for improved teeth, etc. Master saw-makers of the House of Disston are constantly striving to give to the trade the very latest and best in saws, tools, and files, and Mr. Freas' invention is another of the many inventions which have crowned their efforts.



### The Man Who Likes a Tree

I like a man who likes a tree,  
 And want no better company,  
 For such a man I always find  
 Is just the very sort and kind  
 Who's not content unless it be  
 He too can grow much like a tree.

I like a man who likes a tree  
 No further introduction he  
 Will ever need to win my heart;  
 To me he is the counterpart  
 Of usefulness and comfort, too,  
 And does the good few others do.

I like a man who likes a tree,  
 He's so much more of a man to me;  
 For when he sees its blessings there,  
 In some way, too, he wants to share  
 Whatever gifts his own may be  
 In helping others, like a tree.

For trees you know are friends indeed,  
 They satisfy such human need;  
 In summer shade, in winter fire,  
 With flower and fruit meet all desire,  
 And if a friend to man you'd be,  
 You must befriend him like a tree.

—Charles A. Heath in *Nuggets*.



## SAWDUST

### THE MODERN CHILD

A colored woman down south, asked why she called her son Prescription, said it was so hard to get him filled.

—Winnipeg *Free Press*.

### EXHIBIT A

In this glorious country there are few to arouse our pity. But once in a while you see a poor husband trying to buy something in the lingerie department.

—Stratford *Beacon*.

Mrs. Nextdoor—Your daughter is different from most girls. She's so sweetly unsophisticated.

Mrs. Simon Pure—She's all of that. Why, she thinks a B. V. D. is a university degree.—*Judge*.

### THE FUNNINESS OF WORDS

Because a newspaper you skim

It is not therefore scum;  
Though round a cask you put a rim  
You can not say 'tis rum.

Because you're always asking "Why "

You will not thus get wise;  
And though for greater girth you sigh  
'Twill not increase your size.

When Cupid gives your heart a stab

You do not call it stub;  
An opportunity you grab,  
And yet it is not grub.

Although a glass of wine you sip,

You have not therefore sap;  
Nor do you say about a tip:  
"The janitor I tap."

Because you do things in your den

They are not therefore dun.  
(A lot more quiblets I might pen,  
But why should they be pun?)

—*Lippincott's Magazine*.

"Here, boy," said the man to the boy who was helping him drive a bunch of cattle, "hold this bull a minute, will you?"

"No," answered the boy, "I don't mind bein' a director in this company, but I'm darned if I want to be a stockholder."—*Cartoons*.

### AND WE HAVE THE PUBLIC SCHOOLS!

Recently the State Board of Regents in New York State propounded a number of questions to the people in the U. S. Here are some of the answers:—

"The government of England is a limited mockery."

"Georgia was founded by people who had been executed."

"A mountain pass is a pass given by the railroads to its employees so that they can spend their vacation in the mountains."

"A mountain range is a large cook stove."

"The qualifications of a voter at a school meeting are that he must be the father of a child for eight weeks."

"Achilles was dipped in the River Styx to make him immortal."

"The function of the stomach is to hold up the petticoats."

"The stomach forms a part of the Adams apple."

"The first governor of Massachusetts was Mr. Salem Witchcraft."

"When the British got up in the morning and saw the Americans on the opposite hill they threw up their breakfasts (breastworks)."

"A permanent set of teeth consists of eight canine, eight cuspids, two molars and eight cuspidors."

"Weapons of the Indians:—Bow, arrow, tomahawk and warwhoop."

PRINTED IN U. S. A.

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## Every Item on this List—

is just as good as the Disston products you are now using. Check off the things you use and the next time you buy specify "Disston"—you'll get that same satisfaction you have come to expect from Disston products.

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### Back Saws

#### Band Saws for Wood and Metal



Bevels  
Buck Saws  
Butcher Saws and Blades  
Cabinet Scrapers

#### Chisel Tooth Circular Saws

#### Circular Saws for Wood, Metal, and Slate

Compass Saws  
Concave Saws, Circular.  
Cross-cut Saws  
Cut-off Saws  
Cylinder Saws  
Dovetail Saws  
Drag Saw Blades  
Edger Saws  
Files and Rasps  
Filing Guides  
Gang Saws  
Gauges, Carpenters' Marking  
Grooving Saws  
Hack Saw Blades  
Hack Saw Frames  
Hand, Panel, and Rip Saws  
Hedge Shears



Ice Saws  
Inserted Tooth Circular  
Saws  
Keyhole Saws

#### Kitchen Saws

Knives—Cane, Corn, Hedge  
Knives—Circular—for Cork, Cloth,  
Leather, Paper, etc.  
Knives—Machine  
Levels—Carpenters' and Masons'  
Lock Corner Cutters  
Machetes

### Mandrels

#### Metal-slitting Saws



Milling Saws for Metal  
Mitre-box Saws  
Mitre Rods  
Nest of Saws

#### One-man Cross-cut Saws

Pattern Maker Saws  
Plumbs and Levels  
Plumber Saws  
Post Hole Diggers  
Pruning Saws  
Rail Hack Saws  
Re-saws

#### Saw Clamps and Filing Guides

Saw Gummers  
Saw-sets  
Saw Screws  
Screw Drivers  
Screw-slotting Saws  
Scroll Saws  
Segment Saws  
Shingle Saws  
Siding Saws  
Slate Saws, Circular



Squares, Try and Mitre  
Stair Builder Saws  
Stave Saws  
Straight Edges

#### Sugar Beet Knives

Swages  
Tools for Repairing Saws  
Tool Steel  
Trowels—Brick, Plastering,  
Pointing, etc.  
Veneering Saws  
Webs—Turning, Felloe, etc.

This is a partial list. There are thousands  
of items in the complete Disston line.

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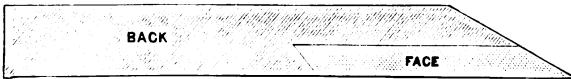
# DISSTON

## SAWS TOOLS FILES

# DISSTON

## Knives and Specialties

For more than a third of a century, Henry Disston & Sons, Inc., have been one of the largest manufacturers of knives and special equipment for all industries. The quality of the famous Disston-made Steel, the experience of Disston workmen in making fine tools, Disston equipment—all combine to give to this class of Disston products unusual wearing qualities and efficiency.



SECTIONAL VIEW OF THE DISSTON KNIFE LOCK WELD

We can offer you increased efficiency and satisfaction when you are in need of knives for any purpose—

*Paper Trimming Knives*  
*Corner Cutting Knives*  
*Paper Shear Blades*  
*Stop Cutter Knives*  
*Scoring Knives*  
*Slitter Blades*  
*Perforating Blades of all kinds*  
*Rotary Slitters*  
*Serrated Slitters of all kinds*  
*Bookbinders' Saws*  
*Metal Saws for Brass or Lead*  
*Doctor Blades*

*Ink Fountain Blades*  
*Folder Blades*  
*Circular Paper Knives*  
*Curved Steel Tympan or Jackets*  
*Spring Steel Aprons*  
*Steel Finishers' Plates*  
*Steel Press Plates of all kinds*  
*Paper Mill Fly Bars*  
*Paper Mill Bed Plates*  
*Chipper Knives*  
*Barker Knives*  
*Jordan Bars*

**HENRY DISSTON & SONS, INC.**  
**PHILADELPHIA, PA.**

Chicago	San Francisco	Bangor
Cincinnati	Portland	Memphis
Seattle	Boston	New Orleans
Sidney, N. S. W.		New York City
Canadian Works: Toronto, Canada		
Branch: Vancouver, B. C.		



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AUG 2 1922

# The DISSTON CRUCIBLE

JULY

1922



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**Four Good Reasons  
Why Disston Files  
Save Time—  
Do Better Work—  
Save Money**

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**(1) *Disston Files are Made of the Famous Disston Steel***

Good Steel must be used to make good files. Disston Files are manufactured from Disston-made Steel—for years famous for its quality as a saw and tool steel.

Disston Steel-makers and Disston File-makers work side by side to turn out a good product. Constant tests and close co-operation explain the uniform good quality for which Disston File-steel is famous.

**(2) *A Careful Test for Every Disston File***

You must have uniform good quality in the files you use. To insure that every Disston File you buy is a good file, our inspectors test every file many times during the process of manufacture. In addition, every finished file is proved by a special test before it leaves the plant. Individual attention is given each file so that you can be sure of getting the same good quality in every file bearing the Disston name.

**(3) *We Put 35,000 Dozen Files a Year to the Hardest Test***

The best test for any product is to try it out in actual use. The supreme test for a file is in filing saws—steel cutting steel. More than 35,000 dozen Disston Files are used to file saws in our factory every year.

This constant use of so many files in our own factory gives us an unusual check day after day on the uniformity and quality of our files. From long experience, we know what a good file should do, and make Disston Files to do it.

**(4) *The Advantages of Disston Experience and Equipment***

There are between sixteen and eighteen million Disston Files made every year.

Disston File-makers are real craftsmen. Their expert experience and the interest they take in their work is shown by the fact that they invented or developed much of the file-making machinery used in our factory today.

**HENRY DISSTON & SONS, INC.**

**PHILADELPHIA, U. S. A.**

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# DISSTON CRUCIBLE

A MAGAZINE FOR MILLMEN

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VOL. XI.

JULY, 1922

No. 6

## “LUMBER MINE” ON LAKE BOTTOM

**I**N the high Sierras of Southern California is an artificial reservoir known as Shaver Lake. This reservoir was constructed some thirty years ago for logging purposes by the predecessors in interest of the Fresno Flume and Lumber Company.

Recently the Edison Company purchased property including the reservoir for the purpose of erecting a hydroelectric plant. Having been informed before the purchase that there was a large number of water soaked logs at the bottom of the lake, the company lowered the water to make a survey and found that there is approximately five million board feet of logs resting on the bottom of the lake in a bed of mud and sand.

It is the intention of the present

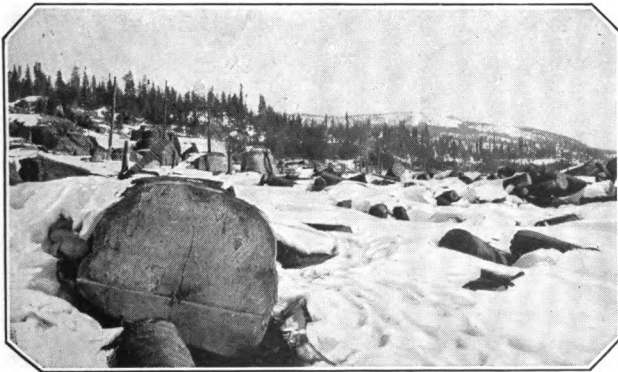


The resinous pine-logs were well preserved, although they had been submerged for years.

owners to build a very large reservoir on the present Shaver Lake site in the near future. And before this is done, the water will be lowered again and the logs put through their mill adjacent to the lake. This mill was constructed by the Fresno Flume and Lumber Company

many years ago, and was included in the purchase of the Shaver Lake site by the Edison Company.

Most of the logs at the bottom of the lake are sugar pine. They are well preserved even though they have been submerged from one to twelve years. Cuts courtesy of the *Popular Science Monthly*.



Draining of the lake revealed hundreds of logs, soon to be reduced to timber by a sawmill close by

## Relative Durability of Rocky Mountain and Pacific Coast Douglas Fir Ties

Before the preservative treatment of ties was practised as extensively as at present, the railroad companies using Douglas fir ties held the opinion that the Douglas fir grown in the Rocky Mountains was more durable than that grown on the Pacific Coast. In some of the copper and lead mines in the Rocky Mountains the mountain fir was also considered more durable.

No authentic records are available where coast and mountain fir ties are set in the same locality. Such service records as there are, however, fail to show that the mountain fir has superior lasting qualities. In some instances the mountain fir and in others the coast fir has proved more durable.

Botanically there is no difference in Douglas fir according to the locality in which it grows. Tests made by the Forest Products Laboratory, Madison, Wis., indicate that Pacific Coast fir is on the average somewhat denser and therefore stronger and harder than mountain fir. However, the parts of coast timber usually cut into ties are

boxed hearts or wood cut near the piths or from the tops of trees. These are the poorer parts, and coast fir ties therefore generally contain no better wood than mountain fir ties.

The conclusion of the laboratory is that there is practically no difference in the durability of Douglas fir ties cut in the mountains and those cut along the Pacific Coast. It has been observed, though, that the latter receive preservative treatment a little more readily than the former.

A new wood-preserving process employed in Germany consists of a hypodermic injection of a protective anti-septic in the freshly felled tree-trunk while it is still in the forest. The highly concentrated mixture quickly spreads through the tree tissues of the trunk by diffusion, as the tree is still full of sap.—*Lumber*.

## A Famous Japanese Image of the Great Buddha

Mr. A. S. Hunt, who has been in Japan recently, in the interest of the House of Disston, sent us a photo of the famous Japanese image of Buddha at Kamakura, near Yokohama. This image is a production of Japanese Art, and is wrought of bronze and silver, with eyes of gold. It is known in Japan as the Kamakura Dai-butsu (Di' boo'tsoo) **GREAT BUDDHA!**

This image was cast in September 1252 A. D. In 1495 a tidal wave did some damage to it; but notwithstanding this misfortune, the ravages of time, and the fury of the elements, the Dai-butsu is remarkably preserved.

It is about 50 feet in height; 98 feet in circumference; the length of the face is 8 and a half feet, of the eye 4 feet, of the ear 6 and a half feet, and of the nose 3 feet 8 inches. The breadth of the mouth is 3 feet 2½ inches; the length from knee to knee 36 feet, and the circumference of the thumb is over 3 feet.



The Kamakura Dai-butsu.

## FROM THE LOOKOUT TOWER

In the May Crucible we ask for fish stories. That issue was so late getting in the mail that we could not print the stories received in the June issue. Therefore, we have them for this number.

The first one received comes from our own neighborhood. Whoever sent it, did not sign his name. After you have read the story, you will understand why.

"On Memorial Day the Torresdale Fish Hatchery was overrun with sight-seers, and Superintendent Jerry Burkhouse took a great delight in showing them everything, especially one of the large lakes where he has fresh water fish of every description. Jerry takes great pride in a large rock bass that hovers near the banks of the lake. When the superintendent stoops down and calls softly, "Warree! Warree!" the fish will swim to the very edge of the lake and Jerry will pick him up, stroke and fondle him as he would a French poodle. So fond is the superintendent of this fish that he has named him after President Harding, and taken several years to train him. According to Superintendent Burkhouse the fish is 25 years old, and while not showing more than ordinary poor fish intelligence at the start, patience and persistency overcame all obstacles, until now the superintendent has a theory that any living thing can be trained the same as this fish has been. Members of the 27th police district vouch for this story in every detail."

Well, if the police vouch for the story—that's different.

\* \* \* \* \*

This one came from South Carolina:

"Accoutered with a device described as a skim net, Mr. — made his way to the river at about the hour of sundown Tuesday evening. He embarked upon a bateau and cast out into the stream, made fast his ship to a rock in the river, lit his pipe and let down his net into the waters of the river. The net was lowered into the water at times and hauled out again, usually empty, always empty. Mr. — grew discouraged, but to his mind came the advice to the fishermen in Galilee. He cast his net on the other side of the ship. Right then and there things began to happen. Suddenly the net was full of something.

By the light of a lantern, as the skim-net was hauled up, Mr. — saw a moccasin, eight feet of him, and a full three inches in diameter. He uttered a

yell and was about to jump into the river on the other side of the boat. His companion restrained him. The snake took advantage of the excitement and wriggled out of the net and went away from there."

—W. H. Gregory.

Yes, it was written since prohibition.

\* \* \* \* \*

Here is another one that came in unsigned. The writer shows that he is an experienced and a wise fisherman:

"I'm proud of my ability to catch fish. In my time, I've caught some mighty big ones. I remember, one day I caught a fish up in Michigan that weighed, — (but you only asked for ONE story)— anyway, that fish was the biggest I ever caught. A fellow who lives near me, an old buddy of mine, is also a good fisherman. For years, the fish he caught were always a little bigger than the fish I caught. However, for the last few years I am the one that gets the biggest fish. It is easy for me, too. I simply let my pal tell about his fish FIRST. Mine are always bigger!"

That is a story with a moral—built upon all the wisdom of the ages.

\* \* \* \* \*

We try to keep advertising off of this page, but we can't do it, as you will see from the following, which is a different kind of a "fish" story:

"In the last Disston Crucible I noticed that you would like to have some "fishy" stories, or rather fish stories. Well, if I were to tell you the saw you hammered and tuned up for us a little while ago did not stand up and do the work, you would write me at once, and say, "I think that story sounds a little fishy," and of course it would. The truth is: I put the saw on just the way it screwed up tight. Then I brought the guides just free of the saw and it ran like a top in locust, oak, poplar, or chestnut. I could make 10% better time."

—Ross H. Rohrer.

\* \* \* \* \*

So endeth the fish-stories. It is getting too hot for fishing now, anyway. We must find something cool and restful to talk about. What will it be?

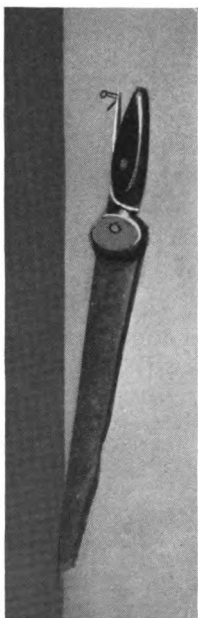


## THE GRANDFATHER KNIFE

A True Story, Graphically Told, in which a Disston Saw Knife "came back to its own"

By KATHERINE WEST KELLY

**T**HE fall after Tom and I were married we decided that in order to have plenty of meat for the corn huskers, we must butcher a pig. Tom cut the hog out from the herd, made up a hot fire in the kitchen range, and put a wash boiler of water on to heat, while I watched, enjoying the new experience.



Disston Saw Knife  
Purchased 1870.

"Well," said Tom, "I'm going to butcher that pig this afternoon, and I am not going to the neighbors to borrow a butcher knife and give them a chance to laugh at you for not knowing enough to buy one. I can shoot the pig instead of sticking it, and when it is dead I can cut its throat with this bread

knife so it will bleed; and I have a good sharp hoe at the shop. I'll take it off the handle and use it to scrape with. We'll get along some way."

So he took the bread knife and the hoe to the grindstone and put a keen edge on them, and I kept stuffing cobs into the stove, and by the time the knives were ready the water was boiling. Presently Tom came in and put some lye in the boiling water. I wondered why he did it, but I had shown my ignorance enough for one day, so I did not ask any questions, and Tom carried the hot lye water out and I saw him pour it in a barrel. Then I went to the room farthest from the pig pen and sat down to sew, for I did not want to know too much about the killing of that pig. The thought carried grisly suggestion, and I wanted to have a good appetite for liver at supper time.

After a while Tom came in. "His majesty, the pig, is dead, and is all scalded and scraped and hung up, ready to dress. And now I'm up against it for fair. That pesky bread knife is no good; it simply will not keep an edge. Haven't we anything else? Didn't I see a big knife among the things you brought up here from your home?"

"A big knife?"

Why, yes, there was a big knife—blade on one edge and saw on the other. But that is an heirloom; it belonged to my grandfather, and it hasn't been used for more than thirty years—it wouldn't be any use," I answered. "Wasn't your grandfather a farmer?" asked Tom, and when I admitted that he was, he chuckled. "Then that old knife has just come



"His majesty, the pig. \* \* ready to dress."

back to its own. I'll bet it is just the thing we need. That old Grandfather Knife will be happy to be put to use again instead of lying on the shelf, wrapped up in tissue paper."

I got the knife and Tom examined it. A Grandfather Knife, indeed! A sturdy blade more than twelve inches long, two inches wide at the base, the saw on the one side and the edge on the other looking equally efficient. The strong wood handle was shaped to fit a large strong hand, and the blade was firmly riveted almost to the end of the handle. It took and kept an edge.

When the meat work was done, Tom said, "That old knife is a wonder. It was made in the days when good workmanship was respected, and by some one who thoroughly understood how to make steel. I believe I can see a name stamped on the blade." A little rubbing, and the name began to show. Finally Tom held it to the light. "I can make it out now.—H. & C. DISSTON, PHILA.)\*"

\*Up until 1886 when Henry Disston & Sons was incorporated, the Saw Knives and several other tools were made by Henry and Charles Disston, as the etching on the Saw Knife indicates. Charles Disston was a brother of Henry Disston, founder of the great Saw Works. All tools made by H. & C. Disston were sold by Henry Disston & Sons exclusively.



The Disston Saw Knife being presented to the third generation of owners.

Oh—Disston! That is it! That accounts for the way it keeps its edge, and the way it has lasted! I knew Disstons are making good tools now, but I did not know they have been at it so long.

That was twenty years ago. The old knife is now more than fifty-two years old. Every butchering day since then Grandfather Knife has done valiant service. Its rivets still hold firmly, its saw is keen, it holds its edge better than any knife we have ever used. Our children are now almost grown. When they are married, Grandfather Knife shall go to the one that stays on the farm, for with the knife as with a man, "It is better to wear

out than to rust out."

#### Historical Facts Upon Which The Foregoing Story Was Based:

The Grandfather Knife was bought by Cornelius West at Cincinnati, Ohio, in 1870, and at his death in 1877 became the property of his son, Rev. P. B. West. In 1902, when his daughter Katherine was married to John M. Kelly, it was given to her and was used constantly in the "meat work" on the farm, almost the first time it had been used since it was owned by Cornelius West. It is still in good condition and is capable of giving service for another fifty years. As there are three Kelly children it is likely that the knife will continue to cut up the meat in the same family several additional generations.

—Katherine West, Millboro, South Dakota.

If you intend to go to work, there is no better place than right where you are; if you do not intend to go to work, you cannot get along anywhere. Squirring and crawling about from place to place can do no good.—Abraham Lincoln.

## “WOODMAN, SPARE THAT TREE!”

In the rear of the old Woodward Mansion at No. 462 West 22nd Street, New York City, stood two sycamore trees. When they died, two years ago, they were more than three hundred years old. It was under these trees that George Pope Morris, poet and journalist, wrote the well-known poem, “Woodman, Spare That Tree!”

These two historic trees no doubt could have been saved by more careful nurture, according to an eminent tree doctor, as they were only in their infancy compared with the age of some trees of which we have record.

For instance, there is a tree in Cey-

lon, under which it is claimed the Great Buddha received his inspirations. This tree was planted 245 B. C. and is still standing.

Had these two sycamore trees lived about seventeen times as long as they did, they would not have attained the age of the Mexican Cypress which stands in the church yard at Santa Maria del Tule, and considered by scientists the oldest living thing.

As a matter of safety the New York authorities recently ordered these trees to be cut down and removed. The accompanying tree shows the work in progress. The poem:

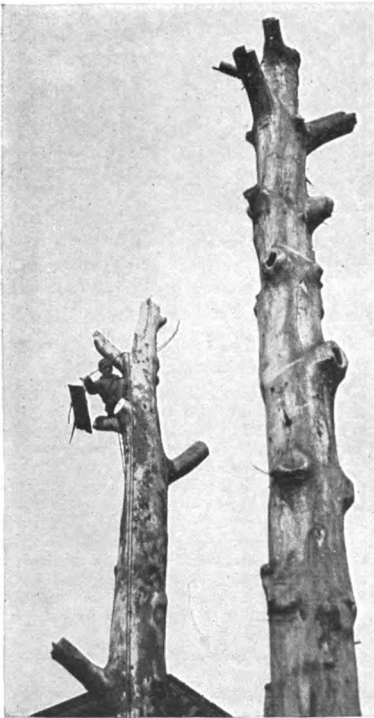
### Woodman, Spare That Tree!

