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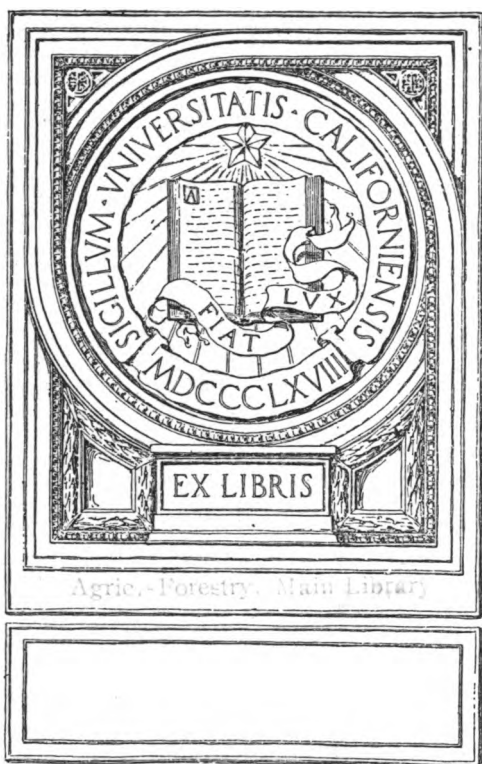
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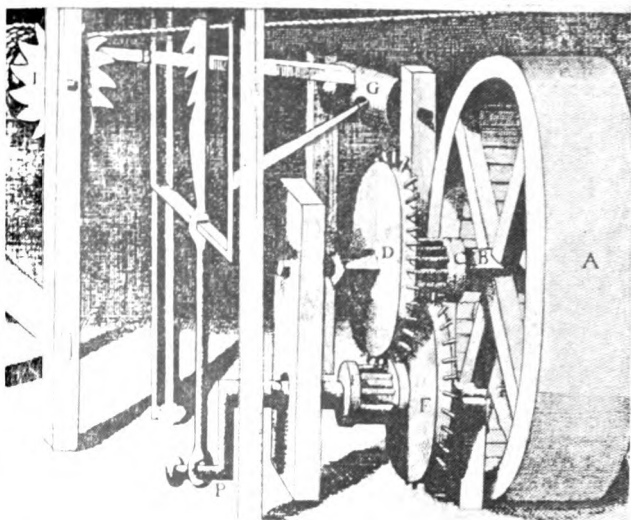
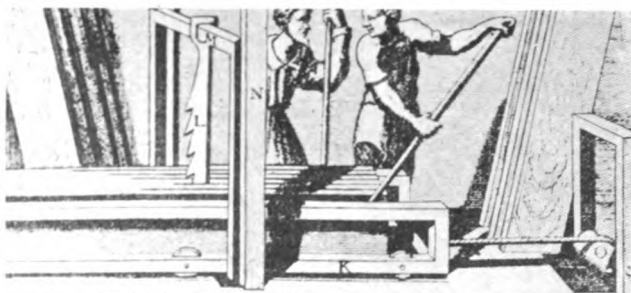
# THE DISTON CRUCIBLE



**FEBRUARY**

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**1918**



### OLD TIME MILLS. No. 2

From the hand driven mill there developed the foot power apparatus with additional gears giving greater power. A man is supposed to be in the large wheel working it, treadmill like.

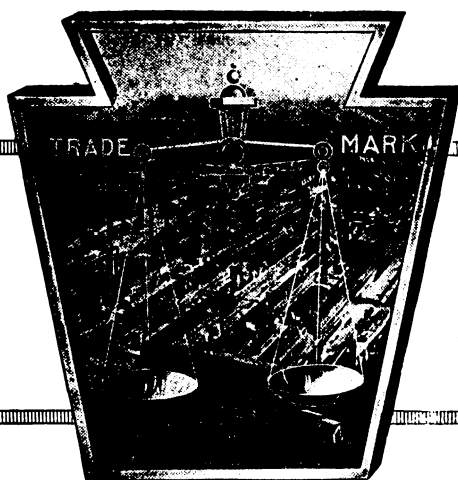
# THE DISSTON CRUCIBLE

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

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INCORPORATED

**Keystone Saw, Tool, Steel, and File Works**  
**PHILADELPHIA**

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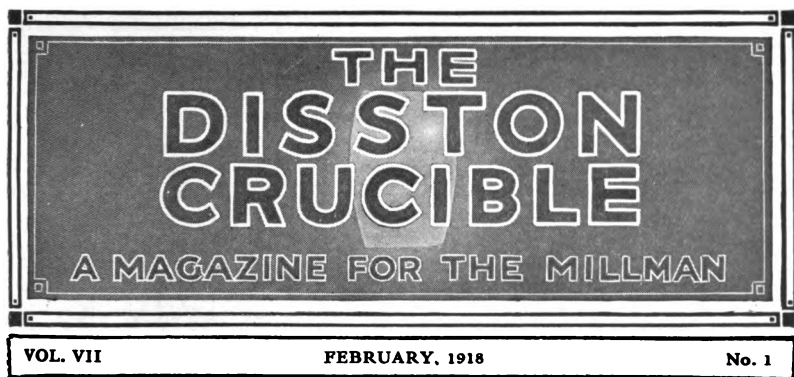
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FISHER	ROONEY	BIEMULLER	SHIELDS	DORSEY
PEGLE	KUNSTMAN	MAJOR BRADY	LEWIS	ROGERS

Major Brady and his Junior Staff  
 Field Hospital Co. No. 110, Camp Hancock, Ga.  
 "SOME DISSTON BOYS"



## EDITORIAL CHAT

### Sentiment in Business

**C**ONTINUED success in business depends upon the loyalty and zeal of everyone connected with it, not merely on the part of the employed, but the employer as well, for it is he who must inspire and foster the feeling that the welfare of all rests upon the personal interest taken by each in his individual task.

Employees are human, their actions governed by mood, physical condition and circumstances, but in the main they are honest, sincere and willing, quickly responding to the treatment and consideration accorded them.

Every establishment must have its workers. No mechanical device can ever be invented to entirely displace or control them, for, being mechanical, its results are limited, but who can place a limit on the achievements of a resourceful corps of employees, satisfied, contented and thoughtful by reason of known appreciation of effort—which is simply the outcome of sentiment applied and expressed.

A business without sentiment surely is one without life.

*Quality  
Sells*

***The "Crucible," with this issue, enters the Seventh Year of its life.***

## Leadership

**T**HE following article appeared in the Sunday Magazine of *The Philadelphia Press*, and while the address was made by Major C. A. Bach, U. S. A., to the men commissioned as officers in his battalion, it is the best composition on "Leadership" ever recorded and its spirit applies equally as well to civilians in their daily occupations:

In a short time each of you men will control the lives of a certain number of other men. You will have in your charge loyal but untrained citizens, who look to you for instructions and guidance.

Your word will be their law. Your most casual remark will be remembered. Your mannerisms will be aped. Your clothing, your carriage, your vocabulary, your manner of command will be imitated.

When you join your organization you will find there a willing body of men who ask from you nothing more than the qualities that will command their respect, their loyalty and their obedience.

They are perfectly ready and eager to follow you so long as you can convince them that you have these qualities. When the time comes that they are satisfied you do not possess them you might as well kiss yourself good-by. Your usefulness in that organization is at an end.

From the standpoint of society, the world may be divided into leaders and followers. The professions have their leaders, the financial world has its leaders. We have religious leaders, and political leaders, and society leaders. In all this leadership it is difficult, if not impossible, to separate from the element of pure leadership that selfish element of personal gain or advantage to the individual, without which such leadership would lose its value.

It is in the military service only, where men are willing to suffer and die for the right or the prevention of a great wrong, that we can hope to realize leadership in its most exalted

and distinguished sense. Therefore, when I say leadership, I mean military leadership.

In a few days the great mass of you men will receive commissions as officers. These commissions will not make you leaders; they will merely make you officers. They will place you in a position where you can become leaders if you possess the proper attributes. But you must make good—not so much with the men over you as with the men under you.

Men must and will follow into battle officers who are not leaders, but the driving power behind these men is not enthusiasm but discipline. They go with doubt and trembling and with an awful fear tugging at their heart-strings that prompts the unspoken question, "What will he do next?"

Such men obey the letter of their orders, but no more. Of devotion to their commander, of exalted enthusiasm which scorns personal risk, of their self-sacrifice to insure his personal safety, they know nothing. Their legs carry them forward because their brain and their training tell them they must go. Their spirit does not go with them.

Great results are not achieved by cold, passive, unresponsive soldiers. They don't go very far and they stop as soon as they can. Leadership not only demands but receives the willing, unhesitating, unfaltering obedience and loyalty of other men; and a devotion that will cause them, when the time comes, to follow their uncrowned king to hell and back again if necessary.



## THE DISSTON CRUCIBLE

You will ask yourselves: "Of just what, then, does leadership consist? What must I do to become a leader? What are the attributes of leadership, and how can I cultivate them?"

Leadership is a composite of a number of qualities. Among the most important I would list self-confidence, moral ascendancy, self-sacrifice, paternalism, fairness, initiative, decision, dignity, courage.

Let me discuss these with you in detail.

Self-confidence results, first, from exact knowledge; second, the ability to impart that knowledge; and, third, the feeling of superiority over others that naturally follows. All these give the officer poise.

To lead, you must know—you may bluff all your men some of the time, but you can't do it all the time. Men will not have confidence in an officer unless he knows his business, and he must know it from the ground up.

The officer should know more about paper work than his first sergeant and company clerk put together; he should know more about messing than his mess sergeant; more about diseases of the horse than his troop farrier. He should be at least as good a shot as any man in his company.

If the officer does not know, and demonstrates the fact that he does not know, it is entirely human for the soldier to say to himself, "To hell with him. He doesn't know as much about this as I do," and calmly disregard the instructions received.

There is no substitute for accurate knowledge. Become so well informed that men will hunt you up to ask questions; that your brother officers will say to one another, "Ask Smith—he knows."

And not only should each officer know thoroughly the duties of his own grade, but he should study those of the two grades next above him. A twofold benefit attaches to this. He prepares himself for duties which may fall to his lot at any time during battle; he further gains a broader viewpoint which enables him to appreciate the necessity for the

issuance of orders and join more intelligently in their execution.

Not only must the officer know but he must be able to put what he knows into grammatical, interesting, forceful English. He must learn to stand on his feet and speak without embarrassment.

I am told that in British training camps student officers are required to deliver ten-minute talks on any subject they may choose. That is excellent practice. For to speak clearly one must think clearly, and clear, logical thinking expresses itself in definite, positive orders.

While self-confidence is the result of knowing more than your men, moral ascendancy over them is based upon your belief that you are the better man. To gain and maintain this ascendancy you must have self-control, physical vitality and endurance and moral force.

You must have yourself so well in hand that, even though in battle you be scared stiff, you will never show fear. For if you by so much as a hurried movement or a trembling of the hands or a change of expression, or a hasty order hastily revoked, indicate your mental condition, it will be reflected in your men in far greater degree.

In garrison or camp many instances will arise to try your temper and wreck the sweetness of your disposition. If at such time you "Fly off the handle" you have no business to be in charge of men, for men in anger say and do things that they almost invariably regret afterward.

An officer should never apologize to his men; also an officer should never be guilty of an act for which his sense of justice tells him he should apologize.

Another element in gaining moral ascendancy lies in the possession of enough physical vitality and endurance to withstand the hardships to which you and your men are subjected, and a dauntless spirit that enables you to not only accept them cheerfully but to minimize their magnitude.

(To be Continued)

# THE DISSTON CRUCIBLE

## Some Excuse!!

I should have written you long ago, George, but the remaining reasons why I have not written before are: that I have been held up, held down, sand-bagged, walked on, sat on, rolled over, flattened out, and squeezed, etc., first by the U. S. Government for the federal tax, war tax, excess profits tax, Liberty bonds, and the bonds of matrimony, by Maine for the state tax, highway tax, insane tax, auto tax, chauffeur tax, lead, iron and carpet tax, personal tax, school tax, taxi cabs and the syntax (sintax) and by every society and organization the inventive mind of man can invent to extract what you may or may not possess, from the Society of John the Baptist to the society to prevent the interference of husbands from maintaining other men's wives, including the G. A. R., the Woman's Relief corps, the man's relief, the stomach relief, the wifeless, the husbandless, the childless, the fatherless, the motherless, the homeless and the conscienceless, the Red Cross, the Green Cross, and every other cross of all colors, shapes and sizes until I feel that I am on the cross and get cross, and by the Y. M. C. A., and Y. W. C. A., and the Y. R. U. S. O. D. A. R. N. M. E. A. N. And because I will not sell all that I have and then go out and beg, borrow and steal, I have been cussed, discussed, boycotted, talked to, talked about, lied to, lied about, held up, hung up, robbed, ravished and nearly ruined, and the only reason that I am still clinging to life is to see what the H—— is coming next.

—Otters.



PUT YOUR SHOULDERS TO THE WHEEL.

—Donnell in the St. Louis Globe-Democrat.

## Paper Makers

**T**HE views shown on following pages are of the Anglo-Newfoundland Development Company, Grand Falls, N. F. The photo of the trainload of paper was taken by Mr. W. E. Bell at Batwood, where all paper is loaded on steamers for England or America. Many thousands of tons of paper are stored at Batwood for shipping.

Batwood is about twenty miles from Grand Falls. The Anglo-Newfoundland Development Company have their own railroad for hauling. This makes regular trips every day and has one passenger car, and also carries mail.

This mill is considered one of the largest in the world. When running to capacity, can turn out over 200 tons of newspaper print per day, in addition to making about 250 tons of sulphite pulp at the same time.

The company has extensive timber limits, and runs a saw mill that cuts about 5,000,000 feet of lumber each summer, mostly pine.

Lord Northcliffe is head man, and has very great confidence in all his employees, who seem to even have a greater amount of respect for him, mostly due to his kindness towards each individual.

Harmony prevails through the entire force of men.

Grand Falls is located about the center of the Island and has a population of some 7,000, all of whom are employed in some way in the Anglo-Newfoundland Development Company.

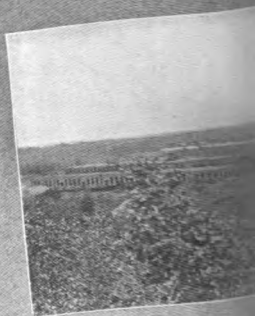
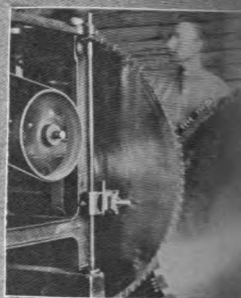
The company owns everything and has furnished the people with churches of each denomination, also good schools for each.

They have a nice up-to-date hospital that is well looked after.

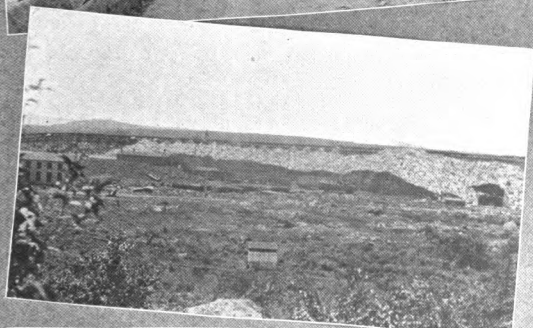
Mr. Scott is General Manager; Mr. Tom Judge, Assistant General Manager; Mr. Mark Davis, Superintendent of Wood Room; Mr. I. Morgan, Purchasing Agent.

The company usually carries a half million dollars' worth of supplies in its general store.

They have used many other kinds of knives and saws, but it is acknowledged by everyone in connection with the cutting up or chipping wood, that best results are obtained by Disston Saws and Knives, the kind they now use.



**Views of the Anglo-New  
Grand Falls**



Land Development Co.  
Soundland

## THE DISSTON CRUCIBLE



JOHN PAUL

As time creeps on, one by one our old and faithful employes pass away.

It is with extreme regret we announce the death of John Paul, on Thursday, January 24, 1918, at the age of 81 years.

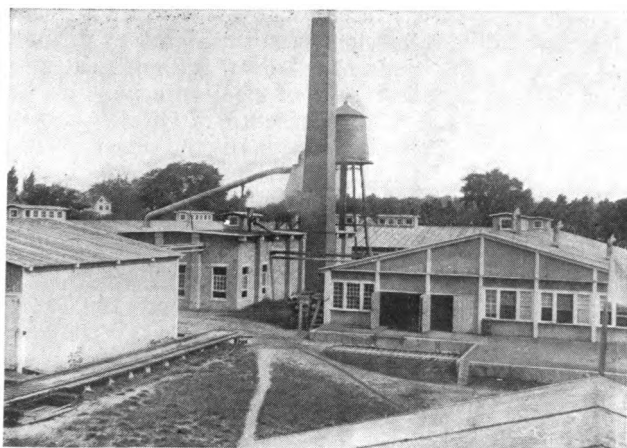
For sixty-four years John Paul was on the payroll of the Disston Works.

In 1854, when seventeen years old, he entered the employ of Henry Disston, the founder of the Disston Saw Works. In the course of time he advanced from bench-hand to foremanship of a department, serving continuously until 1908, at which time he was pensioned.

Of the Paul family, six were in the Disston employ for years—the fathers and sons giving up to that grim reaper—Time—but leaving a grandson to represent them in the work of saw making.

It is to the men like John Paul, loyal, conscientious and skilled in their craft, whose very reliability is embodied in the goods they make that credit is due and given for the high prestige achieved.

## A Table Factory Built for the Business



THE business of table manufacture in New England is confined to a comparatively small number of shops, perhaps one or two in each State, and these tables of sturdy Yankee manufacture hold their own in every variety of design and thoroughness of construction and finish with the similar products of any group of States in the Union. If anyone is inclined to the belief that New Hampshire is struggling along making pedestal extension tables with antiquated methods and out-of-date machinery, a visit to the plant of the Indian Head Table Co., Nashua, N. H., will quickly convince him to the contrary.

As will be noted in the photo, the factory is of single-story construction and built in the form of a hollow square. The lumber, which is brought to the yard on spur track, passes through a

modern moist-air drykiln, which has a capacity of twelve-yard carloads at a time, and from thereon a system of transfer tracks to the west wing of the factory, where the machines are located. All these machines, which include power-feed band rip saws, Linderman dove-tailing joint machine, Mattison turning lathe, belt sanders, etc., are advantageously placed to insure the greatest efficiency with the least work.

By the time the stock has traversed the length of both wings it is ready to ship as finished tables, over the same transfer tracks to the cars conveniently placed on the siding. In its transmission it has deviated very little from a straight line, nor have the workmen been obliged to transfer it from one story to another, with more or less labor and loss of time.

*(Continued on page 13)*

## Large Circular Saws—Steam Feed

**O**PERATORS of saw mills using steam feeds are, very naturally, interested in the question as to what make of saw will give them the best results.

A large percentage of the fastest circular mills in this country, mills which cut from 50,000 to 300,000 feet of lumber per day of ten hours, are using Disston saws. The operators of these mills know why this make of saw is desirable for this intensely severe work. To those operator not at present using Disston saws, the following will be both interesting and profitable:

The large circular is the main artery of a mill of this character. Everything is behind it, and every minute of lost time must be multiplied by the number of the entire crew. It is not only necessary that it operate every moment of the day, but also that it produce the maximum capacity of true, well-sawed lumber. To accomplish this, the very best saw obtainable is essential.

In Disston solid tooth circular saws will be found all the qualities necessary to insure successful results.

The most important feature of a fast-feed saw is the character of the steel put into it. This material must be of high quality and of such a nature as to be particularly adapted to the work that the saw is to do—for example—while the material put into Disston metal cutting saws is of the highest quality and perfectly

adapted for metal cutting, this material would not be suitable for use in a lumber cutting saw.

Now the fact that every pound of steel entering into the manufacture of Disston saws is made in the Disston Steel Works, located inside of the walls of the Disston factory, insures the use, in every instance, of material which will suit the work for which the saws are intended.

Please note the fact that the Steel Works and the Saw Factory are within the same walls. The two departments are in constant touch with each other, and the co-operation resulting aids in the production of those splendid circular saws which are standing up to the work day after day in the fastest mills of the country, under the most severe conditions, making good, true, smoothly cut lumber.

It is the quality of holding the corners—of not dulling rapidly—which makes Disston saws economical, for it must be borne in mind that saws are worn out more in the sharpening processes than in the cutting; therefore, when they come off the mandrel at changing time reasonably sharp, they last longer than those which require excessive grinding, because of crumbling teeth or lost corners.

Expert filers like to see Disston saws come into the mill because the tension is put in properly and, it is rarely necessary to readjust the tension to suit the mill.

The Disston method of tensioning large circulars is the combined



## THE DISSTON CRUCIBLE

knowledge of hundreds of competent and successful filers; for years have been spent in collecting this data, and when proper information as to speed, feed and capacity is given when order is placed it is possible to put the saws on and run them, just as they come from the factory. The tension is put in in such a manner that if a change is desired it can be made with the minimum amount of work on the anvil. This is a very desirable feature of DISSTON FAST-FEED SAWS.

This feature adds to the life of a saw, for the more hammering a saw is given, the shorter its life will be—many cases of broken saws may be charged to the changes in tension the filer was obliged to make in his endeavor to make them run.

The Disston plan of fitting the teeth is along the lines of good mill practice. A filer does not find it necessary to regrind and resaw Disston saws three or four times to get them in shape to slab well and hold corners. The knowledge of mill practice in this particular, as well as in adjusting the tension is not entirely from a saw factory, but also from a mill standpoint.

There are many other reasons why you, Mr. Saw Mill Man, want to know Disston saws more intimately and Henry Disston & Sons, Inc., will be glad to have you write them what your saw problem is and will help solve it for you.

If you wish the names and addresses of some fast mills using Disston saws, they will be mailed to you on application.



This picture shows the curious and peculiar manner in which a Disston Bandsaw broke in Bathurst Lumber Co.'s Mill No. 2. All twisted up, and the filer says he never saw the beat of it for toughness

### A Table Factory Built for the Business

*(Continued from page 11)*

The power for this plant is supplied by a 160-h.p. boiler and a 150-h.p. engine, Corliss type, directly connected to an alternating-current generator, which supplies the power for the machinery, each machine being driven by an individual motor. The rooms in the factory are high-posted, well-lighted and ventilated, which plays an important part in producing good furniture and contented men.

Mr. R. D. Fletcher is president and treasurer of this progressive concern. In line with his efficiency ideas, he is using only Disston saws throughout the plant.

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

## Timber Sales of National Forests Doubled in Last Year

WASHINGTON, December 21.—Sales of National Forest timber in the fiscal year 1917 were more than double those of 1916, according to the Annual Report of the Forester. The total amount sold exceeded two billion feet and is valued at more than \$3,745,000. During the same period about 727 million feet were cut and removed, for which the purchasers paid \$1,507,303 into the Federal Treasury. The largest sales were made in Oregon, where about 688 million board feet were disposed of.

In addition to the timber sold, approximately 113 million board feet, valued at almost \$150,000, were cut under free use permit by more than 41,000 settlers living near the National Forests and depending on the Forests for firewood and building material to improve their homesteads.

The timber business on the Eastern Purchase Areas, while still small as compared with the Western Forests, showed a decided increase, the report states. More than three times as much timber was sold and more than twice as much cut as in 1916. The material disposed of, it is pointed out, is largely of poor quality, and its removal will improve the forest growth.

## WAR'S LESSONS ARE ALWAYS GOOD

Sociologists and political economists throughout the country are emphasizing the fact that those qualities which are needed to make a nation effective in war are exactly the qualities which will make it most efficient in time of peace.

The President, in his various expressions and messages, has pointed out that what we need during war time is:

Economy, conservation of energy, preservation of health, elimination of waste, righteous living, abolition of speculation and gambling in the necessities of living, fair prices and profits for all, high ideals, temperance in all things.

Each of these qualities and principles are necessary to a nation if it is to reach its highest efficiency and usefulness in time of peace. War has merely served to bring to the surface the fact that this country,

because of its prosperity and good fortune, was in danger of forgetting the cardinal virtues.

The war, therefore, will be beneficial to every American in his daily manner of living long after the fighting is over.—*Popular Magazine*.

## ALCOHOL FROM SAW DUST

A process for producing alcohol from saw dust is offered by the Forest Products Laboratory, Madison, Wis. One ton of dry saw dust worth not more than 50 cents a ton will produce 15 to 25 gallons of 190-proof spirit. A plant large enough to distill 2,500 to 3,000 gallons daily can make alcohol at a cost of 14 to 20 cents a gallon, according to this laboratory's estimate.

There are a whole lot of ways to acquire a black eye. But you can't make a man believe that you didn't get yours the way he thinks you did.—*Bulletin*.

# DISSTON'S NEW CROSSCUT SAWS

These saws are particularly designed for Pacific Coast timber and embody the suggestions of practical logging foremen and expert filers.

No. 498

No. 499

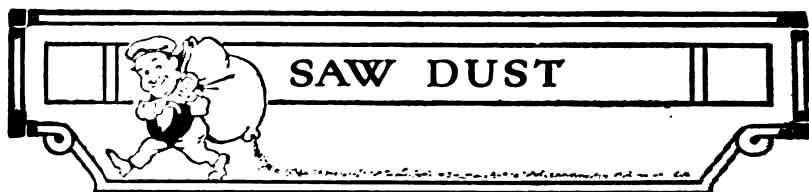
They are ground even in thickness on tooth-edge, tapering on proper lines to thin-back. The clearance is especially adapted for work in cutting big timber.

The blades are of Disston high-quality crucible steel, specially tempered. For set and edge-hold-qualities they are unequalled.

**HENRY DISSTON & SONS**

Incorporated

KEYSTONE SAW, TOOL, STEEL & FILE WORKS  
PHILADELPHIA



### CONTAINING SEASONABLE WISDOM

"Did you order a ton of coal?"

"I did not. I put my request for one respectfully on file."

"My wife watches the sugar market closely."

"Speculating?"

"In a small way. She borrows when it's high and pays back when it's low."

"I say, who was here with you last night?"

"Only Myrtle, father."

"Well, tell Myrtle she left her electric cigar lighter on the piano."

—*The Mirror*.

"Well, you see, sir," replied the foreman, "it was this way. Bill went into the powder mixing room, probably thinking of something else, and struck a match in mistake. He—"

"Struck a match!" exclaimed the proprietor in amazement. "I should have thought that would have been the last thing on earth he'd do!"

"It was, sir," was the calm rejoinder.—*The Yellow Strand*.

### A DISTINCTION

Young Hopeful: "Father, what is a traitor in politics?"

Veteran Politician: "A traitor is a man who leaves our party and goes over to the other one."

Young Hopeful: "Well, then, what is a man who leaves his party and comes over to yours?"

Veteran Politician: "A convert, my son."—*Tid-Bits*.

A sad looking man at the corner table in the restaurant had been waiting a long time for the fulfillment of his order. Finally, the waiter approached and said: "Your fish will be coming in a minute or two now, sir."

The sad man looked interested. "Tell me," he said, "what bait are you using?"—*Exchange*

### A DISAGREEABLE JOB

A washerwoman applied for help of a gentleman, who gave her a note to the manager of a certain club. It read as follows: "Dear Mr. X.:—This woman wants washing."

Very shortly afterwards the answer came back: "Dear Sir:—I dare say she does, but I don't fancy the job."

—*The Kilgore Pi-Box*.

### OLA

Blithely beautiful was Ola:

She could play the pianola.

Listen to the big victrola,

Cook meals by a kitchenola,

Get hats from a millimola.

Dresses from a modistola,

Learned things from a tutorola,

Danced as per a terpsicola,

Won games in a bridgewhistola,

Motored in an automola,

Plays golf with a linkerola,

Thought thoughts with a mentalola.

Wrote things with a chirogrola—

But, alas, unhappy Ola

Couldn't find a husbandola!—*Life*.

The railway board had met to consider the case of old Tom Jones, who in a train accident, had become deaf.

"Well," said the director, "old Tom has been with us a long time now, and we want to find him a new job. What do you suggest?"

"I know," said the chairman. "Let's put him in charge of the complaints department."

He spent his health to get his wealth,

And then with might and main

He turned around and spent his wealth

To get his health again.

—*Bulletin Kansas Board of Health*.

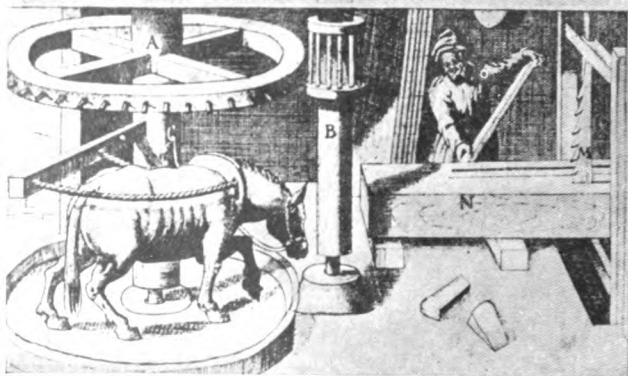
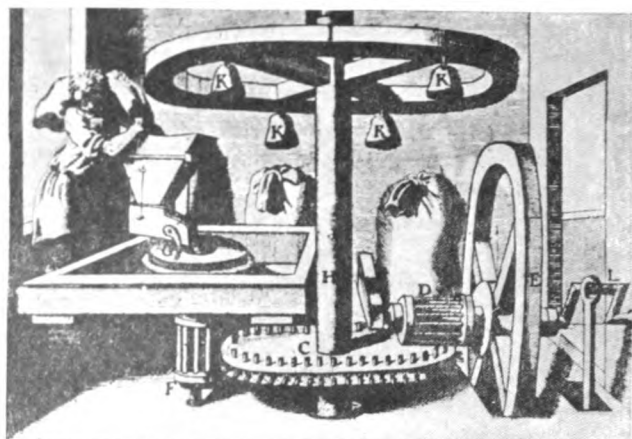
There is a lot of difference between a man with a keen intellect and one who only has a sharp tongue.

# THE DISTON CRUCIBLE



**MARCH**

**1918**



### OLD TIME MILLS. No. 3

An advance, showing not only the development from hand and foot to horse power, but the combination of lumber sawing and grist milling.

# THE DISSTON CRUCIBLE

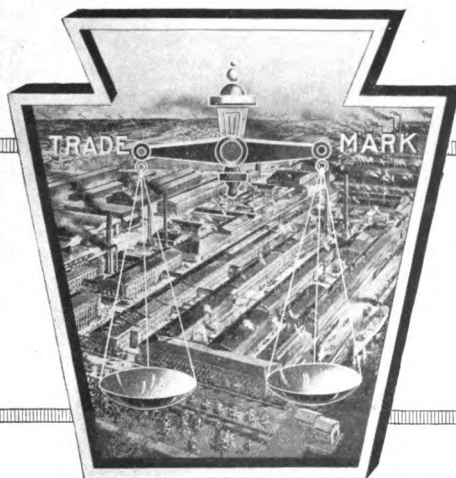
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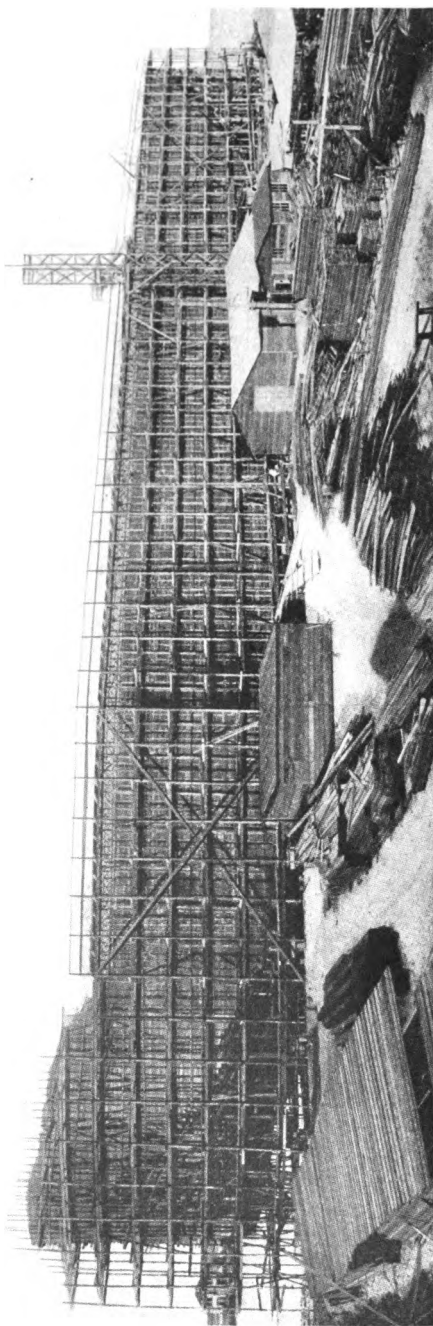
**Keystone Saw, Tool, Steel, and File Works**

**PHILADELPHIA**

BRANCH HOUSES:

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

200  
16

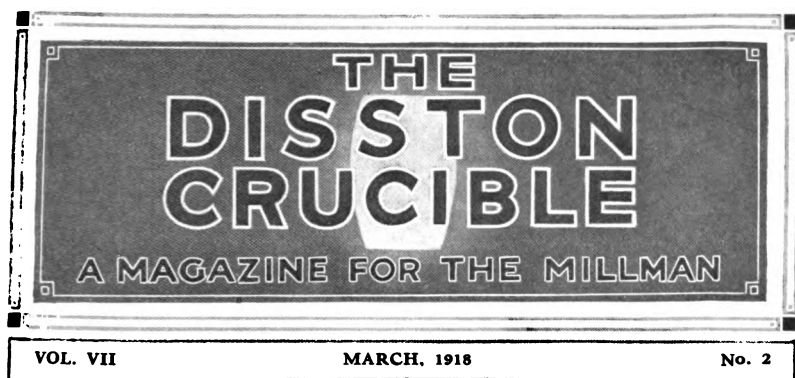


### Mass of Timber Required for the Building of a Concrete Boat

The first big concrete ship built in this country will be launched in the course of a few weeks. It is expected that this interesting event will take place shortly. The vessel is being built at Redwood City, which is on the Southern shores of San Francisco Bay, and it would have been ready for the water a month earlier had it not been for changes made in the plans and the employment of a new naval architect, which caused a delay of about one month. The great mass of woodwork is necessary to make the mold in which the concrete is formed to shape, and an interior view of the vessel would exhibit the great lacework of metal used in reinforcing the bow of the craft.