Woodman, spare that tree!  
 Touch not a single bough!  
 In youth it sheltered me,  
 And I'll protect it now.  
 'Twas my forefather's hand  
 That placed it near his cot;  
 There, woodman, let it stand,  
 Thy axe shall harm it not.

That old familiar tree,  
 Whose glory and renown  
 Are spread o'er land and sea—  
 And wouldst thou hew it down?  
 Woodman, forbear thy stroke!  
 Cut not its earth-bound ties;  
 Oh, spare that aged oak  
 Now towering to the skies!

When but an idle boy,  
 I sought its grateful shade;  
 In all their gushing joy  
 Here, too, my sisters played.  
 My mother kissed me here;  
 My father pressed my hand—  
 Forgive this foolish tear,  
 But let that old oak stand.

My heart-strings round thee cling,  
 Close as thy bark, old friend!  
 Here shall the wild-bird sing,  
 And still thy branches bend.  
 Old tree! the storm still brave!  
 And, woodman, leave the spot;  
 While I've a hand to save,  
 Thy axe shall harm it not.



Underwood & Underwood, N. Y.  
 Trunks of Famous Sycamore Trees.  
 Illustration Courtesy *Plymouth Products*.



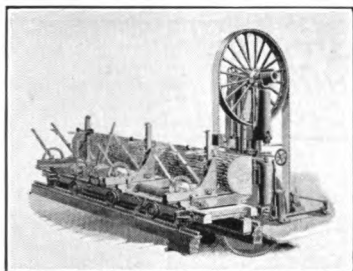


Fig. 88-A

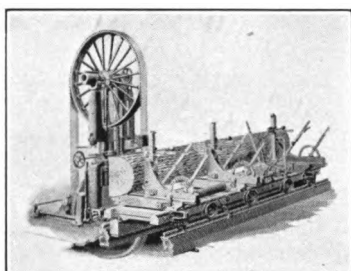


Fig. 88-B

### When Ordering Band Saws—

be particular to state whether right or left-hand saws are desired; also give full particulars as to gauge, style of tooth, back edge, etc. If the saws are to be crowned on the back we finish them with  $1/64$  crowning to each 5 feet in length, unless otherwise instructed.

We will supply, on application, an order blank giving details to be specified. If this is properly filled out it will enable us to make up the saws exactly as required.

The illustrations above give a view of two mills, in which the "hand" of the saw can readily be determined. Fig. 88-A shows the design of a left-hand mill, the log being on the left side of the saw when standing facing the mill. Fig. 88-B shows a right-hand mill, the log being on the right-hand side of saw.

### Toughest American Wood

The toughest American wood is that of the Osage orange, which is not an orange at all, but belongs to the nettle family. This has been proved by a series of tests made by the United States forest service, but the Indians knew it before the coming of the white man, and it was known to them as the bow tree, because they used it for making their finest bows. Some idea of its strength may be had from the report made not long ago, which shows that a block 30 inches long and two inches in cross-section when bent breaks under a stress of 13,600 pounds, its nearest rival being a variety of hickory called monkey-nut, which, when bent by the impact of a 100-pound hammer, stands a stress of 10,520 pounds.

The first telescope used in this country for astronomical purposes was set up at Yale College in 1830.

### Lasting Qualities of Wood

The Southern Pacific Company is replacing with steel and concrete the old wooden drawbridge at Albany, Oregon, which has carried freight and passenger traffic on the Yaquina Branch for some 30 years. The old bridge had two 150-ft. Howe trusses and one 260-ft. Howe truss draw span.

This was the longest wooden draw span in the world and it illustrates the strength of Douglas fir, the great construction timber of the Northwest.

Roofed-over bridges of this material are being built on western highways in competition with steel, and when properly protected they render as long or longer service than the steel bridge.

Until 1772, umbrellas were unknown in North America. In this year they were imported from India.



## SAWDUST

### TIMELY WARNING

First Errand Boy: "Some terrible things can be caught from kissing."

Second Errand Boy: "Right! You ought to see the poor fish my sister caught."

### MAY BE A SHINING LIGHT SOME DAY

"I gi'e the wee laddie a shullin' pocket money every week."

"Mon, that's a lot for him!"

"Aye. But I mak' him put it in the gas-meter. He thinks it's a money-box!"—*London Mail.*

### SLIGHTLY MUDDLED

Two gentlemen riding on a train were both very much intoxicated.

First Gent: "What time is it?"

Second Gent (after extracting a match-box from his pocket with much exertion, and gazing at it intently): "Thursday."

First Gent: "My heavens, I've got to get off here."—*Everybody's.*

### THE "FIRE ALARM" CAUSE FOR FIRING

For four consecutive nights the hotel proprietor watched his fair, timid guest fill her pitcher at the water tap.

"Madam," he said on the fifth night, "if you would ring, this would be done for you."

"But where is my bell?" asked the lady.

"The bell is beside your bed," he replied.

"That the bell?" she exclaimed. "Why, the boy told me that was the fire alarm, and that I wasn't to touch it on any account."

### FORCE OF HABIT

Waiter—"Sir, when you eat here, you need not dust off the plate."

Customer—"Beg pardon, force of habit. I'm an umpire."—*Lemon Punch.*

### POOR MARY

"Mama, why do they wax people?"

"They don't; where did you ever get that idea?"

"I heard Uncle tell Papa that at midnight the party waxed Mary (merry)."

—*Virginia Reel.*

### DIAGNOSIS

"Do you like Betty?"

"Oh, she's an awfully nice girl. Very —er—well-meaning and all that sort of thing."

"I don't like her either."—*London World.*

### WILL CAUSE 'EM TO BITE

A minister, with two lovely girls, stood entranced by the beauties of a flowing stream. A fisherman happening by and mistaking the minister's occupation, said: "Ketchin' many, pard?"

"Sir," answered the minister with dignity, "I am a fisher of men."

"Well," replied the fisherman with an admiring smile at the girls, "you sure have the right bait."

### WISDOM OF FATHER

"My dad knows mor'n George Washington did," said the small boy.

"How's that?" queried the grocer.

"Last night," continued the small boy, "when I told dad I hadn't been skatin' he sed he know'd better, an' gimme a lickin' for lyin'. George Washington couldn't tell a lie, but dad kin tell one the minute he hears it."

—*Chicago Daily Socialist.*

# A List of Disston Products That Have Given Satisfaction to Users for 82 Years

**B**-etter results can be obtained by using Disston

Back Saws  
Band Saws for Wood and Metal  
Bevels  
Buck Saws  
Butcher Saws and Blades

**C**-areful design and workmanship add to the quality of Disston

Cabinet Scrapers  
Chisel Tooth Circular Saws  
Circular Saws for Wood, Metal and Slate  
Compass Saws  
Concave Saws  
Cross-cut Saws  
Cut-off Saws  
Cylinder Saws

**D**-ependability has always been a feature of Disston

Dovetail Saws  
Drag Saw Blades

**E**-xperience over a period of 82 years insures the quality of Disston

Edger Saws

**F**-requent and careful inspections account for the uniformity of Disston

Files and Rasps  
Filing Guides

**G**-ood steel—the famous Disston-made Steel, —is used in Disston

Gang Saws  
Gauges, Carpenters' Marking  
Grooving Saws

**H**-ard usage brings out the advantages of Disston quality in

Hack Saw Blades  
Hack Saw Frames  
Hand, Panel, and Rip Saws  
Hedge Shears

**I**n the long run, it is you who profit from Disston quality in

Ice Saws  
Inserted Tooth Circular Saws

**K**-een, long-wearing cutting edges are on all Disston

Keyhole Saws  
Kitchen Saws  
Knives—Cane, Corn, Hedge  
Knives—Circular—for Cork, Cloth, Leather, Paper, etc.  
Knives—Machine

**L**-ess time and energy are required when you use Disston

Levels—Carpenters' and Masons'  
Lock Corner Cutters

**M**-any thousands of users know the advantages of Disston quality in

Machetes  
Mandrels  
Metal-slitting Saws  
Milling Saws for Metal  
Mitre-box Saws  
Mitre Rods

**N**-ow is the time to test the advantages of Disston

Nest of Saws

**O**-nly a test can really prove the efficiency of Disston

One-man Cross-cut Saws

**P**-roof of efficiency that comes from an actual trial, is the way to test Disston

Pattern Makers' Saws  
Plumbs and Levels  
Plumbers' Saws  
Post Hole Diggers  
Pruning Saws

**R**-eliability and experience of the manufacturer is another way to judge the quality of Disston

Rail Hack Saws  
Re-Saws

**S**-atisfactory service is assured to everyone using Disston

Saw Clamps  
Saw Gummers  
Saw-sets  
Saw Screws  
Screw-Drivers  
Screw-slitting Saws  
Scroll Saws  
Segment Saws  
Shingle Saws  
Siding Saws  
Slate Saws  
Squares, Try and Mitre  
Stair Builders' Saws  
Stave Saws  
Straight Edges  
Sugar Beet Knives  
Swages

**T**-ime is the best test for any product. 82 years of leadership recommend Disston

Tools for Repairing Saws  
Tool Steel  
Trowels—Brick, Plastering, Pointing, etc.

**V**-eterans of the industry is a name given to Disston

Veneering Saws

**W**-hen you order a new stock, it will pay you to try Disston

Webs—Turning, Felloe, etc.

**X. Y. Z.**—are the thousands of other items in the complete Disston line.  
Only a partial list is given above.

**HENRY DISSTON & SONS, INC.**

PHILADELPHIA, U. S. A.

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# DISSTON SAWS FOR PORTABLE SAW MILLS

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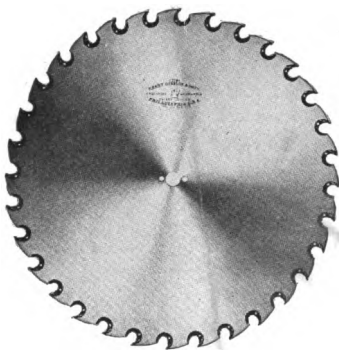
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On portable saw mills, more than any other type—the saw is the important thing.

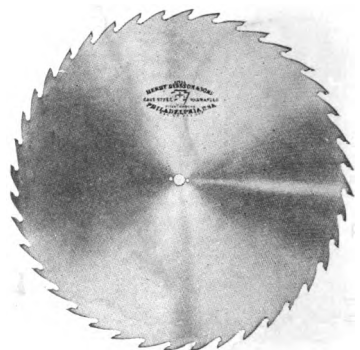
Portable mills are valuable because they can be moved easily and can be used to do many different kinds of work at a profit. Because of this, the saws used on the mill are required to do hard work under varying conditions—and *good saws* are required to do such work without trouble.

John M. Tennis, operating a portable mill, has used Disston Chisel Tooth Saw No. 29857, eight and one-half years—most of the time in “fitched” lumber and part of the time cutting trees that were full of staples and nails, the trees having stood in an old picnic ground. This saw is still doing good work on Mr. Tennis’s mill.

You will find, just as he did, that it will pay you to specify Disston Saws for *your* mill.



Disston  
Saws  
for  
Portable  
Mills



The Disston Inserted Tooth Saw is particularly efficient and economical for this use, because:

- (1) The saws always remain the same in diameter—no filing away of the blade.
- (2) Disston “Points” and “Bits” are absolutely interchangeable. The Points can be changed in a few minutes.
- (3) These saws consume less power.
- (4) They have ample throat room and clearance and, therefore, are not easily choked down.
- (5) They will carry more feed than any other inserted tooth saw made.
- (6) After each insertion of new “Points” in the saw, it is practically as good as when new.

**Disston Chisel Tooth Saws consume little power—cut easily—run lightly**

338.05  
DIS

Commerce R.R.

The UNIVERSITY OF ILLINOIS LIBRARY  
**DISSTON**  
**CRUCIBLE**

**AUGUST** **1922**





## *Who Says I'm Tired?*

**I**T'S only since I began to use Disston cross-cuts that I could say that after a hard day's work.

I didn't want to change from the old saw, but Jack Daly and his gang raved so much about Disstons, and they had such a lot of pep, left at night, that I thought I would take a Brodie, and try one.

And Oh, Boy—the difference!

The Disston people say the difference is in the steel and workmanship. I guess they're right for it has it all over the old saw; and some old timers around the camp who are still using Disston saws that they bought years ago say that the temper and the cutting edges are as good as new.

From now on, it's Disston for me.

**HENRY DISSTON & SONS, Inc.**  
PHILADELPHIA, U. S. A.

# **DISSTON**

## **CROSS-CUT SAWS**

# DISSTON CRUCIBLE

A MAGAZINE FOR MILLMEN

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VOL. XI.

AUGUST, 1922

No. 7

## YELLOWSTONE NATIONAL PARK

Purchased by the U. S. Government Fifty Years Ago—1872

Most Unique Park in the World. Celebrations Now On in Honor of its Fiftieth Anniversary

**A**BOUT two thousand miles across the continent, hidden away in the heart of the Rocky Mountains, eight thousand feet above

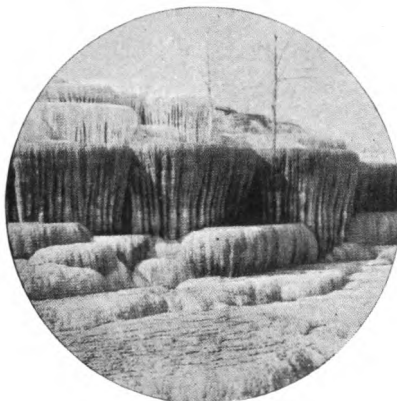
sea level, there lies a marvelous section of Mother Earth. To be more explicit, the exact location of this section comprises small portions of three States — Northwest Wyoming, East Idaho, and South Montana. It is about half the size of the state of Connecticut—62x54 miles, or, to be exact, 3,312 square miles.

On three sides, this unique area is guarded by lofty mountains, as though nature would prevent the depredation of mankind within this sublime enclosure.

As if to assist nature in carrying out her intentions, the United States Government in 1872, by Act of Congress purchased this area, and named it *Yellowstone National Park*, thus saving it from private ownership and

exploitation, and preserving it as a heritage for the American people.

This burst of eloquence appears in John L. Stoddard's description of Yellowstone National Park:—



"Sepulchers of Vanished Splendor."

"To call our National Park the 'Switzerland of America' would be absurd. It is not Switzerland; it is not Iceland; it is not Norway; it is unique; and the unique cannot be compared. If I were asked to describe it in a dozen lines, I should call it the arena of an enormous amphitheatre. Its architect was Nature; the gladiators that contended in it were volcanoes. During unnumbered ages, those gladiators struggled to surpass one another in destruction by spouting forth great floods of molten lava. Even now the force which animated them still shows itself in other forms but harmlessly, much as a captive serpent hisses though its fangs are drawn. But the volcanoes give no sign of life. They are dead actors in a fearful tragedy performed here countless centuries before the advent of mankind, with this entire region for a stage, and for their only audience the sun and stars."

The preservation of national resources and game probably influenced Congress more in the purchase of Yellowstone Park than the beauty and



The Great Falls of the Yellowstone

awesomeness of the natural scenery, for eighty-four percent of its entire area is covered by forests. In a treeless country like Wyoming these forests are of priceless value, not so much in dollars and cents for manufactured lumber, but for holding in check, in spring, the melting snows.

Two companies of United States Cavalry are stationed in the Park, and one of the principal duties of the soldier boys is to prevent forest fires. Some of the largest rivers of the Continent are fed from this section, and if the trees were destroyed, the enormous snowfall in the Park, unsheltered from the sun, would melt so rapidly, and have such a free course, that quickly swollen torrents would wash away roads, bridges, and productive farms, even far out in the adjacent country. Then, following this, would come drought for many months.

One of our contemporaries prints:—

### “The History of Yellowstone Park

from the time of early Indian traditions, when it was an enchanted land among the mountains, where rivers boiled and hidden lakes shot pillars of steam into the air, down to the present-day resort of thousands of tourists, is one of daring exploits and continuous exploration and development. It has been called by American historians a “sequential link” in the chain of events which commenced with the purchase by the United States of the then uncharted wilderness called the “Louisiana Territory,” the subsequent expedition of Lewis and Clark, the gold rush of '49, the conquest of the Indians, and all the epic deeds that achieved at last the winning of the West.

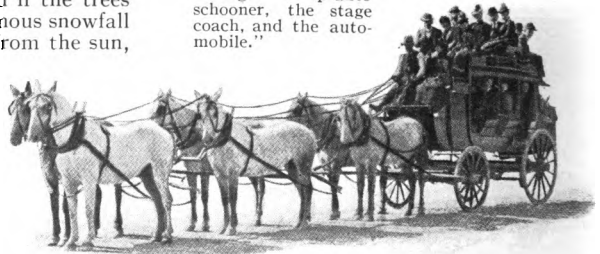
### Celebration of Fiftieth Anniversary

“Yellowstone Park will be the scene this summer of a continuous celebration in honor of the fiftieth anniversary of the national park system. The history of the park since 1872, when it was taken over by the Government, will be shown in pageants and outlined in special lectures and informal talks arranged for the crowds of visitors. It is possible that President Harding will make the trip, and special ceremonies will be arranged in his honor.

“No time is set for the various features of the celebration. They would, if advertised, attract such crowds, it is pointed out by officials of the National Park Service, that ‘the park couldn’t hold them all.’ They will be put on in more or less impromptu fashion and at intervals during the season, which lasts from June 20 to Sept. 15.

### The Pageant of Transportation

“One of the most elaborate features planned is a pageant of transportation at which will be shown the development of travel through the western region from the days of the Indian trail to the present motorcycle patrol system. The visitor will be shown each successive stage in the work of bringing the Yellowstone region into close connection with the other parts of the country through the prairie schooner, the stage coach, and the automobile.”



Park “Automobile” of earlier days.



# FROM THE LOOKOUT TOWER



Yesterday, when the sun was trying to force the mercury out of the top of the office thermometer, when everyone at the factory had a wilted collar and ruined disposition, we were trying to write something for this page.

Just when we were so hot and so disgusted that we decided to call it a day—even if we had to print this issue of the Crucible with one blank page—someone placed a letter on our desk.

We opened the letter and our dropped photographs showing snow-covered piles of logs, a team of oxen pulling logs over a frozen lake, and a snow-bound woodsman's cabin!

The letter, which was from Mr. J. N. Bullivant, a Disston booster up in Nova Scotia, gives some idea of lumbering as done in that part of the world. His letter reads:

"I am a portable saw mill operator in Nova Scotia, and a user of Disston Saws. I use one of your 48-inch inserted tooth saws, also various kinds of solid-tooth cut-off saws. They all give good satisfaction.

"I cut one million feet of lumber each year—principally spruce, hemlock, and pine. We get our logs out mostly in the winter, either hauling direct to the mill or on to the frozen lakes to float to the mill in the spring.

"Our lumber is exported to England from Halifax in the shape of three-inch deal or to the United States in the various sizes used there."

We have never been in Nova Scotia but if Mr. Bullivant can guarantee weather like that pictured in the photograph below for a good portion of the year, we're tempted to pack up and move.



\* \* \* \*

We are entirely too modest. We refrained from telling any of our best fish stories last month because we did not

want any one to question our truthfulness. But this morning, on the front page of our favorite newspaper, we find this headline:

"SNAKES OVERTURN AUTO"

And just two inches further down on the same page, this appeared:

"FISH PULLS MAN OVERBOARD"

It is not safe to go out in automobiles or boats these days!

\* \* \* \*

Anyone who saw the map printed in AMERICAN FORESTRY recently showing that more than half the forest area of our country is still in need of forest fire protection, should have something to think about. Forest fires have no valuable by-product. They destroy. And every one of them costs us money.

\* \* \* \*

The INDUSTRIAL DIGEST says that "we are in the midst of the biggest building boom the United States has ever known. . . . Construction is one of the key industries of the nation. It uses the products of about one-fourth of all the persons in the country who are engaged in manufacturing. It consumes about nine-tenths of all the iron, copper, zinc, and lead produced. Normally, it is estimated, construction absorbs about half the new capital accumulated in the country every year. . . .

"At the beginning of this year the real boom (in construction) started. . . . Up to this time, the record-breaking building has been confined almost entirely to the Eastern states. The West was coming merrily along, but it was lagging behind and not breaking all precedents. In May, however, all parts of the country broke records. . . .

"The housing shortage, apparently, will furnish the stimulus for building for many years to come. Of 24,351,676 homes in the United States, 54.4% are

(Continued on Page 55)

## TWISTS IN BAND SAWS—HOW TO LOCATE AND REMOVE THEM

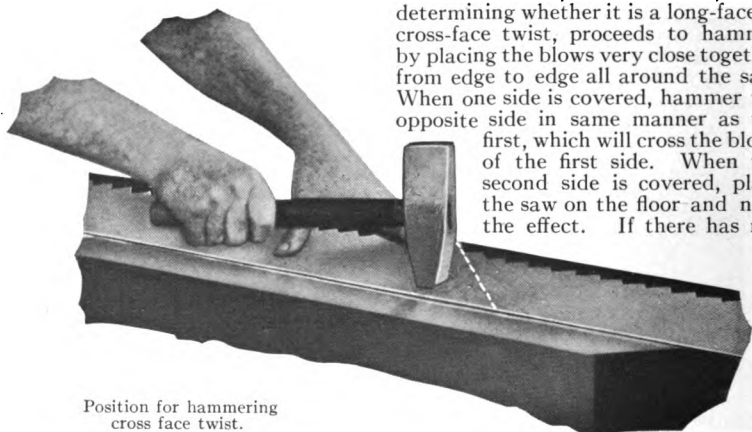
This article is a reprint from *Disston Lumberman's Handbook*

**T**WISTS in band saws are termed as follows: long-face, cross-face, and double. The terms "long-face" and "cross-face" come from the hammer used in the removal of twists. The long-face and cross-face hammer is that one which has two



Position for hammering long face twist.

faces; one, a long face in line with the handle, the other at right angles with the handle.



Position for hammering cross face twist.

A long-face twist is that which requires the use of the long-face hammer, and is determined in the saw by the way the saw lies when resting on the floor. If the filer is standing at the end of saw and the opposite end inclines to the right, that is a long-face twist, and must be taken out by the filer at the bench standing with his left to the saw and hammering diagonally across the saw with the long-face hammer.

On the other hand, should the saw be inclined to the left at the opposite end that would be a cross-face twist and should be removed with a cross-face hammer while the filer is standing with his left side to the saw striking diagonally with a cross-face hammer.

Most twists in bandsaws are due to accidents while the

saws are running, such as striking iron, or dodging in or out of the cut. In such cases the twist generally runs clear around the saw, and the filer, after determining whether it is a long-face or cross-face twist, proceeds to hammer by placing the blows very close together from edge to edge all around the saw. When one side is covered, hammer the opposite side in same manner as the first, which will cross the blows of the first side. When the second side is covered, place the saw on the floor and note the effect. If there has not

been enough hammering until the saw stands evenly on the floor.

A double twist means that saw has both kinds, and they must be located by the way the saw lies on the leveling table. Trace with a straight-edge as though hunting for lumps, but hold the straight-edge diagonally on the saw. If the saw shows a hollow, examine across the hollow where a diagonal lump is likely to show. This should be hammered in the direction indicated by straight-edge. Mark the opposite side of the saw, trace in the same manner, and the twist will be seen to run across the lump taken out on the other side. Trace as at first and hammer until the lump is removed.

Examine for tension in the meantime and if any fast places are found, open them with the roll, as it is impossible to remove twists while the saw is long on the edges.