The ship is 336 feet long over all, 45 feet in beam, and 31 feet deep to the upper deck. The draft loaded will be 24 feet. The ship will be equipped with Scotch marine boilers and 1750-H.P. triple-expansion engines. The speed will be 10 knots. The displacement is figured at 7,900 tons and the dead weight carrying capacity at 5,000 tons. The same company has under way designs for four similar ships of similar construction of 7,500 tons dead weight carrying capacity.





## EDITORIAL CHAT

### Faith

**F**AITH is a mighty factor in the making of progress by mankind. It is the element in the make-up of man—firm belief in himself, in his ideas—which when coupled with study, practical experience and industry brings final accomplishment of purpose.

There are many dreamers, only too numerous are they who have original thoughts, visions of improvements or new devices, but lack sufficient confidence and will power to buckle down to the task of working out the development.

It was first imagination, then faith that led to the discovery of America, faith brought forth the telephone, the wireless, the steam engine, the talking machine, motion pictures, automobiles, flying machines and the hundreds of other things which revolutionized living conditions.

Many are the radical inventions which at first were ridiculed, but the indomitable will and great faith of the inventor in the practicability of his idea caused him to ceaselessly toil even in the face of bitter discouragements until, all obstacles overcome, he gave to the world the creation of his brain in concrete form—enabling his fellowmen to live better, in greater comfort, and with more convenience.

It is likewise with the inception and building up of any industrial or other business. A man's heart must be in his work, his interest based on absolute faith in the ultimate result of his skill and effort.

But "Faith without works is dead."

*Quoting  
Sells*

## The Friar, His Dog and the Iron Cross

By Alice Spencer

(Reproduced from *American Forestry*)

**W**HEN science tackles some of the problems of wood structure the freaks of nature not infrequently have the best of the argument. One of the most difficult things for the scientist to determine is the cause of such peculiarities as are shown in the accompanying illustrations. These freaks are shown with photographic accuracy and have not been retouched or altered in any way.



**The Hooded Friar**

This freak formation was found in a poplar board and shows the extent to which nature will go in varying the monotony of everyday tree growing.

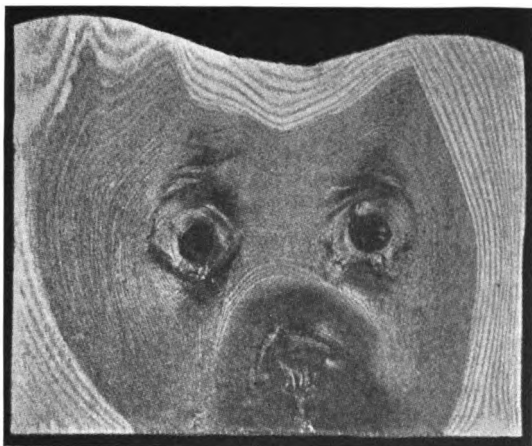
In the first picture is shown a formation found in a poplar board at a Cincinnati upholstery furniture factory. The friar here represented in speaking likeness is considered one of the most interesting freaks of wood structure ever discovered. In the second picture is shown a curiously wrought animal face which might be taken for that of a dog or a hog. For the purpose of classification in a family group it is here chosen to designate it as the Friar's dog. This formation was found in a board cut from a new species of dogwood which was recently discovered by Secretary R. S. Kel-

logg, of the National Lumber Manufacturers' Association.

The singular wood structure shown in the third picture comes from Greenfield, Ohio, and has been the subject of considerable speculation among scientists to whom it has been submitted. The exact cause

## THE DISSTON CRUCIBLE

of the formation has not been determined, but the best opinion seems to be that it resulted from the stripping of the bark of the young tree on four sides. The removal of the bark is supposed to have caused a discoloration which ultimately reached to the very center of the growing trunk, while those portions of the tree where the bark had not been damaged retained their natural coloring. During its years of



**The Friar's Dog**

Those who think this animal looks as much like a hog as a dog must remember that the board in which this picture was found was a piece of dogwood.



**The Iron Cross**

Perhaps the suspicious will think the discovery of this freak structure indicates that German spies are endeavoring to force American forests to supply iron crosses for military decorations. The suspicion is groundless.

growth the tree apparently healed the outer scar by supplying a new covering of bark. This gave the exterior a normal appearance, but left the iron cross in the center for discovery when the trunk should reach a saw-mill.

---

### Some Tree

From one fallen giant tree in a California forest, lumbermen recently got three thousand fence posts, enough to fence in 8,000 acres of ground, and 700,000 shingles, enough to shingle 70 houses. No wonder the lumberman would, if he could, cut all the big trees down!

## The Food Situation

**H**ALF the world depends on the United States for its food. Millions of men in England, Scotland, Ireland, in France, Italy and Belgium, have been taken from peaceful pursuits for making war and munitions. They are gone from the farms. Even before the war, these countries raised less than they ate.

Their need is now greater than ever, their production is less than its want; they are cut off from half the world by the shortage of shipping.

Therefore our associates in this war depend on North America for food as they have never depended before, and they ask us for it with

a right which they have never had before. For today they are our companions in a great war against a common enemy. For the present it is they who are doing the fighting, the suffering, the dying—in our war.

One million of the best young men in the United States will soon be fighting side by side with the millions of brave soldiers of France, Great Britain, Belgium and Italy.

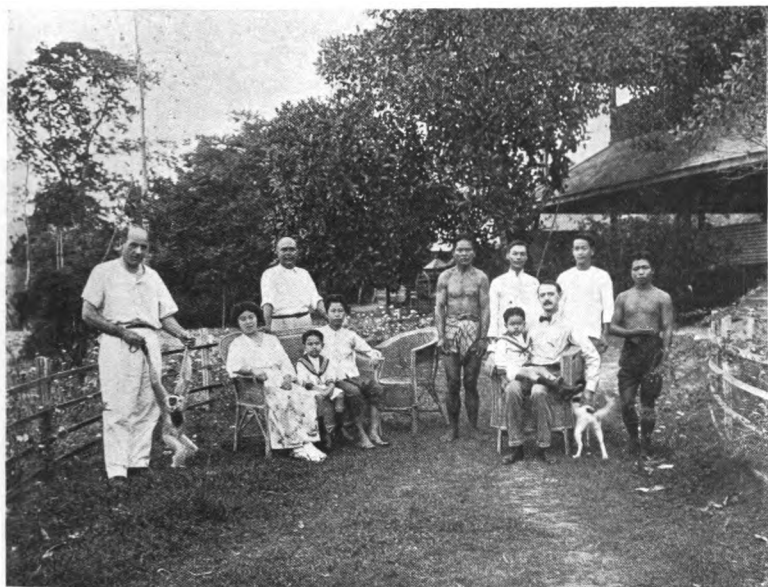
Millions of the men, women and children of the United States can not go abroad and fight the enemy face to face. But they can fight by helping the fighters fight.

**THE UNITED STATES FOOD ADMINISTRATION** asks you to get behind our soldiers, sailors and associates by sending them now the most food possible in the least shipping space. Every man, woman and child in America can help by eating less wheat, beef, pork, fats and sugar, more of other plentiful foods which can not be shipped, and by avoiding waste.

**EAT PLENTY, WISELY, WITHOUT WASTE,  
AND HELP WIN THE WAR**

*Reprint from material furnished by the*  
**UNITED STATES FOOD ADMINISTRATION**

## THE DISSTON CRUCIBLE



### The Home of Mr. H. J. Hewitt, in Siam

At the right, Mr. Hewitt and servants, Mr. J. L. Godenho and wife in the centre, and Mr. Carey Ball, the filer, on the left. Notice the white Gibbon that Mr. Ball has. There are hundreds of these monkeys in the jungles and they are great pets.

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

GENTLEMEN:

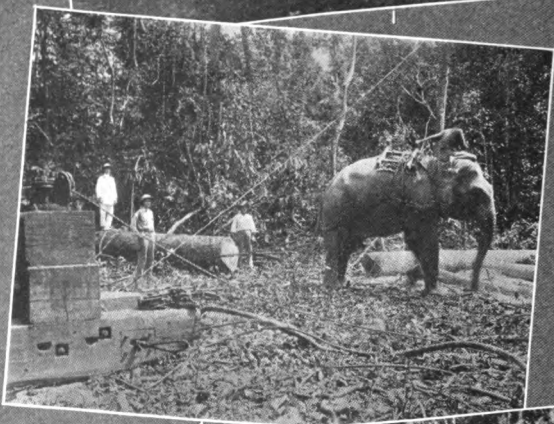
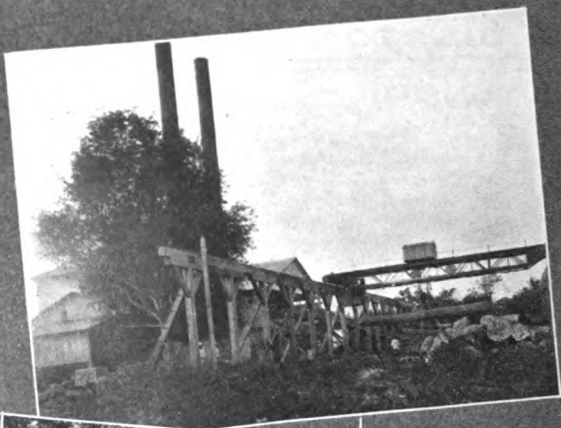
As a descriptive writer I am not, so will not try to practice "Camouflage" on you. I am much better with the file or a logging engine than I am with a Type-writer, now get this "Type-writer" right.

About 18 months ago the Borneo Co., Ltd., at Bangkok, Siam, were having some trouble at their new Mill at Sriracha, on the gulf of Siam, about 70 miles from Bangkok. This Mill is equipped with the latest up to date Allis Chalmers Machinery of Milwaukee, Wis., and there is none better. It was built by Mr. Wm. Muir, Engineer for the Borneo Co. His assistant was AhFoo, a very able Chinese Mill-wright.

I was recommended by your Seattle Manager, Mr. Dave Jenkins, to go to Siam and try to locate the trouble. After the very quick passage of 27 days, I arrived at the Mill. I had not been there 24 hours before I found the trouble was in their timber and not in the Machinery or Saws, the timber contains a grit that is in the wood itself and dulls the Saws very quickly, making it necessary to change from 12 to 18 times a day in a run of 9½ hours. They have about 175 varieties of hard woods here, and it is hard too, it would put to shame our hard woods in America. The predominating timber is Yang, Takien, Tabac, Krabace, Yai Boo, My Pai Doo, and Penong. This last named wood is scandalous. When a Saw has made two cuts in it, it would have to be taken off, impossible to run it longer, dull, with swage all gone.

The logging in this country is done with Elephants and Logging Engines,

(Continued on page 26)



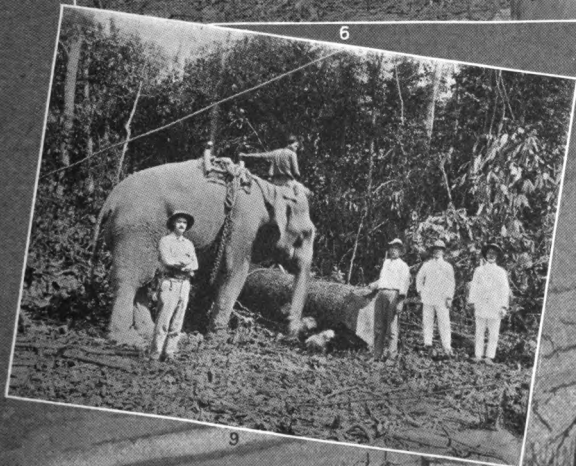




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## THE DISSTON CRUCIBLE

the Elephants are used mostly for making roads, swamping, getting the trolleys in place, moving timbers. This Company have about 25 of them, it is surprising what they can do in this line, almost human.

The climate here is very warm, sometimes as high as 115 degrees in the shade, therefore the natives do not require any clothes, only a "Penoong," and sometimes not that.

It takes 300 native loggers to get out 50,000 feet per day of 9½ hours, it is impossible to labor hard in that country on account of the heat. The principal food of the natives is rice and plenty of fruit and fish. They are very likable people, given to play and good times more than work.

The Borneo Company have a narrow gauge Railroad of about 25 miles, that runs from the Mill to the Jungles, also 5 or 6 English Locomotives all run by native Engineers, also the Mill crew are all natives, their pay is One Tecal or about 36 cents a day; the Filer and Sawyer are Americans.

Of the Animal life the Elephant is first, then the Tiger, Leopard, Bison, Deer, Wild Boar and Monkey. The Birds are the Egrett, Vulture, Jungle Fowl, Parrot, Minor, Horn Bill and many others. Snakes are the King Cobra, Boa Constrictor, Malay Viper, and they also have the Scorpion, Centipede, Tarantula, Lizards of several kinds and colors.

Enclosed you will find a few photos that I had taken in the Jungles.

Yours truly, H. J. HEWITT.

### Description of Cuts on pages 24-25

1. Back end of mill showing 12-ton electric crane for handling logs. This is what they call a dry pond mill. The logs will not float. They are so heavy they will sink in water.
2. Logging train, with rice field at the left. The rice has just been cut.
3. View of mill, showing the chief engineer, John L. Godenho (second from the left). This photo gives a slight idea of the size of mill.
4. Elephant dragging log on to skidway so it can be placed on trolley car.
5. Mill floor of the Borneo Company's mill at Sriracha, Siam.
6. The large elephant at the left will weigh four and a half tons. It is worth \$2,500.00 and is 80 years old—just getting so he is good. The little one in the centre killed his driver just before Mr. Hewitt left Siam.
7. Elephant rolling log in place. This log is a "Yang," will weigh about two tons. Mr. Hewitt is shown at the extreme left.
8. This shows the up-to-date power "steam," used in logging, also the out-of-date power, the "elephant." Mr. Hewitt is on the elephant at the left. "Mom" is her name.
9. Another scene in the woods showing elephant used for rolling log.



**Sriracha, Siam**

The native village near the Borneo Company's mill. Population, about 1,200.



## The Men Who Get Things Done

Nobly great is the dreamer of dreams,  
And honored of men alway,  
In whose eyes flash ever the kindly beams  
Of earth's diviner day.  
And yet what gain doth he ever bring  
To men beneath the sun,  
Till his dream is shaped to a living thing  
By the men who get things done?

They are not saints by a long, long way,  
Their gaze is not fixed above,  
They are only made of common clay ;  
They are sometimes hard to love.  
And yet if life is a thing to praise,  
Instead of a thing to shun,  
It mostly comes from the hustling ways  
Of the men who get things done.

I'm tired of the fools who hope to preach  
The sleepy old earth awake ;  
And save mankind by making a speech—  
It's the only thing they make.  
Give me the men who do not shrink  
To handle the spade—or the gun—  
Who know how to act as well as think—  
The men who get things done,

Place the bays on the poet's brow,  
Give honor where honor is due,  
But never forget that THE LIVING NOW  
Is the time to dare and do.  
The plough is mightier than the pen,  
And earth's great goals are won  
By the tireless, hustling, bustling men—  
The men who get things done.

—*The Australian Manufacturer.*

# Leadership

(Continued from February issue)

Make light of your troubles, belittle your trials, and you will help vitally to build up within your organization an esprit whose value in time of stress cannot be measured.

Moral force is the third element in gaining moral ascendancy. To exert moral force you must live clean, you must have sufficient brain power to see the right and the will to do right.

Be an example to your men. An officer can be a power for good or a power for evil. Don't preach to them—that will be worse than useless. Live the kind of life you would have them lead, and you will be surprised to see the number that will imitate you.

A loud-mouthed, profane captain who is careless of his personal appearance will have a loud-mouthed, profane, dirty company. Remember what I tell you. If you have a rotten company it will be because you are a rotten captain.

Self-sacrifice is essential to leadership. You will give, give all the time. You will give of yourself physically, for the longest hours, the hardest work and the greatest responsibility is the lot of the captain. He is the first man up in the morning and the last man in at night. He works while others sleep.

You will give of yourself mentally, in sympathy and appreciation for the troubles of men in your charge. This one's mother has died, and that one has lost all his savings in a bank failure. They may desire help, but more than anything else they desire sympathy.

Don't make the mistake of turning such men down with the statement that you have troubles of your own, for every time that you do you knock a stone out of the foundation of your house.

Your men are your foundation, and your house of leadership will tumble about your ears unless it rests securely upon them.

Finally, you will give of your own

slender financial resources. You will frequently spend your own money to conserve the health and well-being of your men or to assist them when in trouble. Generally you will get your money back. Very frequently you must charge it to profit and loss.

When I say that paternalism is essential to leadership I use the term in its better sense. I do not now refer to that form of paternalism which robs men of initiative, self-reliance and self-respect. I refer to the paternalism that manifests itself in a watchful care for the comfort of those in your charge.

Soldiers are much like children. You must see that they have shelter, food and clothing, the best that your utmost efforts can provide. You must be far more solicitous of their comfort than of your own. You must see that they have food to eat before you think of your own; that they have each as good a bed as can be provided before you consider where you will sleep. You must conserve their strength by not demanding needless exertion or useless labor.

And by doing these things you are breathing life into what would be otherwise a mere machine. You are creating a soul in the organization that will make the mass respond to you as though it were one man. And that is esprit.

And when your organization has this esprit you will wake up some morning and discover that the tables have been turned; that instead of your constantly looking out for them they have, without even a hint from you, taken up the task of looking out for you. You will find that a detail is always there to see that your tent, if you have one, is promptly pitched; that the most and the cleanest bedding is brought to your tent; that from some mysterious source two eggs have been added to your supper when no one else has any; that an extra man is helping your men give your horse a super-

## THE DISSTON CRUCIBLE

grooming; that your wishes are anticipated; that every man is "Johnny on the spot." And then you have arrived.

Fairness is another element without which leadership can neither be built up nor maintained. There must be first that fairness which treats all men justly. I do not say alike, for you cannot treat all men alike—that would be assuming that all men are cut from the same piece; that there is no such thing as individuality or a personal equation.

You cannot treat all men alike; a punishment that would be dismissed by one man with a shrug of the shoulders is mental anguish for another. A company commander who for a given offence has a standard punishment that applies to all is either too indolent or too stupid to study the personality of his men. In his case justice is certainly blind.

Study your men as carefully as a surgeon studies a difficult case. And when you are sure of your diagnosis apply the remedy. And remember that you apply the remedy to effect a cure, not merely to see the victim squirm. It may be necessary to cut deep, but when you are satisfied as to your diagnosis don't be diverted from your purpose by any false sympathy for the patient.

Hand in hand with fairness in awarding punishment walks fairness in giving credit. Everybody hates a human hog.

When one of your men has accomplished an especially creditable piece of work, see that he gets the proper regard. Turn heaven and earth upside down to get it for him. Don't try to take it away from him and hog it for yourself. You may do this and get away with it, but you have lost the respect and loyalty of your men. Sooner or later your brother officers will hear of it and shun you like a leper. In war there is glory enough for all. Give the man under you his due. The man who always takes and never gives is not a leader. He is a parasite.

There is another kind of fairness—that which will prevent an officer from abusing the privileges of his

rank. When you exact respect from soldiers be sure you treat them with equal respect. Build up their manhood and self-respect. Don't try to pull it down.

For an officer to be overbearing and insulting in the treatment of enlisted men is the act of a coward. He ties the man to a tree with the ropes of discipline and then strikes him in the face, knowing full well that the man cannot strike back.

Consideration, courtesy and respect from officers toward enlisted men are parts of your discipline. Without initiative and decision no man can expect to lead.

In maneuvers you will frequently see, when an emergency arises, certain men calmly give an instant order which later, on analysis, proves to be, if not exactly the right thing, very nearly the right thing to have done. You will see other men in emergency become badly rattled; their brains refuse to work, or they give a hasty order, revoke it; give another, revoke that; in short, show every indication of being in a blue funk.

Regarding the first man, you may say: "That man is a genius. He hasn't had time to reason this thing out. He acts intuitively." Forget it. Genius is merely the capacity for taking infinite pains. The man who was ready is the man who has prepared himself. He has studied beforehand the possible situation that might arise. He has made tentative plans covering such situation. When he is confronted by the emergency he is ready to meet it.

He must have sufficient mental alertness to appreciate the problem that confronts him and the power of quick reasoning to determine what changes are necessary in his already formulated plan. He must have also the decision to order the execution and stick to his orders.

Any reasonable order in an emergency is better than no order. The situation is there. Meet it. It is better to do something and do the wrong thing than to hesitate, hunt around for the right thing to do and wind up by doing nothing at all.

(To be Continued)

## THE KID

By W. B. Herscbell

The Kid has gone to the Colors  
 And we don't know what to say;  
 The Kid we have loved and cuddled  
 Stepped out for the Flag today.  
 We thought him a child, a baby,  
 With never a care at all,  
 But his country called him man-size  
 And the Kid has heard the call.

He paused to watch the recruiting  
 Where, fired by the fife and drum,  
 He bowed his head to Old Glory  
 And thought that it whispered, "Come!"  
 The Kid, not being a slacker,  
 Stood forth with patriot-joy  
 To add his name to the roster—  
 And God, we're proud of the boy!

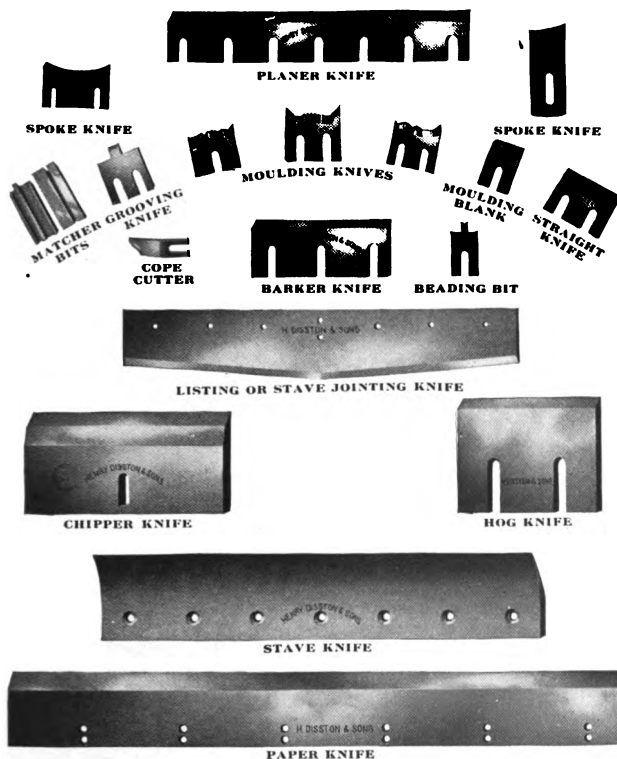
The Kid has gone to the Colors;  
 It seems but a little while  
 Since he drilled a schoolboy army  
 In a truly martial style.  
 But now he's a man, a soldier,  
 And we lend him listening ear,  
 For his heart is a heart all loyal,  
 Unscourged by the curse of fear.

His dad, when he told him, shuddered,  
 His mother—God bless her!—cried,  
 Yet, blest with a mother-nature,  
 She wept with a mother-pride.  
 But he whose old shoulders straightened  
 Was grand-dad—for memory ran  
 To years when he, too, a youngster  
 Was changed by the Flag to a man.

---

*"A light of duty shines on every day for us."*

# MACHINE KNIVES *and* CUTTERS



To produce good knives there are three important requisites: good steel, good temper and good workmanship. The steel in the Disston knives is made in the Disston Steel Works and is of a quality especially suited for the particular requirements of knives. The method of welding, the temper and the workmanship are exclusively Disston and the knife makers employed possess high skill and long experience.

Disston knives give satisfactory service and will prove most economical to you.

**HENRY DISSTON & SONS**  
INCORPORATED  
KEYSTONE SAW, TOOL, STEEL & FILE WORKS  
PHILADELPHIA, U. S. A.

## SAW DUST

### THE MYSTERY

'Tain't me, says the farmer, who's  
getting th' stuff;  
'Tain't me, says the packer, I get  
just enough  
To pay a small profit, as fair as  
can be;  
And all of them chorus together,  
'Tain't me.

'Tain't me, says the tanner, who gets  
the high price,  
For high shoes and low ones, for  
slippers and ties.

'Tain't me, says the rancher, I live  
and that's all.

'Tain't me, says the dealer, my profits  
are small.

'Tain't me, says the canner, my mar-  
gin's the same.

'Tain't me, says the huckster, who's  
bracing the game.

'Tain't me, says the gardener, I'm  
poor all the time.

'Tain't me, says the grocer, I ain't  
seen a dime.

It's surely a puzzle to know where it  
goes,

No maker or seller, or any of those  
Partakes of high prices, so they all  
agree

And I'm a consumer—I'm certain  
'tain't me.

—Egg Reporter.

### HAW, HAW!

L. J. B. overheard a conversation  
on the rear platform of a street car.  
A German was grumbling about the  
shortage of coal, and said to an  
Irishman standing beside him: "Why  
is it a shortage dis year? I don't  
seen no use in closing everything  
on Mondays. Vere does the coal  
go?"

"Well," replied the Irishman. "The  
Allies are sending so many Germans  
to hell that it takes a larger supply  
of coal to keep the place running."

### A "WHOLESALE PROFITEER"

A dollar a head had been promised  
to Mike, an Irish dragoon, for every  
German he captured. Daybreak one  
morning in a front line trench, some-  
where in France, Mike was snatching  
a wink or two of sleep, while Pat,  
No. 2 in his squad, was alertly watch-  
ing over the top. There was a sign  
of movement in the German lines,  
and Pat jabbed Mike with his rifle  
to arouse him.

"Wake up, me man, they're com-  
ing!" shouted Pat.

"Who's coming?" responded Mike,  
rubbing his eyes.

"The Germans, to be sure. Wake  
up!"

"How many of them are there?"

With a quick glance toward the  
enemy trench, Pat shouted:

"More than a million!"

"More than a million," replied  
Mike. "Thank heaven; me fortune's  
made."—*New York Globe*.

### THE HORSELESS VEHICLE

"It's funny how afraid your horses  
still are of automobiles up here," said  
a summer visitor to a Maine farmer.

"I don't know that it is so funny,"  
answered the farmer. "Not so  
strange, when you think how an auto-  
mobile must look to a horse. Wouldn't  
it seem strange to you if you saw  
my pants comin' down the road with  
nothin' in 'em?"

### THAT LIFELESS LIFE

My Tuesday's are meatless,

My Wednesday's are wheatless,  
I am getting more eatless each day.

My home it is heatless,  
My bed it is sheetless,

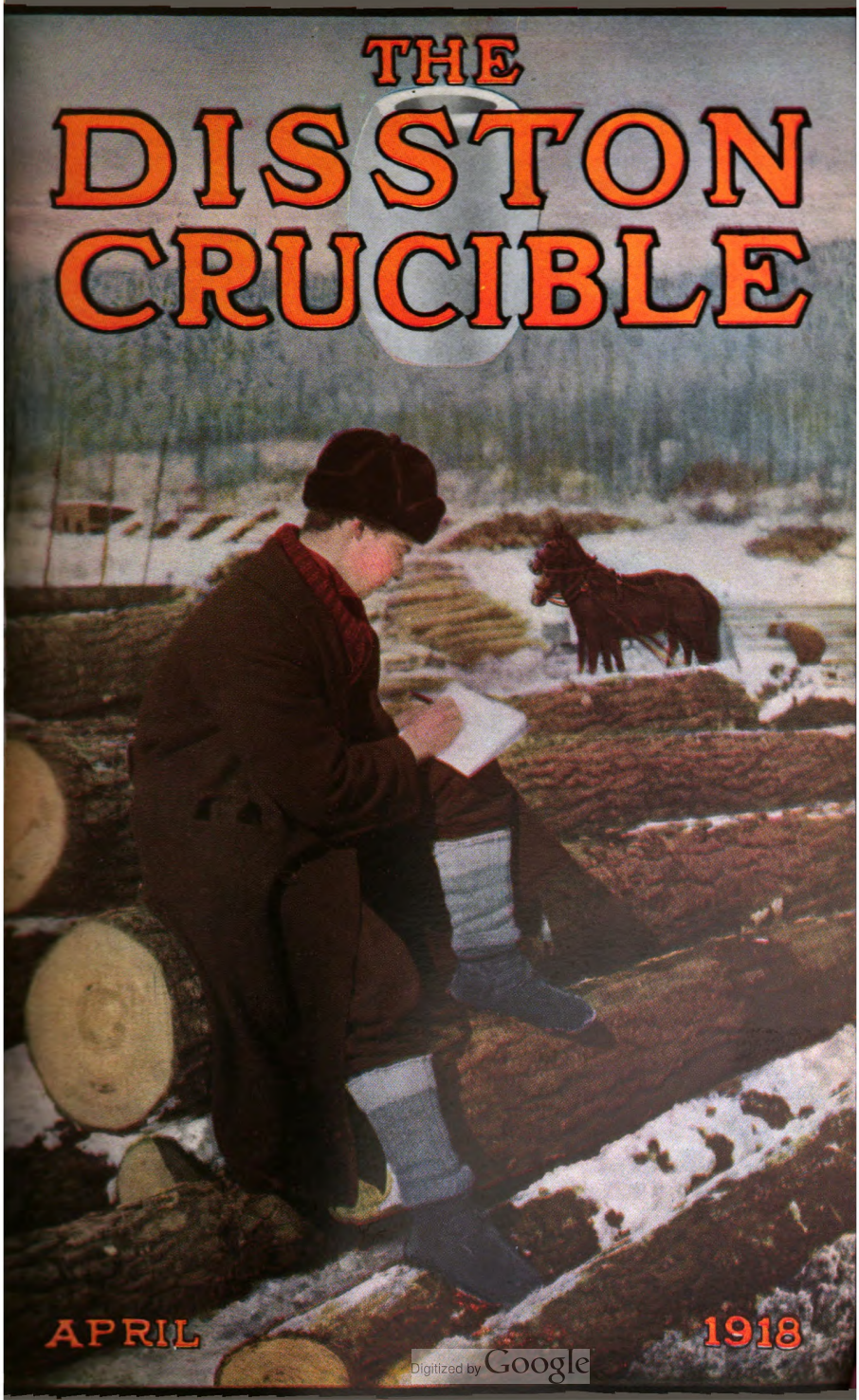
They're all sent to the Y. M. C. A.  
The bar rooms are treatless,

My coffee is sweetless,  
Each day I get poorer and wiser.

My stockin' are feetless,  
My trousers are seatless,

My God, how I do hate the kaiser.  
—*Exchange*.

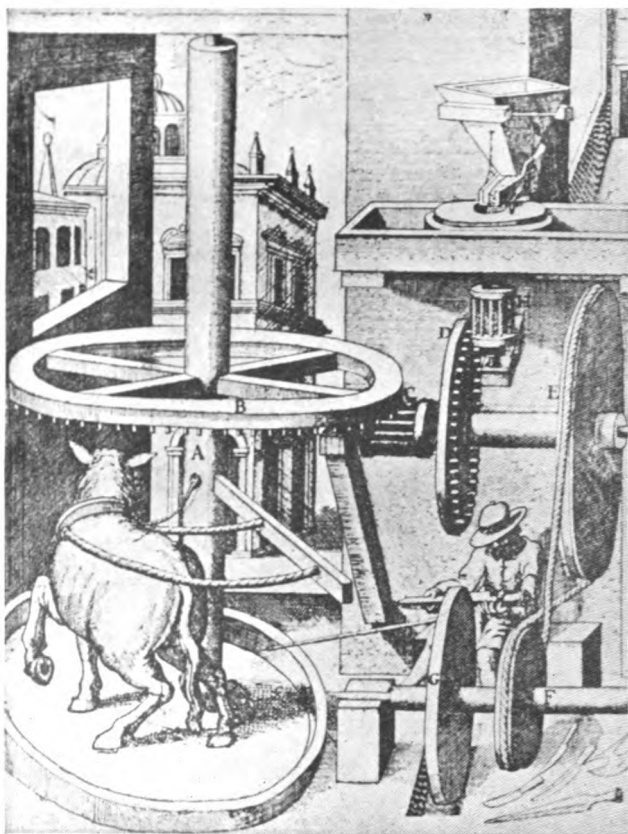
# THE DISTON CRUCIBLE

A man in a dark coat and cap sits on a log in a snowy landscape, writing in a notebook. A horse stands in the background.

APRIL

1918





#### **OLD TIME MILLS. No. 4**

Another type of Combination Mill, run by horse power. Here is shown flour milling and grinding by one-horse power.

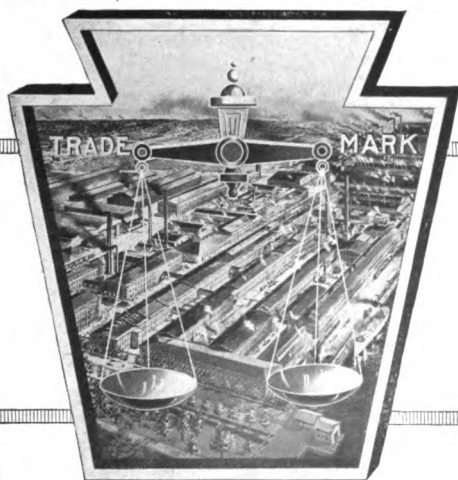


# THE DISSTON CRUCIBLE

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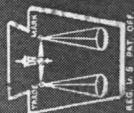
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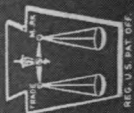
# Absolutely

The merit of a product is attested by the demand.  
The volume of demand is evidenced by the size of the works.  
And when the works, steadily increasing, year after year  
attain immense proportions—

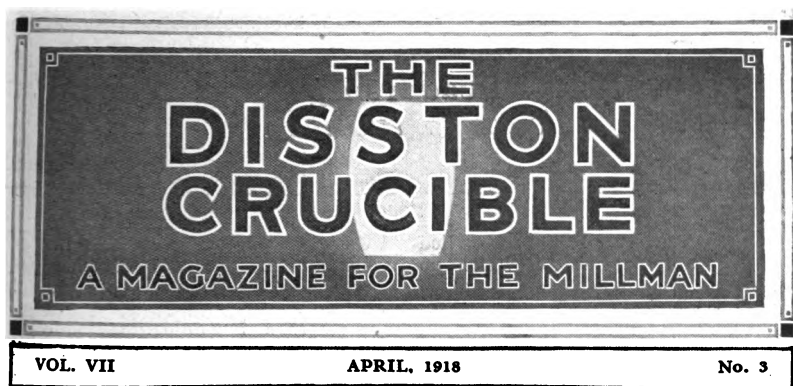
**THEN** is conclusively demonstrated the continued and  
absolute confidence of a vast army of users in the  
excellence, worth and reliability of the goods.



**HENRY DISSTON & SONS, INC.**  
**KEYSTONE SAW, TOOL, STEEL AND FILE WORKS**  
**PHILADELPHIA.**



## THE LARGEST IN THE WORLD.



## EDITORIAL CHAT

### Competition

**W**HILE two bull terriers were fighting, a yellow street cur sneaked up and stole the bone.

That's a fair illustration of competition.

Any man who says that unlimited competition is the ideal economic condition isn't even a theorist—he's just a plain fool.

Competition is nothing in the world but war. It is wholly destructive and is equally ruinous to both combatants and to the innocent bystanding consumer who has to pay for the worthless merchandise which is inevitably the final product of competition.

If civilization had had nothing better to offer than unlimited competition, we would never have progressed from the stone age.

But from the very dawn of civilization, we have been climbing painfully out of the pit of competition upward toward the splendid goals of non-wasteful Co-operation and the ultimate economy of Quantity Production.

Any man or group of men so reactionary, so archaic, so stupid as to attempt to check our progress toward those goals is a traitor to the best and greatest force in America—American Business."

*Quality  
Sells*

*The above article, clipped from a journal, was sent to us to pass along, and it is so well worthy of repetition that we give it this prominent position.*

# Leadership

*(Continued from March issue)*

Occasionally you will be called upon to meet a situation which no reasonable human being could anticipate. If you have prepared yourself to meet other emergencies which you could anticipate the mental training you have thereby gained will enable you to act promptly and with calmness.

You must frequently act without orders from higher authority. Time will not permit you to wait for them. Here again enters the importance of studying the work of officers above you. If you have a comprehensive grasp of the entire situation and can form an idea of the general plan of your superiors, that and your previous emergency training will enable you to determine that the responsibility is yours and to issue the necessary orders without delay.

The element of personal dignity is important in military leadership. Be the friend of your men, but do not become their intimate. Your men should stand in awe of you—not fear. If your men presume to become familiar it is your fault not theirs. Your actions have encouraged them to do so.

And, above all things, don't cheapen yourself by courting their friendship or currying their favor. They will despise you for it. If you are worthy of their loyalty and respect and devotion they will surely give all these without asking. If you are not, nothing that you can do will win them.

It is exceedingly difficult for an officer to be dignified while wearing a dirty, spotted uniform and a three days' stubble of whiskers on his face. Such a man lacks self-respect, and self-respect is an essential of dignity.

There may be occasions when your work entails dirty clothes and an unshaven face. Your men all look that way. At such times there is ample reason for your appearance. In fact, it would be a mistake to look too clean—they would think that you

were not doing your share. But as soon as this unusual occasion has passed, set an example of personal neatness.

And then I would mention courage. Moral courage you need as well as physical courage—that kind of moral courage which enables you to adhere without faltering to a determined course of action, which your judgment has indicated as the one best suited to secure the desired results.

You will find many times, especially in action, that, after having issued your orders to do a certain thing, you will be beset by misgivings and doubts; you will see or think you see other and better means for accomplishing the object sought. You will be strongly tempted to change your orders. Don't do it until it is clearly manifested that your first orders were radically wrong. For if you do, you will be again worried by doubts as to the efficacy of your second orders.

Every time you change your orders without obvious reasons you weaken your authority and impair the confidence of your men. Have the moral courage to stand by your order and see it through.

Moral courage further demands that you assume the responsibility for your own act. If your subordinates have loyally carried out your orders and the movement you directed is a failure, the failure is yours, not theirs. Yours would have been the honor had it been successful. Take the blame if it results in disaster. Don't try to shift it to a subordinate and make him the goat. That is a cowardly act.

Furthermore, you will need moral courage to determine the fate of those under you. You will frequently be called upon for recommendations for the promotion or demotion of officers and non-commissioned officers in your immediate command.

Keep clearly in mind your per-

## THE DISSTON CRUCIBLE

sonal integrity and the duty you owe your country. Do not let yourself be deflected from a strict sense of justice by feelings of personal friendship. If your own brother is your second lieutenant and you find him unfit to hold his commission, eliminate him. If you don't your lack of moral courage may result in the loss of valuable lives.

If, on the other hand, you are called upon for a recommendation concerning a man whom, for personal reasons, you thoroughly dislike, do not fail to do him full justice. Remember that your aim is the general good, not the satisfaction of an individual grudge.

I am taking it for granted that you have physical courage. I need not tell you how necessary that is. Courage is more than bravery. Bravery is fearlessness—the absence of fear. The merest dolt may be brave, because he lacks the mentality to appreciate his danger; he doesn't know enough to be afraid.

Courage, however, is that firmness of spirit, that moral backbone which, while fully appreciating the danger involved, nevertheless goes on with the undertaking. Bravery is physical; courage is mental and moral. You may be cold all over; your hands may tremble; your legs may quake; your knees be ready to give way—that is fear. If, nevertheless, you go forward; if, in spite of this physical defection, you continue to lead your men against the enemy, you have courage. The physical manifestations of fear will pass away. You may never experience them but once. They are the "buck fever" of the hunter who tries to shoot his first deer. You must not give way to them.

A number of years ago, while taking a course in demolitions, the class of which I was a member was handling dynamite. The instructor said regarding its manipulation: "I must caution you gentlemen to be careful in the use of these explosives. One man has but one accident." And so I would caution you. If you give way to the fear that would doubtless beset you in your first action,

if you show the white feather, if you let your men go forward while you hunt a shell crater, you will never again have the opportunity of leading those men.

Use judgment in calling on your men for displays of physical courage or bravery. Don't ask any man to go where you would not go yourself. If your common sense tells you that the place is too dangerous for you to venture into, then it is too dangerous for him. You know his life is as valuable to him as yours is to you.

Occasionally some of your men must be exposed to danger which you cannot share. A message must be taken across a fireswept zone. You call for volunteers. If your men know you and know that you are right, you will never lack volunteers; for they will know your heart is in your work, that you are giving your country the best you have, that you would willingly carry the message yourself if you could. Your example and enthusiasm will have inspired them.

And lastly, if you aspire to leadership, I would urge you to study men.

Get under their skins and find out what is inside. Some men are quite different from what they appear to be on the surface. Determine the workings of their minds.

Much of General Robert E. Lee's success as a leader may be ascribed to his ability as a psychologist. He knew most of his opponents from West Point days, knew the workings of their minds, and he believed that they would do certain things under certain circumstances. In nearly every case he was able to anticipate their movements and block the execution.

You cannot know your opponent in this war in the same way. But you can study each to determine wherein lies his strength and his weakness; which man can be relied upon to the last gasp and which cannot.

Know your men, know your business, know yourself.

THE END

## Tension in a Circular Saw

**H**AVE you ever tied a stone or weight on the end of a piece of cord and whirled it around faster and faster? If so, you noticed the pulling power of the weight growing stronger and stronger with the increasing speed; the string, stretching, becomes taut or tensioned to stiffness and finally the cord breaks, or you let go and the weight flies to a great distance. This aptly illustrates the action of centrifugal force.

The weight of a Solid Tooth Circular Saw, sixty inches in diameter, six gauge, is approximately 160 pounds, and some idea may be formed of the great stress under which the saw operates in action by picturing this large circular mass of steel flying around at a speed of over 640 revolutions per minute, rim motion, or at the rate of nearly two miles per minute.

The motion imparted through the grip of the collar to the portion of the saw to which it is attached is exerted in greatly increasing degrees along the blade to the outer or cutting-edge which travels many times faster than the driving centre and constitutes the load, which, while re-

volving, is constantly pulling away from the centre. This is the action of centrifugal force and its power multiplied in proportion to the size of the blade, causes a stretching or stress to such an extent that a plain, flat blade, as the velocity increases to that required of high speed Saws, would continuously wobble from side to side while revolving, then crack and finally, if an object is brought in contact with it, the blade would fly to pieces—the effect of centrifugal force.

To compensate for and overcome this effect, Circular Saws, after being leveled and trued up, are given a “Tension.” This is a conditioning of the blade where the greatest expansion takes place, midway between the collar line and the rim or tooth-edge. It is done by the experienced sawmaker skillfully hammering that portion so that it will be stretched or expanded, technically termed “open.” The expansion of this portion when the saw is in motion causes the rim to become rigid or tensioned. If a large circular saw, properly hammered for a medium high motion, is stood on edge and shaken slightly, the

## THE DISSTON CRUCIBLE

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

### To Take 1917 Lumber Census

WASHINGTON, January, 1918—A census of the lumber production of the country during 1917 is to be made by the Forest Service in co-operation with the National Lumber Manufacturers' Association, as in past years. Questionnaires have already been mailed to the 30,000 sawmills throughout the country asking that the amount of each kind of lumber cut be reported promptly.

It is pointed out by officials of the Forest Service that the lumber census is of particular importance at this time, because of the large quantities of special material needed for the conduct of the war. Several of the Government Departments, they say, depend upon the Forest Service for data and technical advice on subjects connected with lumber. Since the entry of the United States into the war, this demand has been greatly increased. In many cases the information gathered by the Forest Service in previous years has made it possible to determine at once where certain classes of material could be obtained in the largest quantities and consequently has enabled the Government to get in direct touch with the proper mills without loss of time.

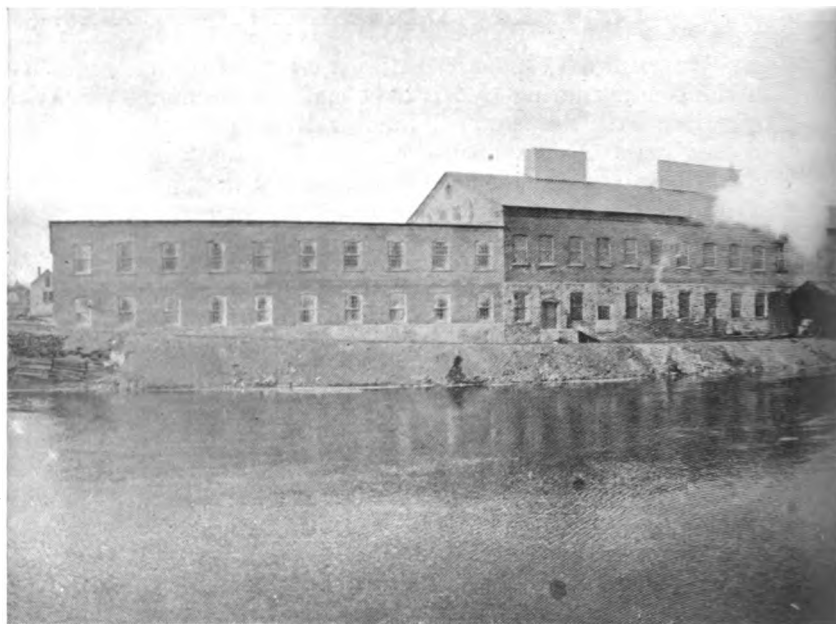
Because of unsettled conditions in the lumber trade in 1917, it has been somewhat difficult to judge the current production. Heavy calls for lumber made by the Government have been partially offset by transportation difficulties and scarcity of labor. Officials say that it will require a careful census to determine whether the output was more or less than preceding years. They point out at the same time that the lumber manufacturers can aid the work materially by filling out and returning promptly the questionnaires that have been sent them.

---

centre will vibrate, moving in and out uniformly, while the rim remains stiff.

This condition, in greater or lesser degree according to the desired velocity of the saw and its thickness, is an absolute necessity, for, while it will gently sway from side to side in getting up to full speed, upon reaching the maximum motion, the centrifugal

force causes the rim of saw to gradually expand and in expanding the provided "open" portion is taken up and stretched to stiffness, which also allows for the additional and severe strain on tooth-edge when cutting. The known stress, thus counterbalanced, enables the saw to stand up straight and steady to its work and cut a true line.



## PLANT OF FLAMBE PARK 1

Located at Park Falls, Wis., this plant consumes in the neighborhood of  
in the manufacture of paper.

Having just completed a new mill, the capacity of the plant has be  
greatly increase the present facilities.

It is their expectation to saw from 300 to 400 cords per day of pulp w

In the words of Mr. Guy Waldo, the genial and efficient manager of t

"We employ about 175 men and hope to be able to get enough pulp w  
we have put in the new conveyor. The pulp wood will be cut in two-foot lengt





## PAPER COMPANY S, WIS.

cords of pulp wood per year in the making of pulp used entirely in this plant  
bled, while the installation, now under way, of a pulp wood conveyor will  
ich is cut in lengths of 4, 8 and 12 feet.

it:  
ring the pulp wood season to run our plant for a year, and this is the reason  
t comes from the cars and conveyed to a big stock pile."

## THE DISSTON CRUCIBLE



The smiling one to new hand: "That's it—all ye gotta do is to keep yer feet on top and yer perfectly safe."

## THE DISSTON CRUCIBLE



R. B. McKIM COMPANY, INC.,  
Boston, Mass.

Gentlemen:

Enclosed, find photo taken by Mr. J. E. Felch, Superintendent New England Box Co., at Ashuelot, N. H., of a Disston band resaw after it had run onto iron and been removed from wheels.

Mr. Raymond Brooks, the filer, is shown carrying saw to filing room, where he got busy on it and, much to everyone's surprise, made it a perfect running tool without a crack. Nothing wrong with a Disston band saw or a Raymond Brooks.

Mr. Felch says he would not have believed that a piece of steel abused to such an extent could ever have been made to resaw lumber again—let alone come out flawless.

Yours very truly,

W. H. BANKS.

## Which Are You?

There are two kinds of people on earth today,  
Just two kinds of people; no more, I say.  
Not the sinner and saint, for it's well understood,  
The good are half bad, and the bad are half good.

Not the rich and the poor, for to count a man's wealth  
You must first know the state of his conscience and  
health.

Not the humble and proud, for in life's little span  
Who puts on vain airs is not counted a man.

Not the happy and sad, for the swift-flying years  
Bring each man his laughter and each man his tears.  
No; the two kinds of people on earth that I mean  
Are the people who lift and the people who lean.

Wherever you go, you will find the earth's masses  
Are always divided in just these two classes,  
And oddly enough, you will find, too, I ween,  
There is only one lifter to twenty who lean.

In which class are you? Are you easing the load  
Of overtaxed lifters, who toil down the road?  
Or are you a leaner who lets others bear  
Your portion of labor and worry and care?

*Ella Wheeler Wilcox.*

---

## Truth Wins in the End

**T**RUTH is the foundation of everything. Business must be built on truth. Every right move is inspired by truth. The fact that we exist and that creation is scientifically perfect is absolute truth. Life is based on truth. Just as important for success in business is it that such business be conducted on truthful lines.

A false move, a lie, a subterfuge, an imitation, or a deception of any kind in business may yield a temporary profit, but every such transaction is a prop removed from the support of that business and the foundation must eventually crumble and the business fail.

Truth is a divine attribute and every human being is endowed with truthful instinct. Falsehood is of man's making and is at best a temporary bulwark which offers defense for the moral coward. All men are hard pressed at times and this false bulwark offers easy defense. How much better at such times is it to stand upon a truthful platform and take temporary defeat and loss, confident, however, that permanent victory is assured because we know that in all things, eventually and without exception, truth wins.

*—Hardware World.*

# THE DISSTON CRUCIBLE

MARCH 15, 1918.

FRIEND DISSTON:

I have much pleasure enclosing three snaps taken at Summit Lumber Company's camp last week. Will send another as soon as developed of our dog "Sheridan" pulling his sled.

With all good wishes and kindest regards, I am,

Yours truly,

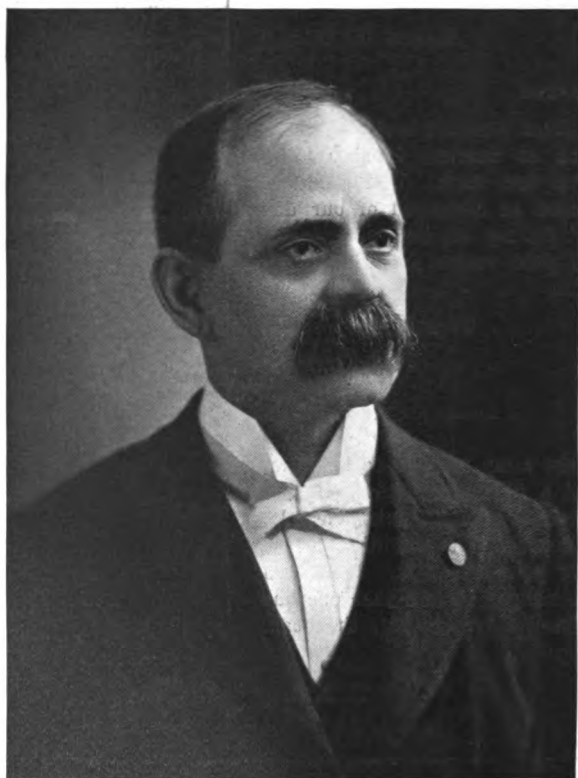
H. J. OTTEN.

This is the camp to come to next November for a "brace of deer." Spring beds, mattresses, *splendid water*, victrola, good cook stove, and a pair of "Beaver" saws to saw your fuel with. Trout and pickerel so hungry to bite that one has to hide behind a tree to bait the hook. Come on up!

H. J. O.



## THE DISSSTON CRUCIBLE



**WILLIAM SAMPSON**

It is with extreme regret we announce the death of Mr. William Sampson.

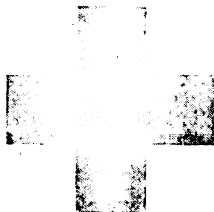
For many years Mr. Sampson was a loyal and faithful Diss-ton worker. He entered our employ in 1880 and was connected with our Chicago branch since 1881, making a record for continuous service of over 36 years.

He was an exceptionally good workman, conscientious and thoroughly reliable, having lost practically no time during the 36 years connection with this branch as foreman of the shop.

Mr. Sampson was born at Rochester, N. Y., December 18, 1847, and died March 6, 1918. At the age of 14 he enlisted in the Navy during the Civil War, was a member of the G. A. R. and stood high in Masonry.

As a man, his sterling qualities commanded our esteem; and as an employee, he had our utmost confidence.

To his family, we and his numerous friends join in expressing our sincere sorrow in the great loss sustained by his death.



*"A Great Net of Mercy Drawn Through  
an Ocean of Unspeakable Pain"*

# What Your Red Cross Dollars Do

## An Accounting of Expenditures of the First Red Cross War Fund

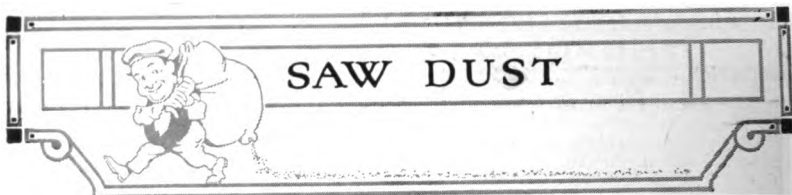
Every one of the twenty million and more Red Cross members is entitled to this Statement. Your local Red Cross Chapter can give you further details.

### *First War Fund Appropriations up to March 1, 1918*

Foreign Relief:		United States Relief:	
Relief in France .....	\$30,936,103.04	U. S. Army Base Hospitals .....	\$54,000.00
Relief in Belgium .....	2,086,181.00	U. S. Navy Base Hospitals .....	32,000.00
Relief in Russia .....	1,243,845.07	U. S. Medical and Hospital Work .....	531,000.00
Relief in Roumania .....	2,676,368.76	U. S. Sanitary Service .....	403,000.00
Relief in Italy .....	3,588,826.00	U. S. Camp Service .....	6,451,150.86
Relief in Serbia .....	875,180.76	U. S. Miscellaneous ....	1,118,748.41
Relief in Great Britain .....	1,885,750.75		
Relief in other Foreign Countries .....	3,576,300.00	Total U. S. Relief .....	\$8,589,899.27
Relief for Prisoners, etc. ....	343,304.00	Working capital for purchase of supplies for resale to Chapters or for shipment abroad .....	15,000,000.00
Equipment and Expenses in U. S. of Personnel for Europe .....	113,800.00	Working cash advances for France and United States .....	4,286,000.00
Total Foreign Relief .....	\$47,325,609.38		
Restricted as to use by Donor .....	2,520,409.57	Total of War Fund Appropriations .....	\$77,721,918.22

At the close of the first year of the War the Red Cross goes to the public for the raising of the Second War Fund with a record of appropriations which warrants continued contributions to this great relief work. As an influential citizen of your community, join with your local Red Cross Chapter to make this campaign successful. Your Red Cross is the Army behind the Army. Give till your heart says stop.

## Second Red Cross War Fund Week, May 20-27



### TURN ABOUT

He was about to propose, but before doing so he wished to make sure she was a competent girl. So he asked her:

"Can you wash dishes?"

"Yes," she said sweetly. "Can you wipe them?"

He didn't propose.—*Record.*

An Irish quack doctor was being examined at an inquest upon the treatment of a patient who had been in his care.

"I gave him ipecacuanha," he said.

"You might just as well have given him the aurora borealis," replied the coroner.

"Indade, your honor, an' thot's jist what Oi'd have given him next if he hadn't unfortunately died."

—*Boston Transcript.*

### PRACTICE PERSUASION

By LIEUT. N. C. JOHNSON (Somewhere in France)

At Fort Sheridan they have a number of prisoners who were arrested for trying to escape the draft. Among the prisoners was a darky. After serving about five days he went to the officer in charge and said: "Boss, before dis yere war started I sho was a peaceful nigger, and dey done brung me here—'cause I didn't want to fight dem Germans. But aftah workin' on dis here garbage wagon fo' five days, I's ready to fight any man any place."

—*The Salt Seller.*

### NO RESTRICTIONS

Yes, sir, I got my start in life by clerking in a small grocery store at a salary of \$1.00 a week, and I managed to save money at that. "But," said the listener, more observing than tactful, "of course that was before cash registers had been invented."—*Hardware World.*

### WHO?

Sister Sadie's now a bell-hop,  
In a swell hotel,  
Cousin Lucy drives a taxi,  
So does Annabel.

Mother runs an elevator,  
Aunt Jane carries mail,  
Grandma's busy guarding aliens,  
At the county jail.

When the cruel war is ended,  
And the boys come back,  
Wonder who will rock the cradle—  
Jill or Jack? —*Judge.*

You are early of late. You used to be behind before. But now you are first at last.—*Exchange.*

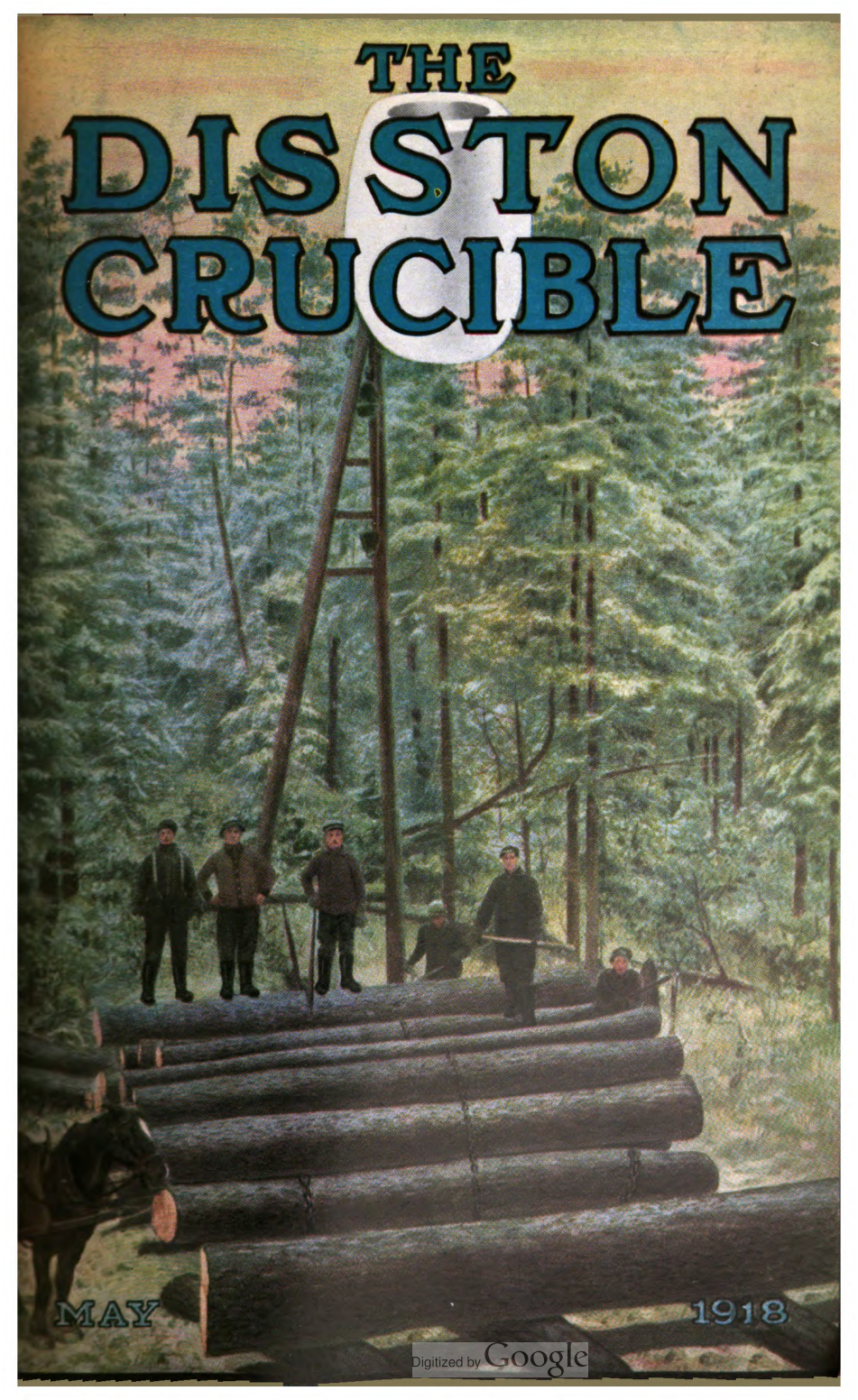


Slim Pickens has accepted a position with the saw mill on Gander creek. While learning the business he will act as foreman.

—*Philadelphia North American.*

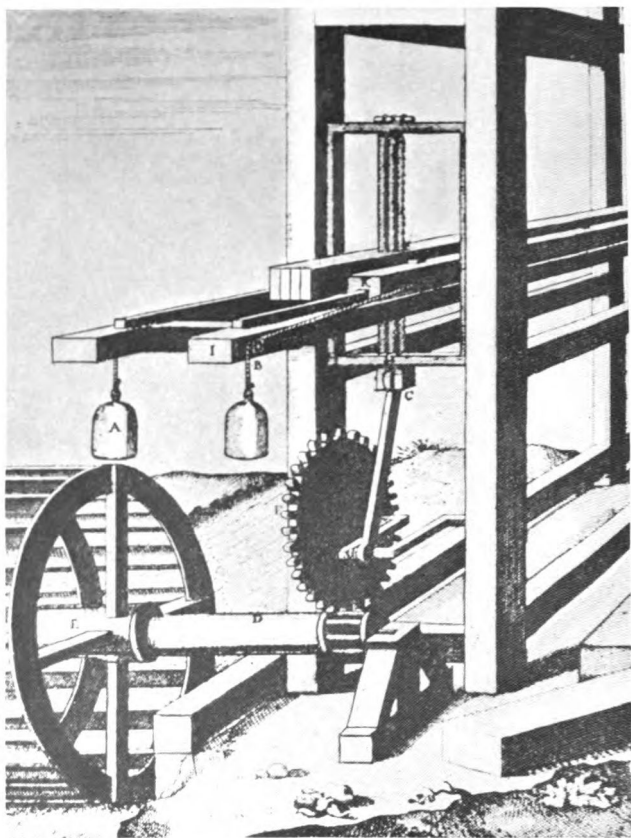


# THE DISSTON CRUCIBLE



MAY

1918



**OLD TIME MILLS. No. 5**

A step in progression from hand, foot and horse power is the mill operated by water power. A mill of few parts but great relief to the operators on past types.

# THE DISSTON CRUCIBLE

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

**HENRY DISSTON & SONS**  
INCORPORATED

**Keystone Saw, Tool, Steel, and File Works**

**PHILADELPHIA**

BRANCH HOUSES :

Chicago, Ill. Boston, Mass. Cincinnati, Ohio. Seattle, Wash. Portland, Oregon.  
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**"SOARS" all over the World**

# THE DISTON CRUCIBLE

A MAGAZINE FOR THE MILLMAN

VOL. VII

MAY, 1918

No. 4

## EDITORIAL CHAT

### Safety First—Then Peace

**H**E is a big giant, immense, powerful and forceful, good natured, easy going, care free, but industrially a worker, active and energetic, possessing great resources, immensely wealthy and prosperous, increasingly so as time passes, the outgrowth of steady effort, unselfish in the highest degree, willing, nay anxious, that all should prosper, having a fatherly interest and extending a helping hand where needed, a champion of the rights and liberty of the individual, of humanity in general, overflowing with good will, slow to anger and resentment.

But, God! what a change. Only yesterday at peace with the world, smilingly calm and contented, this huge giant now stands imposingly tall and straight, an expression of grim determination on his face, fighting mad he is, with arms extended, vigorously directing the mighty forces he has called forth, gathering stupendous supplies, assembling boundless resources, the like of which never before even conceived.

To WAR! he announces in thunderous tones. Liberty has been outraged. Its treacherous enemy, filled with lust and greed, pitilessly murdering, wantonly mutilating men, women and children, causing intense suffering and great devastation, spreading everywhere with malicious intent the seeds of mistrust and discontent.

Again he thunders forth, TO WAR! TO WAR! For Liberty and Freedom I dedicate my all. The world shall be made safe for its people. Autocracy with all its selfish desires must be destroyed.