### Breakage of Small Band Saws

Among the most frequent causes of breakage the following may be named: The use of inferior saws of unsuitable gauge for the work; pulleys being out of balance or too heavy; the use of improper tension arrangements; not slackening the saw after use thus preventing the free contraction of the saw blade cooling down after work; the framing of the machine column being too high or too light, thus causing excessive vibration; the joint in the saw not being of the same thickness as the rest of the blade; improper method of receiving



This shows a band saw with a cross face twist.

the back thrust of the saw and consequent case-hardening and cracking of the back of the saw blade; using band saws with angular instead of rounded gullets at the roots of the teeth; top pulley over-running the saw; working dull saws; feeding up the work to the saw too quickly; allowing saw dust to collect on the face of the saw-wheel thus causing it to become lumpy and uneven. Stopping or starting a machine too suddenly, especially while using a light blade, will almost certainly snap a saw in two.

You rob children of education if you are careless with fire in timber land. School funds come from timber.

## INTERESTING ITEMS FOR LUMBERMEN AND MILLMEN



### Logging in South America

There is a certain fascination in reading about primitive methods of logging in foreign countries. Take for instance the lumbering operations of rosewood in Brazil.

The trees are usually cut by the native farmer, who chops off the bark and light colored sap wood, and loads the log on an ox-cart, taking it over what are generally well nigh impassable roads to a store, where he exchanges it for provisions.

From the store, the logs go to collecting places along the river. Here they are hewn smooth with adzes, and the best grades are picked out for veneer.

The veneer stock is sawed in two in the middle by pit sawing, that is, one sawyer stands in a pit beneath the log. Any rotten part is then cleaned out. The logs are shipped down the river to the coast, or to some lumber center.

### Saw Mills in Peru

Several small sawmills in the neighborhood of Iquitos, the commercial center of Peru, and the hand sawing by natives in the jungle constitute Peru's lumbering activities. The mill products are used locally, while the hand-sawn boards seldom longer than six feet, are carried up the mountains by the Indians to the markets of the higher and more temperate regions. Trips take as long as 30 days one way on account of the great distance and arduous climbs. The pack parties are large, but the limited number of short boards carried by each burden bearer makes the total production from this source exceedingly small.

### Forest Flourished Five Centuries Ago

Actual photographs of the stumps and shattered trunks of a forest that flourished five centuries ago were shown lately with a most interesting lecture in Toronto by Professor Wm. S. Cooper of the University of Minnesota, on "The Interglacial Forests of Glacier Bay, Alaska."

When Captain Vancouver explored this region a century and a half ago the bay was filled almost to its mouth by a single huge glacier. But since then the ice has retreated steadily and the salt water has followed it a distance of 60 miles.

In the course of this retreat the ice has brought to light the remains of a large forest which must have covered the shores of the bay over 500 years ago. But being buried in gravel and silt and then covered by a great sheet of ice the roots and stumps of these trees have been preserved till today, and since the final retreat of the ice the sediments are being steadily washed away, continually uncovering fresh traces of the forest for the study of scientists.

### Wood and Human Progress

"Knowledge is the torch of human progress. It throws its light forward and lifts each generation upward in the scale of civilization in proportion as that generation accepts its standards. In the story of creation, knowledge is symbolized by a tree. Down through the intervening ages man's use of wood in attaining new heights of knowledge has been one of the most important factors in the advance of civilization."  
—*Forest Products Laboratory Decennial.*

## NORTHWEST LUMBER MILLS BOOMING

### Mills Doing a Large Business and Employing Thousands of Workers

**R**EPORTS recently issued by J. C. H. Reynolds, secretary of the Timber Products Manufacturers in Spokane, show that the lumber mills of the Inland Empire are doing an exceptionally heavy business this year. Mr. Reynolds says: "There are 35 large mills and 75 small mills reporting to him. These are located between Bonner's Ferry and Winchester, Idaho, and between the Montana state line and the Yakima-Leavenworth territory on the west.

#### Enormous Lumber Cut

"The 35 large, representative mills," says Mr. Reynolds, "require 7000 men to operate the plants, 9000 men for necessary logging operations, and 1000 men for railroad operation in moving logs and lumber. It is estimated that the total lumber cut by one shift in all these mills during the year will be

about 1,220,000,000 board feet. The planing mills' annual capacity for one shift is about 1,000,000,000 feet. When it is considered that 12 of the 35 large mills are operating double shifts, we get an idea of the tremendous scale upon which the lumber business of the northwest is being operated in 1922.

#### White Pine of Idaho

"The largest body of standing white pine in the world is in the north Idaho woods and about 25 per cent. of the lumber cut this year will be from these forests. Yellow pine will compose about 45 per cent. of the total cut and the remainder will consist of fir, larch and cedar.

"The market for our lumber is only circumscribed by freight conditions and rates. The lumber is shipped to all middle western states and the Chicago territory. White pine is shipped to many Atlantic coast points. Directly or personally em-

ployed in the lumber industry of the Inland Empire are upward of 60,000 people."

### BIGGEST LOG CABIN

**It is Being Built in Illinois by Lumbermen's Association**

On the 20th of July, 1922, forty woodsmen arrived at Aurora, Illinois, where they are building the biggest log cabin in the United States as a permanent convention hall of the National Lumbermen's Association of America. The cabin will be 150 feet long, 90 feet wide and as high as a four-story building. Seventeen carloads of logs will be used in its construction.

### From the Lookout Tower

(Continued from Page 51)

rented, 28.2% are owned outright, and 17.5% are owned under mortgage by occupants. According to John Ihlder, Manager of the Civic Development Department of the Chamber of Commerce of the United States, the shortage at the beginning of 1922 was equal

to three years pre-war normal production. 'So great has this shortage become,' he says, 'that even if we begin on its reduction now, it will take us 12 years working at 25% above normal to provide as adequately for our population as we did before the war.'"

Would you call a man who is tied to his wife's apron strings fast?



## SAWDUST

### MOSE WAS WILLIN'

Old Mose was wrestling with a balky mule, when a bystander asked him: "Why Mose, where's your will-power?"

"Mah will-power's all right," came the reply, "but you ought ter come out an' see dis yar animal's won't-power."

### A SKIN BUSINESS

Jack—I hear that owing to the shortage of leather, they are making foot-wear out of skins of all kinds.

Tom—All kinds? What about banana skins?

Jack—Oh, they make slippers out of them.—*Ex.*

### SIMPLIFIED ANATOMY

Mary had been spanked by her mother. She was crying in the hallway when the minister entered.

"Well, well, what's the matter with my little girl today?" he inquired.

"It hurts," she sobbed.

"What hurts, my dear?"

"The back of my lap."

—*Exchange.*

### HE WAS PROBABLY A GARDENER

An experienced golfer, in a fit of condensation, invited a novice to a game. The novice, to the golfer's dismay and disgust, plowed up the ground all around the ball at every stroke. He stood it patiently for a while, but after one particularly vicious dig into the tee, he remarked:

"You're revoked."

"We're playing golf, not whist," said the novice.

"Yes," replied the golfer; "but you have just played a club where you should have played a spade."

### A SUGGESTION

"Do you really believe a wife with good cooking can pull the wool over her husband's eyes?"

"Just try some nice flannel cakes."

### WELL INFORMED

Ruth—Who is that fellow with the long hair?

Eddie—He's a fellow from Yale.

Ruth—Oh, I've often heard of those Yale locks.

### STRANGE HOW SOME PEOPLE GET UP IN THE WORLD

"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 clumb up there to slumber, or went to sleep on the ground on top of an acorn and it grew up with him."

### DUNNERWETTER !?!?!?

A well-dressed man stood for several minutes watching a brawny expressman tugging at a heavily laden box almost as wide as the doorway through which he was trying to move it. Presently the onlooker approached and asked:

"Like to have a lift?"

"Thanks, I would," the other replied, and for the next five minutes the two men, on opposite sides of the box, worked, lifted, puffed and wheezed, but the object of their attentions did not move an inch. Finally the well-dressed man straightened up and said between puffs:

"I don't believe—we can—ever get—it out."

"Get it out?" the drayman roared. "Why, you idiot, I'm trying to get it in!"

# DISSTON

## SAWS TOOLS FILES

*You Can Buy Disston Quality  
In All The Products Listed Below*

### Back Saws

### Band Saws for Wood and Metal



Bevels  
Buck Saws  
Butcher Saws and Blades  
Cabinet Scrapers

### Chisel Tooth Circular Saws

### Circular Saws for Wood, Metal, and Slate

### Compass Saws

### Concave Saws, Circular.

### Cross-cut Saws

### Cut-off Saws

### Cylinder Saws

### Dovetail Saws

### Drag Saw Blades

### Edger Saws

### Files and Rasps

### Filing Guides

### Gang Saws

### Gauges, Carpenters' Marking

### Grooving Saws

### Hack Saw Blades

### Hack Saw Frames

### Hand, Panel, and Rip Saws

### Hedge Shears



### Ice Saws

### Inserted Tooth Circular Saws

### Keyhole Saws

### Kitchen Saws

### Knives—Cane, Corn, Hedge

### Knives—Circular—for Cork, Cloth, Leather, Paper, etc.

### Knives—Machine

### Levels—Carpenters' and Masons'

### Lock Corner Cutters

### Machetes



### Mandrels

### Metal-slitting Saws



### Milling Saws for Metal

### Mitre-box Saws

### Mitre Rods

### Nest of Saws

### One-man Cross-cut Saws

### Pattern Maker Saws

### Plumbs and Levels

### Plumber Saws

### Post Hole Diggers

### Pruning Saws

### Rail Hack Saws

### Re-saws

### Saw Clamps and Filing Guides

### Saw Gummers

### Saw-sets

### Saw Screws

### Screw Drivers

### Screw-slotting Saws

### Scroll Saws

### Segment Saws

### Shingle Saws

### Siding Saws

### Slate Saws, Circular



### Squares, Try and Mitre

### Stair Builder Saws

### Stave Saws

### Straight Edges

### Sugar Beet Knives

### Swages

### Tools for Repairing Saws

### Tool Steel

### Trowels—Brick, Plastering, Pointing, etc.

### Veneering Saws

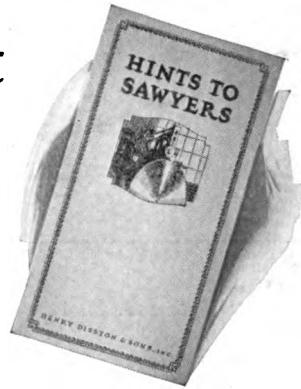
### Webs—Turning, Felloe, etc.



This is a partial list. There are thousands  
of items in the complete Disston line.

**HENRY DISSTON & SONS, Inc.**  
PHILADELPHIA, U. S. A.

# A Booklet You Should Have



## A Book of Information For the Users of Circular Saws

**T**HE new "Hints to Sawyers" booklet is just what the name implies—a compilation of useful hints for men who are operating circular saws. Some of the chapter headings are:

- "Saws Out of Round"
- "Setting the Carriage Track and Husk or Saw Frame"
- "Lining the Saw With the Carriage"
- "Saw Guides"
- "Proper Speed of Saws"
- "Fitting Saws and Maintaining Them in Proper Condition"—Etc.

# Hints to Sawyers Booklet

Real brass-tack information that should be of value to all users of circular saws. We will be glad to send the book free of charge.

*Write for it. Address—*

**HENRY DISSTON & SONS, INC.**  
DEPARTMENT O  
PHILADELPHIA, U. S. A.



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Comm. R. R.

SEP 27 1922

# The DISSTON CRUCIBLE

SEPTEMBER

1922



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# Do *Your* Band Saws Give This Kind Of Service?

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A 6-inch Disston Band Saw, used in the factory of Leiberman, Loveman, and Cone Company of Nashville, Tennessee, was worn down from 6 to 4½ inches in resawing knotty, gnarled oak and hard wood culls used in making box shooks.

This same saw was then reduced to rip-saw length and worn down from 4½ inches to 3½ inches — without developing a crack or losing a tooth.

*“You Can’t  
Buy  
A Better Saw”*



# DISSTON CRUCIBLE

A MAGAZINE FOR MILLMEN

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VOL XI.

SEPTEMBER, 1922

No. 8

## THE SENTINEL ELM

**It Stands on the Site of an Old Fort Which Protected Early Settlers From the Indians**

**T**HE Sentinel Elm, the famous New England tree, is located on the farm of Mr. Frank Moore, two miles from North Orange, Mass., about fifty feet on the Athol side of the line. It is estimated the tree is about 300 years old. It stands on the site of a fort which protected the early settlers from the Indians, and while history records no Indian fights in this vicinity, from the numerous arrow heads and other Indian war implements it is evident that many sharp encounters took place.

Back in 1746 or '47, Mr. Ezekiel Wallingford was killed near the fort. Hearing what he supposed were bears in his cornfield, he went out to investigate, when he soon found he had been tricked by the Indians, and immediately started to regain the fort, but a musket ball felled him and a tomahawk ended his life.

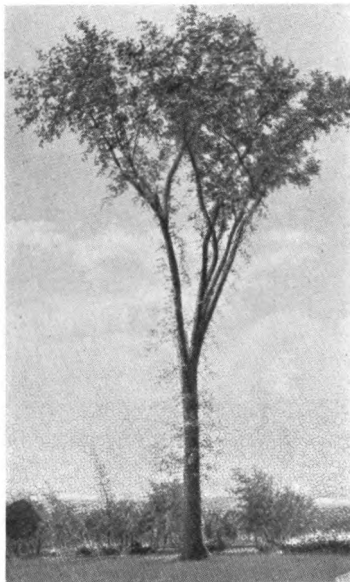
The next April or May, Mr. Janson Babcock, while looking for his cows in the neighborhood of the fort, was fired upon and taken prisoner. He was carried to Canada, but afterward redeemed and returned to his home.

The Sentinel Elm stands on a hill, in a large open area, overlooking a great expanse of territory. North Orange and Athol lie in the valley below. From this tree one of the finest views in New England can be obtained, as there are no obstructions to the view for a sweep of 150 miles.

The tree can be seen from a distance of 20 miles, and from Warick, Wendall, Petersham, New Salem, Erving, Richmond and Tully.

The Sentinel Elm is strong, stately, beautiful—a veritable “monarch of all it surveys”—the pride of the neighboring residents. There is something majestic about this tree, which words

(Continued on Page 63)



Sentinel Elm near North Orange, Mass.

## FOSTER LUMBER COMPANY SAWYERS MAKE FINE RECORD

### Cut 1709 Yellow Pine Logs in Ten Hours with Disston Double-cut Band Saws

**D**OWN in the "Lone-Star" state is a place called Fostoria. Here is located a well-managed, up-to-date lumber mill, owned and operated by the Foster Lumber Company.

This Company has a crew of hustling filers and sawyers which for speed, efficiency, and endurance rank A-1 among the sawmill fraternity.

We wish to introduce the members of this crew to the Crucible readers, so you will please meet, (and have an imaginary handshake with)—

Mr. Norman Dunnam, head filer.

Mr. Sam Hudgins, filer's helper.

Mr. Wess Lynch, sawyer.

Mr. Eugene Daw, sawyer.

Now, (since you are acquainted with these gentlemen), allow us to tell you of their recent remarkable achievement.

One day, just so time would not hang heavily on their hands, they stepped on the accelerator which controls the

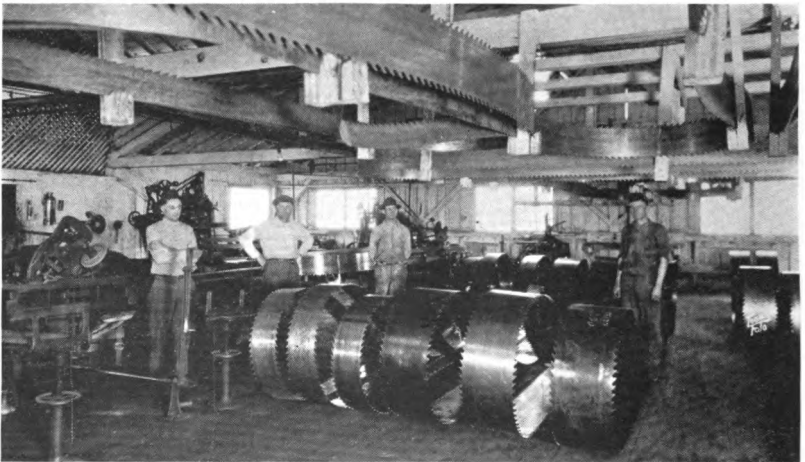
speed of their rigs, and presto, they had their Disston double-cut band saws "plowing" through yellow pine logs to the number of 85 an hour on each one of their two rigs.

Going some? Yes, indeed! And the notable part of it all is that they kept this pace up for 10 hours—170 logs an hour—in which time, to give accurate figures, 1709 yellow pine logs were transformed into lumber.

Think of it, a little better than one and a third logs a minute to each rig. Why, it takes the average man that long to sharpen a lead pencil. It is impossible for the layman to realize the dizzy speed at which these past-master millmen, as well as the machinery, were obliged to move to make this record.

Obviously, the perfect arrangement of the mill and logs, good machinery, and quality saws co-ordinated the skill, speed, and endurance of the crew.

(Continued on Page 63)



Filing room of Foster Lumber Co., Fostoria, Texas.  
Left to right—Messrs. Hudgins, Dunnam, Lynch, Daw.

## FROM THE LOOKOUT TOWER



On the opposite page is printed the story of a record cut made by the Foster Lumber Company's mill at Fostoria, Texas. 1709 logs were cut on two rigs in ten hours.

It takes mighty good men working with good equipment to put through that many logs in a day.

Does anyone remember ever having seen a list of mills that have made exceptional cutting records? We have heard of records from time to time but do not remember ever having seen a list made for comparison.

Such a list would be interesting to all of us. If our readers will send the Crucible Editor the names of mills—and of the men who operated them—that have made record cuts, we will be glad to try to make up such a list in the Crucible.

Besides the mosquito, what is the worst summer pest you know of? We think it is the chap who goes away on a vacation and then bombards everyone he knows who had to stay on the job, with post-cards carrying little words of cheer like the following:

(These are samples we have received)

"Having great time; feel sorry for you fellows at the office."

"Don't you wish you were here?"

"Notice the young lady on my right—a lot more like her here. Wish you were with me."

"As you will see, we wear sweaters all day long here; never gets hot. Haven't done a thing but loaf for a week."

The experts who attempt to keep up efficiency during the summer months should censor all vacationists' mail addressed to anyone who is trying to work.

Some of the largest building material dealers in Chicago report that July sales were 35% more than sales for June.

A Philadelphia department store representative says that this month's furniture sales will be 15% to 20% more

than the August turnover for any other year. Wholesalers and retailers report August furniture sales very good—some say the best in history.

Increased sales of furniture and of building material mean increased lumber sales, either now or later on.

A man we know recently purchased a new home—a new building, just completed. A goodly price was paid, too. One proud day he stood on the front porch and watched a moving van drive up with his furniture. Everything was carried in and placed in the most attractive position. Last of all came his particular pride—a shining, new piano. It was placed carefully in the living room, and immediately the living room floor gave way and the piano dropped to the basement.

**MORAL:** Modern science has accomplished wonders in building, but lumber of sufficient size and quality is still required to build a house in which one can live.

It would be great fun to write this page—if we could just sit down and write it, but we can't seem to do it that way. To show how it usually works out, we give below what would be today's entry in our diary, if we had one:

"Up this morning early, it was raining and dark and dismal. Having no pep on such a morning, we were unusually long at our breakfast and so had to run for the train. Bought a paper on the way, with expectations of half an hour on the train to read it. No such luck, for no sooner were we seated than a pest came up, sat down in the same seat, and took up all of our time talking about nothing. After arriving at the office, we attempted to write something for this page but, having no ideas, could make no headway.

"Some fellows came out and wanted

(Continued on Page 63)

## HAND SIGNALS BETWEEN SAWYER AND Prominent Saw Mill Men Tell of Signals U

**T**HERE is no absolute uniformity of signs exchanged between sawyers and setters but the majority use signs which are very similar. As a matter of fact, when a carriage crew becomes accustomed to a sawyer, sizes can be read by the motion of the lips and hand and other signals are frequently dispensed with. In order to cover this interesting subject, data has been gathered from different sections of the country from experienced sawmill men. Fred C. Pecore of Wisconsin gives the following signals:

- | Size in inches | Sawyer's Sign  |
|----------------|--|
| 1              | Extend first finger out on hand.                                 |
| 1¼             | Extend first finger and thumb out on hand.                       |
| 1½             | Extend first finger and little finger out on hand.               |
| 1¾             | Extend first finger and thumb and little finger.                 |
| 2              | Extend first and second finger upward on hand.                   |
| 2¼             | Extend first finger and second finger and thumb out on hand.     |
| 2½             | Extend first and second finger and little finger upward on hand. |
| 3              | Extend last three fingers upward on hand.                        |
| 3¼             | Extend last three fingers upward and then thumb.                 |
| 3½             | Extend last three fingers upward and then little finger.         |
| 4              | Extend four fingers upward on hand.                              |
| 4¼             | Extend four fingers upward and then thumb.                       |
| 4½             | Extend four fingers upward and then thumb and little finger.     |
| 5              | Extend five fingers upward on hand.                              |
| 5¼             | Extend five fingers upward and then thumb.                       |
| 5½             | Extend five fingers upward and then little finger.               |
| 6              | Extend hand with fist closed.                                    |



Hand over nose—  
9 inches.

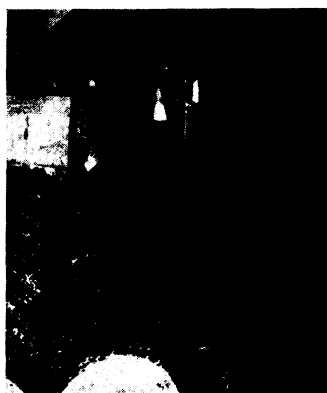
- |     |   |
|-----|---|
| 7   | Extend fist with first finger partly closed.                          |
| 8   | Extend hand out with thumb and first finger together, forming circle. |
| 9   | Place hand over nose.   |
| 10  | Cross first two fingers.  |
| 11  | Extend first two fingers downward.                                    |
| 11½ | Extend first two fingers downward and then little finger.             |

- |    |   |
|----|---|
| 12 | Extend fist closed with thumb extended outward.           |
| 14 | Draw hand across breast.                                  |
| 16 | Extend hand to tip of ear.                                |
| 18 | Extend elbow outward.                                     |
| 20 | Extend hand outward same as for 10-inch but signal twice. |
- When you want to turn log, throw up hand.

R. C. Leibe gives the signs used in southern mills as follows:

- | Size in inches | Sawyer's Sign         |
|----------------|-----------------------|
| 1              | Extend forefinger.    |
| ¼              | Extend thumb.         |
| ½              | Extend little finger. |

Therefore, if the sawyer wants to cut a 1-inch board he holds up his hand with forefinger extended; for a 1½-inch board, the forefinger and little finger are extended. To cut a 2-inch board, the first two fingers are flashed before the ratchet setter. To cut a 1¼-inch board, the forefinger and thumb are extended. If any board seems too thin for the size called for, the sawyer rubs his forefinger against his thumb and the setter makes the necessary adjustment. When about to turn the log unexpectedly, the sawyer signals to the setter by lifting his hand, palm upward; this means, lift all carriage dogs when the carriage stops. When the sawyer desires to turn or dog a log edgewise, he



Band Mill—Sawyer giving Signals are useful because c



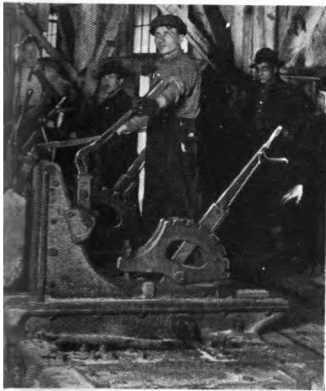
Extended thumb—  
¼-inch.