That's our Uncle Sam today. That's his will, that's his power, and his motto is "Safety First—then Peace."

*Quality  
Sells*



## Americans in the French Forests

Addressed to the Members of the United States Forest Service

By HENRY S. GRAVES, FORESTER

From "American Forestry" March, 1918

I WANT to tell you something about the work of the forest regiments in France, and something also of other impressions I received of the war during my period of service. I know that every member of the Forest Service is doing whatever he or she can find to do to contribute toward this great enterprise, an enterprise which means so much to this country as well as to the whole world. I realize, too, that you are anxious to know as much as possible of what is going on in France, and what your friends and relatives are doing there. In the limited space at my disposal I must confine myself to the matters I think will be of most interest to you, that can be discussed.

My task in France was to prepare the way for the Tenth and Twentieth Engineers and auxiliary troops that were to go over to work in the French forests. An organization to handle the work has been built up; forests have been secured, partly through grants by the French Government, partly by purchase from private owners; a procedure for acquiring additional forests has been established; and the actual work of logging and milling is well under way. Aside from the main headquarters, an effective district organization has been established. When my work in France was completed and I left for home—some three or four months behind the original schedule—Major

Greeley took my place at headquarters of the Lines of Communications in charge of the technical forestry work, and Colonel J. A. Woodruff, who has done such admirable work in organizing the Tenth, was in military command of the forestry troops.

I shall try to take you with me in imagination on a typical field trip in the French forests, such as I took last October in company with Major R. E. Benedict, the commanding officer of the district. Our object was to inspect an encampment of a section of the Tenth Engineers which had been established only a few days before. We drove in a Government automobile through a beautiful forest country, over splendid roads lined with sycamore trees—at that time of the year in yellow leaf—with a background of green pines. (I wonder if we have ever thought of planting sycamore in our pine regions to get that effect.)

The people of the villages through which we passed were quick to recognize the American uniform, chiefly by our service hats, or "Pershings," as the French often call them, and greeted us with the greatest cordiality. Finally we came to a little village and observed near the railroad station a crowd gathered to watch some curious operation. Coming nearer, we saw a group of husky American lumberjacks working up fifty-foot pines preparatory to loading them on the

cars. As we came to a stop, Captain D. T. Mason, formerly of Missoula, greeted us. These were the first trees cut in this district; they had been felled and taken out of the woods within three days after the men had left the train which brought them there—and they did not have a single horse. Then we went on a little farther through the pine woods to a beautiful camp. There were rows of Sibley tents, and men moving here and there, all busy, all with a definite purpose. Some were putting up shelters for horses which they expected in a day or two. Captain J. D. Guthrie and Captain I. F. Eldredge met us. They told us how quickly the camp had been put up and the men established, and how they had astonished every one in that section by their speed. As we went about I heard ringing through the French forests, "Watch out below." Then a tree would crash down, and I would know that another pile was being prepared for the docks that are to receive the many troops and the great quantities of supplies that we are sending over there.

I wish you could have seen those men in the woods. They had had a long and trying trip across the water; they had been taken through France, not in Pullmans, but in the only kind of cars available for transporting them at the time; they had to make camp in a hard storm. Yet they accepted it as all troops in France are accepting such conditions. And now, when they were at last in the woods, they were swinging their axes, troubles for-

gotten—joyful, singing, shouting, happy, well — everybody working hard and thinking how his particular tree was going to serve some particular purpose that would help our soldiers to final victory. They had not waited for horses; they were picking up the logs by man power and getting them out as best they could with the aid of a logging truck improvised from a supply wagon. What did they care whether they had horses or not! They were at their goal; the work was right in front of them; they were eager to get at it; and they were getting at it with all their might.

They were a fine body of men. Not all saints, of course. There were two of them, for example, who had been a little slow to pick up the military end, but whose boast had always been that, while they might not be much at drilling, they were "hell on cutting down trees." These men, as it turned out, were the first crew to fell a tree for the American soldiers in France. Not unnaturally, perhaps, they felt that they ought to celebrate, which they did, with the result that it took four men to put them in the guard house. But the affair had its good ending, for the local mayor ordered that no more liqueurs be sold to men wearing the American uniform. Let it be added that the men took this in good part, just as they have taken in good part every other restriction necessary for maintaining the highest efficiency.

And they are doing other fine things, too. They are endearing themselves to the people of the

place where they are at work. It means a good deal when a soldier, coming along the road, sees an old woman with a wheelbarrow—a heavy barrow—and, gently pushing her way, takes the handles and trundles it himself. At Christmas each company at that camp raised 700 francs for a celebration and gifts for the children of the neighborhood. These may be little things, but there are going on in France lots of other little things like them that cut deep. The people appreciate it, and I heard about it wherever I went.

I could take you, if I had the time, to other parts of France where other units of the Tenth and Twentieth Engineers are located that present a similar picture—a different class of timber, perhaps, somewhat different logging conditions; somewhat different living conditions; but essentially the same. In the colder parts of the mountains the men have established themselves in comfortable barracks; in other places where it is not so cold they prefer to live in tents with board floors. In all the camps are being established buildings for recreation and amusement.

At the time I left France all of the men in the Tenth and Twentieth Engineers were in splendid health. They are living under healthful conditions; and this accounts for it. I was told just before I came away that in one group of camps containing 400 men there was not a single case in the hospital.

Without going into details, I can assure you that the Army

Engineers are doing a splendid work in forestry—work that is essential for our American forces abroad, and of a kind to secure the hearty appreciation of the French. The efficiency of our men and our operations in the woods wins, I think I may say without undue boastfulness, the admiration of the French foresters. At the same time we have been able to adjust ourselves satisfactorily to their conditions, the conditions arising from their methods of handling the forests as a permanent resource. The Tenth and the Twentieth are working right together in this important task of the Engineers. Colonel Woodruff on the other side and Colonel Mitchell on this side are seeing to it, most admirably, that these indispensable forest regiments are organized and handled along lines to give them high efficiency, as military and industrial units. The lumber industry of the country and the foresters of the country may each take pride in the share which they have taken and are taking in the work. Without the participation of both lumbermen and foresters, the result could not have been what it is and will continue to be.

I was fortunate to arrive in France early enough to see something of the first expression of welcome by the French people to the American troops. I was in Paris on the Fourth of July when several companies of American Infantry marched through the city. I saw the enthusiastic greeting accorded them. And I was struck with the eager expression



on their faces; some of them veterans and marching splendidly, others newer at the game and a little timid lest they should not keep a good line, but all fresh, young, stalwart, enthusiastic. Behind them marched one of the star companies of one of the star regiments of France—a regiment with a splendid record for valor. It was tremendously impressive to see American soldiers marching through Paris and French troops marching with them. It typified the union of two great nations in a common cause.

That evening officers of the French Army in Paris gave the American officers a dinner at the Military Club. The club is on the Avenue de l'Opera, a broad and beautiful thoroughfare. When I arrived there, a few minutes late, I found an enormous crowd packing the streets, through which policemen had to clear a way for us. The minute the people saw the American uniform there were great cheers, vivas, and almost every other mark of enthusiastic greeting. About half an hour after we sat down to dinner a French officer came in and said that the people would not go

away and that the crowd was bigger than ever. A balcony runs around the club, and we all went out on that. Never before in my life have I heard or seen such cheering and enthusiasm. The people forgot themselves; they threw their hats in the air with no thought of ever getting them again; they waved and cheered, and cheered again. Along the balcony were draped American and French flags. We tore these from their fastenings and, waving them together, led the crowd in singing the Marseillaise. They kept up the demonstration for a full half hour. It was representative of how the French people feel and of the spirit in which they are receiving us; not as saviors, not as a people coming over to rescue France, but a people, a nation, coming from across the sea to fight side by side with France.

My work took me pretty largely back of the lines, and in those early days I was usually the first American officer who had come to the places where I went. The papers had published pictures of General Pershing and of the typical American soldier, and every-

*(Continued on page 58)*

## A South American Saw Mill

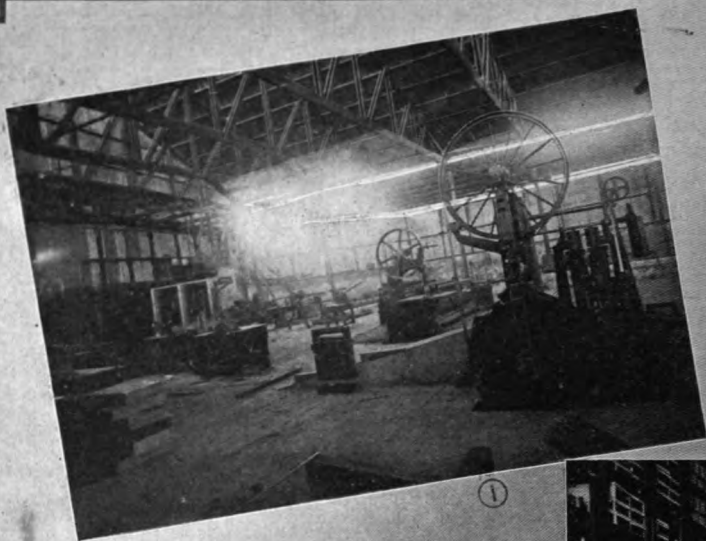
The pictures on pages 56 and 57 came all the way from Arequipa, Peru, S. A., and are reproduced to show the up-to-date saw mill and stores of James Vucetich.

No. 1 and No. 2 are views of the saw mill.

No. 3 shows the office in front of the saw mill. The older gentleman seated at the desk is Mr. Vucetich, the owner. The younger man is Mr. Vucetich, the buyer.

No. 4 is the store near Vidauazage. The saws in the picture are Disston's.

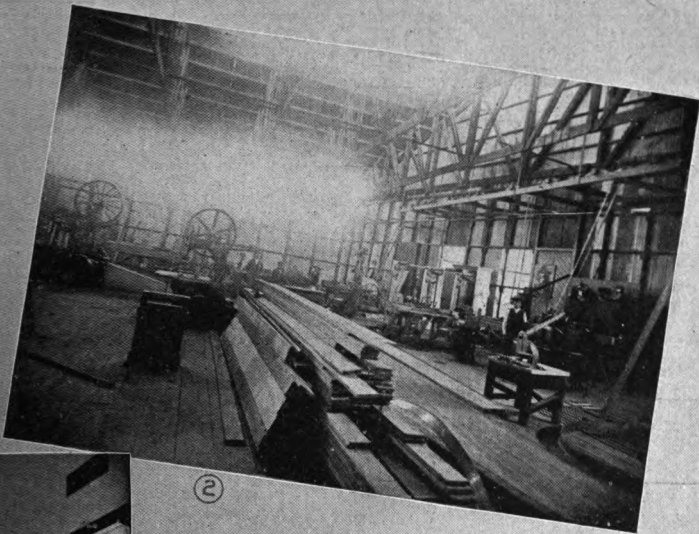
No. 5 is the store in front of saw mill.



①



④



## Americans in the French Forests

*(Continued from page 55)*

where people recognized us by our hats. As we drove through the villages the children would rush out into the street shouting "Les Americans! Les Americans!" Then the older people would run out, cheering and waving their handkerchiefs. It was a delightful and a tremendously affecting experience.

It happened that I was the first American officer at a number of camps where German prisoners are kept. One such camp was in a Government forest that we are going to take over, where the prisoners were being employed to get out cordwood and some small timber. If it had not been for the presence of the Boches, the camp would have reminded you of a fairly well organized lumber camp in the North Woods. The men had their bunks and little mattresses to lie on. They worked in the forest, with a large measure of liberty, and they seemed to be in very good health. They had their own German cooks to prepare their kartoffelsuppe and other things that they like. The bread they got was perhaps not quite so good as that furnished the French soldiers, but it was plenty good enough and nourishing. While at this camp I reviewed the prisoners. I rather imagine that the French officer who suggested the procedure had in mind to impress upon the Boches that Americans were in France. At all events they had the opportunity to see for themselves that it was a fact, and I am

glad to have been the means of conveying it to their minds.

The night before I left Paris, which was New Year's Eve, a number of officers of the forest organization who happened to be in town gave me a little dinner. Of our old Forest Service men there were present Major Greeley, Major Woolsey, Major Peck, Captain Stuart, Captain Bruce, Captain Ringland, Captain Moore, Captain Granger, Lieutenant Wolfe and Lieutenant Agee. One of the things which they asked me to do was to tell the members of the Forest Service here how much they and all the men working in forestry in France appreciate the sweaters and other useful articles you are sending them. I can assure you that this is not simply a polite expression of thanks. I have seen the men, in camp, in the fields and at headquarters, when they have received the things you have sent; perhaps yourselves have made them. I know what it means to them, not only from the standpoint of sentiment, but also from that of real comfort.

On the way home I got a little glimpse into the work of the Navy that impressed me tremendously. It was a long trip, but one which I would not have missed for anything. It did not, after all, seem such a serious matter to run the submarine blockade, for there were the destroyers to protect our ships, but it did seem a pretty serious matter for a light boat—they do not, of course, bring back as heavy loads as they carry over

—to run the blockade of six very severe North Atlantic storms, which is what we did. You feel a whole lot difference in a storm—one, for example, which necessitates the ship turning back toward France, as we had to do twice—when you have confidence in those who are in command of the ship, and when you have seen the crew of that ship, a splendid, disciplined body of young men. Those were the kind of officers and men we had on our ship, and so far as my own observation goes and from what others have told me I am confident that these are the kind of men of which our whole Navy is made up.

Another thing which impressed me when I got back here was the tremendous things which this country is doing. We have really got to judge our progress in this war by perspective; we have got to judge it by periodical progress; by achievement during a period; and by results. It is results that count, and they are the only things that do count. That is the first thing that one learns when he goes into the Army. There are no excuses in the Army—or in the Navy either, I presume. When an order is given it must be carried out. There are no reasons why it cannot be carried out, because it has got to be carried out. And that is the only way that the war can be won. So to judge of our progress by achievement is, I think, the only way to obtain a true viewpoint, one in which we will not be deceived by something near at hand that may possibly obscure real accomplishment.

In France, of course, one gets very close to the war, and so perhaps appreciates a little more what we are doing. One sees more vividly the terrible consequences of war, the sorrow and distress of the people, homes broken up, homes ruined, industries destroyed, economic conditions overturned.

It is not necessarily hate that is in one's heart; it is more a realization of what a monstrous thing it is that has possessed a nation, perverted its sense of honor, crushed its sense of the proprieties and decencies, and made it do monstrous things. The world has been made an impossible place to live in until this monstrous thing, however you express it, personally or impersonally, individually or collectively, is swept away. Not until then can we follow peaceful pursuits, not until then can we know that our homes are not going to be wiped out, that happiness is not going to be destroyed, that unhappiness is not going to be spread through our land, let alone other lands. I do not see how any one who comes at all in contact with this war can feel any other way. And the feeling that I have and that every man has who has seen this war at close range is spreading farther and farther away from the center of things and is entering deeper and deeper into the hearts of the people of this country; the realization of this terrible thing that has been forced upon the world, that has been forced upon us, and for the cure of which we count it our duty, our privilege, and our joy to make every sacrifice.

# Facts About the War



OUR government desires that everybody be given an opportunity to learn all *facts* about the War. Every American should know *WHY* we entered this war. Every American should know *WHY* we must fight on until the high ideals of Americanism and Democracy are attained.

President Wilson created the Committee on Public Information to tell the people the TRUTH. As a part of its work this Committee has prepared a series of thirty-seven booklets, each dealing with a vital war problem. These booklets will be furnished free upon request. Fill in coupon below.

## Booklet No. 5

**CONQUEST AND KULTUR.** Contents: Hundreds of quotations from the writings of leading German statesmen, professors and publicists, revealing the Prussian idea of world conquest. One section is devoted to Germany's designs upon the United States with special reference to the Monroe Doctrine. 160 pages with comprehensive map.

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**GERMAN WAR PRACTICES.** Prussianism in all its horror. Methods of the German Military Machine. Documentary proofs of German official brutalities upon civilians. Narrating instances of frightfulness taken directly from German sources.

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**WHY AMERICA FIGHTS GERMANY.** A statement why America entered the war. Deals with offences of Germany against America and against the world. The case in a nutshell written in plain language.

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The Secretary of State  
The Secretary of War

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George Creel

8 Jackson Place, Washington, D. C.

*This space is patriotically donated to our government in appreciation of the value of having every American read these important war booklets.*

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Committee on Public Information,  
8 Jackson Place, Washington, D. C.

Please send me, free of any charge, the booklets which I have checked,  
to the address given below.

Conquest and Kultur

German War Practices

Why America Fights Germany

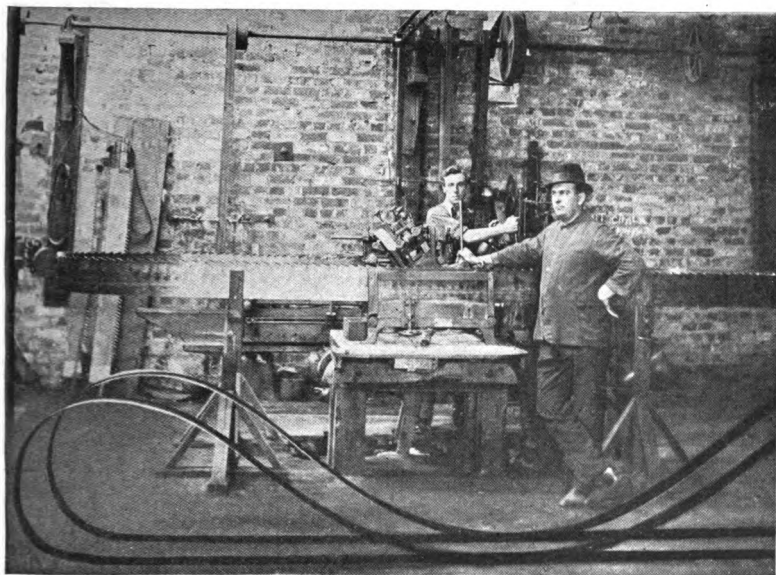
My name is.....

Street address.....

City.....

Disston Bits—May, 1918

## THE DISSTON CRUCIBLE



6th January, 1918.

30 Harmsworth Street,  
Collingswood,

Melbourne, Victoria,  
Australia.

HENRY DISSTON & SONS.

DEAR SIR: I am sending two photos of your saws in use at W. J. Brewer's, Melbourne, Australia. I have taken them purposely to send to you. I was assistant at the time, but now have full control. While I am able I will always recommend your saws, for I have always found them better than other saws during my experience.

You may use these in any form you wish. Hoping they may come in handy to you, I remain,

Yours respectfully,

ERNEST A. MURPHY,  
Saw Doctor.

## The Food Situation

**F**RANCE, Great Britain, Italy and Belgium must now import sixty per cent. of their breadstuffs instead of the forty per cent. they imported before the war.

America must supply the greater part of this need. We cannot send them corn because they have not enough mills to grind it. We cannot send them cornmeal because it spoils in shipping. The oats, rye, barley, etc., that we send will not support them unless mixed with wheat. **WE MUST SEND THEM MORE WHEAT,**

and to do this **WE MUST EAT LESS WHEAT BREAD.**

Have at least **ONE WHEATLESS** day each week and one **WHEATLESS MEAL** each day. By wheatless we mean eat no wheat products. Use corn, oats, rye, barley, or mixed cereal breads, as wheat saving breads.

Order wheat bread from your baker at least 24 hours in advance so that he will not bake too much. Cut the loaf of bread on the table. Use all stale bread for toast or cooking. Eat less cake and pastry.

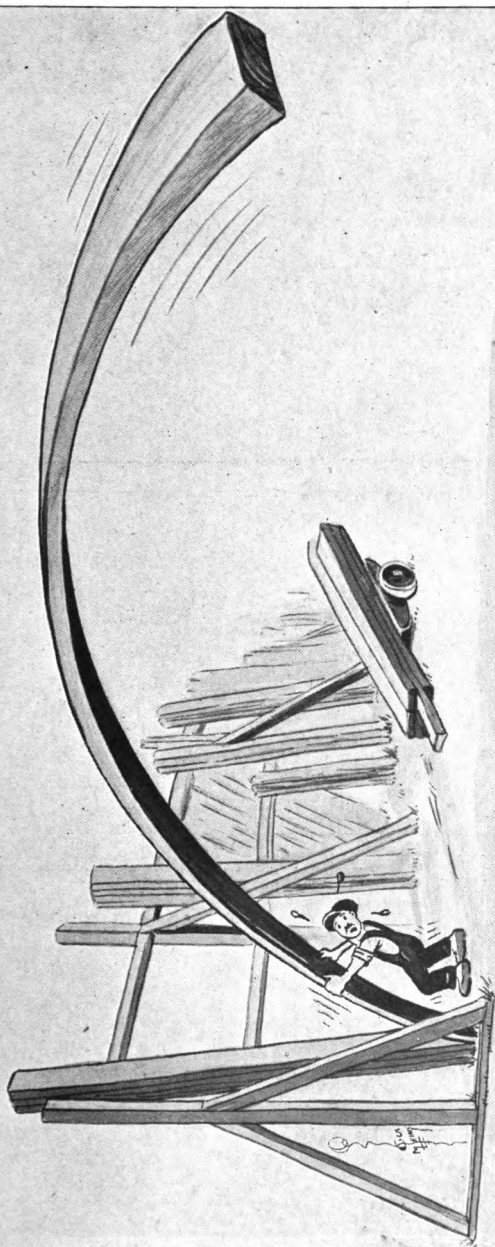
**THE UNITED STATES FOOD ADMINISTRATION** asks you to get behind our soldiers, sailors and associates by sending them now the most food possible in the least shipping space. Every man, woman and child in America can help by eating less wheat, beef, pork, fats and sugar, more of other plentiful foods which cannot be shipped, and by avoiding waste.

**EAT PLENTY, WISELY, WITHOUT WASTE,  
AND HELP WIN THE WAR**

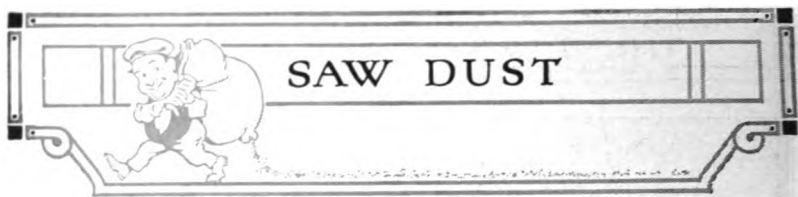
*Reprint from material furnished by the*  
**UNITED STATES FOOD ADMINISTRATION**



# THE DISSTON CRUCIBLE



The way it seems when you stand a long, wet plank on end



### IRISH BULLS

Dear Sir: Having now a little peace and quiet, I sit down to inform you of the bustle and confusion we are in from the bloodthirsty rebels, many of whom are now, thank God, killed and dispersed. We are in a pretty mess. We can get nothing to eat. When we sit down to dinner we are obliged to keep both hands armed. While I write this letter I have my sword in one hand and my pistol in the other. I concluded from the beginning that this would be the end; and I am right, for it is not half over yet. At present there are such goings-on that everything is at a standstill. I should have answered your letter a fortnight ago, but I only received it this morning.

Yours very truly,

B. R.

P. S. If you do not receive this, of course it must have miscarried; therefore I beg you write and let me know.

### THE USUAL THING

While father toils from morn till eve, Son Jim philosophizes, Uncle Ike prognosticates and Sis apostrophizes. Ma gads and gossips. Baby bawls. 'Mid all the clack and pother you never hear a single sound from busy, faithful father.

### BAYONET DRILL

Drill Sergeant (to recruit who is being instructed in bayonet practice): "Now, Murphy, how would you use your bayonet if your opponent fainted?"

Murphy: "Sure I'd just tickle him with the p'int of it to see if he was after fakin'."

First Tramp: "Would a pint of wood alcohol kill a guy, Bill?"

Second Tramp: "Would it! Why, that's the concentrated essence of fifty wood-piles."—*Exchange*.

### KNEW IT ALREADY

"I haven't paid a penny for repairs on my machine in all the ten months I've had it!" said the motorist.

"So the man who repaired it told me!" said a friend in corroboration.

### LADIES, BEWARE

Doctor: "This is a very sad case, sir; very sad indeed. I much regret to tell you that your wife's mind is gone—completely gone."

Peck—"I'm not one bit surprised. She's been giving me a piece of it every day for the last fifteen years."

—*Chicago Herald*.

Patsy: "Hello, Mike! They tell me that yer sister that was afther marrin' Donovan last year is a happy mother this mornin'?"

Mike: "That's so."

Patsy: "Is it a boy or a gurrl that it is?"

Mike: "Ah, sure, I don't know! Isn't it myself that's jist goin' up to the house to see whether it's an uncle or an aunt I am?"

### PLEASANT CONTRAST

"Mike."

"Phwat?"

"I was just thinkin'. After we get out of the trenches an' back home again how nice an' peaceful that old boiler-factory will sound to us."

—*Detroit Free Press*.

You have a dollar.

I have a dollar.

We swap.

Now you have my dollar.

And I have yours.

We are no better off.

You have an idea.

I have an idea.

We swap.

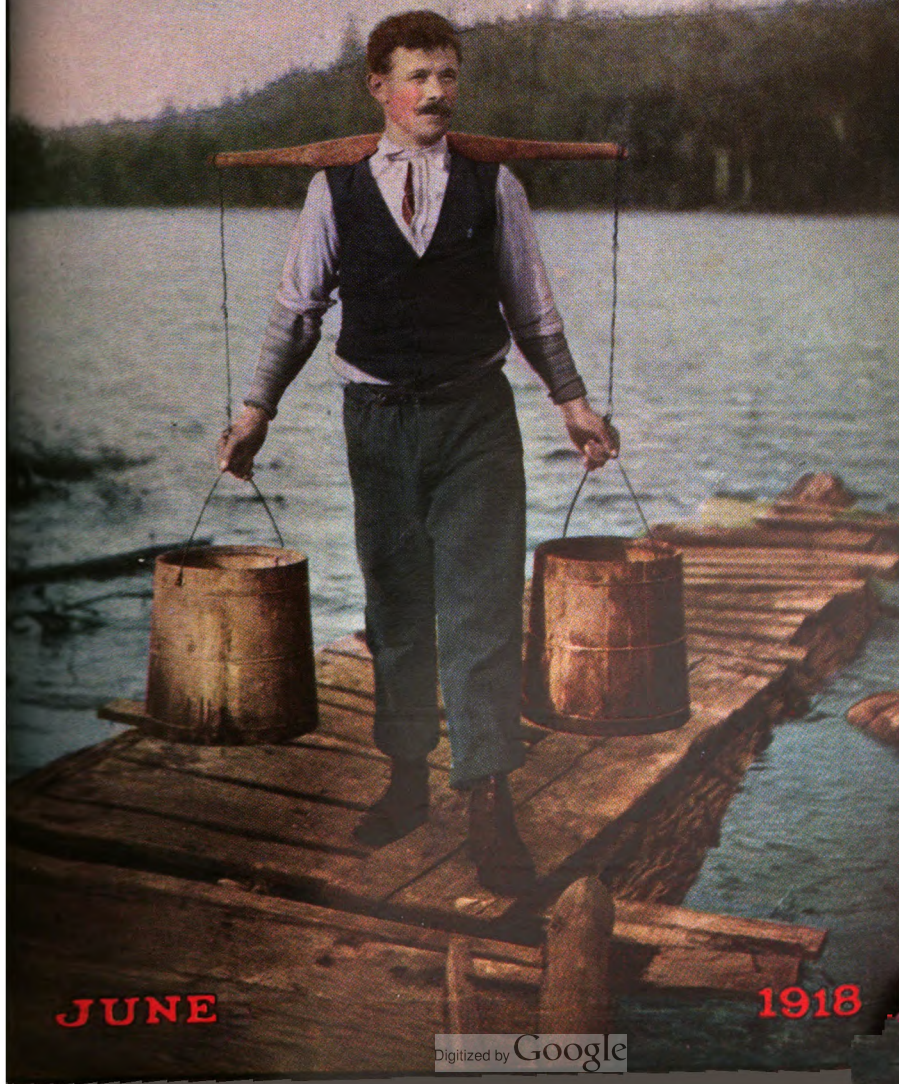
Now you have two ideas.

And I have two ideas.

That's the difference.

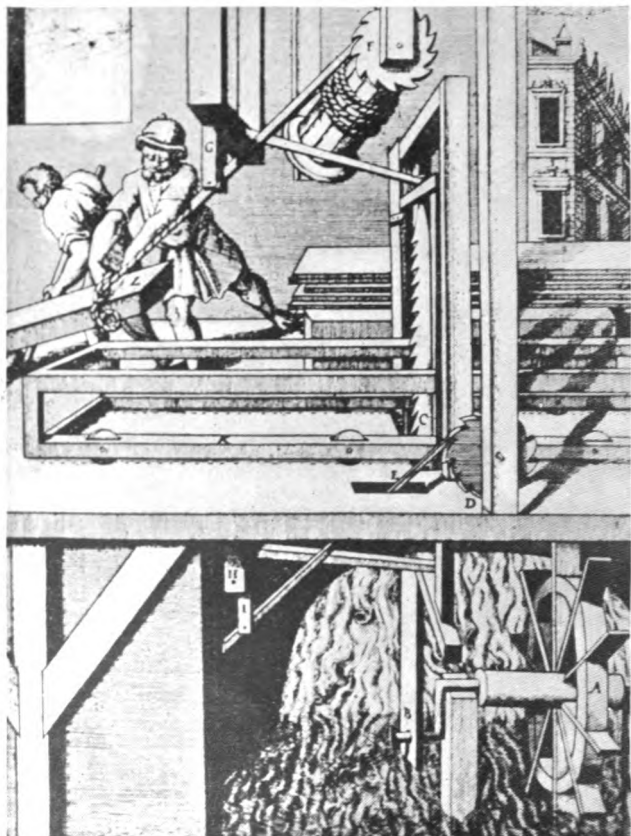
—From the *Modern Retailer*.

# THE DISTON CRUCIBLE



**JUNE**

**1918**



#### OLD TIME MILLS. No. 6

Larger in scope the mills seem to grow as time and inventive genius come into play. This water power mill shows greater production than any of the previous styles.



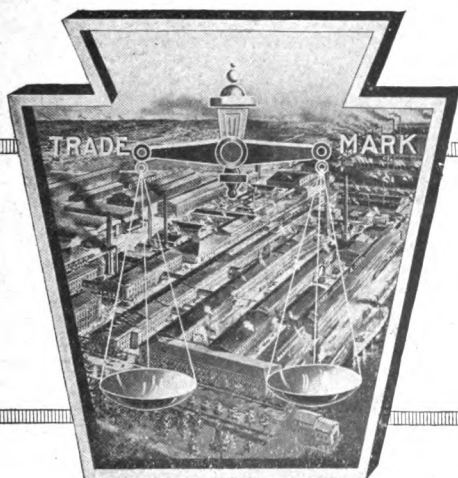
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This Magazine is Published for the Advancement of the Interests of Millmen by

**HENRY DISSTON & SONS**  
INCORPORATED

**Keystone Saw, Tool, Steel, and File Works**  
**PHILADELPHIA**

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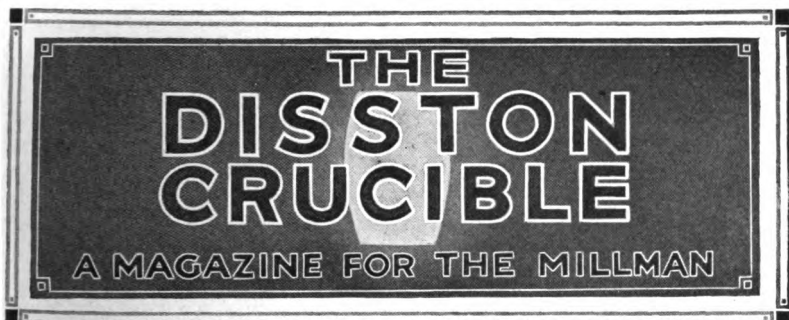
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Canadian Works, Toronto, Canada.

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This is the Filing Room of the Dare Lumber Company, of Elizabeth City, N. C., equipped with Covell Mfg. Company's machinery, and all the band saws you see in the Filing Room are Diastons. So, except one pair, this mill has two 12-inch Band, and one 10-inch Resaw, capacity 128,000 feet, every ten hours one hundred and twenty-five thousand feet. Mr. G. Litchfield, the one in the picture who is sitting on the sawage stand with his leg crossed, is the head filer, and Mr. J. M. Barnes, who is sitting at Mr. Litchfield's feet, is the helper. The other two men in the picture are the superintendent and millwright. Mr.



VOL. VII

JUNE, 1918

No. 5

## EDITORIAL CHAT

### Backing Up Our Soldiers

**T**HIS is not a government entering into negotiations with you. You are the government. You have got an interest in this concern; it is yours as much as ours, and I want you to help us. Should Germany win, God help labor! It will come out of it worst of all.

"I am not saying a word about trade union regulations during a period of peace; I have no doubt they were essential safeguards to protect labor against interference with its rights and prospects. But many government and business regulations have to be suspended during the war because they are inapplicable in the emergency, and the same thing applies to many union rules and practices.

"First are those rules set up, for very good reasons, to make it difficult for unskilled men to claim the positions and rights of men who have had training. We must appeal to the patriotism of the unions to relax these rules in order to eke out, as it were, the skill, to make it go as far as possible, in order to turn out the munitions that will win a speedy triumph. The same thing applies to the work of women in factories; if there are rules forbidding that, they should be suspended for the period of the war.

"Some of you men seem to think this war is a passing shower. It is the deluge! It is a convulsion of nature. It is a cyclone which is tearing up by its roots modern society and wrecking some of the flimsy structures of civilization. It is an earthquake, upheaving the very rocks of European life. It is one of those seismic disturbances in which nations leap forward or fall back generations in a single bound. All this chattering about relaxing a rule and suspending a custom is out of place. You cannot haggle with an earthquake!

"The nation needs for munitions and equipment all the machinery, all the labor, all the strength of every one to the utmost. I say to you workmen and employers: When you turn out shells you are not turning out something merely to kill the enemy; you are turning out something which is to save the life of a comrade! Millions of them are going to face the foe, most of them from working-class homes. Every shell you turn out is a life-guard for some of those gallant fellows."—*Extracts from the speech of David Lloyd George urging co-operation of employers and workers in England.*

*Quaker  
Tells*

## THE DISSTON CRUCIBLE

April 5, 1918.

MR. S. HORACE DISSTON.

Friend Disston:

The snap shots I sent you taken during the writer's fishing trip at the camp of The Summit Lumber Company, Davidson, Me., are very highly prized remembrances of a trip that was thoroughly enjoyed. It could not have been otherwise, for the splendid Hospitality (spell it with capital "H") of the Gilpatrick family is known in every part of Maine and beyond.

Rex Gilpatrick and the writer loaded our knapsacks with all kinds of "goodies" at the Company store, and then took our snow-shoes under our arms and started out—following the logging road, which is a perfect sheet of ice, through the woods for three miles. Here we put on our snow-shoes and followed the old trail through a splendid forest of maple, beech, birch, spruce, cedar and hemlock, to as pretty a camp as exists anywhere. In a clearing of white birch, on the edge of a stream it stands, all alone, perfect isolation! It's night when we arrive, a bright moon lighted our way for last hour or more, and the stars shine with a radiance that can only be observed on a night so still and very cold as this night is now.

Kindling is piled up and it's good and dry, too, so after lighting the lamps and building a fire in the stove, our very soul craves food. Never have fried bacon and potatoes and coffee tasted better than then. After washing dishes we played the Victrola for a while and then "into the flea bed we rolled" and slept like a pair of tired shanty-men.

In the morning at about daybreak a pet ferret that Rex Gilpatrick keeps at the camp to chase away squirrels and rats, etc., woke us up by his searching around for food, so we rolled out and finished breakfast, and then tied on our snow-shoes and walked to the lake, where we chiseled seven holes in the ice at least 36 inches thick, and set our lines for trout or pickerel. We heard a wild cat howling, but didn't see it, then back to camp we went and took the rest of the afternoon for relaxation and music. In the evening we made preparations for Messrs. Beem, Campbell and Little, who arrived rather late for supper, having finished the week's work at the mill before starting for camp. Then the fun really started—dance records were played and fox-trots, hesitations and one-steps made the camp fairly shake.

You will be curious to know why the one snap shot is entitled "On Guard" (pictured in April issue) and just what I was guarding. Though we didn't catch any fish, we did catch a few "three squeaks!" They are quite prevalent in the woods in Maine at this time, and being very shy and liable to run at least attempt to touch, we must guard them carefully. We had been told that there were reports of dinividdies and whangdoodles in these woods, too, but in the case of these, however, it was a decidedly different matter.

The former could be seen in days gone by almost any moonlight night flitting from stump to stump and back to stump again, while the mournful wail of the latter was the doeful accompaniment of nearly every nocturnal stroll. Where are the dinividdies of yesteryear? And what has become of the whangdoodle? Those are questions which I hope some of your experts in natural history will be able to answer.

Some of the most exciting sport I ever enjoyed was in the company of Victor A. Peavey, who used to take keen delight in diving for dinividdies in the shallow arms of Seodic Lake; and as for whangdoodles, why, we used to snare them by the dozen, tanning their pelts for hickey covers, and trying out the grease for use in making black whitewash.

I sincerely hope someone will be able to explain why these animals have become so nearly extinct.

Yours truly,

H. J. OTTEN.



## THE DISSTON CRUCIBLE



**R. E. GILPATRICK**  
Manager of Summit Lumber Co., Davidson, Maine  
at their Camp



### SHERMAN IN THE SLED

Sherman is a pure Great Dane hound, weighing 120 pounds, and is capable of pulling 500 pounds. The two kiddies in the sled are son and daughter of Rex Gilpatrick

## V. D. THE ENEMY AT HOME

"AT THE REQUEST OF THE WAR DEPARTMENT, WE ARE DEVOTING PART OF THE SPACE OF THIS ISSUE TO THE NATIONAL CAMPAIGN AGAINST VENEREAL DISEASE."

**T**HIS article isn't about spy activities or alien enemy outrages. Here is no thrilling narrative of how blonde Lieut. Potts, U. S. A., uncovered the plot to dynamite the Woolworth Building and thus saved the 5 and 10 cent industry to the allied cause! No.

But, this is the story, and we think there's a thrill in it, of how Uncle Sam suddenly rolled up his sleeves and decided to hand the knock-out to an invisible enemy—an enemy taking, in many cases, a greater toll in men than all the German gas, guns, grenades and other products of "frightfulness" combined.

At the request of the War Department, we are giving you this story that we may play our part in the plan to reach every man and woman in the country. You must know the truth about this unseen enemy forever threatening our military forces and our civilian communities. *You must, as a loyal American citizen*, actively enlist in the fight. You as an individual are faced with the opportunity of a lifetime to get into a "big game," to play a big patriotic part by simply backing up your Government and standing for the clean things in your community—openly, frankly and avowedly for the good of your country and your home.

The name of this invisible enemy is Venereal Disease—and there you have in two words the epitome of all that is unclean, malignant and menacing.

A shocking thing to think of and talk about? A tabooed subject? Not at all. The thing that can defeat armies—the thing which, unchecked, can destroy the race, has got to be discussed *now*. The Government is showing the way.

Here are a few of the facts in corroboration of the foregoing statements. Remember what you read. It is vitally necessary to your future and that of your country that you know these things. There is no cause for panic. But there is cause for the awakening of everyone to the situation—there is cause for abolishing the apathy of the general public, which has proved such an obstacle in the past.

Do you know that:

**During the first year and a half of the war one country had more men incapacitated from venereal disease than from all other causes put together.**

**Prostitution is the cause of nearly all venereal infection.**

**Prostitution does not exist in the Army today, but it does exist in civil communities visited by soldiers. Gonorrhea and syphilis are "camp followers" where prostitution and alcohol are permitted.**

**They form almost as great an enemy behind the lines as do the Huns in front.**

**A soldier with a venereal infection is not only disabled as a fighter, but is extremely dangerous to his comrades.**

**It costs the Government hundreds of dollars to make a soldier of a man—this is wasted if the soldier becomes disabled from venereal disease.**

**By far the largest percentage of venereal disease in the Army is brought in by the men leaving civil life.**

**To safeguard the soldier and the soldier-to-be, all communities must be free from sources of venereal disease.**

## THE DISSTON CRUCIBLE

**To protect our future man power. To keep production at the highest point. To protect the working man and thereby his family—the workman must be reached through his employer.**

These few paragraphs should be enough to convince you of the importance of this undertaking.

Now for the rest of the story.

Uncle Sam, knowing all this at the outset and having the terrible experiences of the European countries before him, decided to fight the thing from the very start. It meant doing a thing never before attempted by *any country*. It meant that the leading nation of the world on whom all eyes were turned was to deliver the first great *open blow* against an age-old curse.

How to do it was the next problem—what methods were to be most efficacious in safeguarding the health and lives of the millions of young men called to the colors? Experience with troops has proved time and again that prostitution is not necessary and that its abolishment comprised the real problem.

So with the premise well defined, the Government went to work. The result was the establishment of the five-mile zones, surrounding all military and naval stations and camps, in which prostitution and the sale of liquor were prohibited. It then became necessary to supply healthful recreation in abundance; libraries, reading-rooms, vaudeville entertainments, athletic games and numerous other forms and methods of diversion and amusement. These measures proved most effective, but communities outside the zones, to which the soldier went on leave, were contaminated. Here the Government had no jurisdiction and was forced to rely on the hope that these communities would "clean house" themselves when the Nation's needs were made clear to them.

It was also definitely shown that by far the greatest percentage of venereal infection was brought into the camps by men coming directly from civil life. This fact proved conclusively that the real fight would have to be conducted by *civilians* in their *own communities* with the aid and suggestions of the National Government.

To facilitate this matter, the Division of Social Hygiene was formed under the *War Department* Commission on Training Camp Activities. Three branches of the Division handle Army and Navy Work, Men's Work and Women's Work, respectively. Every form of publicity is being used to acquaint the soldier and civilian with the real facts concerning the subject. Motion pictures, literature for general distribution, lectures and other media for spreading a complete knowledge are being provided.

Now, how can *you* help?

Do you want or feel the need of more information along this line so that you can get shoulder to shoulder with your Uncle Sam? Do you want literature, produced under Government supervision for distribution to your employees or friends?

Do you want to co-operate in making your home town the safe place it should be for your family and the soldiers who visit it or who come from it?

Do you want to get into a really big fight against the Huns of the disease world?

Don't make a mistake—it's a man size job.

To signify your desire to fight with Uncle Sam right here at home and to go on record as a broad gauge, patriotic individual, write to

### **The War Department Commission on Training Camp Activities**

**Social Hygiene Division**

**105 West 40th Street, New York, N. Y.**

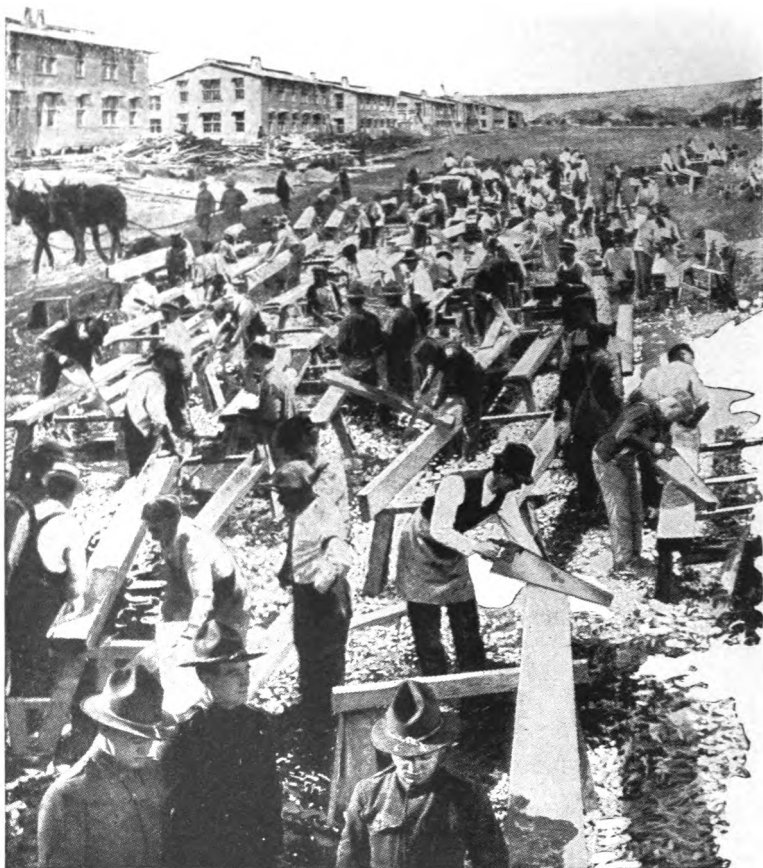
Ask them for information. Tell them what you can do. Offer your help. Write fully. They'll supply you with *real ammunition*.

THE EDITOR.

THE DISSTON CRUCIBLE

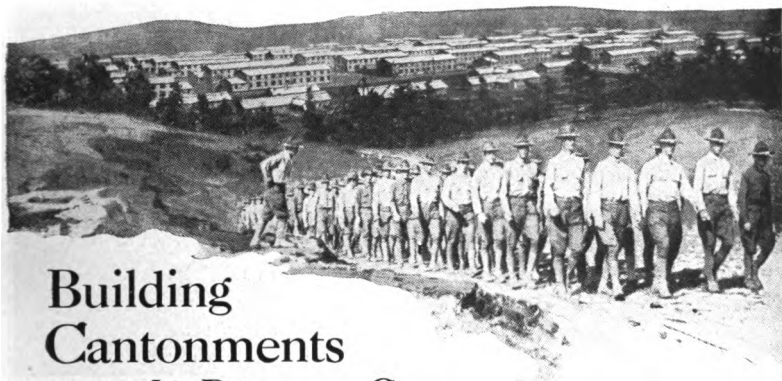
# DISSTON

## SAWS AND TOOLS



# DISSTON

## SAWS AND TOOLS



### Building Cantonments *with Disston Saws*

Where hours press, where every sweep of the saw must count, the experienced carpenter rightly depends upon Disston saws.

That is why you would have found Disston saws in the hands of about three out of every four carpenters who built the cantonments for the National Army.

Disston cross-cut saws have felled and bucked much of the pine, fir, spruce and hemlock for the 16 great army cities. Great power-driven Disston circular and band saws figured largely in milling it into proper lengths.

Every Disston saw embodies precisely the design, hang, temper, rigidity, pitch,

set and polish, that help produce the best work. You will save much muscle-taxing labor by sawing with the easy-cutting, well-tempered Disston hand-saw. Disston saws and tools are made from the highest grade of crucible steel, made in the Disston Plant, under Disston direction. So well-ground is the Disston steel in Disston saws that the need of setting is reduced to the minimum.

When you buy your next saw, follow the example of experts, and get a Disston. Send today for the Disston Handbook of Saws. Disston saws and tools are sold by all progressive hardware dealers in your vicinity.



DISSTON FILES are as famous for quality and performance as Disston Saws. We manufacture all our files from the best quality File Steel, made in our own steel works. We use more than 35,000 discs Disston Files annually in our own shops. Every Disston file is marked with the name "Disston." Ask your dealer.

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

Canadian Works: Toronto, Canada

Chicago	Cincinnati	Boston	San Francisco	New Orleans	Memphis	Seattle
Portland, Ore.		Bangor, Me.	Vancouver, B. C.		Sydney, Australia	

## The Food Situation

**T**HE chief source of fats for eating is in dairy products. We are able to produce no more of these now than before the war. Yet last year we sent to Europe three times as much butter and fifteen times as much condensed milk as we used to send. Because their milk cows are still decreasing we must send even more butter and condensed milk this year. Because their

hogs are decreasing we must send them more lard.

You can help.

Use no butter in cooking except left-overs that would otherwise go to waste. Cook with corn or cotton-seed oil instead. Save lard.

Try to use up all left-over fats in cooking, but if there is some you cannot use, save it carefully, make scrubbing soap out of it, or sell it to the soap maker.

THE UNITED STATES FOOD ADMINISTRATION asks you to get behind our soldiers, sailors and associates by sending them now the most food possible in the least shipping space. Every man, woman and child in America can help by eating less wheat, beef, pork, fats and sugar, more of other plentiful foods which cannot be shipped, and by avoiding waste.

EAT PLENTY, WISELY, WITHOUT WASTE,  
AND HELP WIN THE WAR

*Reprint from material furnished by the*  
UNITED STATES FOOD ADMINISTRATION

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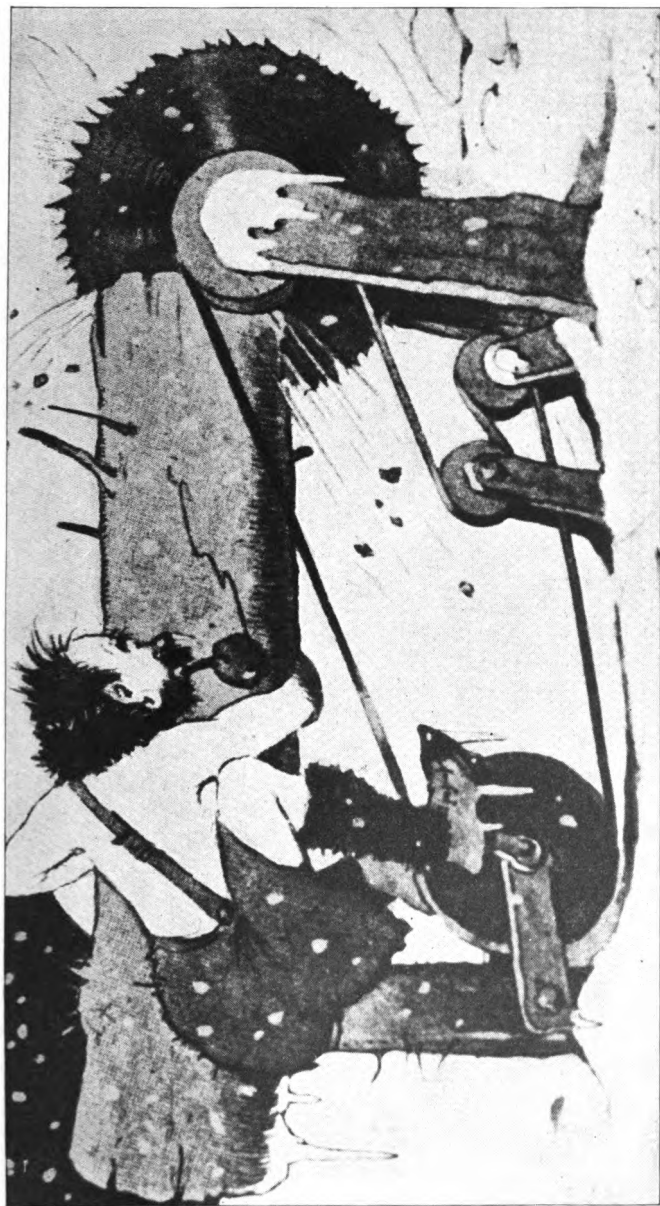
### HELP WANTED

Good, responsible man, to file, take care of and operate 4-inch and 6-inch Band Resaws. Permanent employment for right man.

THE KEYSTONE LUMBER CO., PGH.

Pittsburgh, Pa.

## THE DISSTON CRUCIBLE



Our Davie of Seattle, poking fun at us, sends this in as "A MODERN SAWMILL IN PENNSYLVANIA." Thus do our children spring up and away and seemingly think they have outgrown us. It won't astonish us a bit, Dave, if you tell us that in Seattle you attach a Disston Circular Saw to a flying machine and saw down forests as you swoop along. Once we had that same youthful enthusiasm, too, about reaching the stars. But it's a funny cartoon just the same, David.

# THE DISSTON CRUCIBLE

ELIZABETH CITY, N. C., January 14, 1918.

HENRY DISSTON & SONS,  
Philadelphia, Penna.

Dear Sirs:

I want to give the factory an idea how the 12-inch band saws that you are putting out at the present time stand up. I have spent twelve years in the filing-room steady putting up saws for all kinds of wood, hard wood and soft. This is the first winter in this country that the filers have had frozen timber cut as I remember. I used to have lots of it in the State of West Virginia, and it was no stranger to me, and glad to say I had my filing-room supplied with Disston best-grade band saws, and we made our regular cut every day during the freeze without any trouble whatever. The North Carolina pine, when frozen, is the hardest timber I have ever tried, and as the company timber is loaded on barges and has to be towed a long distance of 40 or 50 miles on water, they are never in the water long when dumped at the mill. These logs were some hard, believe me, but not too hard for a Disston saw when in shape. I am proud to say that in all the freeze I did not lose a corner and haven't in a long while on account of the saw steel.

Some few days ago I was working a saw at the bench wher the bell rang for me to go down stairs, as my fitting-room is overhead. I went down to see if my saws had jumped off the mill or run in the head block or killed a man. The bell rang so long I just knew something great had happened, but, to my surprise, they were taking the saw off, getting ready to send it up stairs. The sawyer said she was ruined. I know they showed me a log dog that she had split from one end to the other, which length was about 9 inches, width  $\frac{1}{2}$  inch.

When the saw was placed on the grinder, I found one tooth gone, and one light swaging and grinding put her in shape for her next trip. Now that is all I can say for the Disston saws. They are more than better than any saw I have ever used. They have no equal.

I hope the man who tempers them can read this letter. I would love to shake his hand, for, believe me, a good tempered saw is the mainstay of a filing-room. If this is worth publishing in your little pamphlet, do so. If not, throw it in your waste basket. I expect to send you the picture of my filing-room soon.

Yours truly,

A Friend of the Disston,

G. L. LITCHFIELD,

C/o Dare Lbr. Co.,

P. O. Box 407,

Elizabeth City, N. C.



## "MY REGGAMENT"

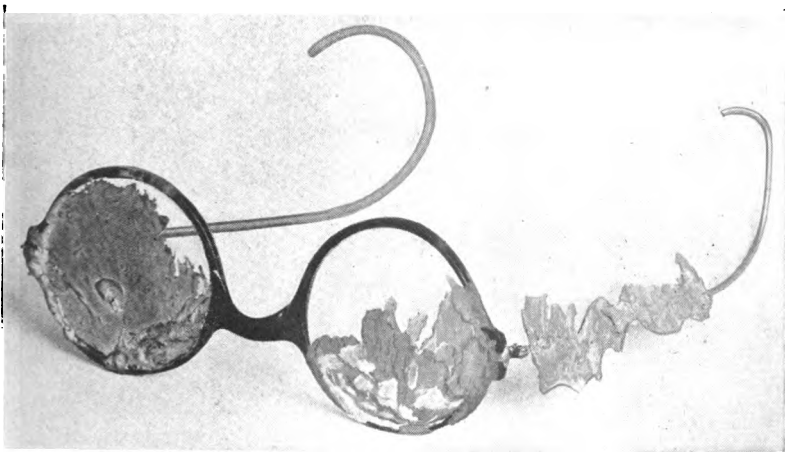
Had a major wus a loyer and a lute that wuz a bloke,  
 Wat toted dynamite around and blew bridges up in smoke;  
 The captains they was 'L' road guards an' football stars, an' such,  
 As peddled real estate to boobs that never would know much;  
 An' the curnel, he came from the Point an' later was a scribe,  
 An' the band conductor he cum from some wild Egyptian tribe;  
 The adjutant raised dogs and hell, and knew the latest fads  
 In wimmins linjerie and stuff from writin' all their ads.  
 An' then the lutes were everything from movie stars to mayor,  
 An' three cum from the reglers an' two o' them wuz fair.  
 The personnel was rah rah boys an' lots of other guys  
 Like what hang around election time to vote agin the drys;  
 An' sum was travelin' salesmen; an' sum wuz poolroom sharks,  
 An' sum just saved their room rent by sleeping in the parks,  
 An' sum was he-stenographers, a few wuz engineers,  
 A lot was foot rail polishers an' free lunch conisseers;  
 Sum slung hash and biskits, an' them not broke wuz bent,  
 But take 'em all together, they're a damn fine reggament.

E. L.

(Written by an American officer now serving in France.)

Reprinted from the May Issue of *National Service*.

## A CURIOUS ACCIDENT



To the wearing of these eyeglasses, Mr. Morehouse, of the Northern Woodenware Company, Island Falls, Me., owes the fact that he still retains his eyesight.

Melting a ladle of babbit metal at a forge, he picked up another bar of metal to add to the quantity already molten, and this either had a piece of ice clinging to it or had been wet in some way. At any rate, when put in the ladle the lot exploded, burning Mr. Morehouse considerably, but owing to the glasses, his eyes were uninjured.

The illustration shows how the glasses were splattered with the hot metal and the great protection they afforded.

## THE DISSTON CRUCIBLE



Don't move away from these Jack and I'll get some help

## THE DISSTON CRUCIBLE

### IF I KNEW YOU AND YOU KNEW ME

If I knew you and you knew me,  
'Tis seldom we would disagree;  
But, never having yet clasped hands,  
Both often fall to understand  
That each intends to do what's right,  
And treat each other "honor bright."  
How little to complain there'd be,  
If I knew you and you knew me.

Whene'er we ship you by mistake,  
Or in your bill some error make,  
From irritation you'd be free,  
If I knew you and you knew me.  
Or when the checks don't come on time,  
We'd wait without a-n-x-i-e-t-y,  
If I knew you and you knew me.

Or when some goods you "fire us back,"  
Or "make a kick" on this or that,  
We'd take it in good part, you see,  
If I knew you and you knew me.  
With customers ten thousand strong,  
Things are at times bound to go wrong.  
Sometimes our fault, sometimes theirs—  
Forbearance would decrease all cares:  
Kind friend, how pleasant things would be,  
If I knew you and you knew me.

J. L. GLENN.

### BOY SCOUTS TO HELP GOVERNMENT FIND BLACK WALNUT

(From the *Forest Service*, U. S. Department of Agriculture.)

WASHINGTON, May —: President Wilson's appeal to the Boy Scouts of America to help win the war by locating supplies of black walnut trees has been followed by arrangements under which the War Department, the Forest Service and the Boy Scout organization have joined efforts to find the needed timber.

As President Wilson pointed out, the War Department program makes the securing of black walnut lumber for use in manufacturing airplane propellers and gunstocks of the utmost importance. War Department and Forest Service officials are combing the country for black walnut timber, which can no longer be found in abundance anywhere, but has to be culled, often as single trees, from mixed forest growths. Much of the black walnut that is left is in farmers' wood lots, and it is primarily to locate this that the Boy Scouts have been called into service. In the aggregate, there are said to be large supplies.

Many thousands of blanks and letters of instructions are being printed by the Government for distribution to scouts and scout masters throughout the region in which black walnut occurs in commercial quantities. Individual trees may be found as far east as Connecticut, northward in New York to and beyond the Canadian line, southward almost to the Gulf of Mexico, and westward far into the prairie States, but the Ohio and Mississippi Valley States, the Middle Atlantic States and the Southern Appalachian region are expected to furnish most of the supply. As reports are turned in by the scout masters, they will be tabulated by the Forest Service and reported to the War Department.



### A JURY'S VERDICT

A Georgia darkey was brought to court on an assault charge. The State produced the weapons—a huge pole, a dagger, a pair of shears, a saw and a gun. The premier counsel presented in rebuttal evidence an axe, a shovel, a scythe, a hoe and a pair of tongs. The jury was out but a few minutes, returning with the verdict, "Resolved, that we, the jury, would have given five dollars to see the fight."—*The C. & O. Employees' Magazine*.

### THE WILL AND THE DEED

"My husband," said the matron, "was a confirmed smoker when I married him a year ago, but to-day he never touches tobacco. He used to smoke forty cigarettes a day, but if you offered him one now he'd run a mile rather than smoke it."

"That's fine!" approved one of the group. "You must be proud of your husband. To break off the habit of a lifetime in one year requires a strong will, indeed."

"Well," remarked the wife, meditatively, "that's just the kind of will I've got."—*London Answers*.

### SAVE THE CHILD

"Oh, hubby, such an instructive lecture. The gentleman told us what you eat, you become."

"Huh?"

"What you eat, you become."

"Take that all-day sucker away from Tommy."—*Exchange*.

### TIME TO STOP

Quit your kicking—get a grip;

Push with all your might,

Start things at a merry clip,

Then keep them going—fight.

Put some ginger in your words,

Tackle something big;

Cast your worries to the birds,

Get right down and dig.

—*Mark Hambleton*.

### THE DIFFERENCE

"Blessed are the meek," quoted the deacon, in reproving the backslider, "for they shall inherit the earth."

"They may inherit it all right, deacon," said the irreverent one, "but somehow or other they never seem to get possession."—*British Weekly*.

### JUST DESERTS

Wife: "This paper tells of a man out in Ohio who lives on onions alone."

Hub: "Well, any one who lives on onions ought to live alone."

—*Boston Transcript*.

### IDENTIFIED

"He's one of the fixtures in the office, I understand. Is he a live wire?"

"No, he's no electric fixture. Does nothing but talk all day long."

"Oh, I see, he's a gas fixture."

—*Exchange*.

### THE MAIN POINT

The Frenchman did not like the look of the barking dog barring his way.

"It's all right," said the host. "Don't you know the proverb, 'Barking dogs never bite'?"

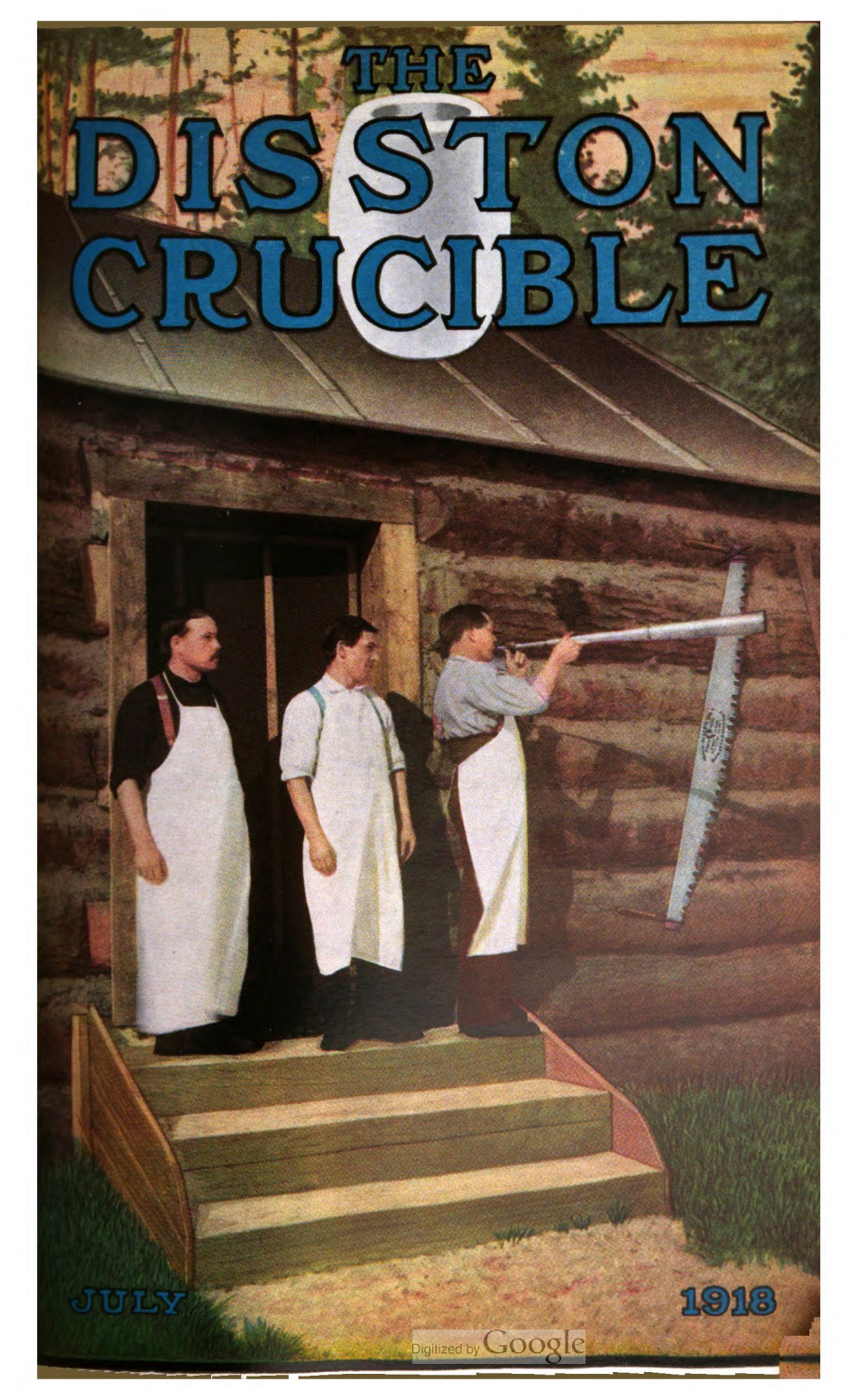
"Ah, yes," said the Frenchman. "I know the proverb, you know ze proverb; but ze dog—does he know ze proverb?"

—*Pittsburgh Chronicle-Telegraph*.

### "IGNORANCE OF THE COTE"

Judge M. W. Pinckney, at a recent banquet, recalled an incident to show that there is some humor associated with such a serious thing as law. In Dawson City a colored man, Sam Jones by name, was on trial for felony. The judge asked Sam if he desired the appointment of a lawyer to defend him. "No, sah," said Sam. "I'se gwine to throw myself on the ignorance of the cote."