# AND CARRIAGE CREW USED IN SAW MILLS

## als Used in Different Sections of the Country

holds his hand sideways; when the log is desired face down on the blocks, the hand is extended with the palm down; when the sawyer wants drinking water, he imitates the act of drinking; when he wants relief, the signal is given by placing the hand on the belt buckle.

Ed C. Hemp gives the following signals as those usually employed on the Pacific coast and in California:



signal; crew riding carriage.  
f noise and speed of work.

- | Size in inches | Sawyer's Sign   |
|----------------|---|
| 1              | Extend index finger.  |
| 2              | Extend first and second fingers.  |
| 3              | Hold the index finger with the thumb showing the three remaining fingers. |
| 4              | Extend four fingers.  |
| 5              | Show the thumb and four fingers.  |

Half-inch is always indicated by extending the little finger. Thus, if the sawyer desires to cut 2½-inch stock, the sawyer extends the first two fingers and the little finger; to cut 6-inch stock, double the hand and hold it with the back showing in front of the breast. If 6½-inch is to be cut, make the same motion with the little finger held straight out. The signal for 7-inch is the same as for 6-inch, except that the index finger is extended. To cut 12-inch, the hand is formed as for



Extended index finger—1 inch.

the 6-inch signal but is drawn across the breast twice.

To cut ¾-inch stock, hold the index finger and the little finger straight up; to cut 1¾-inch stock the thumb and forefinger are extended and the hand swept across the breast. To cut 12-, 14-, 16-inch, etc., the signals are combined to indicate the desired dimension; thus to signal the cutting of a 16-inch cant or timber, first raise the forefinger and then drop the hand across the breast, giving the sign for 6-inch. Other dimensions are signaled the same way.

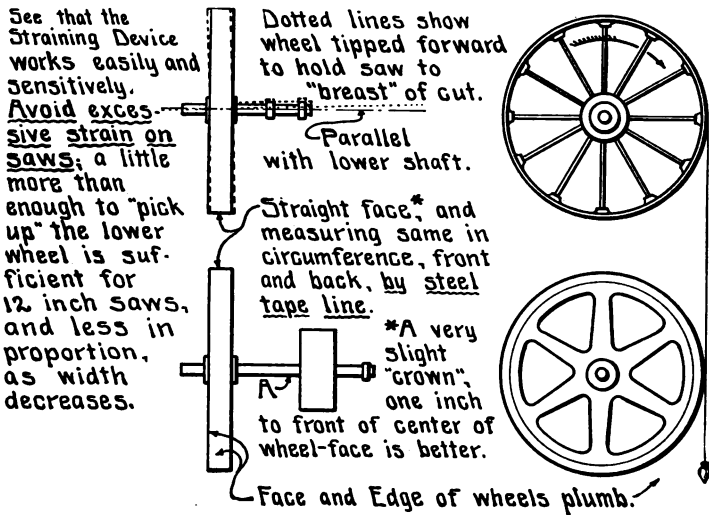
To signal to turn the log, the hand is held out toward the log deck. If the hand doing the signaling is turned half way in each direction, it means the log will be turned up against the knee; while if the palm of the hand is turned down toward the floor, the log will be laid with the flat side on the knee. If the heavy dog is wanted, the hand is held down flat in front of the sawyer; while if the boss dog is desired, the same signal is employed, except that the index finger is crooked like a chicken's beak. If the dog does not suit the sawyer he points his finger straight at the dog, which signifies that it must be moved. If the sawyer wants to know the size of a log or the stand of the knee on the head block, he points to the dial; the setter then signals by holding up his fingers. If the setter holds up two fingers and then three fingers, the dimension is 23-inch; but if he then also holds up the little finger, it means 23½-inch. If the setter holds out two fingers then three fingers and then the thumb and index finger held horizontally, it means 23¾-inch.



Extended first and second fingers—2 inches.

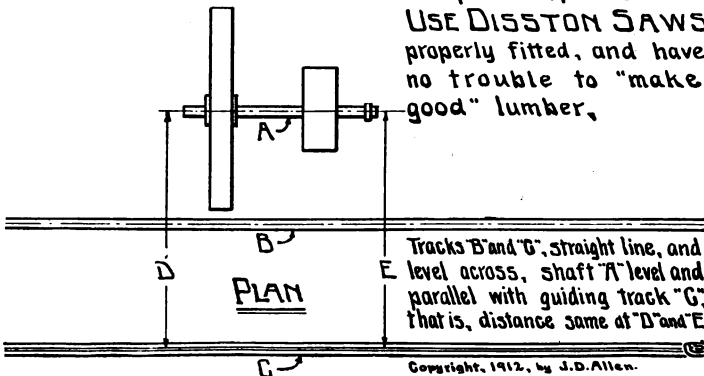
Editor, *American Lumberman*.

## USEFUL INSTRUCTIONS FOR SETTING UP AND OPERATING BAND SAW MILLS



### ELEVATIONS

Put your wheels in shape, and shafts and tracks in position, as shown, USE DISSTON SAWS properly fitted, and have no trouble to "make good" lumber,



These instructions and diagrams are reprinted from the *Disston Lumberman's Handbook*. They were evolved, after years of practical experience and keen observation by Mr. J. D. Allen, of our organization. Should information be desired, other than given above, we shall be glad to furnish it upon request.



**The Sentinel Elm**

(Continued from Page 57)

cannot describe, but which gratifies and satisfies while viewing it.

Four feet from the ground the elm is nine feet in circumference. For about 40 feet (ground to fork) the trunk maintains the same measurement. The two huge branches add an additional fifty feet to the tree's height.

Three times lightning has struck this "lone sentinel," as if jealous of its commanding position and the interest manifested in it. But other than leaving an ugly scar near its base the lightning's assault, as well as the other elements have had little effect on the tree.

**Foster Lumber Company Sawyers Make Fine Record**

(Continued from Page 58)

Mr. Norman Dunnam, the head filer, is a young man in years but he "puts his saw up" like a veteran of the saw dust trail. Some of his qualifications are evidently inherent. His father, Mr. T. S. Dunnam, and his uncle, Mr. Will Dunnam, were first-class millmen. It is said of young Dunnam: "he is full of modern ideas and Disston saws."

Mr. Sam Hudgins, is a worthy helper to the head filer—a very handy man in the file room.

Messrs. Wess Lynn and Eugene Daw are expert sawyers, and if there is anything in a rig these "boys" will get it out.

Generous, like most capable men, this crew give Disston saws a big share of the credit for their remarkable achievement.

We congratulate the crew and company, and wish them abundant success.

**From the Lookout Tower**

(Continued from Page 59)

to see how we made saws. The rain being over, we took them through part of the factory, talking at full speed all the time. Then, that being over, it was time to go out with another fellow to eat a lunch we didn't want.

"Back to the office to look over some new work. Then more work on this page, having thrown away all we did in the morning. After working at it for



**Forest and Sea**

By STUART HENRY

FOREST is Nature's expression of the idea of the home. The home signifies an interior and the forest and a Gothic church emphasize the interior; while in the sea (as we have noted) and in the Greek temple, the exterior is the particular manifestation.

The ocean suggests homelessness, and the ancients had no home. The home came from the forest races. A forest means shelter, protection, and stands for the individual's right to quiet and seclusion.

Thus shade—an attribute which distinctly separates the forest from the sea—becomes a distinguishing characteristic between the art, religion and life of the ancients and of the moderns. An immense, fierce sunlight irradiates the sea-entwined lands of the ancient Hellenes and Romans, while shade and shadow gloom the countries of the North and their modern civilization. And together with the umbrageous and interior effects of the forest, which is, as we have seen,

"True to the kindred points of Heaven and Home,"

there is the inward quality of tenderness which we may oppose to the exterior effect of grace in the Greeks. How aptly does the familiar line

"Shining on, Shining on, by no shadow made tender,"

describe the Greek spirit—in "French Essays and Profiles."

an hour with no success, we turned to other work that must be done at once. At closing time, we put what already had been written, in our pocket, to be finished at home. And so, finally, tonight, the page is finished."



## SAWDUST

They say that Wood is fitted for Post in Philippines. Why not?—*Ex.*

The country has money to burn, but may the Lord give it coal!—*Atlanta Constitution.*

Teacher—"Willie, what does the word reverie mean?"

Willie (excitedly)—"A reverie is like a baseball umpire, only he operates at prize fights."

An Irishman picked up a squirrel the hunter had shot from the top limb of a tree. Looking at it sadly, he asked: "Why did ye waste the shot? Sure he'd 'ave died of the fall."

She—"I was worrying about you last night, Ferdie."

He—"Really? You flatter me!"

She—"Not at all. I frequently worry over trifles."—*Boston Transcript.*

It is in the cemetery at South Bethlehem, Pennsylvania, by the way, that the sign appears: "Persons are prohibited from picking flowers from any but their own graves."—*American Lumberman (Chicago).*

Citizen—"That's my car. The thief is just fixing a blowout."

Policeman—"All right, I'll go over and arrest him."

Citizen—"Sh-h-h! Wait till he gets the tire pumped up."—*American Legion Weekly.*

"I don't like those photos at all," he said. "I look like an ape."

The photographer favored his customer with a look of lofty disdain.

"You should have thought of that before you had them taken," was his reply as he turned back to work.

A tramp knocked at the kitchen door. "Please, ma'am, I have lost a leg—" "Well, it ain't here," said the irate mistress.

"That man stays on an unearthly hour every night, Gladys," said an irate father to his youngest daughter. "What does your mother say about it?"

"Well, dad," Gladys replied, as she turned to go up-stairs, "she says that men haven't changed a bit."

A woman went into a cigar store to buy some cigars for her husband, who was laid up.

"Do you want them mild or strong, madam?" the clerk asked.

"Give me the strongest you have," she said. "The last ones he had broke in his pocket."

Of home, sweet home, the poet spoke  
In other days.

And home was then more than a joke,  
Tradition says.

But now life sets an awful pace

And is a lark,  
And home today is just a place  
Where people park.

—*Louisville Courier-Journal.*

When the new clerk went to work in the drug store, it was a signal for the town's wags to begin their practical jokes. Among the many things he was asked for, in the absence of the proprietor, was potato seed. He explained, after a search, that they were sold out, and inquired about it when his employer returned. The employer explained what had been put over on him.

The next day a lady came into the store and asked for some bird-seed.

"Aw, go on," he said, with a wise grin; "yer can't kid me. Birds is hatched from aigs."

# Why Buy Good Hack Saw Blades?

Why buy *anything* that is good?

Because it pays—in service, satisfaction, and saving of money.

If you have any use for a hack saw, it will pay you to buy *good* blades—blades that cut *easier* and *faster* and *wear longer* than ordinary blades.

## Why Disston Blades Are Good Blades

Disston Hack Saw  
Blades are made  
from a special  
**Disston-  
m a d e  
Alloy  
Steel.**

It is the quality of this famous saw steel and the way it is hardened and tempered, that gives Disston blades their *flexibility*, their *toughness* and *strength* to stand up to hard work for so long a time.

All Disston "Chromol" Hack Saw Blades have milled teeth to insure *evenness* and *strength* in *every* blade.

In the Disston blade, every third tooth is left with no set and is called a "cleaner" tooth. This cleaner tooth plows straight through the cut and carries out the chips which *slow up* the cutting speed and *dull* the teeth in ordinary blades.

We want you to try Disston Hack Saw Blades. A test will show you how *you can do more work* and *cut down your cost* by using these blades.

**HENRY DISSTON & SONS**  
INCORPORATED  
PHILADELPHIA  
U. S. A.

## Right Use of Hack Saw Blades

Never draw a Hack Saw Blade back over the cut material. Bear down with firm, even pressure on the cut stroke. Lift the blade *on the back stroke*.

Care in this matter will give you three times the wear on every blade.

**DISSTON**  
CHROMOL  
HACK SAW BLADES



# *Twelve Opportunities*

The House of Disston has twelve distributing branches. They are located in different parts of the country to give the users of Disston Saws, Tools, and Files more satisfactory and faster service.

These distributing houses are established to take care of your needs. They offer opportunities for fast service and, working in co-operation with our general office and factory here at Philadelphia, will see that your requirements are promptly taken care of.

## HENRY DISSTON & SONS, INC.

GENERAL OFFICES AND FACTORY: PHILADELPHIA, PA.

1.  
Henry Disston & Sons, Inc., of Illinois  
Jefferson Street & Washington  
Blvd., Chicago, Ill.
2.  
The Henry Disston's Sons Company  
Sixth & Baymiller Streets  
Cincinnati, Ohio
3.  
Henry Disston & Sons, Inc.  
322 Occidental Avenue  
Seattle, Washington
4.  
Henry Disston & Sons, Inc.  
144 Second Street  
San Francisco, Calif.
5.  
Henry Disston & Sons, Inc.  
91 First Street  
Portland, Oregon
6.  
R. B. McKim Company, Inc.  
116-118 Pearl Street  
Boston, Massachusetts
7.  
R. B. McKim Company, Inc.  
120-122 Exchange Street  
Bangor, Maine
8.  
The Reichman Crosby Company  
223-235 South Front Street  
Memphis, Tenn.
9.  
C. T. Patterson Co., Ltd.  
New Orleans, La.
10.  
Henry Disston & Sons, Ltd.  
2-20 Fraser Avenue  
Toronto, Canada
11.  
Henry Disston & Sons, Ltd.  
Vancouver, B. C., Canada
12.  
Henry Disston & Sons, Ltd.  
80 Sussex Street  
Sidney, Australia, N. S. W

### Export Office:

Henry Disston & Sons, Inc.  
120 Broadway  
New York City

DISSTON SAWS, TOOLS, FILES, FOR EVERY PURPOSE

# The **DISSTON** **CRUCIBLE**

OCTOBER

1922





# Keep Saws Sharp!

HENRY SCHREIBER, a factory inspector for the State of Wisconsin and a practical woodworker of forty years' experience, blames dull saws for 75 per cent of circular saw accidents.

**Change your saw when it begins to get dull. Sharp saws do better work and are easier to operate**

National Safety Council  
Chicago, U. S. A.  Woodworking  
Section

Keep your saws sharp! Sharp saws mean better lumber and greater production. For 82 years Disston Saws have had an enviable reputation for their edge-holding qualities. They stand up to the work, and require minimum attention.

Practice safety and economy in your work by using only sharp saws, and saws that stay sharp—Disston Saws.

# DISSTON CRUCIBLE

A MAGAZINE FOR MILLMEN

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VOL XI.

OCTOBER, 1922

No. 9

## A RECORD FOR CONTINUOUS SERVICE

**Disston's Have Today Fifty-four Employees Who Have Worked for Them Continuously From Fifty to Sixty Years —Thirty-two of Them Still Actively Employed**

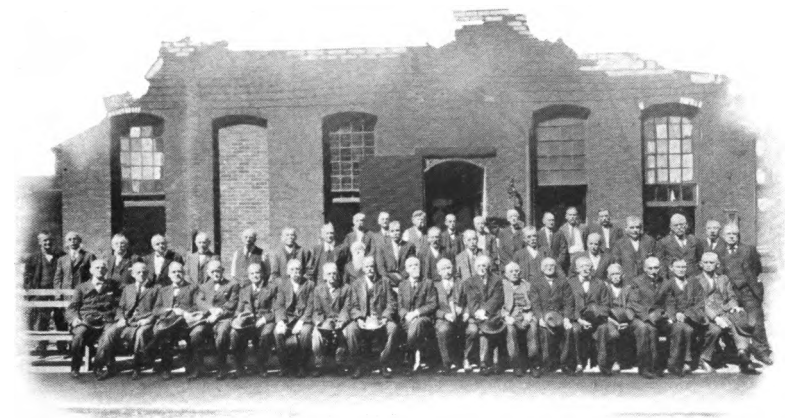
**T**HE firm of Henry Disston & Sons, Inc., enjoys the distinction of having at present fifty-four men who have served them faithfully and well, from fifty to sixty years, continuously. Thirty-two of them are still actively engaged in the Works. This is a record of which the firm is justly proud, and one which probably cannot be duplicated in the United States.

At the recent corner-stone placing which commemorated the fiftieth anniversary of the breaking of ground for the first building of the present factory

site, forty-five of these men assembled to witness the proceedings. One of them came all the way from Baltimore for the purpose.

What an impressive sight! Forty-five men of one organization who had rendered continuous service for fifty or more years. Men with hoary beards—all of them; men whose lives have been devoted to doing *well* the thing they know best how to do. It is not often one has the pleasure of seeing such a large group of veteran, loyal craftsmen.

It is quite likely that during the



Forty-five of Disston's Fifty-Year Service Men. Picture taken day of Corner-stone placing.

corner-stone proceedings, these men lived their working days over again. They reviewed in their minds the various steps in the development of the works; the increased output; the expansion of the site; the installation of saw-making machinery; the improvement of methods of tempering and hardening; the up-to-the-minute devices for transportation and communication; the advent of welfare activities, including the recreation ground, cafeteria, etc.

These men compared the improved avenues of access to the factory—tree-lined streets, and cement pavements, to the "old cinder path"; they also noted the transformation of the farmland adjacent to the factory into an up-to-date town, and many other reminiscences in which they were mutually interested.

Of the thirty-two veterans actively

employed, six of them are foremen, one is manager of a department, and another is assistant factory superintendent. The King Brothers aggregate 108 years of service; George Arnold (55 year veteran) his two brothers, and six sons of these men have aggregated 265 years of service. Three generations of "veteran" Emmett's family, as well as the fourth generation of the Davenport family, worked in the plant. The oldest employee of the organization is William Markland. He celebrated his eighty-ninth birthday Sept. 29, 1922.

The number of Disston veterans shows a steady increase. Ten years ago the list numbered twenty-two; to-day fifty-four.

### October

These are the days of purple haze

When leaf takes flame and flower has flown,  
When clouds drift o'er and to the shore

The sea talks in an undertone;  
When trill of thrush in woodland hush

Is Rapture's laughter, low and sweet,

And brooks steal down through grasses brown

With silver sandals on their feet. —Herbert Bashford.

### Curious Weather Forecast Tower in Berlin

On a hill just outside of Berlin, Germany, is this strange meteorological tower. It is used for weather observations. Any material changes forecast are communicated to the Berliners, who govern their actions accordingly.

Certain innovations are said to make it one of the most modern institutions of its kind in the world. The buildings look small, but they not only make a home for the two persons standing by the tower, but they contain an extensive scientific apparatus. Notice the peculiar tower with its sensitized rods.

—Courtesy of the Taylor Instrument Companies.



INTERNATIONAL Weather Forecast Tower in Berlin.



## FROM THE LOOKOUT TOWER



Everyone who is interested in lumber will follow closely the announcement of the Forest Service of the United States Department of Agriculture that a process has been perfected that makes it possible to de-ink old newspapers and use the newsprint paper over again. It is estimated that about 2500 tons of old newspaper can be collected daily in the larger cities and turned into newsprint. In terms of forest acreage this means roughly, the saving of the cut each year on about 275,000 acres.

\* \* \* \*

It is going to be difficult for us to write anything this month that is not about the ceremonies attending the placing of the corner-stone at our factory—and this is already sufficiently described in other parts of the Crucible.

The ceremony of the placing of the corner-stone was impressive. But it was the group of forty-five Disston veterans who gathered to witness the affair that claimed our attention.

We never saw a finer group of men. Think of it—every one of them had found his work early in life and had worked at his job day after day for fifty years or more.

These men were not of the sort whose names we see so often in the daily news. They have been too busy doing the one job they are fitted for to attempt any of the spectacular things that go to make up what we call "news."

But we wonder who is the happier as he stands and looks back over fifty years of his life—the man who has been the "rolling stone"—who has had many jobs and in many places; who is handy at a dozen trades, but master of none, or the man who can stand and look calmly back over a life that has been spent doing only one thing, but doing it exceptionally well.

The fifty years of experience has not come to us yet. But even to us it seems that it would be better to stand with the veterans and say, "I have done only this one thing, Sir, but I have done it just a little better than it was done when I started."

What a wonderful place this world would be if every one of us could say that about our work!

\* \* \* \*

So much for the story of the men who make Disston Saws. Here is a little story about the things they make, from a man who uses them:

If your saw goes down the pike,  
And the sawyer feeds it with all his  
    might—  
Cutting either pine or oak,  
And it does not come off broke—  
    Its a Disston.

If you can fill it full of tension,  
Then sit down and draw a pension  
For about four weeks or more  
Without the boss-man getting sore—  
    Its a Disston.

If they pull it off the mill,  
As the best of sawyers will,  
Of course I know you will regret it;  
But I beg you don't forget it—  
    Its a Disston.

If you can straighten it right quick,  
With a roll and hammer do the trick,  
Work it out both straight and level,  
And it runs to beat the devil—  
    Its a Disston.

—By J. W. Richy.

\* \* \* \*

The fish stories that were started in the June Crucible continue to come in. Here is the best one received this month. It is from Mr. J. E. Willis, of South Carolina:

"A very tall man and a very short man went to the creek to 'muddy' for fish. They went in, moved around to make the water muddy, and started feeling around under logs and trash for fish.

"Suddenly the short man got his hand on what he thought was a fish and very carefully lifted it out of the water. Instead of a fish, he had a big snake that immediately curled itself around shorty's arm. He yelled to the tall fellow: 'Quick! What shall I do?' The tall man made two or three long strides, stepped out on dry land, and calmly said: 'Turn him loose.'"

## CORNER-STONE PLACED TO MARK FIRST

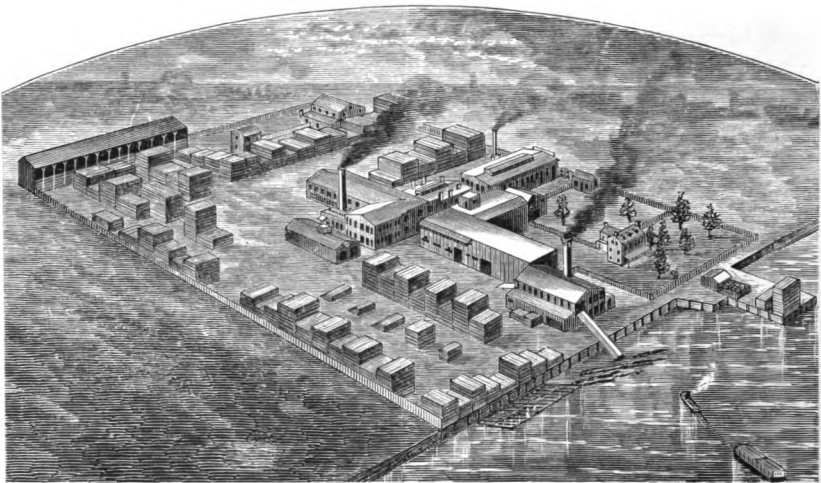
### Stone Indicates Time and Place First Forty-five of the Firm's 50

**S**EPTEMBER 26, 1922, marked a period of exceptional historic interest in the history of the Disston firm.

It was the observance of the fiftieth anniversary of the breaking of ground for the first building of the

begun on a lot adjoining—four stories high; brick; 30x60 feet. This building formed the nucleus of the later commodious factory at this location.

1871—The business having outgrown the Front and Laurel Street quarters, the firm purchased a tract of



Disston Works, Tacony, 1873.  
Building in front of smoke stack, erected 1872. Site—6 Acres.

present factory site by the placing of a corner-stone to commemorate the event.