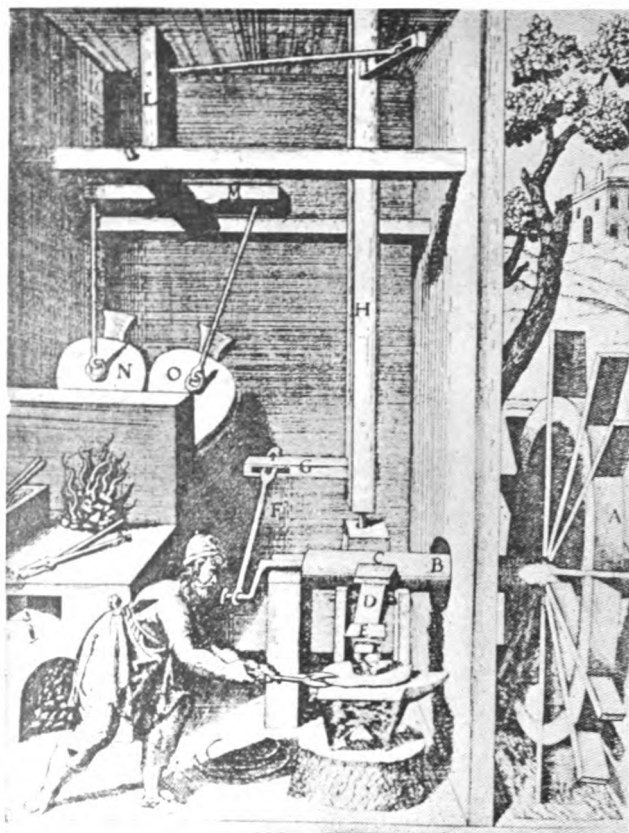
# THE DISTON CRUCIBLE



JULY

1918





#### OLD TIME MILLS. No. 7

This method of working steel into sheets may seem crude today, but nevertheless the application of water power was a great step in advance and led to further improvements later on.

# THE DISSTON CRUCIBLE

PRICE 10¢ PER COPY

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

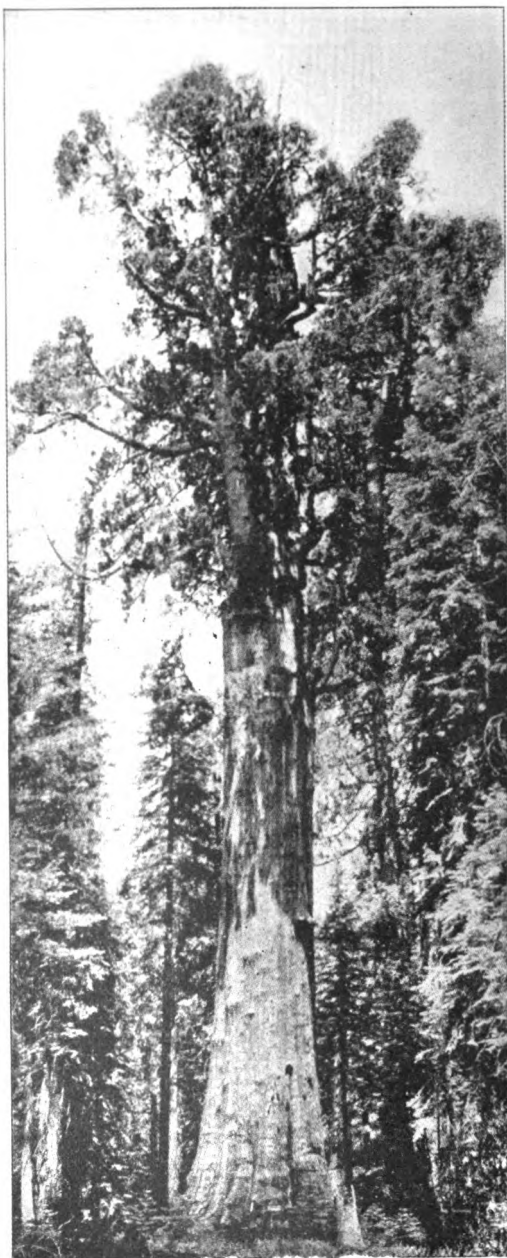
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**Keystone Saw, Tool, Steel, and File Works**

**PHILADELPHIA**

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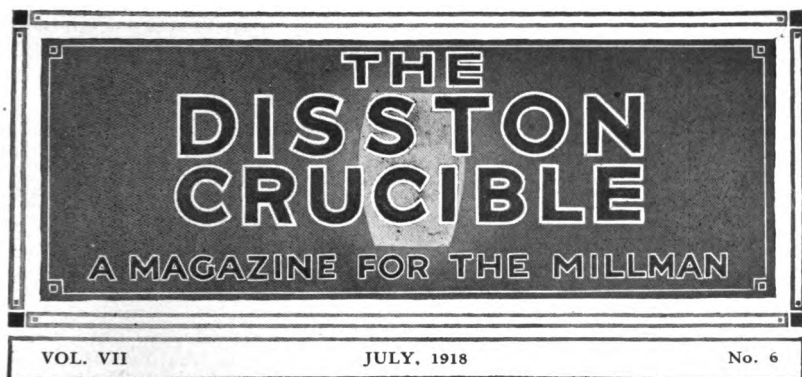
Chicago, Ills. Boston, Mass. Cincinnati, Ohio. Seattle, Wash. Portland, Oregon.  
New Orleans, La. Memphis, Tenn. San Francisco, Cal. Sydney, Aus. Vancouver, B. C.  
Canadian Works, Toronto, Canada.



**General Sherman Tree**

**The largest and oldest living thing in all the world.  
Diameter, 36.5; height, 279.9 feet. Sequoia National  
Park (Middle Eastern California)**





## EDITORIAL CHAT

### "In Union There is Strength"

**O**LD as the hills, is the thought in the saying, "United we stand, divided we fall," which is merely another way of entreating a "pull all together," will always apply. It is the combination of skill, strength and force that leads to powerful accomplishment.

This has never been more aptly exemplified than in the present war, the magnitude of which dwarfs all others. Each of the Allied Armies under separate direction would have a force or power equal only to its own numbers, but combined and directed under one experienced head, the aggregate power and advantage is multiplied many fold.

This is true in any movement, whether it be war or industry, for the grouping of resources and effort enable the attainment of power and facilities by which highest achievement is possible.

*Quality  
Sells*

# Why Wood Warps

(From The Literary Digest)

**W**ARPING, OR BENDING in one plane, is caused by the application of force in various ways. It may be due to gravity, as when a slab of material is supported at both ends and acquires a permanent "sag" by sinking in the middle. In this sense a piece of stone or metal may warp. The term, however, is usually applied to the bending or curling up of wooden boards because of unequal expansion or contraction on opposite surfaces, due often to variations in the drying of the surfaces or in their absorption of moisture. Hu Maxwell, who writes in *The Hardwood Record* (Chicago), tells us that such action may be met with nearly anywhere that the material is put to use. He says:

"It is frequent in lumber-yards, particularly if the piling of the lumber has not been carefully attended to. Boards bending upward at the sides and the ends, if free to move, may rise partly from the ground. Finished work may warp as badly as rough boards, for the mere process of planing, sawing, and fitting wood does not guarantee it against warping. Possibly a door refuses to latch because one side has twisted out of plumb, or a window-sash will not slide up and down as it was meant to do, or a table-top presents a distorted appearance, or possibly a piano-top will do the same, and all sorts of paneling may become curled and warped.

"When wood behaves in this manner it is doing nothing new. The handle of the stone hatchet of the paleolithic man warped as badly, and

in the same way, as the ax-handle of the modern lumberman. Wood has not changed. Modern methods of working it have not increased or lessened the material's natural tendencies to twist or pull out of shape. The modern boat-builder who is compelled to reject a warped stanchion is confronted by precisely the same proposition as confounded Noah

when he discovered that a king-post of the ark had warped and had pulled the roof-tree out of line.

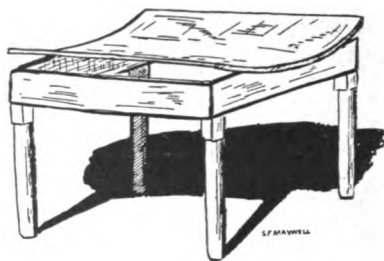
"The warping of any material is due to stresses, usually to the pull of a force that is not counteracted by an equal pull in the opposite

direction. In wood this pull is commonly caused by shrinkage, and the shrinkage is the result of drying."

A study of warping in detail, Mr. Maxwell goes on to say, involves an examination of the minute structure of the material. In the first place, such structure in wood is very complex. It has been remarked that a modern sky-scraper is not more complex in structure than a half cubic inch of wood magnified to the size of the building. To quote further:

"Wood is composed primarily of cells and other elements, some of which lie with their long axes up and down the trunk, others at right angles to them, extending from the bark toward the center of the tree. Those extending up and down are the most important in the majority of woods, because most numerous, the largest in size, and most vital to the tree's existence. The elements extending from the bark inward belong

(Continued on page 86)



Too Much Water Did It

## The Food Situation

**T**HE railroads cannot carry coal to you and also handle military supplies in the quickest way. Help by burning less coal.

Coal supplies power for electric light and steam heat. Turn off both when you don't need them.

If you can get wood, use it instead of coal.

The United States Government has no intention of taking the preserved fruits and vegetables, or other food supplies of private citizens, either now or at any future time. Any other statement is enemy propaganda to frighten you into withholding your support from the cause of freedom.

**THE UNITED STATES FOOD ADMINISTRATION** asks you to get behind our soldiers, sailors and associates by sending them now the most food possible in the least shipping space. Every man, woman and child in America can help by eating less wheat, beef, pork, fats and sugar, more of other plentiful foods which cannot be shipped, and by avoiding waste.

**EAT PLENTY, WISELY, WITHOUT WASTE,  
AND HELP WIN THE WAR**

*Reprint from material furnished by the*  
**UNITED STATES FOOD ADMINISTRATION**

## Why Wood Warps

*(Continued from page 84)*

to the medullary rays. All woods have these rays, and all woods likewise have fibers running the long way, up and down the trunk. These fibers, or cells, are the strings which draw when wood is in the process of drying, and the pull may warp the wood or cause it to check.

"The pull or stress is produced by the drying, and the consequent shrinking, of the wood. When a certain percentage of the water in green or wet wood goes out, the individual cells become smaller by the thinning or contracting of their walls. Every cell so shrinking pulls a little, and, when such a force is multiplied by millions, it may become powerful enough to produce warping in a plank, panel, board, or other piece of wood.

"A piece of wood contracts sideways but not much endwise. That is because the individual cells composing the piece shrink sideways but very little endwise. The shrinkage of a plank or beam is only a multiplication of the shrinkage of individual cells or fibers.

"Most of the cells composing a stick run lengthwise. There is, however, some lengthwise shrinkage in wood, and a good deal more of it in some species than in others. Oak has it to a considerable extent, which accounts for the curling up of oak-shingles and for the new-moon shape of oak-boards in sidewalks. \* \* \*

"The shrinkage of wood and all the consequences, particularly warping, checking, and hollow-horning, are considered much more important now than they once were. That is because the utilization of wood is more highly developed than it was a few generations ago. \* \* \*

"When moisture below a certain percentage is taken from wood, the wood shrinks. The vital problem with all kilns is to dry lumber in such a way that this shrinkage is distributed equally over all parts. If unequally distributed, one part will contract more than another and warp

the material or produce checks and cracks. Devices have been provided for extracting the moisture so evenly from all parts of the plank that every stress will be counteracted and the plank will remain straight and without checks. Speed is necessary, but speed has its limits. Moisture from the interior of a piece of wood can come away only so fast. Attempts to speed it up too fast will cause shrinking in some parts, with checking and warping.

"Veneer panels, such as furniture-makers use, are built up of single sheets, the grain of the superimposed sheets crossing one another at right angles. That is done to counteract stresses due to the shrinking and swelling of the wood during alternate changes from wet to dry weather. The pull of one shrinking sheet is in one direction, the next pulls in a different direction, one offsets the other, and the panel remains straight. The manufacturer of articles of wood must be eternally on his guard against the strains produced by the shrinking and swelling of the material.

"He cannot wholly prevent them and must meet them the best he can. No matter how carefully wood may be seasoned, it is liable to absorb moisture enough from the air in wet weather to cause some swelling, and it is liable to part with enough in dry weather or in a heated room to cause some shrinkage. The man who successfully handles wood that goes into exacting situations must work out almost as many problems as the general who conducts a military campaign involving master strategy.

"The shrinkage of wood is caused almost wholly by withdrawing water from it, and swelling by putting water into it, the effect of heat and cold being almost negligible so far as they diminish or increase the bulk. That is different from metals and many other materials whose bulks respond quickly to changes in temperature."

## THE DISSTON CRUCIBLE



This is not a Hun, but one of our men in the Disston Works trying on a real German gas mask. He is Charles Kissel, and his cousin, A. P. Critchon, who sent this mask over to his mother, wrote:

This German gas mask was captured at the battle of Cantigny in France by a member of the Medical Corps of the 29th Infantry, who went over the top with the men. After the town was taken the Americans dug in and repelled four Hun counter attacks. In the last attack about two hundred prisoners were taken, some of them wounded, and the mask was taken from one of the latter, who afterwards died.

## ON ACTIVE SERVICE WITH THE AMERICAN EXPEDITIONARY FORCE

SOMEWHERE IN FRANCE, June 15, 1918.

DEAR FRIEND BOB:

Having a few hours to myself and feeling in the humor for writing, thought I had better drop a few lines to you and let you know how things are going.

We had a very pleasant sea voyage, having good weather all the way across. It rained one day and the ocean got pretty rough, but the most of us had our sea legs by that time and rather enjoyed the rolling and pitching of the good old ship. The seas were this way for a few days, and one morning we awoke and found ourselves in the smoothest of water; it was just like our Schuylkill River, and, better still, we were in sight of land. It sure did look good to us. Well, we landed and took the trains for a camp, which was a "rest camp." On the train we saw a good bit of England, and I for one was rather surprised at the difference between our good old U. S. A. and England. First, their train service is *quaver*. They have little coaches divided into compartments, and we rode eight in a compartment. Their locomotives are very small, something like the engine they have down at the Filtering Plant, but, believe me, they sure can travel some. Next, the tram-cars are funny looking things. They are like our State Road dinkies, but they have an addition on the roof for passengers also. We usually rode on the top deck, because we could smoke up there. They have girl conductors and, believe me, they sure do know their job. I think they are even superior to the men, for when the conductress tells one to step lively or step to the front of the car, they do it with a snap, while if it were a man, no need to go into detail, for you know just how we all would act. The fare is a penny, and for the penny you can ride anywhere and get a receipt besides. The receipt is a bit of cardboard about 2 inches or 2½ inches long by ¾ inch wide and is your receipt. It takes the place of our transfers at home. The conductress carries a satchel at the waist, suspended by a strap around the neck, and this is the receptacle for the big pennies. You know they are a little bigger than our half-dollar, and a few hundred must weigh a ton. So much for the transportation.

England is rather very pretty and they have some very nice houses and park places. One peculiar thing about the houses is that they are all peaked roofed. I do not remember seeing any flat roofs at all. The streets are kept nice and clean, and so are the yards of the houses. While in the train, we had a good look at both houses and roads and found them neat and clean.

The English police, too, were a funny sight for us to look at. They are dressed somewhat like our "cops," but have lots of decorations. They have silver buttons and a good bit of silver or, I should say, nickel on their collars. Their helmets are something like the German soldier's, but they have not that steel point on. They carry a stick which is somewhat like a cane, but not quite as long and a little heavier. They are a husky looking lot, all being either six feet or over, and most of them are built in proportion. So much for England.

We will now go on to France. Bob, France is sure one beautiful country. If I did not like my dear old Pennsy so much, I would say it is even prettier than home, but I will admit it is great. It is no wonder the Frenchies fight

## THE DISSTON CRUCIBLE

so hard to protect their homes and country, for it is sure worth while fighting for.

Every bit of ground they can handle, and that is a good bit, is being farmed and used, for the French people are some workers. Their day is very long, for at sunrise they are up and soon out, and about sunset they call it a day. I guess they do not know there is an eight-hour day. One peculiar thing about the days here is that daylight is very long. The sun rises about 4.30 A. M or 5 A. M., and it is about 9 P. M. before it gets dusk. I am not so sure about the hour the sun rises, for we do not get up that early, but we crawl out of our nests at 4.45 and the sun is bright and pretty high then.

We are now living in billets, which are houses and barns. Myself and nineteen others are quartered in the second story, and we sure have the times of our lives, specially at night, when we are all together. The evenings are spent playing pinochle and singing. Our first night in billets is one long to be remembered, for one of the fellows thought he was attacked by the soldiers' enemy, but it was only a false alarm. We examined him pretty closely, but found no trace of cooties, but nevertheless we all went back to bed, feeling a little creepy. Imagination, I guess.

The other day, in rummaging through the billet, we found an old bed with mattress and everything that goes with it, so we aired the bedclothes good and in the afternoon we fixed the bed for the night and then went outdoors. When we came back, we found our bed was tenanted by chickens, not the regular kind, but of the fowl variety. We soon chased them and started to fix up for the night, and in walks the lady next door, who owns this place. She began to jibber in French at an awful gait, but she made us understand that we were not welcome, that downstairs belonged to her and not us, so we beat it upstairs. Bob, let me tell you that when a French woman starts to lay down the law to you, you may as well keep quiet, for it is impossible to get a word in edgewise.

It is a funny sight to walk down the street and see a group of soldiers here and there, with their little French book out, crowded around some French dame or fellow, trying to learn the lingo. Believe me, it is a tougher proposition than one thinks to learn French, but I think we will get along slowly. Am giving it an awful battle anyway.

Well, Bob, this is about all for this time. Will write you again when news is a little thicker. Give my regards to all the Disston boys and girls, and don't forget our old friend Sarah. Let me know how things are going around Disston's and Tacony.

Hoping this letter finds you in excellent health, will close, remaining as ever,

Your Assistant,

HARRY J. SCHNEIDER,

Field Hospital Co. No. 110,  
103d Sanitary Train,  
American E. F.

P. S. Remember me to the Mrs. and kiddies and Joe Koenemann. All the boys are in the best of health and want to be remembered to the Disston boys. Poly is getting to look like Billy Bounce. He is as round as a ball. So long.

## THE DISSTON CRUCIBLE



WINDSOR CASTLE.

Soldiers of the United States, the people of the British Isles welcome you on your way to take your stand beside the armies of many Nations now fighting in the Old World the great battle for human freedom.

The Allies will gain new heart & spirit in your company..

I wish that I could shake the hand of each one of you & bid you God speed on your mission.

George R. I.

April 1918.

Fred Cantz, formerly of the Disston Steel Works, now with the No 110 Hospital Corps, 24th Division, U. S. Army in France, sent this letter, which speaks for itself. Fred informs us that each man in the Corps received one.



# THE DISSTON CRUCIBLE

## LET THE KAISER LIVE!

From the "Silent Partner"

As long as the flowers their perfume give,  
So long I'd let the Kaiser live,  
Live and live for a million years,  
With nothing to drink but Belgian tears,  
With nothing to quench his awful thirst,  
But the salted brine of a Scotchman's curse.

I would let him live on a dinner each day,  
Served from silver on a golden tray—  
Served with things both dainty and sweet—  
Served with everything but things to eat.

And I'd make him a bed of silken sheen  
With costly linens to lie between,  
With covers of down, and fillets of lace,  
And downy pillows piled in place,  
Yet when to its comfort he would yield,  
It would stink with rot of the battle-field.  
And blood and bones and brains of men—  
Should cover him, smother him—and then,  
His pillows should cling with the rotten clay,  
Clay from the grave of a soldier boy,  
And while God's Stars their vigils keep,  
And while the waves the white sands sweep,  
He should never, never, never sleep.

And through all the days, and through all the years,  
There should be an anthem in his ears,  
Ringing and singing, and never done,  
From the edge of light to the set of sun,  
Moaning and moaning and moaning wild,  
A ravaged French girl's bastard child.

And I would build him a castle by the sea,  
As lovely a castle as ever could be,  
Then I'd show him a ship from over the sea,  
As fine a ship as ever could be.  
Laden with water cold and sweet,  
Laden with everything good to eat,  
Yet scarce does she touch the silvered sands,  
Than a hot and Hellish molten shell,  
Should change his Heaven into Hell,  
And though he'd watch on the wave-swept shore,  
Our "Lusitania" would rise no more.

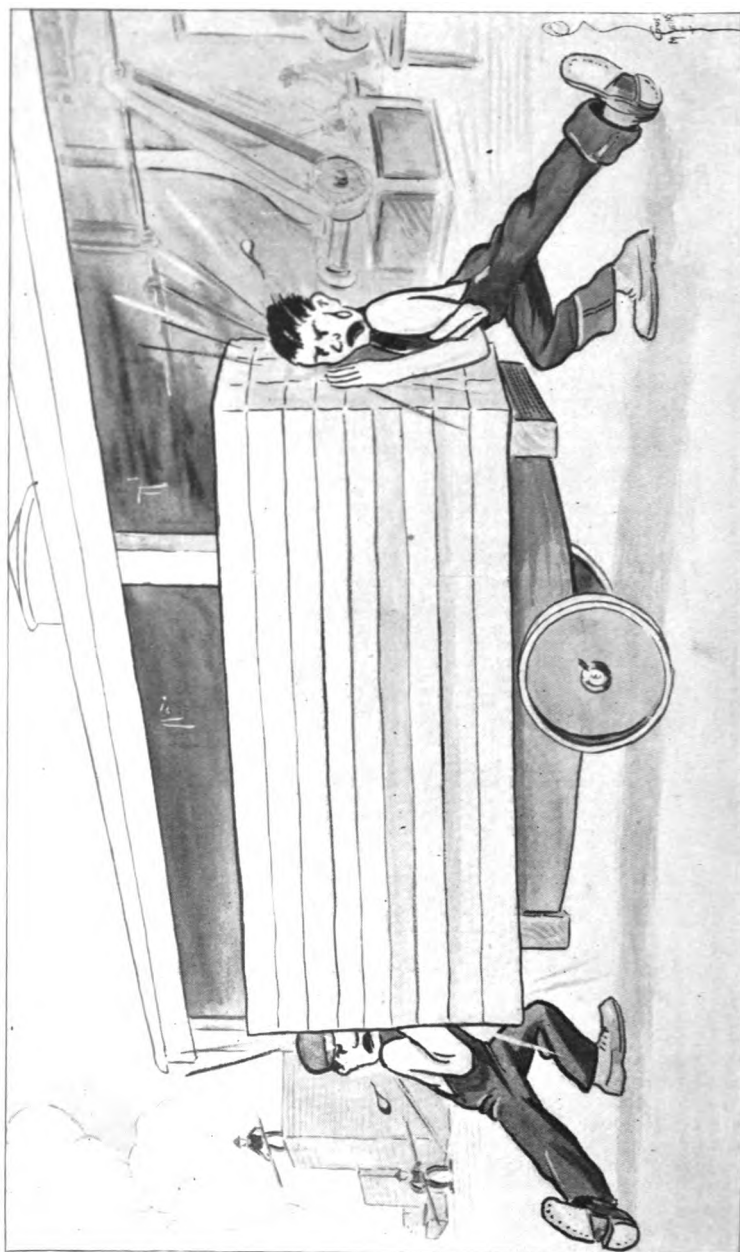
In "No Man's Land" where the Irish fell,  
I'd start the Kaiser a private Hell,  
I'd jab him, stab him, give him gas,  
In every wound I'd pour ground glass,  
I'd march him out where the brave boys died,  
Out past the lads they crucified.  
In the fearful gloom of his living tomb,  
There is one thing I would do before I was through,  
I'd make him sing in stirring manner,  
The wonderful words of the "Star Spangled Banner."

## Ball Bearing's Mechanical Efficiency

Ball bearings once considered only for special purposes, can now be found in many unexpected and surprising places. Their use usually enables higher speeds, reduces friction losses and simplifies design. Large electrical machines are adopting ball bearings because of the lower static and running friction, lower starting and running currents. Ball bearings often enable reduced overall machine dimensions, making for a cheaper machine that overcomes

space restrictions. Ball bearings are now being used where dirt and grit and infrequent inspection make other bearings troublesome and expensive as with locomotives for coal haulage. Even mechanical stokers are adopting ball bearings, a class of extremely severe service. Ball bearings conserve energy, reduce trouble and save repairs and lubricant expense, while permitting higher speeds and loads with higher over-all efficiency.—*Exchange.*

## THE DISSTON CRUCIBLE



Has it Happened to You?  
First: "...Which way ye goin' Jake?" Second: "...Straight ahead!"

## THE DISSTON CRUCIBLE

### Preliminary Final Figures on 1917 Lumber Production

*(From the Forest Service, U. S. Department of Agriculture)*

WASHINGTON, JUNE . . .—A total computed lumber cut for the United States in 1917 of 35,831,239,000 feet is announced by the Forest Service. This figure is based on reports received up to May 15 from 16,408 sawmills out of the 24,815 believed to have operated last year. It is estimated that the actual cut in 1917, on the basis of compiled figures, was approximately 10 per cent. less than the production in 1916.

The falling off in lumber production during the past year is attributed principally to largely decreased private building operations, the scarcity of labor in connection with small operations, transportation difficulties, curtailment of demand on the part of wood-using industries, and a more or less general dislocation of lumber distribution through ordinary channels of trade.

The State of Washington was again the largest producer, with a lumber cut of 4,570,000,000 feet; Louisiana was second with 4,210,000,000 feet, and Oregon third with 2,585,000,000 feet, crowding into the fourth position Mississippi with a cut of 2,425,000,000 feet.

Southern yellow pine, with a total of 13,539,464,000 feet, forms 37.7 per cent. of the total cut. Douglas fir, its nearest competitor, is credited with 5,585,000,000 feet. White oak and white pine are each credited with 2,250,000,000 feet.

The number of mills in operation reporting in 1917 was smaller than for the two preceding years.

A comparison of the computed cut for 1917 with the total cut of the previous year in the larger producing regions shows a decrease of about 10 per cent. in the southern yellow pine group of States, a decrease of 23 per cent. in the North Carolina pine group, and a decrease of 11 per cent. in the Lake States. On the other hand, there was 3 per cent. increased production in Oregon and Washington.

### What Per Cent Efficient Are You?

What is my efficiency? Am I 50 per cent. efficient in my work, or am I working up to candle power and giving my employer full 100 per cent. efficiency? Here is food for reflection. Many of us are prone to complain of our lack of recognition on the part of our "boss," or don't think we are receiving proper compensation for the work that we are doing. At such times, when a spell of gloom casts its shadow before us, it is time to sit up and take notice of our actual working conditions.

If we reflect carefully we generally see where by a little extra effort we could have improved the quality or the quantity of our work. The old saying "let well enough alone" is a fallacy. There is always a chance for improvement if careful thought is given to existing conditions. A little kink here and a small repair job there, if conscientiously followed up, will unquestionably add to the efficiency and operating conditions of any plant. It is the collection of little things that create the mighty whole and if one is constantly on the alert to make any possible improvement in operating conditions, or make changes ever so slight that will be beneficial.

The man who gets into a rut and stays there, and who for years will plod along in the same job, and who is generally bewailing his lot, will, upon investigation be found to invariably follow the paths of least resistance and let well enough alone. When through with the day's work one is tired and naturally wants rest and recreation, but a few minutes can be spared to thinking over the work of the day and trying to determine where mistakes have been made and where conditions could have been bettered. If this is done a new interest will be awakened the next morning and we will set about to correct our errors and put into effect such ideas as we think will be for the improvement of the work in hand, and thereby aid in bringing our efficiency up to the standard.

# THE DISSTON CRUCIBLE

## Capitalist Wanted

DEAR SIR: *Gentlemen—*

I thought by me writeing you a letter you might be able to do me some good and do you some good allso. Could I get a gob from you of drawing drafting work I am a splendid pattern maker, I have got some good first class guaranteed inventions to sell or trade for good improved property or would prefer a small farm. I want to goe south to get away from the cold winters, one of my inventions is a train that will run on the water this train will run on canals narrow rivers where ships can't run it will run from 60 to 90 miles an our better than a mile a minute this is better time than your ships can make this train can run across the Gulf of Mexico to Cuba and South America and California and to New York City when the waves gets still runs when the water gets level and smouth is the time to run this water train for it cannot run in water when the waves are more than 4 or 6 feet heigh, this train can run on water railroad or on snow and ice, I have beautiful drawings of it and I am going to put up better drawings of it if some Co. takes it up with me I can throw in a map and gage invention in with this water combine train invention this map will show where all trains and ships are at if they are on time the map is holar and is made of paper glass and water jewls threads and wires and is operated by time pieces and electric can see the fish in the water and birds flying and liteing on ships it is simplay fine very fine and grand, I have got a Patent on an automobile mower harvesting threshing machine mill general purpose stationary and running auto machine I also have a large number of musical and medical inventions in view and an war air plane medal baloon ship combine invention and a host of other inventions to allso but I think you would be more interested in this train and map invention than anything else as it runs in your line give it a trial if you don't want to undertake it yourself get another ship company to help you out, do not let this goe by you for it will mean millions of dollars to you and thousands of dollars to me I am shure of that if you cant handle it please send my letter to the ship builders at Mobile, Alabama, or Philadelphia, Pa. Of corse I know the war hard times is hard on invention business and other business so far as that is concern but I hope it will be over this year sometime this is all hoping to hear from you soon and do not throw this letter aside without answering it soon treat me white. Yours, Very, Respectfully, For. Business.

## Range of Big Guns

To the Editor of *The Press—*

Sir: To settle a dispute between friends, please state if it would be possible for the Germans to bombard the coast of England with guns in France or Belgium.

F. U. WESSELS.

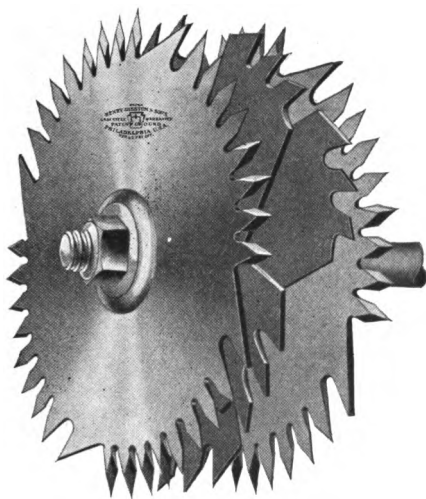
Reading, Pa., Oct. 1, 1917.

Firing across the English Channel, a distance of twenty-one miles, with modern guns, is quite feasible. A ten-inch gun with a projectile weighing 550 pounds and a muzzle velocity

of 2450 feet a second, could easily do such a thing, and the sixteen-inch gun could do it more readily with its shell weighing a ton, and a muzzle velocity of only 2250 feet per second. These weights of projectiles and muzzle velocities are rather low than above the average requirements of the present. By the use of lighter projectiles greater velocities are obtainable in the same gun and a range of thirty-five miles with an elevation of 45 degrees is entirely possible with the most powerful guns in use in the world to-day.

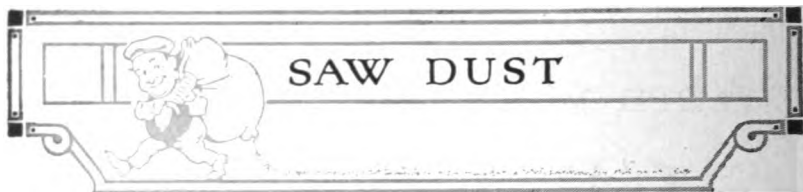
When you need

# GROOVERS



of standard or special pattern, write us. We manufacture all varieties and of a quality that gives satisfactory service.

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INCORPORATED  
KEYSTONE SAW, TOOL, STEEL & FILE WORKS  
PHILADELPHIA, U. S. A.



### OVERHEARD IN BOSTON

The cyclist was a stranger in Boston's streets. That was evident from the cautious manner in which he picked his way through the half-empty thoroughfare. It was evening. The penny-a-liner approached.

"Sir," said he, "your beacon has ceased its functions."

"Sir?" gasped the cyclist, dismounting from his machine.

"Your illuminator, I say, is shrouded in unmitigated oblivion."

"Really! But I don't quite——"

"The effulgence of your irradiator has evanesced."

"My dear fellow, I——"

"The transversal ether oscillations in your incandenser have been discontinued."

Just then an unsophisticated little newsboy shouted from across the street:

"Hey, mister, yer lamp's out!"—*Pittsburg Chronicle-Telegraph.*

"If it ain't enough to drive a poor woman barmy, I dunno wot is!" exclaimed Mrs. Mixup to a sympathizing group of friends and neighbors. "Ere's me just on me feet again after triplets—triplets, mar yer!—and they've got me ole man down at the training camp, and they're a-learnin' 'im 'ow to form fours!"—*Fair Play.*

A certain fair maiden of Perth  
Had eaten sweet things from her birth.

One day she cried: "Gee!  
I must let such things be,  
For I fear the effect on my girth."

Willie Willis: What's a "second-story" man, mamma?