Leading up to this event the following data of the several factory sites occupied by the firm will give some idea of its gradual growth.

1840—Henry Disston, single-handed, manufactured saws in a small cellar on Bread Street, near Second Street, Philadelphia.

1846—Henry Disston leased factory space at Front Street and Maiden Lane (afterwards called Laurel Street) where he could have access to steam.

1849—The boiler exploded demolishing the plant on Laurel Street. Immediately the erection of a factory was

six acres of land in Tacony, a suburb of Philadelphia, for a larger factory site.

1872—September 26th, plans were completed and ground broken for the first building on the Tacony site.

1922—Corner-stone laid.

The 26th of September, 1872, came on Thursday, and it had been arranged to start excavating for the foundation the next day. Mr. Disston was far from being a superstitious man, but when he was reminded that the next day was the proverbial unlucky Friday, he asked for a pick and spade, and he, himself began to dig. Mr. Samuel Bevan, his chief engineer, and Mr.

## BUILDING OF PRESENT DISSTON WORKS

### Building of Present Site Was Erected— Year Service Men Present

William Smith, who afterwards became his chief engineer, joined Mr. Disston, and they excavated quite a space before they quit.

Press of business demanded rapid completion of the building. So Mr. Disston did not consider the placing of a corner-stone to mark the initial step, in the erection of what has since become the greatest saw works in the world, comprising 68 buildings and covering 65 acres of land. As few persons are living who remember the occasion, and still fewer who know the exact location of the historic spot, the firm concluded to place a corner-stone to permanently and definitely indicate it, so that in the future, it will not be necessary to depend on tradition for the information.

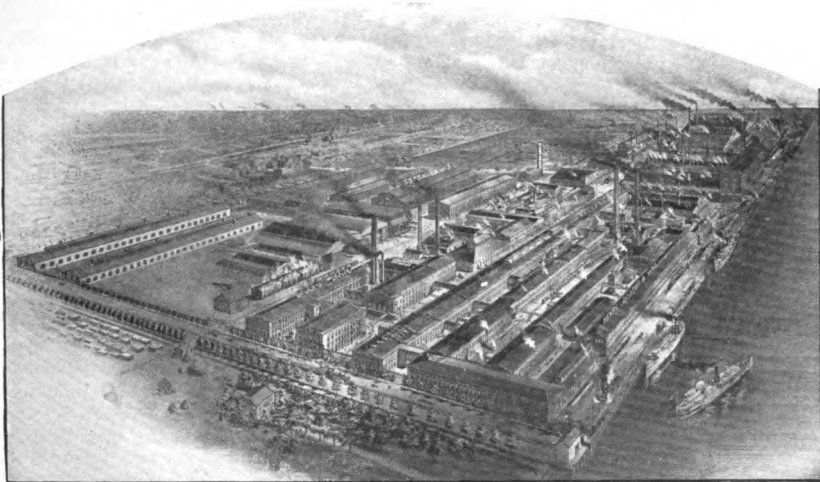
Accordingly, September 26, 1922, the fiftieth anniversary of the ground-breaking, the corner-stone was placed.

The day was auspicious for the occasion, and at 11:30 A.M. the executives, heads of the various departments, and about forty-five veterans who had been

employed by the firm fifty or more years, continuously, assembled at what is known as building No. 1-C—Junction of File Grinding Room and Drop Hammer and Forge Shop, to witness the proceedings.

Mr. Jacob S. Disston, Sr., the only surviving son of the founder of the works, was accorded the honor of placing the stone. He was assisted by Mr. William Smith, who fifty years before had assisted his father, Henry Disston, in breaking the ground. Mr. William D. Disston, a grandson of Henry Disston, was master of ceremonies. After a patriotic song by an impromptu choir, composed of the vocal talent of the organization, he delivered an address in which he commended the veterans for their loyalty and faithfulness, to which, he declared, the firm attributed much of their success. He then presented Mr. William Smith, who gave an interesting summary of the development of the firm, and recited a number of personal recollections.

Continued on Page 72)



Present Disston Works, Tacony—68 Buildings; 65 acres.

## CHASE TRACTOR SAWMILL

### Is Center of Interest at Fordson Tractor Exhibit in Philadelphia

**R**ECENTLY crowds of people were attracted to the Fordson Tractor Exhibit at Broad Street and Allegheny Avenue, Philadelphia.

Among the many tractor-driven devices there were none which drew and held the attention of the people like the Chase (Portable) Tractor Sawmill.

The reason for this is obvious. A sawmill in operation has lots of action, most of its mechanism is uncovered. The American people are strong for action, hence the placing of the log on the carriage; the manipulation of the levers; the travel of the carriage to and fro; the hum of the saw; the removal of slabs and boards—all appealed to them. It kept the eye and mind engaged as long as the machine was in operation.

There were many expressions of surprise as the Disston circular saw cut slabs and boards from the goodly-sized logs as readily as a knife slices a piece of cheese into parts.

The smooth, clean cut made by the saw, the splendid control of the mill, as well as its practical and substantial construction impressed the crowds and especially the visiting sawyers and millmen.

Tractor-driven mills are popular and valuable because they can be moved easily from place to place, and used for sawing all kinds of lumber for many different purposes.

Because of this, the saws used on the mills are required to do hard work under varying conditions—and *good saws* are required to do such work without trouble. Experienced operators always use good saws.

The Disston Inserted Tooth Saws, made right or left, are particularly efficient and economical for this use, because:

1. The saws always remain the same in diameter—no filing away of the blade.

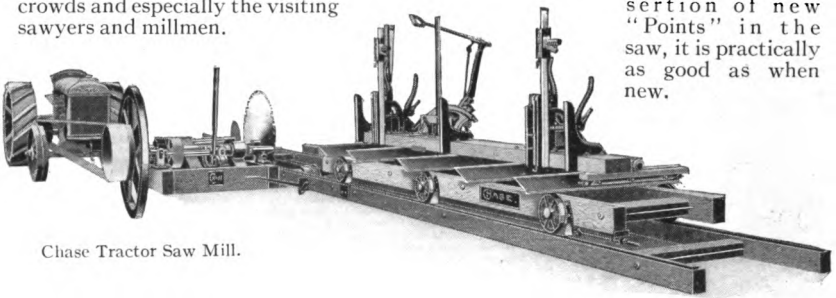
2. Disston "Points" and "Bits" are absolutely interchangeable. The Points can be changed in a few minutes.

3. These saws consume less power.

4. They have ample throat room and clearance, and, therefore, are not easily choked down.

5. They will carry more feed than any other inserted tooth saw made.

6. After each insertion of new "Points" in the saw, it is practically as good as when new.



Chase Tractor Saw Mill.

What the lumber industry means to the present lumbering communities and what it meant to the dead and decaying lumber towns that may be found

in cut-over region is indicated by the fact that Washington and Oregon now receive \$200,000,000 a year from the sale of their forest products.

## INTERESTING ITEMS FOR LUMBERMEN AND MILLMEN



### A Prominent Filer Gets Satisfaction from Disston Saws

One of the most popular and efficient filers of Southern Arkansas is Mr. John C. Bonds. For the past 10 years he has been doing the "dental" work on the saws of the Bradley Lumber Company, of Warren, Arkansas.

Thoroughness is one of his dominant qualities.

When Mr. Bonds "puts up" a saw it is ready for the "fastest feed" and it makes a clean, even cut.

Recently Mr. Bonds wrote to the Riechman-Crosby Company, Memphis Tenn., agents for Henry Disston & Sons, Inc., telling of his experiences with Disston Saws. We have received Mr. Bond's permission to publish this letter. It follows:

"The Riechman-Crosby Co., Agents for Henry Disston Saws, Memphis, Tennessee.

"Sirs:

"Having used your saws exclusively for 13 years (10 years on the present job) I thought perhaps you would appreciate a word from me as to their quality, durability, etc. The story in a nut shell is—they have given the very best of satisfaction and service. To be more explicit, however, I wish to state that during my thirteen years experience, I have never had a bad saw. I have no complaints to make.

"I find that the Disston Saws are easy to keep in running order and they hold their corners fine. We have one 14-inch band, carrying fifty feet saw; one 13-inch band, carrying forty-five feet saw, and the usual number of round saws which go with this size of mill.

"We cut all kinds of mixed hardwood

and pine. Would like to specially mention a set of edger saws, 26 inches in diameter, 7 gauge, 30 teeth (when new), which was in use seven years and eight months. I consider them the best set of round saws I ever used on an edger.

"I also run 4 small band saws (re-saws) carrying saws from 3½ to 6 inches wide. These saws have always proved satisfactory in this class of work.

"With best wishes to your business and success, I am

Yours truly,

J. C. Bonds, Filer for  
Bradley Lbr. Co., Warren, Arkansas."

The House of Disston appreciates Mr. Bonds' commendatory letter and extends to him their best wishes for a long, happy and successful future.

### Saw in Ancient Times

A Grecian fable describing the origin of the saw relates how Talus (or Perdix) having found the jawbone of a fish (according to some authorities a serpent), produced an imitation by cutting teeth in iron. While the Grecian claim to discovery is unbacked by historical authority, such an origin seems probable.

Saws appear not to have been known in the time of Homer, for in the minute description of the building by Ulysses of his ship, no mention of them is made, although if this tool had been known, Calypso could have supplied it as easily as she did the axe, adze, augers and other tools. Probably the Greeks, like other nations, borrowed the saw from the Egyptians, on whose sculptures it appeared at a very early period.—"*The Saw in History*"—Disston.



## SAWDUST

### JOHNNY'S ESSAY ON CATS

Cats that are made for little boys to maul and tease are called Maltease cats. Some cats is known by their quiet purrs, and these is called Pursian cats. Cats with very bad tempers is called Angorie cats. Cats with deep feelin's is called Feline cats.

### CONVENIENT DUAL PERSONALITY

"Hello! Hello! is this you, Mac?

"Aye."

"Is this Mac-Macpherson I'm talking to?"

"Aye; spe'kin'."

"Well, Mac, it's like this: I want to borrow fifty dollars—"

"All right. Ah'll tell him as soon as he comes in."

### OH, WELL, WHAT OF IT

A band in a small Minnesota town had just finished a vigorous but not overly harmonious selection. As they sank perspiring to their seats after bowing for the applause, the trombonist asked hoarsely:

"What's the next one?"

"The Maiden's Prayer," answered the leader, consulting his program.

"Good Lord!" ejaculated the trombonist, "I just got through playing that!"

### ARITHMETIC BUGS

Captain—What are you scratching your head for, Rufus?

Colored Private—Aw, sah I got arithmetical bugs in my head.

Captain—What are arithmetical bugs?

Colored Private—Dat's cooties.

Captain—Why do you call them arithmetical bugs?

Colored Private—Because dey add to misery, dey subtract from my pleasure, and divide my attenshun, and dey multiply like the dickens.—*Exchange*.

### WELL TO HAVE IT HANDY

Motorist—"Yes, it took me about six weeks hard work to learn to drive my machine."

Pedestrian—"And what have you for your pains?"

Motorist—"Liniment."

### LAPSUS MEMORIAE

He—"I beg of you, Miss Perkins, do not say Mr. Tompkins to me."

She (shyly)—"We have only known each other such a short time now; (coyly) tell me what you would like me to call you."

He—"Call me Mr. Jones; that is my name."

### Corner-stone Placed at Disston Saw Works

(Continued from Page 69)

Another selection by the choir and the event passed into history.

The Corner-stone is inscribed as follows:

"First Building Erected

Sept. 26, 1872.

At Tacony Plant.

Corner Stone laid

Sept 26, 1922."

The contents of the Stone:

Picture of the Factory in 1873.

Picture of Factory in 1922.

Models of D-8 and No. 7 Hand Saws.

Model of Band Saw.

Photographs of Henry Disston and his Sons—Hamilton, Albert H., Horace C., William, and Jacob S.

Extract from "History of Plant."

List of Present Executives and Corner-Stone Committee.

1922 Catalog.

Copy of Daily Paper.

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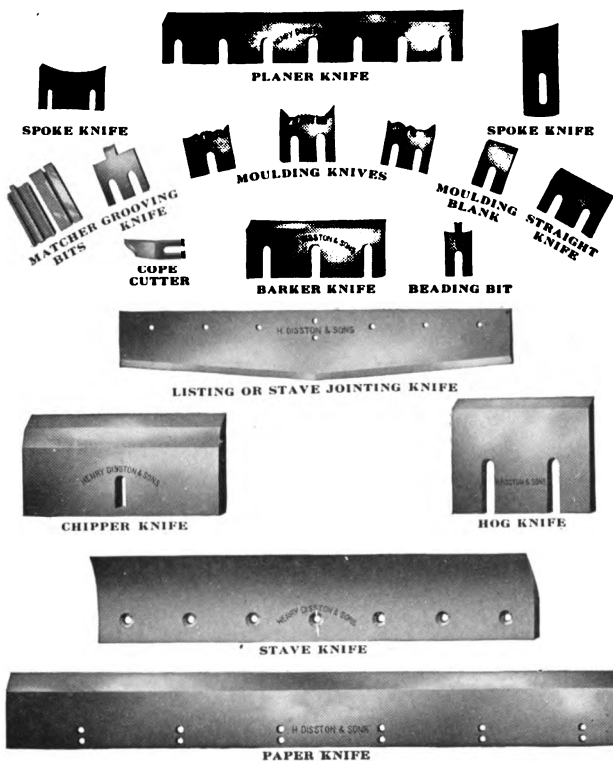
# Machine Knives and Cutters

## For Every Purpose

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You want knives that will give satisfactory service and be the most economical for your use. Because *Disston Knives* have met these requirements for other users year after year, we know they will do it for *you*. May we tell you more about them? A letter addressed to "Department O" will have immediate attention.

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# DISSTON

## SAWS TOOLS FILES

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**Every Product on this List  
is of Standard DISSTON  
Quality and Workmanship**

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**Back Saws**

**Band Saws for Wood and Metal**



Bevels  
Buck Saws  
Butcher Saws and Blades  
Cabinet Scrapers

**Chisel Tooth Circular Saws**

**Circular Saws for Wood,  
Metal, and Slate**

Compass Saws  
Concave Saws, Circular.

Cross-cut Saws

Cut-off Saws

Cylinder Saws

Dovetail Saws

Drag Saw Blades

Edger Saws

Files and Rasps

Filing Guides

Gang Saws

Gauges, Carpenters' Marking

Grooving Saws

Hack Saw Blades

Hack Saw Frames

Hand, Panel, and Rip Saws

Hedge Shears



Ice Saws

Inserted Tooth Circular  
Saws

Keyhole Saws

Kitchen Saws

Knives—Cane, Corn, Hedge

Knives—Circular—for Cork, Cloth,  
Leather, Paper, etc.

Knives—Machine

Levels—Carpenters' and Masons'

Lock Corner Cutters

Machetes



**Mandrels**

**Metal-slitting Saws**



Milling Saws for Metal

Mitre-box Saws

Mitre Rods

Nest of Saws

One-man Cross-cut Saws

Pattern Maker Saws

Plumbs and Levels

Plumber Saws

Post Hole Diggers

Pruning Saws

Rail Hack Saws

Re-saws

Saw Clamps and Filing Guides

Saw Gummers

Saw-sets

Saw Screws

Screw Drivers

Screw-slitting Saws

Scroll Saws

Segment Saws

Shingle Saws

Siding Saws

Slate Saws, Circular



Squares, Try and Mitre

Stair Builder Saws

Stave Saws

Straight Edges

Sugar Beet Knives

Swages

Tools for Repairing Saws

Tool Steel

Trowels—Brick, Plastering,  
Pointing, etc.

Veneering Saws

Webs—Turning, Felloe, etc.



This is a partial list. There are thousands  
of items in the complete Disston line.

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**DISSTON**  
**SAWS TOOLS FILES**



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NOV 28 1922

# The **DISSTON** **CRUCIBLE**

NOVEMBER

1922



*"Funny — but every Thanksgiving I need a larger belt!"*

## What A Few Disston Users Say About Their Saws

**"15 years  
service"**

"Ran a Disston 52-inch saw for fifteen years. Sawed off the head block, dogs, spikes, etc. Then sold the saw and it is doing GOOD work now.

—*Handle & Excelsior Co., Picture Rock, Pa.*"

**"best saw  
ever run"**

"The inserted tooth saw I bought of you last winter has proven to be the best saw I even ran. I have been in the saw mill business all my life but I never ran a saw that was as satisfactory in all kinds of timber as this one.

—*W. R. Myers, Columbia, Ky.*"

**"cut 4,000,000  
feet"**

"In the year ending May 1st we cut four million feet of lumber, with one portable mill, which is a very good run for one year's sawing. This amount was sawed with the two saws purchased from you, and they are still in good condition, the No. 6-54" saw with 56 teeth now cutting about 25,000 ft. per day.

—*Carpenter & Chase, Newmarket, N. H.*"

**"vim"**

"You certainly put the vim in a saw and the money is yours, and if it stands up like that all the time you could not buy it back for one thousand dollars. She is certainly a good one.

—*Frank Beal, Mt. Hebron, N. B.*"

**"best of lots  
of other  
makes"**

"We are glad to tell the public that we have been running the Disston Circular Saws for 15 years and find them to be the best saw we ever used after using lots of other makes.

—*G. B. Haven & Son, Gretna, Fla.*"

**What Disston Saws Have Done  
For Others—  
They Can Do For You**

# DISSTON CRUCIBLE

A MAGAZINE FOR MILLMEN

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VOL. XI.

NOVEMBER, 1922

No. 10

## A TRIP FROM BARRANGUILLA TO BOGOTA

By Boat and Rail

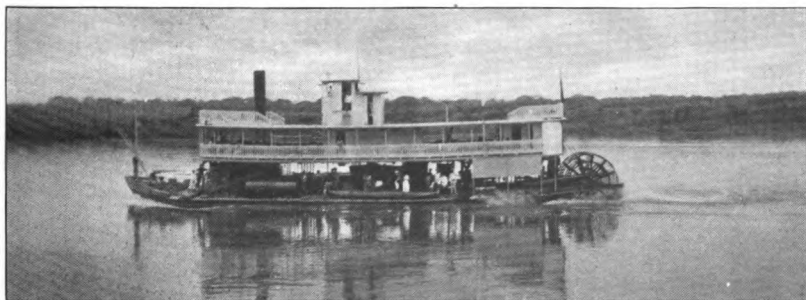
Beautiful Scenery, Alligators Galore, Live Stock on Boat for Food Purposes

**R**ECENTLY, our Mr. Heiss, who is traveling in Columbia, South America, wrote of his trip from Barranguilla up the Magdalena River to Bogota. He says: "It is one of the most interesting trips in the Western Hemisphere, requiring ten days to sail the distance between these places. Unique experiences multiply as the journey progresses. There is a gala time in Barranguilla the night the steamer sails. People crowd its decks, saying adieus, clasping hands, patting backs, and weeping on shoulders with the emotional fervor characteristic of the latin races. The sporting bloods of the town assemble and shake dice for drinks, as do also the young chaps of Barranguilla, who come on deck to see the girls. It is a night of dissipation.

"The boat is scheduled to leave at 10 o'clock, but it is one A. M. before the last good-bye is said and the final good-luck drink is taken.

"At last, with blowing of whistles and ringing of bells, the 'El Expreso Rapido Directo' is off. This is no ordinary boat. From the staff on the bow two flags float to the breeze. The upper one of bright red material, inscribed 'Correo Nacional' (National Postal); the lower one of orange-colored material, inscribed 'Expreso.'

"My first night on the boat was passed without unusual experience. About daylight, however, I was awakened by a terrific bumping. Upon investigation I found that the boat was taking on wood, the fuel consisting entirely of this material. Huskies were



Steamboat on the Magdalena River

carrying wood from large piles on the bank, by the arm loads, up a narrow plank, and dumping it into the bunkers. The natives never hurry, so it took some time to fill the bunkers, which hold a ten-hour supply.

"The mooing of cows, squealing of pigs, and cackling of chickens, caused me to ask the Captain if I was on a cattle boat. 'No, Senor,' replied the Captain, 'the animals are for the feeding of passengers. The heat is so intense we cannot carry ice, so we carry the livestock and kill as we need supplies.'

"Rice and bananas! Ye gods! The uninitiated cannot imagine the many ways of serving bananas—cooked, fried, powdered, deviled, mashed, steamed, pickled, ad infinitum.

"After traveling five days we landed at La Dorada. Here we took a train around the rapids to Beltran, where another boat was waiting for us in the upper Magdalena River. Rocks, sandbars, and sharp curves make navigation dangerous. Impossible to travel at night, so the Captain selected a safe place and anchored till morning.

"Flies, pester me all day long, then give way to the mosquitos. How they do relish the tender skin of the white man! The natives are not bothered much while the white man is present.

"The shores of the river are filled with flats. I saw hundreds of alligators. It is said that they will not attack a native, but if a white man goes overboard he is doomed.

"The ninth day of our trip brought me to Girardot, the terminal of the river trip. Here I entrained for Bogota. A ten hour ride brought me to Facatativa, over a one-meter gauge road. Here it was necessary to change to a standard-gauge road, which landed me in Bogota, the capital of Columbia, the next afternoon. Oh, what a change! Barranguilla is tropical; Bogota is 8,600 feet above sea level, and misty. Overcoat in day time and a blanket at night is essential to comfort. In the ascent to Bogota the clouds were penetrated and fine mist fell. The change from the

lowlands is so great that the less sturdy travelers stop off at La Esperanza, which is only 5,000 feet above sea level. Here he becomes acclimated before proceeding to Bogota.

"The sudden change in temperature often causes an attack of 'calenture'—chills and fever. The old remedy—hot rum and quinine, soon has the afflicted one on his feet again. We can imagine that some of our friends back in the States would not be particularly averse to an attack of 'calenture' especially if there was a sufficient supply of the 'old remedy' available.

"The first day or two in Bogota the climate has a weakening effect, but then becomes invigorating. It is no place for a person with a weak heart or weak lungs."

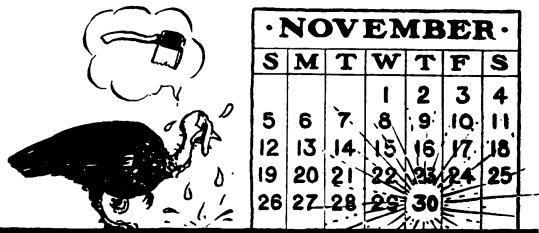
### The First Thanksgiving Day

After the ingathering of the Plymouth Pilgrims' first harvest in 1621, Governor Bradford sent four men out to shoot wild fowl so that the infant colony "might, after a more special manner, rejoice together." He little dreamed to what extent this pious act would grow.

For many years the autumnal "feast of ingathering" was merely an occasional festival, as unexpected prosperity or unhoped for aid in adversity moved the Pilgrim fathers to a special act of praise.

It was not until our Revolutionary War that the Feast became national, and after 1784 it was only occasionally observed, except in New England.

It was our Civil War which brought the people to a new sense of national oneness, and since 1863, the President of the United States has annually issued a Thanksgiving Proclamation.



Illustration, Courtesy of "Our Boys, Curtis Publishing Co."

## FROM THE LOOKOUT TOWER



Our happy friend, pictured on the cover design of this issue of CRUCIBLE, is having trouble making the ends of his belt meet after "doing justice" to a bountiful Thanksgiving dinner.

The difficulty is a common one. The following is a little picture of what happens very often on our national day of Thanksgiving:

### ACT 1.

Time: *An hour before dinner, Thanksgiving Day.*

Place: *Any place where a Thanksgiving Dinner is being prepared.*

JOHN STOUT (*a big fellow who usually eats more than is good for him*). Well, Fred, no more of these big Thanksgiving dinners for me. Last year I ate so much I could hardly move, but nothing doing this year. I've got to walk into town this afternoon and I don't want to feel like a stuffed turkey while I'm doing it.

FRED SMITH (*Stout's pal who has come over for dinner*): Yeh—you're right. I can't for the life of me see why people talk so much about Thanksgiving dinner. I'm not going to make a pig of myself, I'll tell you that.

### ACT II.

Time: *Dinner Time.*

Place: *Same as Act I.*

STOUT: Um-m-m! Whatever is being cooked for dinner smells mighty good to me. I could eat a whole turkey myself.

SMITH: Me too. I'm hungry as a bear.

COOK (*Coming to door*): Come on. Dinner is ready.

### ACT III.

Time: *An hour later.*

Place: *The dinner table.*

SMITH (*pushing back his chair and rising heavily*): Gosh, I'm full! How about it, John, do you think we had better go to town today? How about waiting till next week some time?

STOUT (*rising and letting out his belt in the general attitude of the man pictured on the front cover of this issue*): Walk to town? You must be dreaming! I couldn't walk ten yards. I'm going to sleep a while. Whew! That was some dinner, and I certainly ate my share.

SMITH: Well, if that's the way you feel, guess I might as well rest a little myself. What good is a Thanksgiving dinner if you don't eat it?

Once more newspapers are telling us that, because of the high cost of coal and the low price of corn, farmers are burning corn for fuel.

Rumors of corn-burning no longer excite us. One time we tried it. We were storm-bound out in the country and corn was the only burnable thing we could find; everything else was buried under the snow.

We fed corn into the old stove for hours before we could get enough heat to boil water. So when an authority on the subject says that about \$25.00 worth of corn is required to give as much heat as a ton of soft coal, we can understand why.

### Back in 1890

The world's most famous automobile manufacturer was working in a bicycle shop.

A millionaire hotel owner was hopping bells.

America's steel king was stoking a blast furnace.

An international banker was firing a locomotive.

A President of the United States was running a printing press.

A great merchant was carrying a pack on his back.

A railroad president was pounding a telegraph key.

There's always room at the top—where'll you be in 1954?



## TREES, LIKE PERSONS, BREATHE, E

### No Two Leaves are Exactly .

**T**REES literally breathe—inhal-ing oxygen and exhaling carbonic acid gas. The leaves are the lungs of the tree. On the lower surface of the leaf are vast multitudes of minute mouths or openings (100,000 to the square inch, it is estimated), which admit the air and expel the carbon.

There are other openings, called lenticels in the bark—dots and lines which can be easily seen on the twigs and smooth branches, which help the leaves just as the pores of the skin help the lungs. The perspiration of plants is technically known as transpiration.

The exhalation of water from the leaves is very great. That from a large oak is estimated at 150 gallons a day during the summer. The evaporation of water from the forests is fully as important as that from the ocean, if not more so.

The roots also are active in taking oxygen from the air, through porous soil. A tree may be smothered by piling earth on its roots or hardening the soil around them, and may be drowned by keeping its roots water soaked. Coal gas will choke it.

The tip ends of the tree roots absorb moisture from the ground, even in zero weather, but the passage of water from the roots up the trunk is retarded until winter relaxes its hold. The largest roots do but little else than anchor the tree to the soil. The slender rootlets and the tips of the large roots collect all that part of the tree's food which comes from the ground.

Trees eat and drink through the leaves and rootlets. While they breathe all the time, day and night, rain or shine, as steadily as we do, they feed only part of the time. They sleep in the night, during rainy weather and

throughout the winter. The growing season is very short, ending by mid-summer, due to the summer droughts which cut off or diminish, the supply of water.

A long period of rest is essential that twigs may harden and the wood ripen.

Careful preparation takes the place of further thickening of the trunk or lengthening of the limbs. The twigs and stems and roots must be stocked with food. The tree strives to take in all the nutritious parts of each leaf before it casts it off. When winter

"I think I shall never see  
A poem lovely as a tree.  
A tree whose hungry mouth is pressed  
Against the earth's sweet flowing breast;  
A tree that looks at God all day  
And lifts her leafy arms to pray;  
A tree that may in summer wear  
A nest of robins in her hair;  
Upon whose bosom snow has lain;  
Who intimately lives with rain,  
Poems are made by fools like me,  
But only God can make a tree."  
—Joyce Kilmer





## EAT, DRINK, SLEEP, BECOME ILL, DIE

### Alike—Each One a Laboratory

comes it generally finds the tree ready. The lenticels are sealed during the winter to prevent the breathing away of the tree's moisture.

Each leaf is a laboratory, where minerals and gases, water and sunshine are made into nourishment for the living tissue, from which comes wood, cork flower, fruit and a large number of gums, oils, essences and perfumes which have become indispensable in art, manufacturing and medicine.

The leaves take charge of the nourishment of the tree as soon as they open. They prepare food only in the daytime and in the presence of the sunlight; the more warmth the more work. They make a complex substance known as starch, containing carbon, oxygen and hydrogen. The tree finds its growing season inaugurated when it is supplied with foliage.

The closing of the leaflets at night reduces evaporation. This is a cooling process and enables the tree to save much of its heat. The cause of the brilliant foliage in the autumn is the chemical decomposition of the useless mineral substances in the leaves when the living substance is with-

drawn. No two of the untold millions of leaves in the forest are exactly alike.

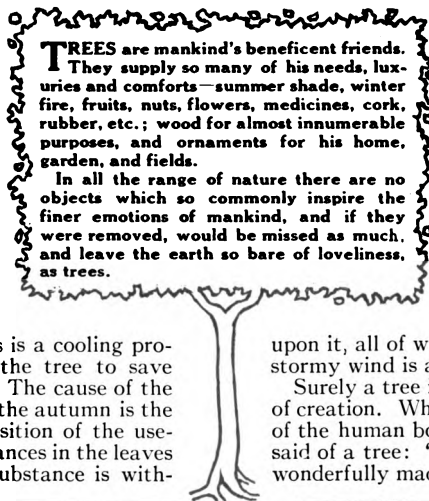
Only the "sapwood" of the tree is living, as is the inner bark. When the "sapwood" becomes lignified, it ceases to be alive and becomes heartwood, which is lifeless, serving the tree only by adding strength to the trunk and branches.

The upward mounting of the sap remains one of the mysteries of plant life. If a tree is girdled it usually dies because the descending sap cannot reach the roots, which in a short time perish of starvation from lack of the food sent them from the many leaves.

A tree does not die of old age. It accumulates infirmities with the years, and has many diseases. It may starve or die of thirst; caterpillars may eat its foliage; scale bugs suck its juices; beetles tunnel under the bark; scab, rust, moulds, rot, blight, may prey

upon it, all of which are fatal. The stormy wind is also an enemy.

Surely a tree is a marvelous work of creation. What the Psalmist said of the human body could as well be said of a tree: "It is fearfully and wonderfully made."



## PROPER ADJUSTMENT OF BAND MILL

By Mr. Ed. C. Hemp

Snoqualmie Falls, Washington

**I** NOTICED an article in a trade journal not long ago about the proper adjustment of the band mill, and that the care of the band mill should be left entirely to the millwright in charge, and after reading this, of course I had to put my spoke in the wheel.

I cannot agree with the writer on this.

Assuming that the millwright happens to be a new man on the job, and the filer has been around the mill for two years, who would most likely be the one to know the most about the mill—the newcomer or the man who has been on the job?

Now, I am not throwing any bouquets to the filer—far from it. The filer and the millwright should co-operate on this one point and get the ideas of each other on the proper way to handle the mill. To get the best results the millwright should keep the head block level and the knees plum, then if the mill does not cut square cants the filer must come to the front and show why. This is the most important part of the filer's trade. Too many filers learn to fit saws, and to roll them and hammer, but do not know anything about the mill.

A filer should know every part of the mill; also the straining device, the tilt and adjusting screws for cross line, and, in fact, everything about the mill. He should know how to line the mill, and know if the wheels are worn, and if the face is lumpy or uneven.

Sometimes, after using narrow saws and putting on wide ones, the wheels are worn back, so that the saw will run right off the wheel. I have known a filer who had this trouble, and sheared off the back of the saw an inch to make it stay on the wheel, and he was considered a first-class filer. But, be that as it may, there is a lot that a filer should learn about the band mill. He should be able to line up the mill, and when millwrights and all others fail, he should be able to step in and show

them all where the trouble and the weak spots are, and be able to put them in shape.

The mill should be lined with the track first. To begin after the bottom wheel is lined, a long straight edge is the best. Take a pair of tram points and get a right angle across the track in front of the bottom wheel. Take out all the end play in shaft, and when you have a line across the track, put the bottom wheel so that both edges will come in line with the straight edge. This done you have the bottom wheel in line. Now put the top wheel right. Drop a plumb bob down over the face of the wheel (not the edge), and see if the top wheel overhangs the bottom. There should be no overhang, but if there is some, it will not make a great deal of difference, that is, a very little; but if there is much it will not make a square cant or carriage. If you cannot get a square cant, you can at once make up your mind that there is an overhang in the top wheel, providing headblocks and tracks are level.

Let me say that, to make a square cant, the knee of headblock must be square and plumb; but as a general rule you will find that the out-of-square cant is caused by an overhanging wheel. After you have found the overhang put this right by the screws in the top boxes. If there is none, this can be remedied by babbitting the wheel boxes. Next put the plumb bob on the edge of the wheels (there should be one on each side) and see that both edges line with each other, and the plumb bob line will touch all four edges of the wheels. If it will do this, your mill is in line and ready for work. In addition to this the filer should know how to grind the face of





wheels, and this should be done every six months, where the mill is running steadily. How many hard days work, and how much longer the saw would wear if this rule was followed in all mills!

In grinding wheels the mill should be lined perfectly before grinding. So you see that if grinding were looked into more frequently the mill would hardly ever get out of line; better lumber would be the result; the saws would stand a better feed, and not dance a can-can before taking the cut.

There is a great deal of difference in regard to the wheels and how they should be ground. Some filers think a crown face is the best, others think that a flat face is the best. I prefer a flat face wheel, but let me say that I have used both in different mills, and if the saw is in proper condition and if it fits the wheel, it will run and give good results on either the flat or crown face.

The crown face is where the face of the wheel shows about one sixty-fourth of an inch to one thirty-second of an inch high, about one and one half inch from the front edge.

A flat wheel is one that shows flat across the entire width of face. Do

not try to run the saw too fast. Nothing is made by doing this. A good fair speed is better and insures longer life of the saw. About the right speed for a re-saw is six to seven thousand feet a minute on a five or six foot wheel and increase speed on log bands. For eight ft. band wheels in soft timber 8,000 a minute. A larger wheel will stand more, but I would never run any mill over 9,000 ft. a minute. In sawing hard maple I have run an eight foot mill 6,000 ft. a minute and cut as much lumber as when running 9,000 ft. a minute.

### THE GUIDES

The guides on all mills should be carefully watched. To set guides, put the strain on saw and move the guides out from the saw, so that the saw will hang true. Then move the inside guide up against the saw first, until there is just a little light showing between the saw and guide pin. Then move up the same way the outside guide. Guides must not be too tight or too loose. If too tight, saws will heat; and if too loose, saws will flutter and be inclined to run, in or under a heavy feed.

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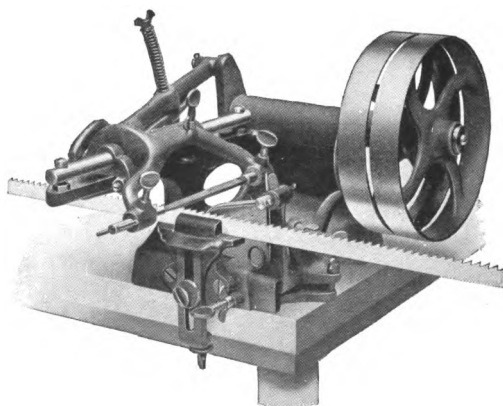
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## DISSTON AUTOMATIC FILING MACHINE FOR NARROW BAND-SAWS

This tool is simple, efficient, and accurate. It is strongly made, easily adjusted, and requires no attention after it has been started.

It will take saws  $\frac{1}{8}$ " to  $1\frac{1}{2}$ " wide, with teeth  $\frac{1}{16}$ " to  $\frac{5}{8}$ " space, and will file old saws with uneven teeth as perfectly as new ones. If all teeth are filed to the same height, the saws will stay sharp longer. Each tooth doing its proportionate amount of work prevents breakage.

This machine uses 6" taper saw files, and should run 50 to 60 revolutions per minute.



Narrow band-saw filing machine



## SAWDUST

"Do you use Pear's soap?"

"No, I don't room with that guy any more."—*Ex.*

### A MATTER OF FORM

Tourist (in village notion store)—  
Whaddya got in the shape of motor car tires?

Saleslady—Funeral wreaths, life preservers, invalid cushions and doughnuts —*Life.*

"No, sah, Ah don't never ride on dem things," said an old colored woman looking in on the merry-go-round. "Why, de other day I seen dat Rastus Johnson git on an' ride a dollah's worth an' den git off at the same place he started at. I says to him "Rastus," I says, "yo' spent yo' money, but whar yo' been.

### THAT'S DIFFERENT

Henry: "Say, what's the best way to teach a girl to swim?"

Harold: "That's a cinch. First, put your left arm under her waist, then gently take her left hand—"

Henry: "Oh, say, boy, she's my sister."

Harold: "Aw! Push her off the dock."

Sandy, not feeling well, had consulted a doctor.

Doctor—"Do you drink, Sandy?"

Sandy—"Yes, sir."

Doctor—"Well, you must give that up. D'you smoke?"

Sandy—"Yes, sir."

Doctor—"You must give that up, too."

As Sandy went quickly through the office door, the doctor exclaimed:

"You have not paid me for my advice, Sandy."

"I'm not taking it," replied Sandy.

First College Student (over the phone)—"What are you doing?"

Second Student—"I just finished washing my B. V. D.'s."

Central (breaking in)—"I'm ringing them!"

### HIS HERITAGE

"You look like an idiot," thundered the disgusted man to his swell son, just returned from college. "You grow more and more like a conceited, hare-brained, helpless idiot." Just then an acquaintance of the old gentleman entered the office and saw the youth.

"Hello, Charlie, back eh" exclaimed the visitor. "You're looking more like your father every year."

"Yes," said Charlie, "that's just what the governor's been telling me."

### PEN MIGHTIER THAN ORATORY

Although Gene Whitley possessed many admirable qualities, he was somewhat lacking in oratory, to shine in which was his highest ambition. On account of some local activities, he was requested to give a lecture in his native town on "Home Economics." His vocabulary, however, could not do justice to the richness of his mind, and his audience was manifestly disappointed.

The following day he received this note from one of the women who attended the lecture:

Dear Mr. Whitley:

What you need is two things: (1) a wife; (2) lessons in elocution.

To which the aspiring orator replied:

Dear Madam:

Am in receipt of your note saying that I need two things: (1) a wife; (2) lessons in elocution. Those are only one.

PRINTED IN U. S. A.

# To Give You Better Service

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The House of Disston has twelve distributing branches. They are located in different parts of the country to give the users of Disston Saws, Tools, and Files more satisfactory and faster service.

These distributing houses are established to take care of your needs. They offer opportunities for fast service and, working in co-operation with our general office and factory here at Philadelphia, will see that your requirements are promptly taken care of.

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## Good Workmanship Demands Good Tools

**T**HE work the tools are to do is first thought of in the manufacture of Disston products. Your work must be well done if you are to be satisfied with Disston tools, and the reputation of Disston Saws, Tools, Files, and Knives is to be maintained.

Only good tools can turn out good work. Since 1840 the House of Disston has designed, developed, and produced Saws, Tools, Files and Knives of good steel, good temper, and good workmanship. These are the three essentials *you want*—they are the three essentials *Disston gives*.

**HENRY DISSTON & SONS, INC.**  
PHILADELPHIA, U. S. A.

*The  
Disston Factory  
Sixty-five acres  
Sixty-eight  
Buildings*



**DISSTON**  
SAWS TOOLS FILES

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# The DISSTON CRUCIBLE

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**Yuletide Memories Revived**



Made of  
famous  
**DISSTON**  
STEEL

## ***Shingle and Heading Saws Backed by DISSTON Reputation***

**W**HY not buy everything you *can* when you purchase Shingle and Heading Saws?

Saws that fit your needs, of course. Saws that do their work, naturally. But *more*—install DISSTON Shingle and Heading Saws. Disston Shingle and Heading Saws are made by Disston-trained sawmakers specializing in their work. These Saws are of the famous Disston-made Steel that is expressly prepared for Shingle Saws—toughened and tempered by special processes.

Eighty-two years of saw-making experience of the Disston organization is back of Disston Shingle and Heading Saws.

*Buy* this Reputation when you buy your Saws. You can buy it in no other saws but Disston.

# **DISSTON**

**SAWS TOOLS FILES**

# DISSTON CRUCIBLE

A MAGAZINE FOR MILLMEN

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VOL. XI.

DECEMBER, 1922

No. 11

A  
MERRY CHRISTMAS

*"Here's our hand  
on it"*



AND A  
HAPPY NEW YEAR

## A PEACE TOKEN BETWEEN INDIAN AND WHITE MAN

**R**ECENTLY one of the staff of our Seattle Branch picked up at Chehalis, Washington, and sent to us the unique picture which illustrates this article.

The old flint-lock musket which penetrates the trunk of the tree was a peace token between the Whites and the Indians of Rochester, Washington district, some sixty years ago.

At the time of the Indian outbreak in western Washington, the redman and the pale-face settlers in the Rochester section agreed that there should be no trouble between them. As a token of this agreement the old musket was placed in the crotch of the oak tree shown here, where it remained until

recently, when the tree was cut down.

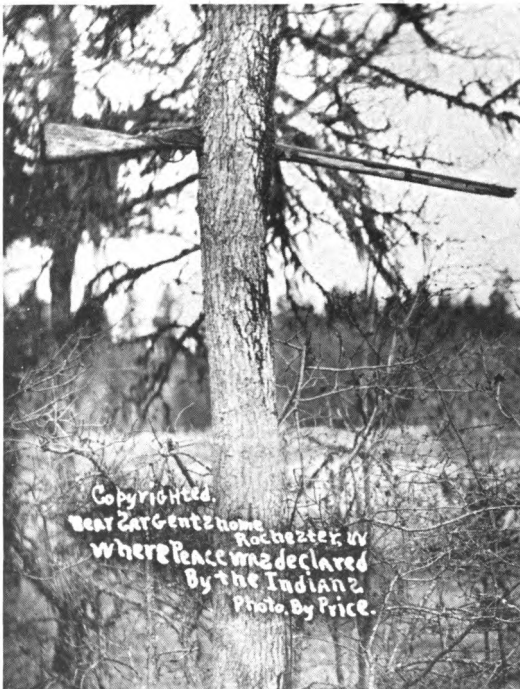
If the tree could be seen from a different angle it would be noticed that the musket did not repose very long in the crotch of the tree, for in its growth the trunk encased the central part of the musket, and the crotch, at the time the picture was taken, had grown above it eighteen to twenty inches.

The old settlers cannot recall, neither does history record any trouble in this particular section between the red and white men after their peace agreement was sealed by this peculiar rite.

This incident tends to disprove the old saying that "the only good Indian is a dead Indian," and it is most significant of the fact that

peace would prevail in all sections of the world if fire arms were placed out of reach.

We are indebted to Mr. Price, photographer, of Chehalis, Washington, for the photograph of this tree and the right to reproduce it in the CRUCIBLE.



Peace token, near Sargent's home, Rochester, Wash.

### Saw Mills for Poland Forests

The enormous forests of Bialowieza, containing many thousands of acres of uncut timber, are engaging the attention of British concerns, who are negotiating for leases. At the same time American business interests have sent an agent over here who, in company with H. H. Smith, Trade Adviser to the American legation to Warsaw, is now on a tour of inspection of the forest lands.



## FROM THE LOOKOUT TOWER

If you have been toiling away at the old job for 364 days this year—forget it on Christmas. Take this one day away from your work and give it to the ones you love, and to the ones who need your help. If you will do this, we can *promise* you the Merry Christmas and Happy New Year we wish you.

\* \* \* \*

When a man ain't got a cent,  
And he's feeling kinda blue,  
And the clouds hang dark and heavy  
An' won't let the sunshine through,  
It's a great thing, O my brethern,  
For a fellow just to lay  
His hand upon his shoulder,  
In a friendly sort o' way.

It makes a man feel curious,  
It makes the teardrops start,  
An' your sort o' feel a flutter  
In the region of your heart!  
You can look up and meet his eyes;  
You don't know what to say  
When his hand is on your shoulder  
In a friendly sort o' way.

Oh, the world's a curious compound,  
With its honey and its gall,  
With its cares and bitter crosses—  
But a good world after all.  
An' a good God must have made it—  
Leastways, that is what I say  
When a hand is on my shoulder  
In a friendly sort o' way.  
—James Whitcomb Riley.

Christmas is just one day out of the 365, but this year make the most of it "in a friendly sort o' way."

\* \* \* \*

We have just come from the Army and Navy football game. We are one of the 50,000 people who saw it. What a wonderful game it was! All the Middies on one side of the field yelling and cheering the Navy eleven, and all the cadets from West Point likewise backing their team from the other side of the field.

But there was one thing in the game that stood out from all the rest. That was a time when the Navy had the

ball on the last half-a-yard to go, to make a touch-down and win the game. From the West Point rooters came a roar that urged their team to "Hold that line!" The Navy quarter-back tried to call signals but his team could no more hear him than they could hear a voice from Mars.

Then the Army captain, with the game itself dependent on the confusion of the Navy in this next play, came out and signaled to the Army stands for silence. Immediately there was hardly a whisper of sound.

That was sportsmanship—on the field and in the stands.

It was rewarded, too, because the Navy failed to make that all-important half-yard and touchdown.

\* \* \* \*

Football and business are very much alike. In both, co-operation wins. A grandstand player never gets very far in either.

\* \* \* \*

Our minds are as different as our faces; we are all traveling to one destination—happiness, but few are going by the same road.—*Colton.*

\* \* \* \*

We don't often print stories that the other fellow tells, but here is one by Montague Glass that is on ourselves, which is too good to keep. Mr. Glass says:

"Philadelphia possesses some ultra-conservative citizens who never read the newspapers and are about 60 years behind the times. One of these old codgers was recently seen on the roof of a tall building in his Grand Army uniform, shooting at letter-carriers with a Springfield rifle.

"He thought they were Confederate soldiers!"

\* \* \* \*

And about the New Year resolutions—don't forget to include at least one new one that you didn't make and break last year!



## CIRCULAR SAW MANDRELS

### Proper Selection and Care of Mandrels Essential to Best Results from Circular Saws

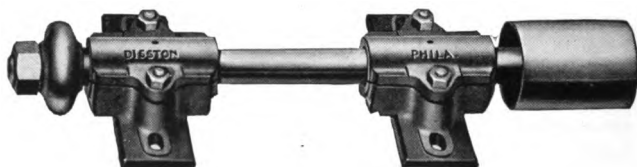
Reprint from the Disston *Lumberman's Hand Book*

**I**N order to obtain the best results and the maximum output from circular saws a good mandrel is an absolute necessity.

The shafts of steel, accurately turned, should possess in the various sizes, a safe margin of strength to prevent springing or undue vibration

ings are well proportioned and fitted. All bearings should be at least three times as long as the diameter of the mandrel. The boxes should fit neatly enough to prevent lost motion, but not so tightly as to cut off the supply of oil.