Mamma Willis—Your father. If I don't believe the first one he tells he always has another one ready.—*Life.*

### TOMMY'S HARD LUCK

Tommy came out of a room in which his father was tacking down a carpet. He was crying lustily.

"Why, Tommy, what's the matter?" asked his mother.

"P-p-p-papa hit his finger with the hammer," sobbed Tommy.

"Well, you needn't cry at a thing like that," comforted his mother. "Why didn't you laugh?"

"I did," sobbed Tommy disconsolately.—*Kirsch Sales Booster.*

### WHAT SHE WANTED

An old lady walked into the judge's office.

"Are you the judge of Reprobates?" she enquired.

"I am the judge of probate," replied his honor with a smile.

"Well, that's it, I expect," answered the old lady. "You see," she went on, confidentially, "my husband died detested and left several little infidels and I want to be their executioner!"

### HARDLY

Eager Shopper: "Where are the demonstrations to-day?"

Salesman: "No demonstrations on Thursday."

Eager Shopper: "Not even a special sale?"

Salesman: Special sale in bathtubs—but no demonstrations."

A glue factory stands near a certain railway. Its charms are not for the nose, and therefore a lady often carried with her a bottle of lavender salts. One morning an old farmer took the seat beside her. As the train neared the factory the lady opened her bottle of salts. Soon the carriage was filled with the horrible odor. The farmer put up with it as long as he could, then shouted: "Madam, would you mind puttin' the cork in that bottle?"



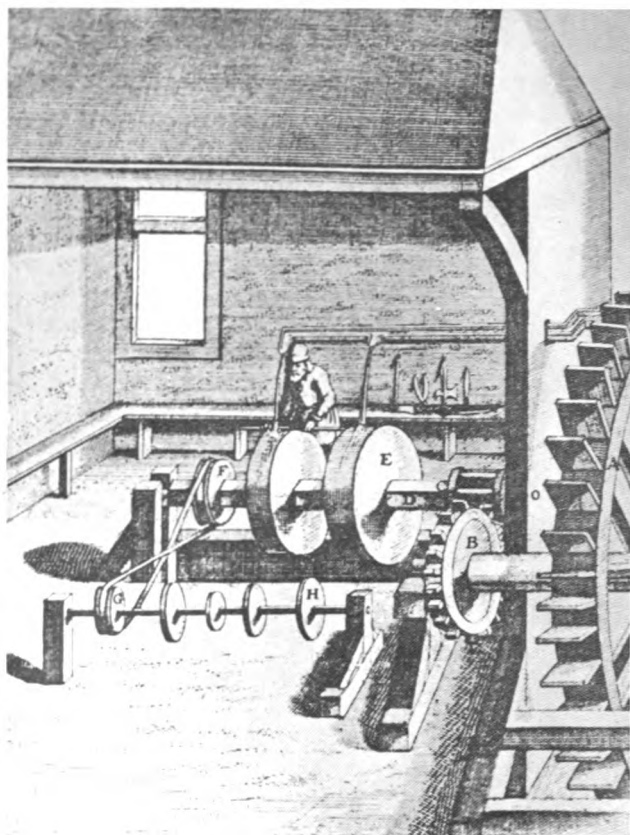
# THE DISTON CRUCIBLE

A man in a dark brown suit is shaving a young boy's head with a straight razor. The boy is sitting on a wooden stump, wearing a white shirt, dark trousers, and grey socks. They are in front of a log cabin made of horizontal logs. The background shows a forest and a body of water.

AUGUST

1918

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#### OLD TIME MILLS. No. 8

The invention of water wheels for the generation of power was utilized in numerous ways and for many purposes, one of the earliest being for Grinding, as shown in the illustration.



# THE DISSTON CRUCIBLE

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**Keystone Saw, Tool, Steel, and File Works**  
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BRANCH HOUSES:

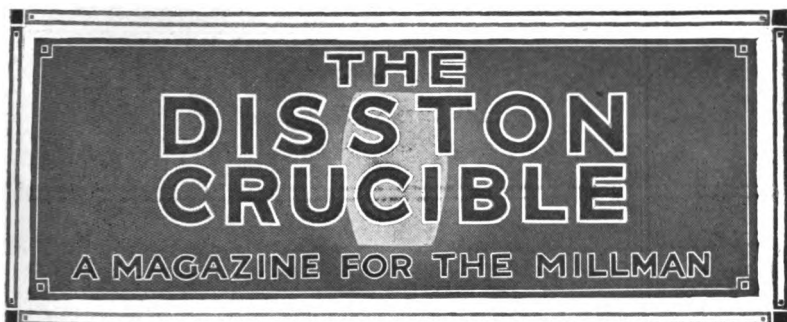
Chicago, Ills. Boston, Mass. Cincinnati, Ohio. Seattle, Wash. Portland, Oregon.  
New Orleans, La. Memphis, Tenn. San Francisco, Cal. Sydney, Aus. Vancouver, B. C.  
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**TIRED OF GIVING?**  
**YOU DON'T KNOW WHAT IT IS TO BE TIRED**



**HOMELESS—STARVING—PENNILESS**

**HERE'S WHERE, AND WHY, THE AMERICAN RED CROSS,  
SPENDS YOUR MONEY**



VOL. VII

AUGUST, 1918

No. 7

## EDITORIAL CHAT

### "HOLD FAST!" IS LLOYD GEORGE'S PLEA AS FIFTH YEAR OF WAR STARTS

LONDON, August 5.

**H**OLD fast!" was the keynote of a message to the British empire, issued by Premier David Lloyd George and promulgated in a drastic way through the kingdom at the hour of 9 o'clock to-night. The message was read to the audiences in all theaters, concert halls and other places where people were assembled, including moving-picture houses.

Sealed copies of the message had been distributed to the managers of all these places, with the request that they open and read it at 9 o'clock. The message follows:

"The message which I send to the people of the British empire on the fourth anniversary of the entry into the war is, 'Hold fast!'

"We are in this war for no selfish ends. We are in it to recover freedom for the nations which have been brutally attacked and despoiled, and to prove that no people, however powerful, can surrender itself to the lawless ambition of militarism without meeting retribution, swift, certain and disastrous, at the hands of the free nations of the world. To stop short of victory for this cause would be to compromise the future of mankind.

"I say, 'Hold fast!' because our prospects of victory have never been so bright as they are to-day. Six months ago the rulers of Germany deliberately rejected the just and reasonable settlement proposed by the allies. Throwing aside the last mask of moderation, they partitioned Russia, enslaved Roumania and attempted to seize supreme power by overthrowing the allies in a final and desperate attack. Thanks to the invincible bravery of all the allied armies, it is now evident to all that this dream of universal conquest, for the sake of which they wantonly prolonged the war, can never be fulfilled.

"But the battle is not yet won. The great autocracy of Prussia will still endeavor, by violence or guile, to avoid defeat, and so give militarism a new lease of life. We cannot seek to escape the horrors of war for ourselves by laying them up for our children. Having set our hands to the task, we must see it through till a just and lasting settlement is achieved.

"In no other way can we endure a world set free from war. 'Hold fast.'  
LLOYD GEORGE."

*Quality  
Tells*

## Mobilizing Our Man Power to Fill Our Merchant Ships

By EDWARD N. HURLEY

*Chairman United States Shipping Board*

**W**ITH something like 25,000,000 tons of merchant shipping to be employed inside of two years, the United States Shipping Board feels that it is none too early to look around for cargoes, both in this country and abroad. With the task of building the ships in charge of the Emergency Fleet Corporation, under the leadership of Charles M. Schwab, this function of the United States Shipping Board begins to attain prominence—and that is what the shipping board was originally created for by Congress.

Twenty-five million tons is a lot of shipping. In one voyage these ships would carry all the live stock, dressed meats, packing-house products, poultry, game, fish, wool, hides and leather carried on our railroads in one year. In less than five trips they would carry our whole yearly railroad haul of grain, flour, cotton, hay, fruit, vegetables, and other farm products; in three and one-half trips all our lumber; in seven trips all our manufactured goods; in sixteen trips all our coal and coke. The total tonnage hauled on our railroads is about 1,200,000,000 tons.

So, amid all his splendid effort in producing equipment to win the war, the American manufacturer must be asked to take thought for to-morrow and think in terms of shipping and foreign trade. This might appear like a distraction now—something which will take the attention from the supreme duty of winning the war. But far from being a distraction, it fits in with war production and war psychology. While our factories and factory employees are building war material to-day, they are also building foreign trade, if we can only see things whole and make one factor work with another.

When the business man turns his attention to export trade he looks abroad and thinks of foreign customers. But foreign trade actually begins in his own factory. He looks

abroad and studies such factors as ocean freights, foreign exchange, export packing, and international salesmanship. If he would look into his own factory first, and study factors close at hand, such as labor turnover, wages, manufacturing costs and efficiency, he would be laying solid foundations for export trade.

In a recent study of factors that make successful, lasting foreign trade, Prof. Taussig places first of all the element of manufacturing "effectiveness," as he calls it, which he defines as a combination of capital, labor, invention, salesmanship, and transportation, all working together under first-rate business leadership, to make goods capable of holding markets in competition with the products of other nations. These elements of effectiveness are largely right at hand in our factories—it is not necessary to send anybody abroad to find them. And as an illustration of how nations make mistakes in trying to build foreign trade at the other end, Prof. Taussig shows that real effectiveness in manufacturing almost invariably holds its own against artificial devices for building foreign trade, such as export bounties, special railroad rates on export shipments, cut prices, discriminatory tariffs, etc.

With the bugaboo of cheap foreign labor haunting us in former years, we got into the way of thinking that export trade necessitated some lowering of wages and American living standards. Probably that was crooked thinking before the war. Certainly it is crooked thinking now, for the war is bringing other nations closer to our American standards of wages and living.

True development of foreign trade in our factories means better and better American standards.

In most of the countries of the world there will be a decided shortage of labor after the war. That country will best succeed which pro-

## THE DISSTON CRUCIBLE

tests its workmen by improving their living conditions, guaranteeing a fair return for labor, protecting workmen and their families against accidents and idleness, and making workers better citizens. The country taking those measures will be the country that develops and makes products most economically, and will perform a world service by making goods at the prices fair to other nations.

Nobody has yet suggested sending cheap American soldiers over to France to win the war. Our men at arms are the pick of the country, physically and mentally. We take plenty of time to train them, make them specialists in every branch of fighting. We study them individually to find which are best suited for flying, or signalling, or bombing, or bayonet fighting. We recognize that modern war is a swift game, constantly changing, and that our soldiers must be prepared to learn new trades and new tricks from month to month, and we get ready to teach them these new trades, and also put them in a receptive attitude toward improvements in the fighting game. We feed them like fighting cocks, and spare no expense in clothing them or providing the latest fighting tools.

In the Army and the Navy we have a visible mobilization of man power for results in a foreign country. If we could have the same visible mobilization of man power in our factories for foreign trade it would be a splendid object lesson for those who manage the factories and make the export goods.

To think of cheapness in connection with foreign trade is just as wrong as trying to pin bargain tags on soldiers. Foreign markets are not going to be won or held by cheapened American workers, or bargain methods in American life. As manufacturers, we have got to lay the foundations for foreign trade by going out into our factories and studying labor and costs together. We can sell our export products at reasonable prices by increasing wages along with output, and decreasing the losses caused by labor turnover, untrained workers, spoiled materials and other inefficiency.

Our experience along these lines in the Emergency Fleet Corporation has been most encouraging. With the task of creating new ship-yards in a few months, and manning them with several hundred thousand workmen, most of whom came from other trades, we ran into about every difficulty, and problem, and tangle, that could conceivably arise in management. On a large scale we effected an adjustment of man power such as is called for now in preparing the average American factory for the export trade which we will need to keep our ships employed.

To get production at unheard of speed and in record-breaking quantity, we did something simple and fundamental—and thoroughly human. This was nothing more nor less than arranging wages so that, while our workers produced more for us, they were also able to produce more for themselves. We established the rule that a piecework wage rate set by any shipbuilder must stay in force during the period of the war. Any manufacturer who sets a piecework rate, and then reduces that rate if he finds that he has made a mistake against himself, is doing a great injustice to his employees. Profiting by our experience in the shipyards, I should like to see Congress pass a Federal law making it compulsory to keep every piece rate in effect one year. That would protect workers and furnish a real basis for increased production.

We found ourselves confronted with enormous losses and dangerous delays through lack of skill in special trades needed by workers in the shipyards, and also through the cost of labor turnover. To find 100 capable shipbuilders who would stick on the job it was necessary to hire and try, discharge or lose 1,000. Every manufacturer will recognize in these difficulties exactly the difficulties that he himself faces from day to day, and which put excessive burdens of cost upon his products. In the shipyards we got around those difficulties by establishing training centers for the various trades we needed, and by appealing to the splendid spirit which lies in the average worker.

## THE DISSTON CRUCIBLE

Under this training it was possible to quickly bring green gangs up to about 80 per cent. of the efficiency of skilled workmen. As fast as these men learned their trades, and acquired high earning power under our protected piece rates, they became steady enough, and the costly item of labor turnover began to drop. After that, nothing more was needed but the appeal for patriotic service. We found that the shipworkers would not only stick on the job like soldiers, but that in their inherent spirit as fighters and loyal Americans there was an enormous reserve of man power to draw upon—a reserve capable of meeting every demand and every emergency, with power to spare.

That reserve of spirit exists in every American industry. War has

brought it to light where executives can see it and to develop this great reserve for foreign trade is distinctly the executive's job.

To fill our merchant ships with goods after the war and hold our own in foreign markets, we must begin now to mobilize and train our man power in manufacturing along the same broad lines followed in training for military purposes. Wake up, American business men! Begin to study the man power in your own organizations. Not with the Prussian viewpoint, which counts human life its cheapest raw material in both the factory and the fighting line, but with the American viewpoint of decent living, opportunity, humanity, service.

## FOOD CONSERVATION

### SAVE OR SINK—SUCCOR OR PERISH!

In the course of nearly four years of the world war, the gaunt hand of starvation has scrawled the names of more individuals on its side of the death ledger than have perished by gunpowder, gas and steel. Four million, seven hundred and fifty thousand persons have died from starvation, while about 4,250,000 have been killed by fighting. Hunger gnawed at the vitals of Russia until her morale was so weakened that she collapsed. The same cause may justly be attributed to the crumpling of heroic little Roumania. Italy, underfed with food and overfed with insidious German propaganda, went through a crisis last fall that threatened to result disastrously for the allied program. And now the call has come from England, France, Italy and Belgium that wheat must be forthcoming or they cannot assure us that the allied armies or the morale of the sacrificing, suffering millions behind the lines in those countries will be maintained.

On June 1 there remained but 56,000,000 bushels of wheat in the United States. If we consumed wheat at our normal rate of consumption, more than 40,000,000 bushels per month, we would lack at least 25,000,000 bushels for our needs during June and July, and not send one bushel abroad. To meet the very minimum needs of the allies, we must ship 30,000,000 bushels for this two-month period, leaving but 13,000,000 bushels per month—less than one-third of normal—for home consumption. The entire 30,000,000 bushels that the allies need must come from our savings before the next wheat harvest.

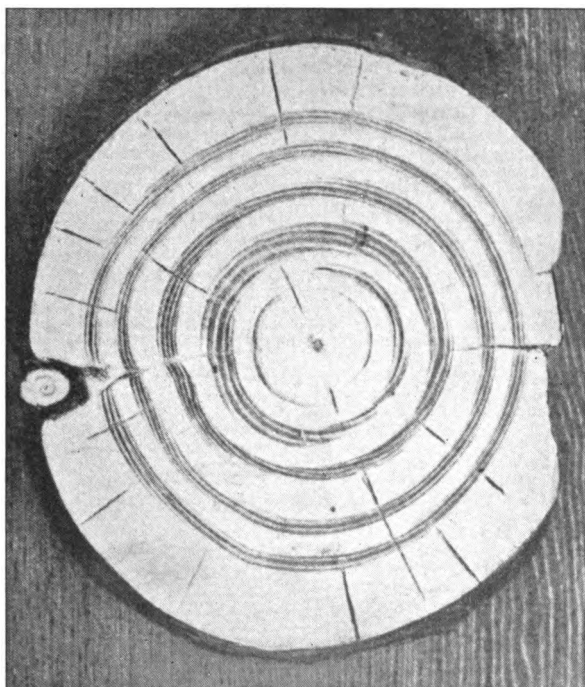
It is inconceivable that America should fail in this crisis. The various strata of our population cannot bear equally this reduction in consumption of wheat bread. Those engaged in physical labor need a larger bread ration than those in sedentary occupations. Furthermore, the special requirements of children and invalids must be safeguarded. To meet the needs abroad and prevent serious suffering at home, it is imperative that those whose circumstances permit shall abstain from wheat products until the next harvest.

With full understanding that as a nation we must save or sink, succor those overseas or perish with them, let us grasp this opportunity—a privilege, not a sacrifice—to abstain from wheat. Thus, may those who cannot fight materially aid the cause, on the success of which rests the freedom of mankind.

## A Gyrating Tree

**A** SECTION OF AN ALASKA SPRUCE showing that it twisted completely around five times in its life of eighty-three years was recently brought to this country. How this peculiar incident in its life-history can be read from its own record is thus told by Alice Spencer in *American Forestry* (Washington, June). We read:

"A cross-section of a spruce-tree, recently received from Alaska, shows a



### NO, IT IS NOT A BULL'S-EYE—FAR MORE INTERESTING

Can you imagine a tree making almost five complete revolutions without getting dizzy and falling over? That is what this spruce-tree did, and in the middle of the fifth revolution it resumed an upright position and was still growing when cut, at the age of eighty-three years. It will be noticed that the darker band is a continuous formation, winding from the center to within half an inch from the circumference, crossing the annual rings.

most peculiar spiral structure which has caused a great deal of speculation among the various foresters throughout the country. Although no definite explanation has been offered, a theory has been advanced in regard to its history which is extremely interesting. It is known that a coniferous tree,  
(Continued on page 109)

# BUILDING

**W**HEN the Kaiser uttered those famous but fatuous words to Ambassador Gerard, "America won't fight," he little dreamed of the great possibilities of American grit, pluck, courage and patriotism. When Von Tirpitz proposed to subjugate the world with his submarines by sinking everything but German shipping, he had little idea of what American industry meant.

This German nightmare, and it is but a nightmare—is having a sad awakening. for all of their boasted preparedness, all of their ingenuity as engineers and builders of submarines have been turned to naught by the American shipyards, such as:

TRAYLOR SHIPBUILDING CO.  
 AMES SHIPBUILDING & DRY DOCK CO.  
 AMERICAN INTERNATIONAL SHIPBUILDING CO.  
 PORTLAND SHIPBUILDING CO.  
 GROTON IRON WORKS  
 MOREY & THOMAS  
 UNION BRIDGE & CONSTRUCTION CO.  
 BEAUMONT SHIPBUILDING & DRY DOCK CO.  
 MIDLAND BRIDGE CO.

CORNWELLS, PA.  
 SEATTLE, WASH.  
 HOG ISLAND, PA.  
 PORTLAND, ME.  
 NOANK, CONN.  
 JACKSONVILLE, FLA.  
 MORGAN CITY, LA.  
 BEAUMONT, TEXAS  
 HOUSTON, TEXAS

and hundreds of other yards all over the country.

A shining example of the patriotism of the American citizen, demonstrating how his knowledge, zeal and those latent qualities which are so prominent in Americans and which they are always able to turn to their country's advantage in its hours of need, is found in the answer to Germany's challenge in the rapid perfection of the shipyard of the National Shipbuilding Company of Orange, Texas.

One has but to enter the gates of this establishment to realize that they are in a real shipyard, one has but to look at the men at work to know that every soul employed in that place has the one absorbing idea of building ships quickly to carry food to our Allies, transport our troops and keep them stocked with supplies.

The leading spirit in this enterprise is a quiet gentleman of the old school, named Mr. A. A. Daugherty. We are proud to recall that Mr. Daugherty was born in Pennsylvania, although he has lived most of his life in California and part of it in New York.

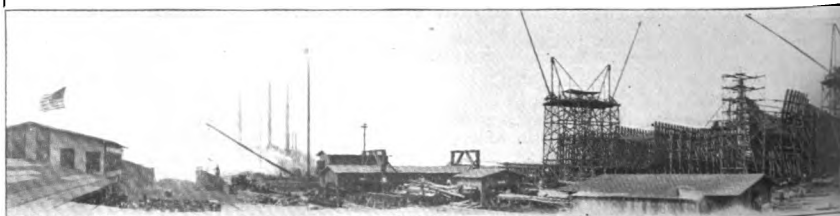
His early training was building river boats, at which time he got the experience which is now standing him in good stead in the building of wooden ships in days where formerly months were required.

In this work Mr. Daugherty is ably backed up by his assistant manager, Mr. C. J. Tutschulte. The knowledge of these two men is really surprising. Nothing escapes them, everything is carefully planned and there are few, if any, post-mortems to consider in the shipyard of the National Shipbuilding Company.

To give a brief history of the project, a few dates are necessary. The contract to build these ships was taken in July 27, 1917. The first spade of earth was turned on September 17, 1917. The first keel was laid February 18, 1918, and up to date and including July 4, 1918, six ships have been launched approximating 3,500 to 5,000 tons dead weight tonnage each.

The leading achievement was the launching on July 4th of the largest wooden ship ever built—it was the *Beachland* of 4,700 tons. At the same time another large ship left the ways—two launchings on the glorious Fourth.

That same day there sailed away from the National Shipbuilding Company's yard a complete ship under her own steam, built and equipped entirely at the yard and ready for action, named the *Boreta*.



**PLANT OF NATIONAL SHIPBUILDING COMPANY**  
 The magnitude of this yard will be better appreciated when the ships are launched.



# 3 SHIPS

On July 11th another ship sailed, on July 31st still another put forth to try her luck with the Kaiser's submarines.

A glance at the picture accompanying this article will give the reader some idea of the scope of the yard, and at the same time will illustrate the wisdom of its promoter in building it between two of the largest saw mills of the south, both of which appear in the picture. Each one of these mills has a daily capacity of 150,000 feet of lumber per day, and the entire output of ship timber produced by these two mills is rolled immediately into the yards and turned into ships.

In July, 1918, this concern was consuming 1,100,000 feet of lumber per week. Preparations and all arrangements have been made to use 2,000,000 feet of lumber per week, and after that time *every ten days* will see a ship of 5,000 tons take her initial splash into the waters of Texas.

The last keel laid at this yard prior to the writer's visit was for a 5,000-ton ship, which was formed complete in the wonderful time of 30 hours and 35 minutes. In the pictures will be seen several ships framed, which will give the reader some idea of the magnitude of this particular accomplishment.

The design of the ships built at this yard is the creation of Mr. A. A. Daugherty, to whom we have referred in the foregoing, and his plans have been adopted by the United States Government for the standard wooden ships to be built hereafter, superseding the initial type selected, known as the *Ferris*.

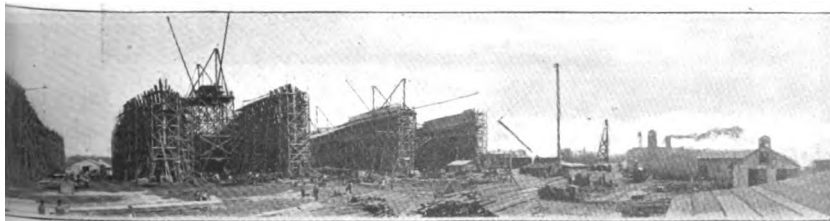
An interesting story is told of Mr. Daugherty in this connection, which will illustrate the man himself:

Called to Washington when the Government decided to purchase these plans, he was asked how much money he would take for them. He informed the Government officials that the plans were not for sale. They were quite aghast and reminded him that he was dealing with the United States Government and that \$50,000.00 was no mean matter to be turned aside without thought. He again informed them that the plans were not for sale. They failed to understand Mr. Daugherty, and asked him if they were not for sale, under what terms they could arrange to use his plans in the building of wooden ships? Mr. Daugherty smilingly told them that if the United States Government wanted to use his plans they could do so without cost of any kind. This is the kind of patriotism that will win the war, and which is giving the Kaiser some sleepless nights.

The day of our visit was pay day. The number of men to be paid off was 1,400. They were paid off in exactly 13 minutes by the watch. The average time consumed in paying off at this yard is 12 minutes. This in itself will give you some idea of the efficiency brought to bear in the work.

In addition to building the ships, they have the problem of feeding the men at noon time. To this end they have designed a dining-room where they can furnish 500 men with lunches in twenty minutes, all food served hot. The dining-room is cooled prior to the men entering by the compressed air used in the yard, which is turned on shortly before lunch time, which will bring the temperature down 15 degrees in three minutes. In view of the fact that this plant is located in Texas, where the temperature in the summer is very often from 90 to 105 degrees, a difference of 15 degrees is something not to be overlooked.

In conclusion, it will be interesting to the reader to know that in this wonderful yard nothing but Disston saws are employed, and when one realizes the efficiency of the force surrounding Mr. Daugherty, and the fact that they will not tolerate failures, it is a remarkable testimonial of the quality and efficiency of Disston products.



3 COMPANY, ORANGE, TEXAS

ed when the size of the ships is considered

# THE DISSTON CRUCIBLE

## A GREAT JUBILATION BY THE



**WE ARE W**

It would have done their hearts good, if the boys at the Front had seen the parade of Disston "workers," Wm. D. Disston in the lead, on Monday noon, July 22d. It was a spontaneous outburst of feeling on account of the great showing the American boys made in the fight. While this was only one of the many demonstrations made throughout the country, it surely shows that the Disston workers are brimming over with American loyalty and proves that the "boys" are watching and backing up the "boys" over there.

It certainly was a great demonstration. Quiet and orderly, some two thousand men, boys, women and girl workers of the Disston Works formed in long parade to the music of the Factory Band. Many flags were displayed, including those of

# THE DISSTON CRUCIBLE

## BY BOSTON ARMY OF WORKERS



### U. BOYS!

the allies, the great big 20-foot by 30-foot flag of the Steel Works, as well as many others of various departments.

Through the factory streets, then to the Town Service Flag, where the band played "The Star Spangled Banner," then returning to the works, the "Bull" blowing just as they entered the yard, and in answer to their "bugle call" they commenced working again with renewed vigor to turn out material and goods that do their part in helping to win the war.

It was an inspiring sight to view the parade, but better than anything else was the demonstration of feeling for "Our Boys," and hard of heart, indeed, must be he who was not stirred and thrilled by the occasion.

## A SERIOUS DISPUTE AMICABLY SETTLED

OLD TOWN, ME., July 11, 1918.

THE DISSTON CRUCIBLE,  
Philadelphia, Pa.

Dear Sir—

A letter from one H. J. Otten in the CRUCIBLE for June has been brought to my attention. As a purist, I strongly object to any deviation from correct names, and wish to protest against said Otten and against your Editorial Department accordingly. Mr. Otten writes of "three squeaks" in the Maine woods; I am familiar with the State's timberlands from Boundary Lake on the north to Sebago on the south, and my business has led me to travel them quietly and in such manner as to view the wild denizens of the forest recesses. I am prepared to say there is no such thing as a "three squeak" in this State, and that Mr. Otten should be classified with genus Dr. Cook and other nature fakirs accordingly; but out of charity to Otten I will state that, in my opinion, he has simply made an error in English—in the good old Anglo-Saxon. Doubtless his careless chirography refers to "tree-squeaks." You will see that a strong similarity exists between the names.

Of this latter and true species there is a vast variety in our beautiful State, occupying the most favorable site, and in little danger of extermination, as they multiply rapidly without direct association. They are difficult to see, shy, and keep well hidden, but may be discovered by their voice, which is peculiarly melodious in the fall. Their colors vary with the disposition of the observer, a characteristic peculiar to this genus.

I am sorry to have had to take up arms in this matter, but of a certainty the true and fine growths of this State should be kept unsullied, even from the careless pen.

Yours very truly,  
JAMES W. SEWALL.

MONTGOMERY, ALA., July 19, 1918.

MR. JAMES W. SEWALL,  
Old Town, Me.

My Dear Sir—

Fellow purist and naturalist, *Greetings!* Your letter of the 11th inst. to THE DISSTON CRUCIBLE has been sent to the writer for perusal, and your righteous indignation "to any deviation from correct names" is most heartily seconded by the writer.

You, sir! having travelled the woods of Maine so extensively, and knowing of and probably having seen "tree squeaks" in more of their colors and shades than the writer, can best fancy my chagrin when I saw in that issue of the CRUCIBLE how horribly the name of this genus had been transcribed to read "Three Squeaks."

But—this heinous crime had been done—mine was not the guilt, therefore I sat for hours communing with my thoughts feeling sure the "lightning would strike soon and somewhere," and incidentally as though it would strike the writer also.

Though expecting a "fell swoop," little did I think an error in the Editorial Department of the CRUCIBLE in transcribing my letter would so soon and so unjustly place me in the category of a nature fakir. And to be classified with genus Dr. Cook, to whom this appellation—"Shorter and Uglier"—had been attached. Oh! you tree squeaks!—Oh! you multi-colored tree squeaks! How I suffer for thee!

## THE DISSTON CRUCIBLE

You, fellow purist, I can forgive for so classifying me, believing that your thorough knowledge of the "tree squeaks" is a source of pride and a knowledge gained only after diligent study and much travel in the wonderful State of Maine, but consider my predicament when I became the target of the "jibes and jeers" of less informed and usually over-zealous purists.

Yet, as I said before, it is through no fault of mine, so with that thought and a clean conscience, I will endeavor to live "this down, too," consoling myself with the fact that the first one to take up arms in this matter was one so intelligently acquainted with "tree squeaks" and a resident of the good old State of *Maine*.

Yours very truly,

H. J. OTTEN,

c/o Henry Disston & Sons, Inc.,  
Philadelphia, Pa.

---

JAMES W. SEWALL  
Forester and Surveyor  
Old Town, Maine

Mr. H. J. OTTEN,  
c/o Henry Disston,  
Philadelphia, Pa.

July 29, 1918.

*My Dear Sir—*

I have your letter of the 19th inst. from Montgomery, Ala., and the explanation you give is entirely satisfactory. I realize too well that this is an age of carelessness and that the fault in naming the species under consideration was not in you, but in some uninterested subordinate who did not appreciate the value of the cognomen nor the importance of the animal in debate.

Therefore, I retract any unkind words which I may have said, and at the same time most heartily retract any unkind feelings which I may have had toward one who is so truly a scientist and lover of nature, as she has been since time immemorial.

Accept my kindest regards.

Yours very truly,  
JAMES W. SEWALL.

### A Gyrating Tree—(Continued from page 103)

growing at a slant, forms, on the lower side of the trunk, a dense reddish wood known as *rotholz* [red wood]. As the *rotholz* in this particular specimen is a continuous formation, winding from the center to within half an inch from the circumference, it is surmised that it was growing in an inclined position on the edge of a glacier, where it was caused to rotate so that different radii of the stem were successively on the downward side, thus causing the *rotholz* to intersect the annual rings and, as the tree grew older, forming a spiral. The formation of the *rotholz* apparently began when the tree was six years old, the *rotholz* as well as the tree itself making almost five complete revolutions, requiring from eight to nineteen years for each revolution. The tree was eighty-three years old, as determined by counting the annual rings, and the formation of the *rotholz* ceased about twenty-one years before the tree was cut, which means that the tree must then have assumed a vertical position. We like to believe that this tree foresaw the great world-war, and with the aid of a glacier, it began the peculiar gyrations which proved its fitness for airplane stock. Ten revolutions in ten seconds, with head bent to the knees, at the end of which time he must resume an upright position, is one of the tests given an aviator, but even he will admit that five revolutions in a lifetime is doing well for a tree."

## WHAT IT COSTS TO MAKE A GOOD CITIZEN

**A** MAN comes to America, takes out his first papers, declares his intention of becoming an American citizen. In the course of time he takes out his full citizenship papers, pays a few dollars in fees, and in his mind that settles it. Maybe it settles his citizenship in his mind—but it doesn't make him a citizen.

Because a man has a paper telling that he has complied with the technicalities of citizenship, does not make him a good citizen. It is going to cost more than that to make your son one. It is going to cost us friendliness and a certain amount of personal effort.

If a man comes into your shop and is ignored or sneered at by his fellow workmen who are Americans; if he is disputed with and the final understanding is a punch in the jaw or a curse—those are the things America means thereafter to him. Those things are your explanation of Americanism. A man is more or less than human if he doesn't give as bad as he gets; that's the history of humanity. On the other hand, there are few men in this world who are not ready to give a nod or a "hello" in return for a nod or a "hello." Americanism is to the foreigner or newly made citizen what you and I make it for him.

At this time when our boys are giving their lives that democracy and decency may live, the man who does not do his individual part of kindness and good feeling to clinch the citizenship which "first" and "second" papers have bestowed, is failing his own son, if that son be on the fight-

ing line; is failing his own wife if that wife's house is not to be invaded; is failing the memory of his father who fought to make men free in this country; is failing his forefathers who fought to give men a chance, a flag and a country—A chance and a flag and a country which the foreign-born citizen has sought, as the chance, the flag and the country which he believes to be best for him and his.