One of the main causes of mandrels heating is want of proper lubrication.



Disston No. 000. Pulley on end, self-oiling boxes.

under the heaviest feed or pressure that may be put on the saw they are designed to carry. All collars or flanges should be of sufficient diameter to give proper support to the saw, accurately machined and recessed, giving a perfect bearing on the blade. The pulleys should be turned up after being placed

The cutting of channels, from the front side of the bottom half of the boxes running down and under the shaft to the point of greatest bearing will be a great benefit in all cases where self-oiling boxes are not used. Where there are no self-oiling boxes use a good heavy body oil or lubricant.

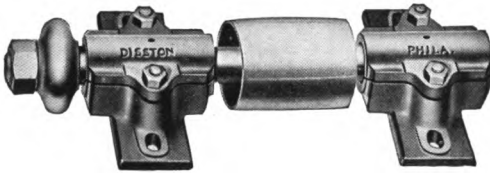


Disston No. 301. Connected box; pulley on end; self-oiling boxes.

on the shaft. The boxes, extra long and heavy, should be of grey iron, well fitted and babbitted, insuring true balance and smooth running.

A mandrel should not be too light for the work to be done or it will spring, causing it to heat. See that the bear-

In some mills where there are three bearings on the mandrel, heating is caused by getting bearings out of line when shifting for lead or adjustment. It is hardly necessary to suggest that heating is often caused by a short and tight belt.



Disston No. 60. Pulley in center with self-oiling boxes.

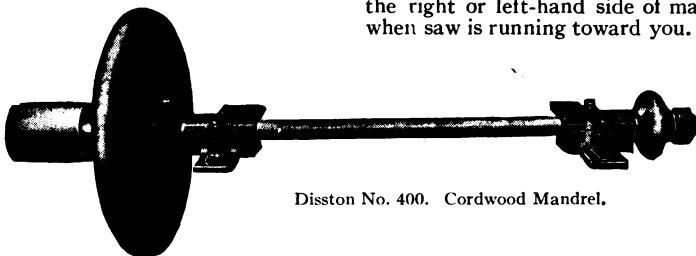
Where there is trouble with a heating journal and slipping belt, it would be advisable, as well as economical, to increase the diameter of the receiving pulley on the mandrel, even at the sacrifice of some of the speed. Belts should be of good length, and in all cases should have the strain on the lower side and the slack at the top.

When practicable, put a balanced tightener, or stress pulley, on the top, placing it so that it will give as much lap of belt on the pulley as possible. This will take much strain off the mandrel, rendering it less liable to heat.

A saw running badly from other causes, by undue crowding and straining will frequently cause a mandrel to heat that would otherwise run cool.

The boxes of Disston Nos. 201 and 301 mandrels being yoked or connected makes it impossible for the journals to get out of line with each other.

All pulley-on-end and connected-box mandrels are made with the pulley on the right-hand side, and with left-hand thread, unless otherwise ordered.



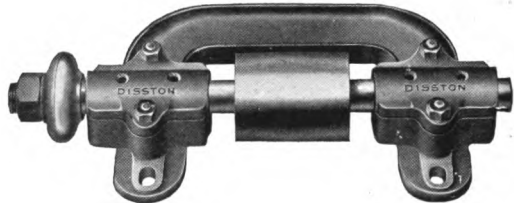
Disston No. 400. Cordwood Mandrel.

**Cordwood Mandrels**

The No. 400 Cordwood Mandrel is made with a pulley on the left-hand side, and with right-hand thread unless otherwise ordered. Our No. 401 Mandrel is same style, only larger.

All these mandrels have self-oiling boxes and require no additional attention in this respect for a long time after the oil reservoir has been filled, the oil being carried to the bearings by a ring revolving on the shaft.

The Disston mandrels with a pulley on the end, or in the center, range in sizes suitable for saws 10 to 38 inches in diameter. Special sizes made to



Disston No. 201. Yoke, with self-oiling boxes.

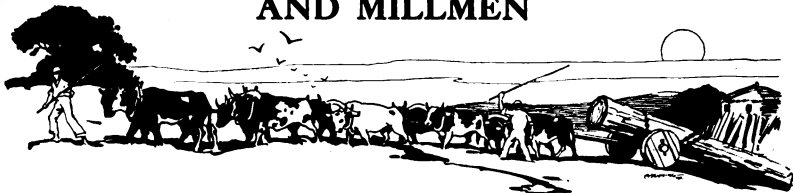
order. They measure up to the minutest requirements.

**When Ordering Special Mandrels**

It is quite important that a sketch accompany the order giving distance from centre to centre of boxes, also position of pulley. It also should be stated whether the pulley is wanted on the right or left-hand side of mandrel when saw is running toward you.

**Don't envy the man who seems to be doing better than you—study him.**

## INTERESTING ITEMS FOR LUMBERMEN AND MILLMEN



### A New Zealand Filer Pleased with Disston Saws

Recently Disston's received a letter from W. Sharp, of Auckland, New Zealand, in which he tells of his filing experiences, and incidentally adds: "I am more than pleased with Disston Saws." He granted us the privilege to publish his letter. Mr. Sharp desires to learn of experiences of other filers.

We will be very glad indeed to open our columns for opinions of filers from all sections of the world. Their experiences with Disston Saws would be quite interesting to the saw-filer fraternity, and incidentally many a helpful hint may be dropped. Who will be the first to accommodate filer Sharp? His letter follows:

"Messrs. Henry Disston & Sons,  
Philadelphia, Pa.

Gentlemen:

"I am filer for the Parker Lamb Timber Company. I got six of your Band Saws five years ago. I have run three of them ever since. The saws were 10 in., 14 gauge, 46 feet long. I have worn them down to 6 $\frac{1}{2}$ , 6 $\frac{1}{4}$  and 7 inches, and I might state I have made only one braze, and that was through a saw striking a splinter. I have had only one little crack in the five years. I have cut two of the saws up for gang saws. I might state that we cut all sorts of snags. I have a box of dogs that we have cut. I show them to the different saw men that come around this way. We cut all sorts of timber in this mill. Kauri is very springy and it takes a good saw that will cut it and not crack. I am going to give the other three a go. I have had two going last week and they went fine. I am more than pleased with them. You are quite at liberty to publish this if you think fit, as I cannot speak too highly of Disston Saws. I use a 35-foot tension gauge, pressed hard, so that is a good test.

"Hoping to hear from you soon.

"You might please publish this in the Crucible for I want to get what other filers think.

Yours truly,

W. SHARP,

Filer for the Parker Lamb Timber Co."

### 5,000,000 Douglas Fir Seeds Presented to King of Italy

Recently Elbert Francis Baldwin, one of the directors of the A.F.A., of New York, visited King Victor Emanuel of Italy, to whom he formally presented 5,000,000 Douglas fir seeds, for the purpose of rehabilitating the forests of Italy which were destroyed during the War. The Seeds were the gift of Charles Lathrop Pack, of the Association.

Mr. Baldwin learned that the King was experienced in forestry. As a boy he would plant trees at his father's country place and rise at four o'clock in the morning to water them properly himself—not merely to see that it was done.

"In my own place, outside the city," he told Mr. Baldwin, "I have grown foreign trees, and I want to see how Douglas firs will do there."

The King further added: "Our forest area is pitifully small if you compare its proportions to our total area with the proportions in France, Switzerland, Austria, Tzechoslovakia. Our people need just such a stimulus as the American Forestry Association is given yours."

Many men follow the races, but few are ahead of them.

Cold hash is the kind that is cool and collected.

The success of any forest fire protection arrangement rests first upon organization.

A magazine writer says the dog fills an empty place in a man's life. This is especially true of the hot dog.

# HAMMER HANDLE WHICH BEARS IMPRESS OF FILER COTIE'S HAND

## "Human File" Wears Away Hickory Wood

**A**S youngsters we were rather skeptical when told that the constant dropping of water would wear away the hardest stone. More than one *adult* person would claim residence in a well-known middle-western state if told that by constant usage for a number

fingers (which on all persons is a veritable human file), wore away the wood. The surface of the handle in the meantime, gradually deteriorated, due to its absorption of oil and grit, which lessened the resistance of the wood.

The skin on the palm of the hand and on the tips of the fingers is covered by



Filer Cotie's Saw-hammer Handle showing impression of his hand

of years a hickory-wood handle would show a well-defined impression of a man's hand. Yet such is the case. The proof is before you.

About eighteen years ago Mr. Archie Cotie bought from C. T. Patterson Company, Ltd., the New Orleans Branch of Henry Disston & Sons, Inc., a Disston No. 3 cross-peen saw hammer which he has used until recently in hammering band saws. It was at that time a well-shaped nicely polished handle, made of the hardest of hickory wood, well seasoned.

Have you ever tried to whittle a piece of seasoned hickory wood. Yes? Pretty tough, eh? So then you can appreciate the resistance Mr. Cotie's hand met the first time he gripped his new No. 3 Cross-peen and proceeded to hammer a Disston band saw. But he not only gripped it once; he gripped it many, many thousands of times, each time in almost exactly the same place.

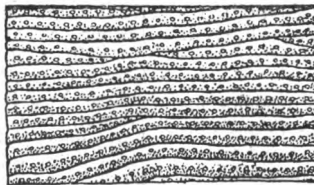
Blow after blow was struck with the hammer. Each blow jarred the hand slightly, causing friction, and slowly but surely the skin on the hand and

a great number of ridges that run in many cases more or less parallel to each other. The ridges form sort of a human file. The illustration of a magnified section of skin verifies this statement. It also plainly indicates the principal cause for the worn handle.

The indentations on the top of the handle were made by the thumb and finger tips; the ones beneath, by the butt of the fingers and the palm of the hand. It is impossible to get a photograph to expose the complete impress of the hand as it appears on the handle.

Mr. Cotie is now an efficient filer for the Lufkin Land and Lumber Co., Lufkin,

Texas, and a strong advocate of Disston saws as well as Disston hammers. We hope he may live to impress his hand on several handles as he has on the one shown on this page.



Surface of skin, magnified, showing ridges and pores from sweat glands

A number of handles, worn quite as deeply as the one shown here, grace the tool chests of

Disston's mechanics. Some of these handles were in use many years before Filer Cotie purchased his handle. The owners are quite attached to them and are not disposed to replace them with new ones.



## SADUWST

A soldier was being examined by a surgeon for a compound depressed fracture of the skull. The doctor placed his finger in the healed depression and while doing so, asked the man numerous questions. Finally he asked: "Are you married?" "No, sir," was the reply, "I was kicked there by a mule."—*Ladies Home Journal*.

### MUM

Bill: "Is it possible to confide a secret in you?"

Phil: "Certainly. I will be as silent as the grave."

Bill: "Well, then I have pressing need for two bucks."

Phil: "Worry not, my friend. It is as if I had heard nothing."—*Exchange*.

### SHE SHOULDN'T DO IT

A woman of the most unmistakably conservative type, had accidentally got into the railway coach reserved for smokers. With ill-concealed indignation she saw the man next her fill his pipe.

"Sir," she said frigidly, "smoking always makes me ill."

"Does it, ma'am," was the polite rejoinder. "Take my advice and give it up."

Little Willie had been hearing his father boast to his friends of his new car and its ability to take the steepest hills. At the Sunday supper table he suddenly astonished his parents by demanding:

"Pa, does the Lord Almighty own a Rolls-Fierce, too?"

"Great Scott, no, son. Whatever put that into your head?"

"Well, at Sunday school we had a hymn that went, 'If I love Him, when I die He will take me home on high.'"

A Gloucester (Mass.) news item stated that the village queen eloped in her father's trousers. The next day another of the Gloucester papers came out with an article headed "Flees in Father's Pants."

### STOP! LOOK! LISTEN

"Is this a fast train?" the salesman asked the conductor.

"Of course it is," was the reply.

"I thought it was. Would you mind my getting out to see what it is fast to?"

### A TROUBLED CONSCIENCE

A Norwegian, John Larson by name, a lumberman, had a couple of fellows working for him. One day one of the fellows got a little fresh and the Norwegian threw him into the river. Then the other fellow got into an argument with him, and he, too, went into the river and drowned.

In about six years John's conscience began to bother him. He went down to the Sheriff, Ole Oleson, and said:

"Ola, sax yar ago Ay kill a couple Swides, and my conscience is begin to bother. What skoll Ay do?"

"Vell, I dunno, John. Ay bane Sheriff only 18 months and dunno the rules. You better go and see Knute Nelson, the County Clerk. Maybe he know what to do."

So John proceeded to the County Clerk's office, and there unloaded his troubled mind. Knute, after hearing the story, took down a big book, rushed through its pages, then took down another book and studied it. Finally, looking a bit puzzled, he spoke up:

"There ain't no bounty on them there things, Larson."

PRINTED IN U. S. A.

# What A Few Disston Users Say About Their Saws

*“up to the  
mark in  
frozen hickory”*

“Will say for the Disston 60” Saw that I can’t express the good words that I have for this saw for both summer and winter work. Last winter I was in frozen hickory for thirty days and she did the work right up to the mark. Anyone doubting the Disston Saws send them to me and I will show them what they will do.

—O. S. Dunkle, Everett, Penna.”

*“advise  
Disston”*

“We advise every mill man wanting a good saw to get the Disston make.

—Fred Fritzsche & Sons, Allhardt, Tenn.”

*“no comparison  
in forty years”*

“We want to say to you that No. 6, 48”, 6 & 8 gauge, Disston Chisel Point Saw purchased of you recently is certainly a prize. The writer has been around saw mills for the last forty odd years and has not seen any saw to compare with it.

—Eagle Square Mfg. Co.  
South Shaftsbury, Vt.”

*“economy”*

“I would cheerfully recommend your inserted tooth saw to any saw mill man both in point of economy and as regards quality of lumber. We do not believe that any first-class portable saw mill man can afford to be without one of these saws.

—James H. Miller, Greenville, Ind.”

*“easily  
driven”*

“We have always found the Disston Saws entirely satisfactory on account of their making splendid lumber and being easily driven. We have at various times operated your saws under very trying conditions and think it is remarkable that they have stood up after being driven against drift bolts, and subjected to various other hardships.

—The Alberta Lumber Co., Ltd.  
Vancouver, B. C.

*“little  
power,  
fast  
feed”*

“The saw certainly is a dandy, it takes very little power, stands up in the cut nicely under a fast feed, and makes nice uniform lumber.

—Gardner Lumber Co., Gardner, Fla.”

# DISSTON

## SAWS TOOLS FILES

### Back Saws

### Band Saws for Wood and Metal



Bevels  
Buck Saws  
Butcher Saws and Blades  
Cabinet Scrapers

### Chisel Tooth Circular Saws

### Circular Saws for Wood, Metal, and Slate

Compass Saws  
Concave Saws, Circular  
Cross-cut Saws  
Cut-off Saws  
Cylinder Saws  
Dovetail Saws  
Drag Saw Blades  
Edger Saws  
Files and Rasps  
Filing Guides  
Gang Saws



### Gauges, Carpenters' Marking

Grooving Saws  
Hack Saw Blades  
Hack Saw Frames  
Hand, Panel, and Rip Saws  
Hedge Shears



Ice Saws  
Inserted Tooth Circular  
Saws  
Keyhole Saws

### Kitchen Saws

Knives—Cane, Corn, Hedge  
Knives—Circular—for Cork, Cloth,  
Leather, Paper, etc.  
Knives—Machine  
Levels—Carpenters' and Masons'  
Lock Corner Cutters  
Machetes

### Mandrels

### Metal-slitting Saws



Milling Saws for Metal  
Mitre-box Saws  
Mitre Rods  
Nest of Saws

### One-man Cross-cut Saws

### Pattern Maker Saws Plumbs and Levels

Plumber Saws  
Post Hole Diggers  
Pruning Saws  
Rail Hack Saws

### Re-saws

### Saw Clamps and Filing Guides

### Saw Gummers

### Saw-sets

### Saw Screws

### Screw Drivers

### Screw-slitting Saws

### Scroll Saws

### Segment Saws

### Shingle Saws

### Siding Saws

### Slate Saws, Circular



Squares, Try and Mitre  
Stair Builder Saws  
Stave Saws  
Straight Edges

### Sugar Beet Knives

### Swages

### Tools for Repairing Saws

### Tool Steel

### Trowels—Brick, Plastering, Pointing, etc.

### Veneering Saws

### Webs—Turning, Felloe, etc.



This is a partial list. There are thousands  
of items in the complete Disston line.

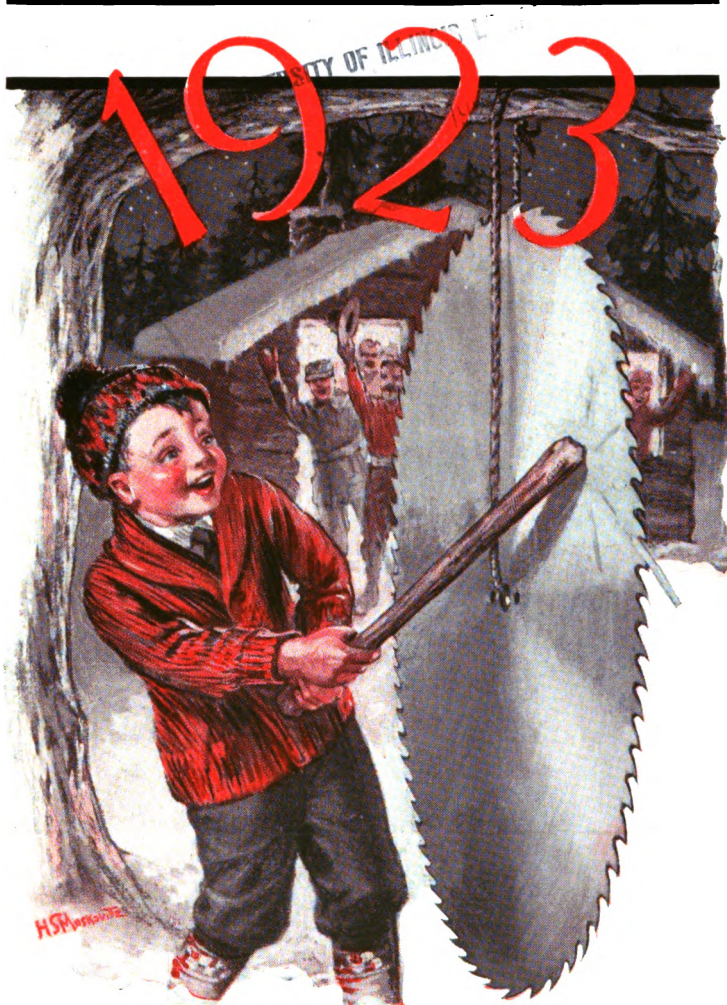
*Use Disston Saws, Tools, Files  
in All Your Work*



338.105  
DI

Comm. R.R.

# The DISSTON CRUCIBLE



Ring in the New Year

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*Experience Has Perfected*  
*Disston Chisel Tooth*  
*Circular Saws*

---

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The experience of more than eighty years of the most famous saw-making organization in the world is responsible for the perfection of the Disston Chisel Tooth Circular Saw.

In addition to this extensive general saw-making experience there are skilled circular-saw experts in the Disston organization whose personal experience alone is broader than that of any other saw makers in the industry.

Disston Chisel Tooth Circular Saws stand up to their work in all seasons, on all woods—hard, soft and frozen. Made from the famous Disston-made steel with specially designed teeth, they turn out the best sawed lumber with the least horse-power.

Tell us the different problems of your plant—experience of our saw experts is at your service.

**HENRY DISSTON & SONS, INC.**

PHILADELPHIA, U. S. A.

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**DISSTON**  
**SAWS TOOLS FILES**

# DISSTON CRUCIBLE

A MAGAZINE FOR MILLMEN

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VOL. XI.

JANUARY, 1923

No. 12

## SHEEP, VALUABLE ASSET OF AUSTRALIA

### A Hundred Million Pounds of Wool Produced Annually in Queensland Alone

**W**ILLIAM D. BRYCE, author and traveler, in his illustrated book on Australia and New Zealand, says: "The sheep country of Australia is divided into great fields—paddocks, they call them—from one to five miles wide and running to some point where there is water, either creek or tank.

"The country on the New South Wales side of the fence is given over almost entirely to sheep. This is also true of the first fifty miles in Queensland, but after that both cattle and sheep are found. Queensland is the real cattle state of Australia.

"Queensland is second in importance as regards sheep among the states of the Commonwealth. In the western part of the state—the dry belt—the wool-producing merino is, of course, the principal breed, but in the regions near the coast the British breeds, such as the English Leicester, Border Leicester, Lincoln, Southdown, Dorset, Roscommon, Romney, Marsh and Shropshire, as well as the New Zealand breed Corriedale and Merino crossbreeds are raised for both mutton and wool. A hundred million pounds of wool are produced in the state annually, on the average."



Pastoral Scene in Queensland, Australia

## FILER PRICE BECOMES REMINISCENT AND TELLS INTERESTING INCIDENT

The Crucible has been inviting millmen and lumbermen to send in accounts of experiences, relating to their respective trades, which would be of interest to Crucible readers.

Probably this has caused our good friend, Mr. L. L. Price, of Sibley, La., to review the incidents in his mill life, pick out a real "snappy" one, and present it for publication.

Filers and sawyers, as well as other readers of the Crucible will, no doubt, be interested in this incident. We hope it will inspire other members of these crafts to submit similar experiences. Mr. Price will proceed to relate the incident in his own, characteristic way:

"I was filing for the Sibley Lumber Co., of this place, last year. One day a

bunch of filers and sawyers met up here and we had an argument over what make of saws would stand up the longest without filing and hammering. To settle our argument we got down to an actual test. Three different makes of saws were used. The Disston Saw cut 16,900 feet. Another make cut 16,000 feet, and the third saw in the contest cut 13,000 feet. I filed the three saws and did the best I could on each one. The Disston Saw was a 50-inch, 9-gauge, 80-tooth band, driven by a 16x22 engine. The Saws were running seven hundred feet per minute.

"I do not favor running saws so long, but it was necessary to settle the argument.

"Most of the timber cut was bull pine. In my opinion this was a good cut for any one of the Saws.

"We use lots of Disston Saws and Tools here, and in my seventeen years experience as sawyer and filer, I found none better than the Disston brand.

Yours very truly

L. L. Price

Sibley, La."

c/o Burrows Mill.

Moral:—It is the actual test that counts.

If Filer Price has other incidents as interesting as this one tucked away in the cells of his gray matter, it is unanimously decided that he forthwith produce them for the edification of Crucible readers.

Who will be the next to send us an interesting experience?



Filer Price about to go into action

# FROM THE LOOKOUT TOWER



## ACT I.

Time: 12.02 Monday morning, Jan. 1, 1923.

Place: Any old place at all.

TOM JONES (*Just an ordinary fellow, like you or me, turns to his friend*): Well, Old Scout, this is New Year. A new leaf for me this year. I'm going to make something of myself. No more fooling around. This year will be a solid year of work for me."

HIS FRIEND: Good Stuff! Here's luck to you, but I seem to remember hearing you say something like that this time last year.

TOM: You did, but *this time* I mean it!

## ACT II.

Time: Friday morning, Jan. 5, 1923.

Place: Same as Act I.

THE FRIEND: Hello Tom. What progress with the New Year's resolution to *work* this year.

TOM: Fine! Fine! The boss said he noticed a difference today. I'm on my way to the top right now.

## ACT III.

Time: Thursday night, Jan. 15, 1923.

Place: Same as Act I.

THE FRIEND: Hey Tom! What are you doing here? Have they made you president yet?

TOM: Who—me? Say, I quit that job! What do you think—the old crab wanted me to work over time. Huh! What they have been paying at that place don't cover the eight hours—and they ask me to work over time to help 'em out! Not me.

THE FRIEND: But—how about the New Year's resolution, to work hard this year?

TOM: Oh—forget it! That's all bunk.

MOTHER: Johnny, if you eat any more you'll burst.

KID: All right; pass the cake and get out of the way.

Too many of us give up quite too easily.

We give up when just one more effort might bring success.

We heard a story of a lumberman who worked out a big improvement in the way a certain sawing job was being done.

He tried to sell the idea to the people he worked for—and couldn't interest them.

He tried to sell it to another concern and then another—and each time failed.

So he gave up. He became discouraged, developed into a chronic grouch and trouble-maker, and finally lost his job.

For the next two or three years he loafed.

Finally, his money gone, hungry, down-and-out, he went in desperation to another company and put his proposition before them. He sold them the idea and since then the company and the man have made a fortune.

But only actual hunger made his success possible. He could have reached his goal years sooner if he hadn't quit so easily.

## THE TURNING.

When your steadiest pal is trouble,  
When everything goes dead wrong,  
When hope is a fragile bubble,

When there isn't a sound of song,  
Or ever a lilt of laughter,  
Or ever a ray of sun,

When the tough luck piles up after  
It's time the good luck won,

Before you decide on quitting,  
Before you toss in your hand,  
Start one more swing from the ankle,  
And maybe *that* punch will land.

—Walter Trumbull.

A Happy and Prosperous New Year.  
May at least two of your good resolutions be unbroken at this time next month.

## KOLAMBUGAN LUMBER AND DEVELOPMENT COMPANY

Has Mill of Twenty-Million-feet-a-year Capacity at Kolambugan Island, Mindanao—Owns Large Tract of Hardwoods



Mill and Log pond, Kolambugan Lumber and Development Company.

Unloading logs at Mill of Kolambugan Lumber and Development Co.



**O**N May 1, 1898, Admiral George Dewey stood on the deck of his flag-ship, "Olympia," which had wound its way through mines into Manila Bay, and calmly gave a command which put the Philippine Islands on the map, so far as many Americans were concerned. That command was—"You may fire now, Gridley, when ready." Americans have become well and favorably acquainted with the Philippines since then, and in the interim the Islands have made remarkable strides in many lines of industry, not least among them the lumber industry.

Many saw mills have been built and operated throughout the islands, as they contain much woodland. There are more than 40,000 acres of virgin forests, and half this number of acres of second-

growth forests and fire woods, ninety-nine per cent of which belongs to the Philippine Government, and is under the administrative control of the Bureau of Forestry.

More than 700 species of wood in the Philippines are of value, either commercially or locally. Some of the woods are well suited for structural woods, for inside finish, cabinetwork, carriage building, etc.

Through the courtesy of Mr. C. V. Blackhart, of Kolambugan, Lanva, we present a view of the mill, part of the log pond, and the deep-water harbor of the Kolambugan Lumber and Development Co., of Manila, P. I. The mill is located at Kolambugan Island, Mindanao. The company owns a very large tract of hardwoods and some very fine

(Continued on Page 95)

### The Lumberjack

From the hills of West Virginia,  
To the shores of Puget Sound,  
Wherever there is timber,  
There the lumberjack is found.  
You will know him when you see him,  
For the forest marks its men,  
And when once a fellow's lumbered,  
Well, he's never free again.

He may journey to the city,  
But he never lingers long,  
For the memories that stir him  
Like a half-forgotten song.  
He can hear the rush of tree-tops  
When the giant fir trees fall,  
He can hear the thud of axes,  
He can hear the fallers call.

He can smell the clean, sweet timber,  
He can see the winter sky,  
And the woods keep calling, calling,  
With a voice he can't deny.  
Till at last, before he knows it,  
He is back again in camp,  
Telling tales of far-off city life,  
Around the evening lamp.

—R. H. Hamill.

### Motion Pictures for Lumber Industry

The Lumber Division of the Department of Commerce announces that the government will assist lumber manufacturers by taking motion pictures of their plants and operations, and will also arrange to have these pictures shown before engineering societies, manufacturers, and other wood users both in the United States and in foreign countries.

The government is prepared to pay all the expenses of the experts who will direct this work, but the films themselves will have to be paid for by the firms wishing such services.

The first ferry, operated by steam was between New York and Brooklyn, 1824.

The first printing press was put up at Cambridge, Mass., by Stephen Daye, in 1639.

### THREE-MAN SAWMILL

The man who says there is no chance in this country for an ambitious fellow to get into business for himself should study this picture.

The three men shown below, cut from ten to fifteen thousand feet of fir ties each and every working day. A single circular on the head rig and a trim saw complete the manufacturing equipment. Small second growth trees are used, which are cut on two sides and then peeled. The output looks just like the hewed article. Paul Willrich on the reader's right is the owner of the mill. R. Johnson and Homer Boronee are his two helpers.

The mill is located about three miles north of Napavine, Win.

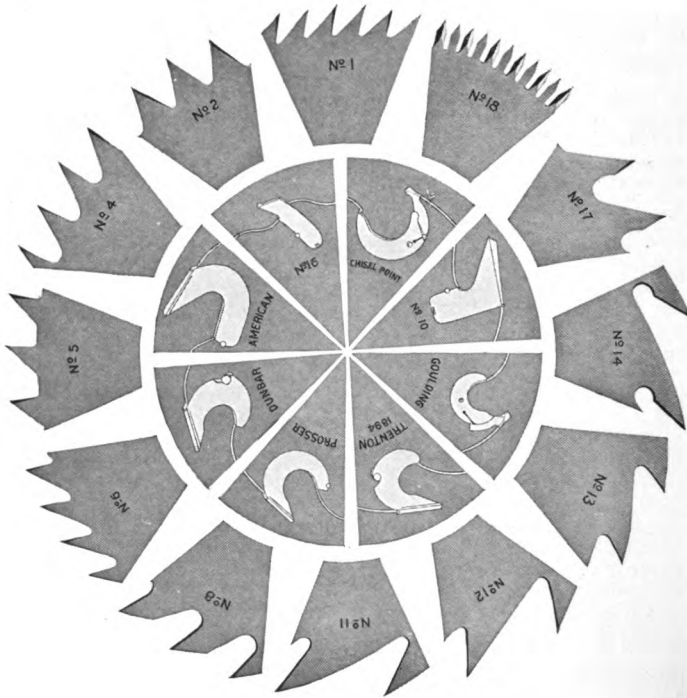
—Cut and Text from 4L Bulletin.



Paul Willrich's Three-Man Sawmill

## STYLES OF TEETH FOR CIRCULAR SAWS

Reprint from the *Disston Lumberman's Handbook*



Circular Saws are made with numerous styles and sizes of teeth, both in the solid tooth and inserted tooth types. The illustration above gives the styles of teeth most generally used. From this collection of styles can be selected a tooth adaptable to almost any kind of wood, condition or purpose. But should occasion arise demanding a special pattern, Disston will furnish it upon request. All of these styles of teeth have stood up under the severest test and can be counted on to give complete satisfaction.

However, the best saw that could be made would not manufacture lumber in a satisfactory manner, nor be safe from possible vital injury unless kept properly set and sharpened. It is therefore very necessary that all saws should be kept in the best possible condition. The contrary is too often the case. The

most general cause of trouble is a dull or improperly fitted saw.

### Solid Tooth Saws

Teeth Nos. 2, 4, 5, and 17 are for cross-cutting.

Nos. 11, 12, 13 and 14 for ripping.

Nos. 1, 6, 8 for cross-cutting or ripping.

No. 18 for mitreing or cross-cutting.

### Inserted Tooth Saws

The Chisel Point is the best form of inserted tooth for general mill use.

No. 10 is used principally on the Pacific Coast.

No. 16 is used for thin saws, re-sawing, etc. The American, Trenton, Prosser, Dunbar, and Goulding are styles formerly made by the American Saw Company.



### Resaw Fitting

This article is written to help some operator who is learning "the game."

The importance of true, even tensions, and evenly swaged teeth cannot be over-emphasized: by all means, watch the back edges of your bands. All these things combine to make possible the least work and eliminate the abuse of your saws to a great extent. It is necessary to keep the band wheels true because if they become out of line, you may be running in a twist, which causes them to lead one way or another. The feed rollers must be kept in line with the saw.

It is necessary to keep the saw clean and cool, especially if the stock run is kiln-dried. A good lubricant may be found in using one part of machine oil and two parts of coal oil.—*J. A. D. in Yates Quality.*

### Kolambugan Lumber and Development Company

(Continued from Page 92)

cabinetwoods. The capacity of the mill is twenty million feet a year.

Mr. Blackhart, a full-blooded American "boy" is the expert filer of this mill. He used to file and saw in mills situated along the Atlantic Coast in the United States of America. For the past five and one-half years he has been in the Philippines, and likes the country very much. He writes that there "is a big future for the lumber industry in the Philippines."

Mr. Blackhart was quite courteous to our Mr. A. S. Hunt, during his recent visit to the Philippines, which was appreciated by both the firm and Mr. Hunt, who unite in wishing him abundant success during the year 1923.

### A COMING LUMBERMAN RIDING HIS PET HOBBY (?)

Time will tell. This cut simply shows one of the freaks of nature we read so much about, but of which we see so little. It is really a trunk of a tree grown into the approximate shape of a horse. It is located in the woodyard of the Huntington estate at Santa

Barbara, California. Mr. Huntington, owner of the estate, is the purchaser of the famous "Blue Boy" painting. It cost him \$480,000, and had just arrived at the time this photograph was taken, March 27, 1922.—From the *American Forestry Magazine.*



A Tree Trunk Resembling a Horse



## SAWDUST

"Did your brother have any luck when he was hunting tigers in India, John?"

"Yes, sir, great luck—he never met any."

Mamma: "Where have you been, Johnnie?"

Small Boy: "Playing ball."

Mamma (severely): "But I told you to beat the rug, didn't I?"

Small Boy: "No, ma'am, you told me to hang the rug on the line and then to beat it."—*California Farmer.*

### THE POOR FISH

An ardent angler took a friend fishing. He knew nothing of the gentle art, but was set up with the necessary tackle and a nice, comfortable seat on the bank.

The experienced hand started fishing a few yards higher up stream.

Presently the novice said, "How much do those red things cost?"

"I suppose you mean the float?" said the angler, "That costs about ten cents."

"Well, I owe you ten cents," said the novice, "The one you let me take has sunk."

### A LINCOLN ANECDOTE

A commercial agency requested a report on the financial standing of a neighbor of Abraham Lincoln, and Lincoln replied:

"I am well acquainted with Mr. A—, and know his circumstances. First of all, he has a wife and baby; together, they ought to be worth \$50,000 to any man. Secondly, he has an office in which there is a table worth \$1.50 and three chairs worth, say \$1. Last of all, there is, in one corner, a large rat-hole which is worth looking into."

Young Lady: "Were you pleased with the new school, little boy?"

Little Boy: "Naw! They made me wash me face an' when I went home de dorg bit me 'cause he didn't know me."

"Hobo, did you notice that pile of wood in the yard?"

"Yes'm, I seen it."

"You should mind your grammar. You mean you saw it."

"No'm. You saw me see it, but you ain't seen me saw it."

In a case tried in a Western court a stonemason was called to describe the way in which he had been assaulted by the defendant. "He walked right into me," the witness said, "and slammed me against one of my own tombstones."

"Were you hurt?" inquired the court.

"Was I hurt, judge! Why, I've got 'Sacred to the Memory of' stamped all the way down my back!"

—*Country Gentleman.*

### CHECKING UP

Roy Simpson, negro laborer, was putting in his first day with a construction gang, whose foreman was known for getting the maximum amount of labor out of his men. Simpson was helping in the task of moving the right-of-way and all day long he carried heavy timbers and ties until at the close of the day he was completely tired out. Came quitting time. Before he went he approached the boss and said:

"Mister, you sure you got me down on the payroll?"

The foreman looked over the list of names he held. "Yes, he said finally, "here you are—Simpson—Roy Simpson. That's right, isn't it?"

"Yaas, suh, boss," said the negro, "dass right. I thought mebbe you had me down as Samson."—*Forbes Magazine.*

# DISSTON

## SAWS TOOLS FILES



A simple explanation of the enormous demand for Disston Cross-cut Saws:—

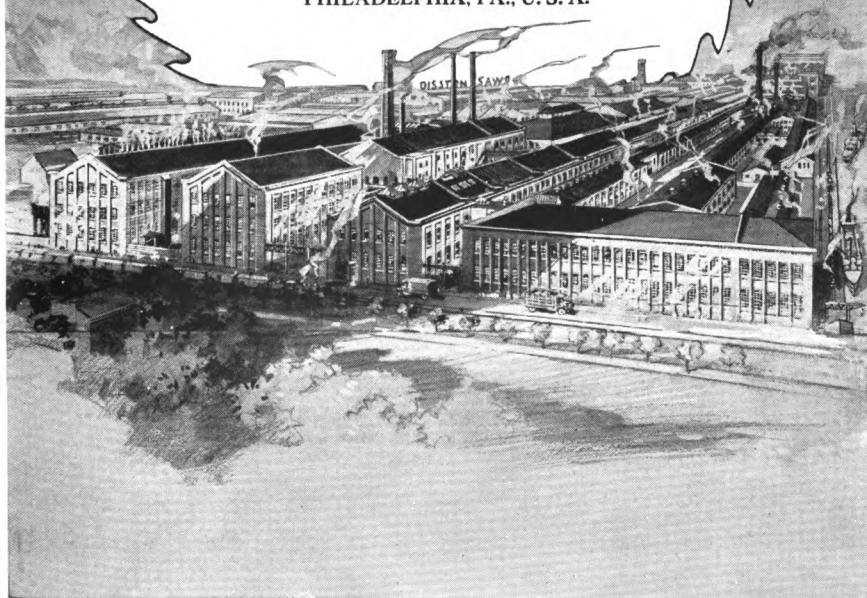
### WHAT

More strokes per minute  
More logs per day  
Fewer trips to the filer  
Less strain on the back and arm muscles.

### WHY

The quality of the famous steel  
Made in the Disston Plant  
The expert workmen  
Trained in Disston methods  
The experience of generations  
In the largest saw house in the world.

**HENRY DISSTON & SONS, Inc.**  
PHILADELPHIA, PA., U. S. A.



---

## Every Item on this List—

is just as good as the Disston products you are now using. Check off the things you use and the next time you buy specify "Disston"—you'll get that same satisfaction you have come to expect from Disston products.

---

### Back Saws

### Band Saws for Wood and Metal



Bevels  
Buck Saws  
Butcher Saws and Blades  
Cabinet Scrapers

### Chisel Tooth Circular Saws

### Circular Saws for Wood,

Metal, and Slate

### Compass Saws

### Concave Saws, Circular.

### Cross-cut Saws

### Cut-off Saws

### Cylinder Saws

### Dovetail Saws

### Drag Saw Blades

### Edger Saws

### Files and Rasps

### Filing Guides

### Gang Saws

### Gauges, Carpenters' Marking

### Grooving Saws

### Hack Saw Blades

### Hack Saw Frames

### Hand, Panel, and Rip Saws

### Hedge Shears



Ice Saws  
Inserted Tooth Circular  
Saws  
Keyhole Saws

### Kitchen Saws

### Knives—Cane, Corn, Hedge

### Knives—Circular—for Cork, Cloth,

Leather, Paper, etc.

### Knives—Machine

### Levels—Carpenters' and Masons'

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### Machetes



### Mandrels

### Metal-slitting Saws



### Milling Saws for Metal

### Mitre-box Saws

### Mitre Rods

### Nest of Saws

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### Saw Screws

### Screw Drivers

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### Shingle Saws

### Siding Saws

### Slate Saws, Circular

### Squares, Try and Mitre

### Stair Builder Saws

### Stave Saws

### Straight Edges

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### Tools for Repairing Saws

### Tool Steel

### Trowels—Brick, Plastering,

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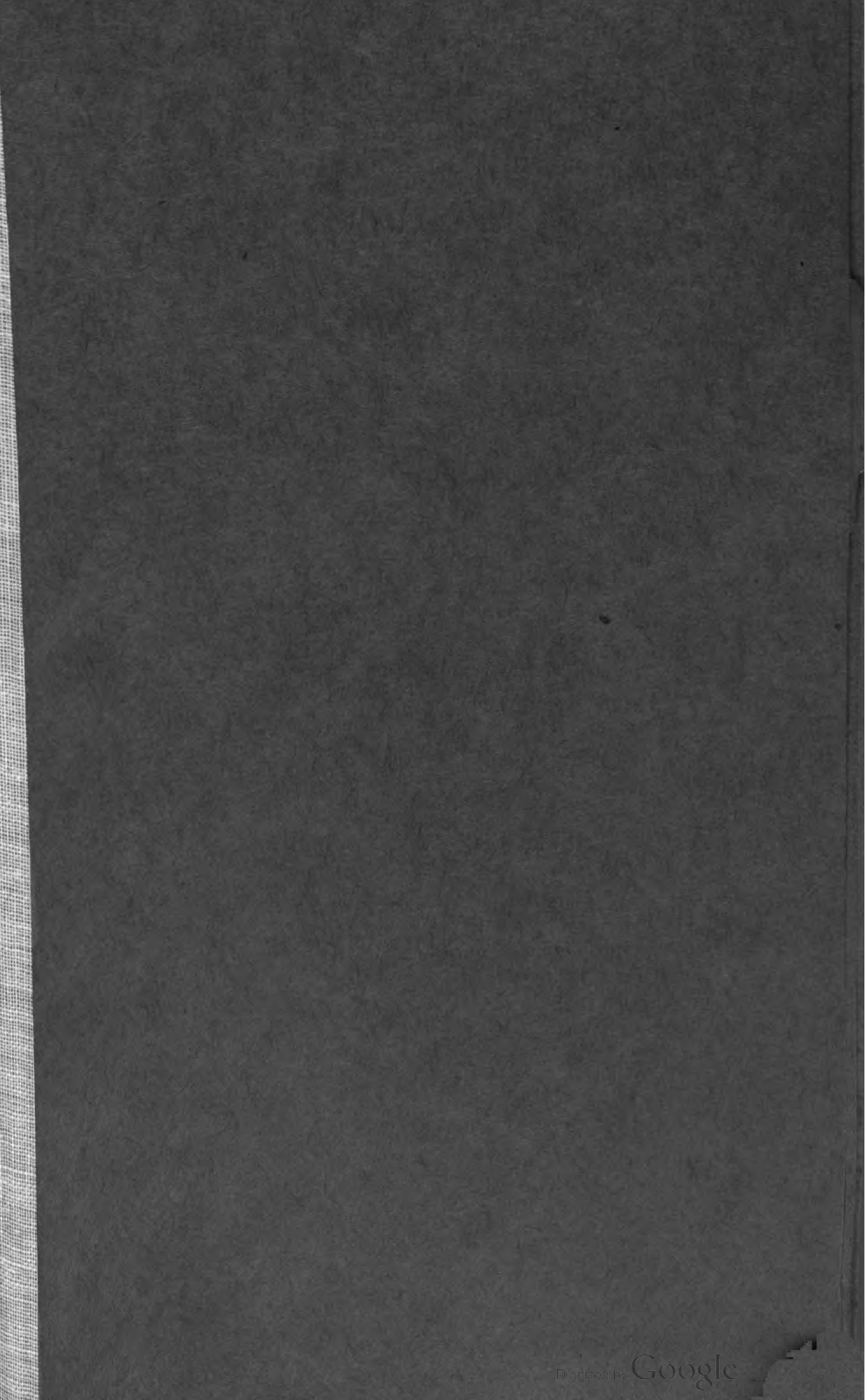
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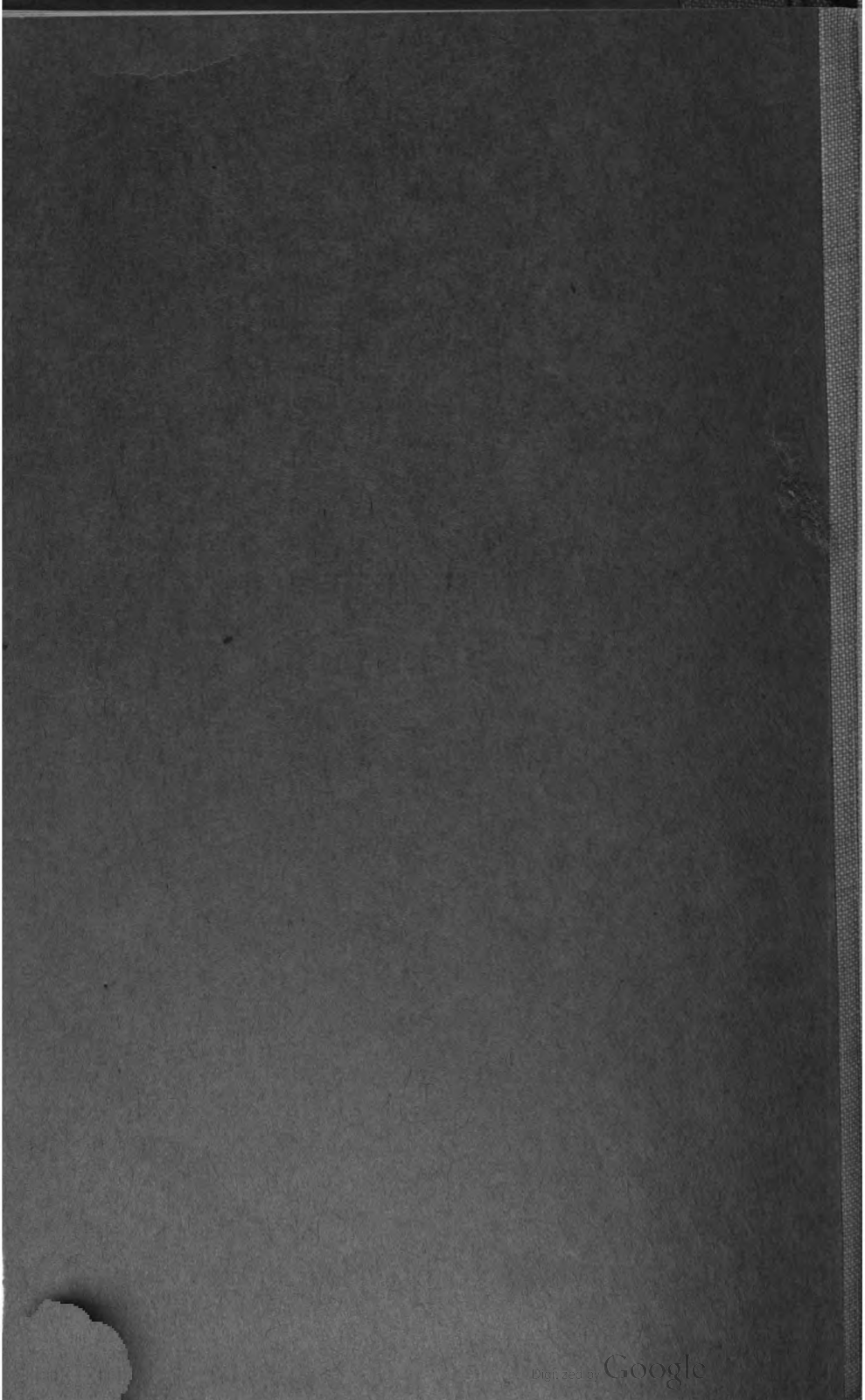
# DISSTON

## SAWS TOOLS FILES













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