The man who chooses this country for his own, pays to you and to me a compliment that can't be matched.

Whether or not we are to have good citizens from these foreign-born is up to you and to me.

---

## JUST AMERICAN

Just today we chanced to meet—  
Down upon the crowded street:  
And I wondered whence he came,  
What was once his nation's name.

So I asked him, "Tell me true,  
Are you Pole or Russian Jew,  
English, Scotch, Italian, Russian,  
Belgian, Spanish, Swiss, Moravian,  
Dutch or Greek or Scandinavian?"

Then he raised his head on high,  
As he gave me this reply.  
"What I was is naught to me,  
In this land of Liberty,  
In my soul as man to man,  
I am just American."

—*Author Unknown.*

---

## THE AMERICAN'S DUTY

The main duty of noncombatant Americans briefly may be stated as follows:

Increase production, economize in consumption, lend your savings to the Government by buying Thrift Stamps, War Savings Stamps or Liberty Bonds. Your help is needed.

# Ask the Man Who *Runs One*

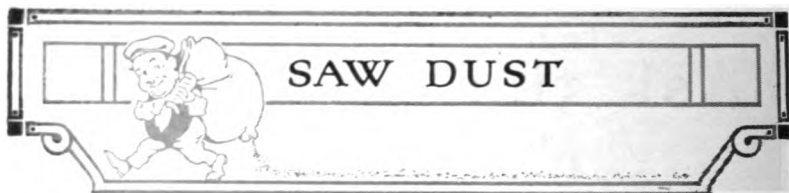


He will tell you that he has found

## Disston Band Saws

the most satisfactory, and the most economical, because they hold their tension, cutting edges, and corners under the greatest amount of feed for the longest possible time.

These superior qualities are the result of the combination of DISSTON Crucible Steel, and skilled workmanship in the world's largest saw works.



### HOW ABOUT IT?

Proved it by Adam: "They say that a man becomes morally weaker as the days wear on; less able to resist temptation."

"Shouldn't wonder. You know it was near Eve that Adam bit the apple."—*Boston Transcript*—*Anodo*.

### NOT DEFEAT

Surgeon: "You aren't licked yet. in a few days you can walk on a wooden leg."

Sammie: "But, please, sir, not an oak one."

Surgeon: "Why not?"

Sammie: "Because I'm afraid it might produce a corn."

### HEARD IN THE DARK

Sentry: "Who goes there?"

Soldier: "Russian soldier."

Sentry: "Pass on, Russian soldier."

Sentry: "Who goes there?"

Soldier: "English soldier."

Sentry: "Pass on, English soldier."

Sentry: "Who goes there?"

Soldier: "Who in hell wants to know?"

Sentry: "Pass on, American soldier."—*Herd*.

### NO SUCH MISTAKES FOR HIM

The stingiest man was scoring the hired man for his extravagance in wanting to carry a lantern in going to call on his best girl.

"The idea!" he scoffed, "when I was courtin' I never carried no lantern; I went in the dark."

The hired man proceeded to fill the lantern.

"Yes," he said sadly, "and look what you got."—*Herald Herald*.

"The reason some men can't make both ends meet is that they are too busily engaged in making one end drink."—*Rockefeller Philosophy*.

### SAFETY FIRST!

He monkeyed with the buzz saw when the buzz saw saw'd its best. It saw'd off half his fingers; now he's feeling with the rest.

He didn't stop "Tin Lizzie" when the crossing bell ding-donged;

If he'd heeded safety's warning, his life would have been prolonged.

He leaned his little "tummy" 'cross a wire red hot with juice;

For things that live ones eat and drink, his "tummy" has no use.

The moral of these tragic tales, we'll now proceed to burst—

The moral is remember—Remember SAFETY FIRST!

—*Charles H. Pierson in Edison Current Topics*.

### ESTHETIC

Two fair munition workers were discussing their personal affairs.

"Got a chap yet, Liz?" inquired one.

"Yes; and he's a regular toff: He's manager at"—

"You don't say so! Why, they tell me he's real refined!"

"Rather! Why, he took me to a restaurant last week, and when we had coffee he poured it into a saucer to cool it, but he didn't blow it like common people would—he fanned it with his hat."—*Belts*.

### IN WAR TIME

Hi diddle, diddle, the cat and the fiddle—

The cow jumped over the moon;  
Our little dollar bill is split in the middle,

And the money's all spent too soon!

—("There was a man who loved the bees.

He always was their friend;

He used to sit upon their hives,  
But they stung him in the end.")—

—*Threads*.



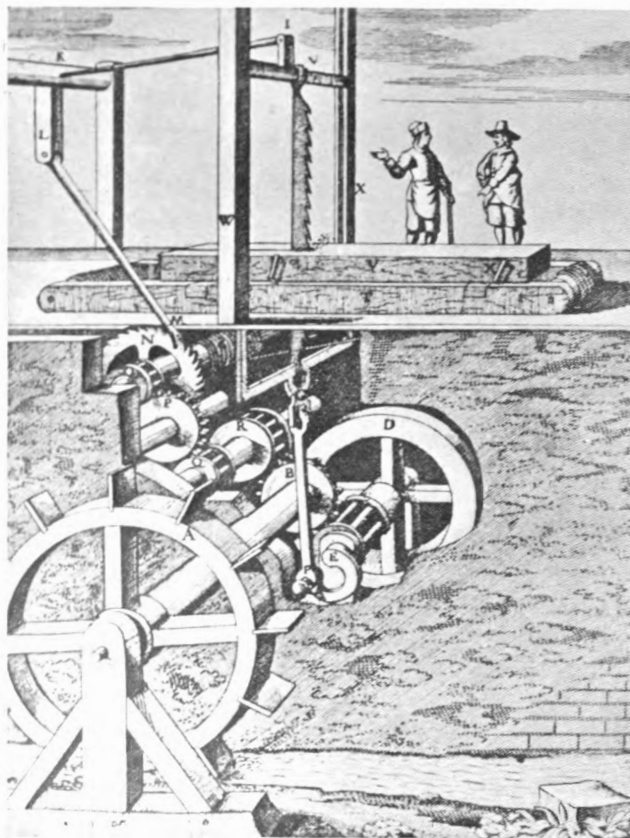


# THE DISSTON CRUCIBLE

SEPTEMBER

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1918



### OLD TIME MILLS. No. 9

A further development of the old water power saw mill here illustrated shows additional mechanism, whereby was gained greater power, speed and better product.

# THE DISSTON CRUCIBLE

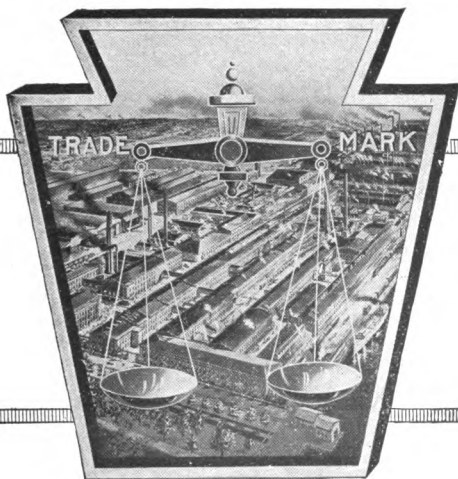
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This Magazine is Published for the Advancement of the Interests of Millmen by

**HENRY DISSTON & SONS**  
INCORPORATED

**Keystone Saw, Tool, Steel, and File Works**  
**PHILADELPHIA**

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



**The General Grant Tree**

**Diameter, 35 feet; height, 264 feet. Second in size and age only to the General Sherman Tree. (General Grant National Park, California)**



# THE DISSTON CRUCIBLE

A MAGAZINE FOR THE MILLMAN

VOL. VII

SEPTEMBER, 1918

No. 8

## EDITORIAL CHAT

### NO PEACE

#### Until German Power is Securely Fettered

*From Ex-President Patton's Commencement Address  
at Princeton*

**T**HREE or four years ago some of us talked lightly of what we were going to do—how we would confiscate the German fleet, levy a large indemnity, and leave behind us an army of occupation to enforce the collection of our claim. We have since learned that we must first bind the strong man and then we may spoil his goods. And until he lies in fetters, let there be no talk of peace.”

“Meanwhile the scholar’s gown must be laid aside for the soldier’s tunic and we who are so old that we can only stand and wait must watch with brightening eye and fervent prayer the sheen of glittering bayonets as on they pass to the scene of moral combat.”

“Till the great achievement is accomplished let the pacifist hold his peace. Let the pulpit refrain from the soft evasions that weaken patriotism and learn from the Old Testament scriptures the fine art of expressing righteous indignation. Let the platform orator retire from his self-appointed place as auditor general of the world’s moral transactions, since he will not find in a century of wrong-doing by the Allied nations any substantial offset to the enormities which in the last four years have been charged to the account of the accursed partnership of Turk and Teuton. And let there come in Britain and to the furthest frontier of her wide domain, and in America throughout the vast expanse of her continental territory, an ever new and ever deepening consecration of heart and soul and energy to this sacred enterprise until the work is done. And may God speed the coming of the wished for day, when Serbia shall have her window on the sea; when Italia irredenta shall find her savior; when Belgium shall be forever rid of the Huns’ polluting presence; when France by her own fierce action of replevin shall snatch from the hands of the enemy her stolen goods; and France, and England and America shall live together under a pact of eternal friendship which will need no other seal than the blood of their heroic sons who fought together side by side, fell together side by side, and from the same cup took the solemn sacrament of death.”

# Great Business Era Coming When the War is Won

*Leaders in finance and industry hold bullish opinion—  
says Crowther in SYSTEM for August*

**W**HAT does the future hold for us? In what condition will the end of the war find our finances, our productive capacity, our markets and our salesmanship in them? Those factors will determine our prosperity and upon that point hinges the ordinary man's adoption of an active or a waiting policy—in advertising as in other phases of business.

That attitude of the ordinary man may be wholly illogical, but, whether it is your attitude or not, a survey of the factors that will create the conditions after the war is equally useful. To estimate the present investment status Samuel Crowther has made just such a survey for the investment department of August *System*. The same factors are to be considered whether it is investment or merchandising and advertising plans that you have to make.

## GREAT BUSINESS ERA COMING

As Mr. Crowther says in his article, "Personal opinions differ widely; one can find both encouraging and discouraging forecasts. But the weight of opinion—the thought of our greatest leaders in finance and industry—is decidedly bullish. The leaders are preparing for a great business era; they feel that the present war will develop the many national muscles that have had but scant exercise."

Continuing, the author discusses the factors which industrial and financial leaders are agreed will determine the national prosperity after the war.

What of our finances? Undoubtedly we shall have a great national debt with heavy fixed charges. But we shall owe it to ourselves. The ordinary man on the street will have his government bonds plus the habit of buying more.

Perhaps the most important effect of the national debt will be to accomplish a wider distribution of wealth. As a nation we have also bought back

nearly half of the bonds on which we used to pay interest to Europe, we have received now more than a billion of gold and have lent to Europe about two billion more. Our indebtedness is internal; our international position is that of a creditor nation.

Those who are concerned about our equipment for production regard the problem as one of surplus rather than shortage of factories and equipment. What will become of the tremendous industrial facilities that we are now getting?

Of course, it is generally known that this industrial expansion is being written off out of current earnings. It is not so generally understood, however, that a considerable part of the plant increase is not of so-called permanent construction.

Needless to say, munition producers in this country generally have not yet reached the stage where they can announce their plans for after the war—with a few notable exceptions. But in Great Britain there has been time for more planning. The famous munition makers, Vickers, Ltd., have just announced their plans for peace time use of their plants.

If we are to win the war we will do it by raising an army of several million men and keeping it supplied—and run the country too. Obviously, we are increasing our efficiency—mechanical, laboring and executive. Our men will return the better for their military training. Not all of the women now going into industry will return to old feminine pursuits or idleness. In other words, we can't win the war without the very same human power that will keep things going after the war.

What, then, of the government's relation to business after the war?

The government can help business if it will and if business will permit it to do so. The present relation between the government and business argues reassuringly on that score, for

# THE DISSTON CRUCIBLE

both parties are getting a new understanding of the public good. It is likely that government "persecution" of business is over and also that business will not need prosecution.

Last, there is simply the question as to whether there will be a market for what we will be so well manned, equipped and financed to produce. Here it must be remembered that our industrial organization inevitably will be less disturbed by the war than those of other nations. We will be the first to be back at the old stand when peace comes. Therefore, we are assured of the largest share of orders.

## WAR HAS INCREASED WORLD DEMAND

While it is true that we will be able to produce more than our own country is likely to consume, still we shall have little or none of the usual reserve stock of commodities and we shall have to catch up on certain lines of equipment and construction that have been checked by the war. But upon what many are agreed as an even more important source of domestic orders is the undoubted increase of purchasing power and higher standard of living that the laboring and farming classes have secured.

The most pronounced agreement, however, among those who are in close touch with the world conditions, is upon the belief that foreign trade will demand of us vastly more than we can produce. There are three reasons why we will grasp foreign trade opportunities after the war. First, we are interested in other nations now and they are interested in us. Second, we have the needed shipping facilities. Third, we are investing and establishing banking houses in other countries. With these advantages foreign trade is practically certain.

It is impossible to measure the world's demand for goods after the war by what it bought before. The ideas of undeveloped peoples—the peasant classes of Western Europe, the Russians, even the Orientals perhaps—will be changed by the war quite as much as their forms of government. Liberated at home they will develop in the same manner that they developed here as immigrants.

These are factors in statesmanship and in business also. Business men must deal with such things now. And there is no evidence that they will fail.

## AMERICA'S LIBERTY LOANS

### FIRST LIBERTY LOAN, JUNE, 1917

Amount asked .....	\$2,000,000,000
Amount subscribed .....	3,035,226,850
Amount accepted .....	2,000,000,000
Number of subscribers.....	4,500,000

### SECOND LIBERTY LOAN, NOVEMBER, 1917

Amount asked .....	\$3,000,000,000
Amount subscribed .....	4,617,532,300
Amount accepted .....	3,808,766,150
Number of subscribers.....	9,400,000

### THIRD LIBERTY LOAN, APRIL, 1918

Amount asked .....	\$3,000,000,000
Amount subscribed .....	4,176,516,850
(Full amount accepted)	
Number of subscribers.....	17,000,000

### SUMMARY

Amount asked .....	\$8,000,000,000
Amount subscribed .....	11,829,276,000
Amount accepted .....	9,985,283,000
Number of subscribers.....	30,900,000

The campaign for the Fourth Liberty Loan for \$5,000,000,000 will begin September 28, 1918, and close October 19.

**HELP GIVE IT A BIG BOOST!**

## A FEW WORDS ABOUT THE TIMBERS OF WESTERN AUSTRALIA

**T**HE biggest trees on the Australian Continent are to be found in Western Australia and in the southwestern portion of that state. The two trees upon which the foreign reputation of Western Australia, as a grower of the very best hardwoods rests, are jarrah and karri. It is not uncommon to find considerable areas of jarrah forest where the matured trees attain a height of from 90 to 120 feet and from 3 to 5 feet in diameter, and 50 to 60 feet to the first branch. Individual trees are to be met with the measurements of which run into figures much in excess of those given. One or two may be cited which give some idea of the possibilities of the tree in the matter of size and wealth of timber. One, at old Wellington Mills, measured 22 feet in circumference at 5 feet from the ground and 80 feet to the first branch. This tree contained at least 20 loads of good marketable timber. Another large specimen in the Ferguson area went 21 feet in circumference at 4 feet from the ground and 75 feet to the first branch, and yet another in the Iron Pot district measured 22 feet in circumference 4 feet from the ground and 60 feet to the first limb.

Karri is a giant among trees. One specimen known as "King Karri" furnished the following measurements:

- 34 feet in circumference 3 feet from the ground,
- 160 feet to the first branch,
- 14 feet in circumference at the first limb,
- over 200 feet in extreme height.

These figures give the contents of that tree from the bottom to the first

limb as nearly 6,000 cubic feet of timber. Another karri tree measured recently was 278 feet in height, which it must be admitted is "some tree."

Jarrah is one of the few woods the world possesses that is practically indestructible. Pillars and posts made of it have been taken from the ground after having been over half a century in position, and have been found to be as good as ever. Wharf and bridge piles have been drawn after an equally long service and have also been found to be perfectly sound. There is no constructional purpose to which jarrah could not be applied. For furniture and decorative purposes it is equally useful, and in Western Australia it is being largely so used. The immense size of karri gives it a special value wherever beams of extraordinary length and thickness are required. The hardness and durability of both these timbers have gained them a high reputation among railway engineers and builders of rolling stock of all descriptions. The Colony of Western Australia was founded in 1829, and the early and hardy pioneers made excellent use of the forests they found at their hand.

Imported timber was remarkably scarce and the local article was used for every purpose. Ships were built of it and traded over seas to London, Cape of Good Hope and the East Indies. The early farmer plowed with a hardwood plow, made in all likelihood from timber grown on his own farm, and he had not to worry about a metal plow shear; the timber itself was sufficiently hard.

In early flour mills here the machinery was often wholly of timber, and it did its work remarkably well. In these pioneer times logs and sawn



## THE DISSTON CRUCIBLE

timber were brought from the bush to the port of shipment by tram lines, the rails of which were of native timber, and many a vehicle did splendid service in carting along rough tracts with wheels which were innocent of tires. In later days the steam sawmill arrived and at present there are a considerable number of these at work in the forests. It may be said that the most powerful saw-milling plants in Australia are in the jarrah and karri forests of the Western State. The illustration on another page shows part of the interior of No. 1 Sawmill at Manjimup, a plant which is operated by the State. The heavy log going through the breaking-down saw, as seen in the picture, is of karri, as are also the other logs that may be noticed lying waiting their turn to be broken down. The equipment in this mill is the most up-to-date, and is capable of dealing with the largest logs.

Besides the timbers named, the forests of Australia hold many other hardwoods of the highest class. Indeed, it may be remarked with truth that there is no purpose to which wood can be applied that cannot be served by the products of Western Australia. York gum is particularly well adapted for all kinds of wheelwright's work; wando also is used for similar purposes; tuatt is the hardest and toughest wood in the forest and is very largely employed in the construction of railway wagons and under carriages.

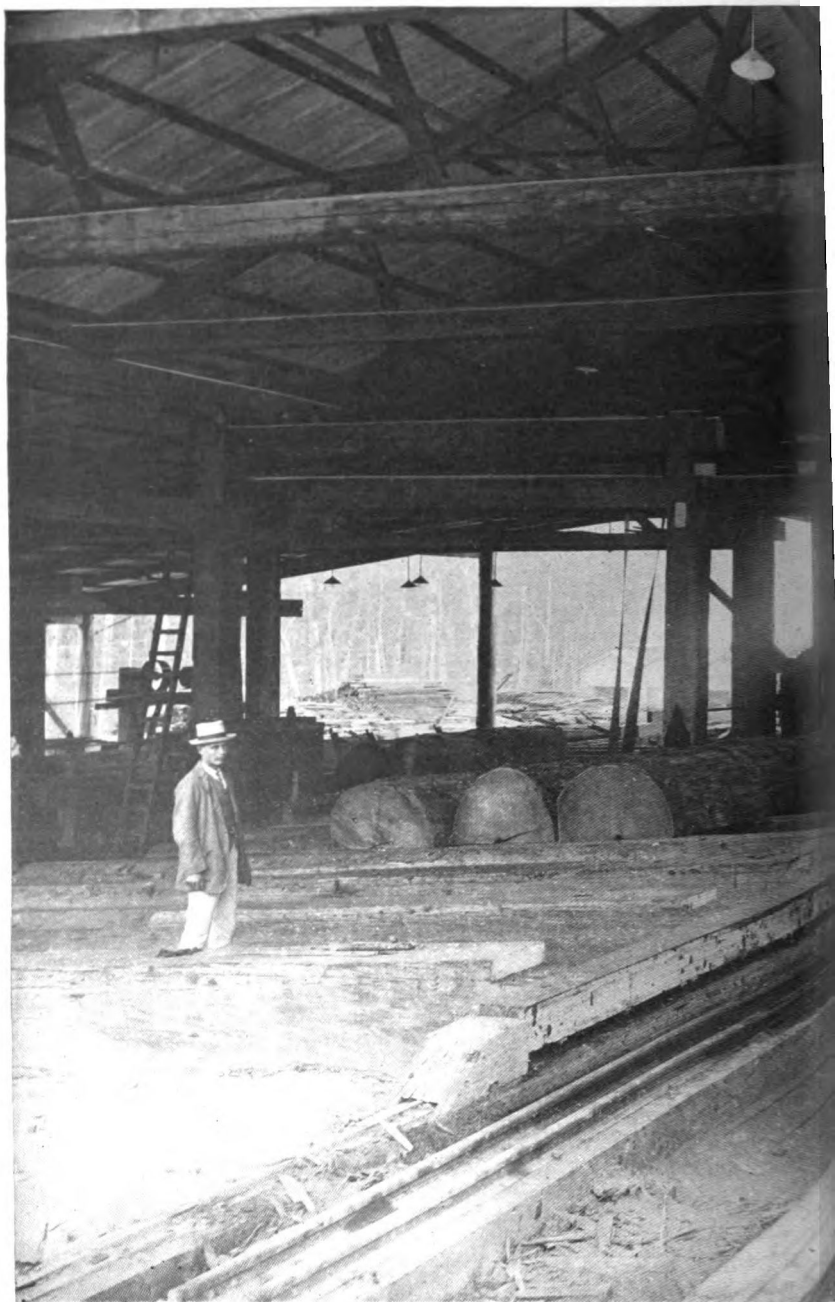
Wherever gold is found in sufficient quantities to be the basis of an industry, timber, as a rule, is not abundant. Western Australia is an exception to the rule, for on the principal gold fields is to be found abundance of splendid timber suitable for fuel and other mining purposes. About 100,000 tons of fuel wood (mulga) is used every year on the eastern gold fields. Sandal wood is

another of the products of the Western Australian forests which finds a ready market abroad, principally in China and the East. In the early days it was plentiful in what are now called the agricultural areas, but to-day the supply is drawn from the mulga belts on the Eastern gold fields and from certain districts in the northwest.

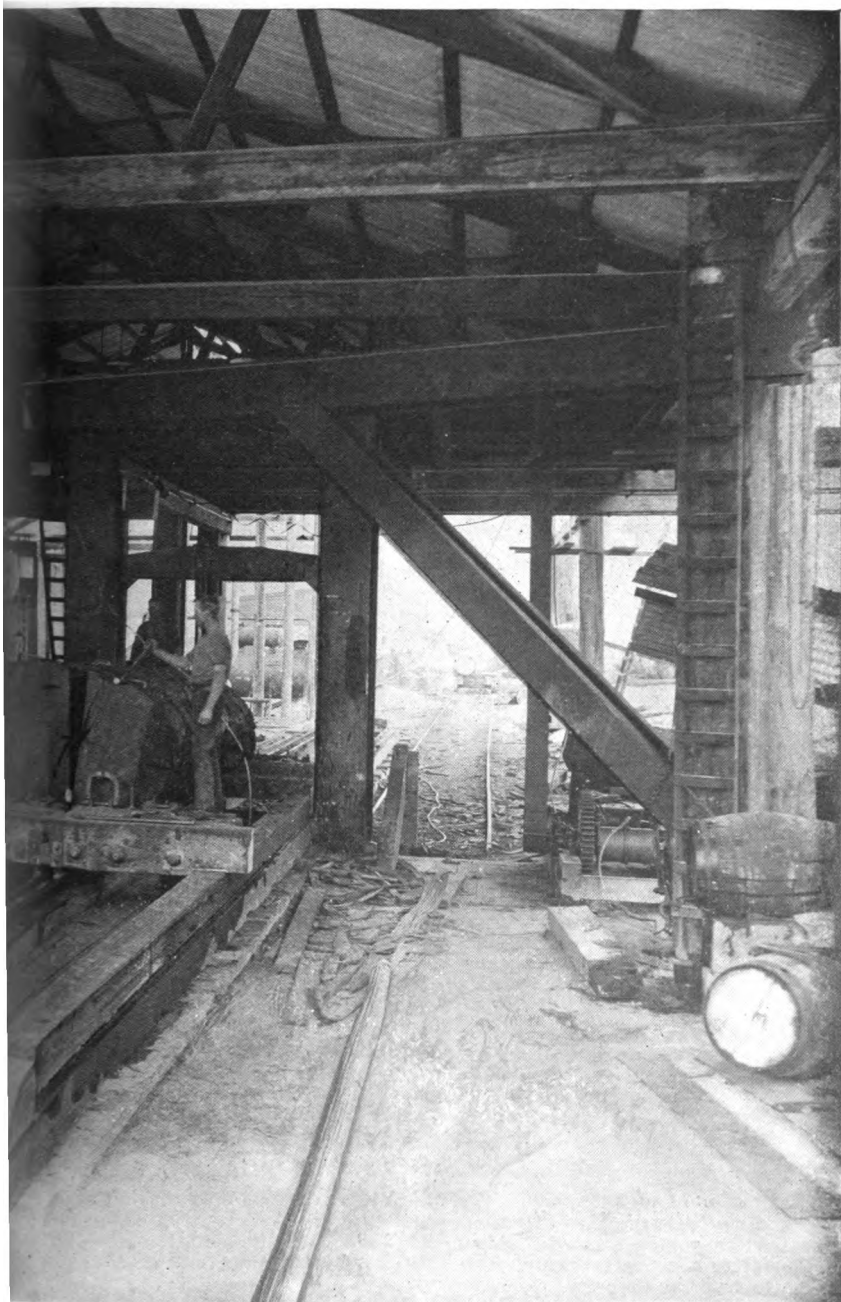
The wealth of Western Australia's forests is not measured by the great trees contained in them. There are other products of the highest value, only exploited as yet to a very limited extent. These products include tannin agents, gums, resins and essential oils, and materials for the manufacture of paper. These series of wealth to be made available in the national economy must be investigated by some institution as a forest products laboratory. The commonwealth government, it is understood, have in contemplation the establishment of such laboratories, and until they have been brought into being and are at work, the best will not be made of the great national assets which the Western State has in its forests. The Department of Woods and Forests, of which Mr. C. E. Lane-Poole is Conservator, is now busily engaged taking a census of the forests with the object of placing them on such a footing as will enable them to be a source of wealth for all time. In Western Australia, as in other parts of the commonwealth, the forests have been woefully misused in the past, but sounder ideas now prevail and the work of indiscriminate and unchecked destruction has been checked. It can scarcely be doubted that after the war economic reconstruction will be speediest in those countries which make the best use of their natural resources, and of these resources there is none that is likely to play a more important part than that of timber.

*We are indebted to Mr. C. E. Lane-Poole, Conservator of Forests, Perth, West Australia, for the above interesting article and photograph on next page.*

(SEE ILLUSTRATION—PAGE 120)



**Karri Log being treated by the Breaking-Down**



**he No. 1 State Saw Mill, Manjimup, W. Australia**

## National Forest Receipts Increase

WASHINGTON, AUGUST : Receipts from the National Forests in the fiscal year 1918, ending June 30, exceeded those for 1917 by almost \$120,000 and totaled over \$3,574,000. The increase does not come up to the big increase of the year before, which was more than \$600,000, but still shows a healthy growth in most lines of business on the forests. The cost of operating the forests was about \$4,000,000, and was practically the same as in the previous year. This is exclusive of the additional expenditures caused by the very serious fire situation, and for which a special deficiency appropriation of over \$700,000 was made by Congress.

This year's increase in receipts, according to the forestry officials, came mainly from the larger number of live stock grazed, although every revenue-producing activity on the forests, except timber business and permits for water power, contributed its share. The timber business fell off in consequence of the general let-up in private building activities on account of the war, the dislocation of transportation facilities during much of the year, and the labor situation, especially in the northwest, where the timber business is ordinarily largest.

The falling off in receipts from water-power permits was caused, it is believed, by the uncertainty created by pending legislation. Many prospective permittees are holding back until final action has been taken on the legislation now under consideration.

Timber sales yielded over \$1,500,000 and live-stock grazing over \$1,700,000. Slightly less than \$100,000 was brought in from permits for water-power development. Other forms of land occupancy, including leases of land for summer homes, hotels, club grounds, apiaries, fish hatcheries and canneries, brought in about \$120,000. The sale of turpentine privileges on the Florida forest brought in a little over \$8,000.

Much of the use of the National Forests is free. Settlers and residents of the small communities in and near the forests are allowed, without charge, reasonable amounts of wood for fuel. In addition, the settler may obtain timber for use in the improvement and maintenance of his farm and is given the privilege to graze free not to exceed ten head of milch and work animals.

Fees for grazing cattle brought in approximately \$1,039,000 and for sheep \$663,000. Special efforts were made during the past year to increase the use of the ranges to the fullest extent in order to meet the needs of the nation for meat, wool and hide production. On one forest a new range for 75,000 sheep was opened by building a special barge to transport the sheep across a lake to high mountain grazing lands which could not be reached in any other way.

Considerable co-operation was also given the Forest Service by grazing permittees in the construction of drift fences and the improvement of watering places. Although the range is being used to the limit, the forestry officials are regulating the use carefully, with a view to preventing any permanent damage to carrying capacity.

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

## Why Is There a Coal Shortage?

**T**HERE is a coal shortage to-day because in addition to the enormous quantities of steel and other products we ourselves need, the Allies are turning more and more to America for their war supplies, the production of which depends on coal.

Lack of coal is to-day limiting the production of steel; 24,000,000 more tons of coal than were used last year are needed this year for the increased war needs of pig iron and steel. Every ton of finished steel requires four tons of coal. Every pound of coal that is saved means more steel, and the war needs every pound of steel that can be produced.

Frequently it is said that since there are almost unlimited quantities of coal in the earth, the additional one hundred million tons required for the total increased war needs this year should be mined. Some of it can be mined—but not all. There are three trillion tons of coal in the earth just as there are, in the air, millions of pounds of free nitrogen urgently needed in the manufacture of explosives. The difficulty is to make the coal and nitrogen available for use.

During the first two years of the war coal production in Great Britain, Germany, France and Austria-Hungary dropped steadily. The first year America was at war, coal production in this country increased 10 per cent. This year there is every indication that our production will be increased 16 per cent., a wonderful record in view of the magnitude of the labor and transportation problems involved.

Already the mines and railroads are doing their part. Almost every week shows a new record of coal

## Promotion

By Edgar A. Guest

Promotion comes to him who sticks  
Unto his work and never kicks,  
Who watches neither clock nor sun  
To tell him when his task is done;  
Who toils not by a stated chart,  
Defining to a jot his part,  
But gladly does a little more  
Than he's remunerated for.  
The man in factory or shop  
Who rises quickly to the top  
Is he who gives what can't be bought,  
Intelligent and careful thought.

No one can say just when begins  
The service that promotion wins,  
Or when it ends; 'tis not defined  
By certain hours or any kind  
Of system that has been devised.  
Merit cannot be systematized.  
It is at work when it's at play,  
It serves each minute of the day;  
'Tis always at its post, to see  
New ways of help and use to be.  
Merit from duty never slinks,  
Its cardinal virtue is—it thinks.

Promotion comes to him who tries  
Not solely for a selfish prize,  
But day by day and year by year  
Holds his employer's interests dear.  
Who measures not by what he earns  
The sum of labor he returns,  
Nor counts his day of toiling through  
Till he's done all that he can do.  
His strength is not of muscle bred,  
But of the heart and of the head.  
The man who would the top attain,  
Must demonstrate he has a brain.

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mined and transported. Still we are short. Conservation must make up the difference.

Householders are now girding themselves for the battle of conservation. They will save coal by every possible means. They will do so that, in these hours of the world's agony, America may be its savior.

*"Philadelphia-Made Hardware."*

# A Record-Breaking Saw Mill

By PINEKNOT

A new World's Record for fast cutting is claimed by the mill crew of the Santa Clara Lumber Company of Tupper Lake, N. Y., which mill has one single-cut band saw 12 inches wide and one 32 saw gang, with oscillating nigger and 12-inch shot-gun feed.

When this mill was being built the engineer in charge, Mr. John L. Graham, installed equipment intended to cut 65 M. per day as a minimum, but from what is learned from the tally sheet records, this mill rarely ever falls short of 100 M. per day.

There seems to be some friendly rivalry between Mr. W. F. Gallagher, who is now in France serving Uncle Sam, but who was sawyer in this mill two seasons previously, and Mr. E. H. Webb, who is the present sawyer, and while the best previous record made by Mr. Gallagher was 2,023 logs in nine and one-half hours actual running time, this mill recently delivered 2,177 logs to the gang, slabbed on two sides, in nine hours and twenty minutes, logs averaging about 13 feet long and making a total of 111,640 feet log scale.

Messrs. Gallagher and Webb are both fast, careful and expert sawyers, and while Mr. Webb has established a new record in this mill, it is not beyond a possibility that Mr. Gallagher has another notch or two of speed he could let out when he finds that his record has been beaten.

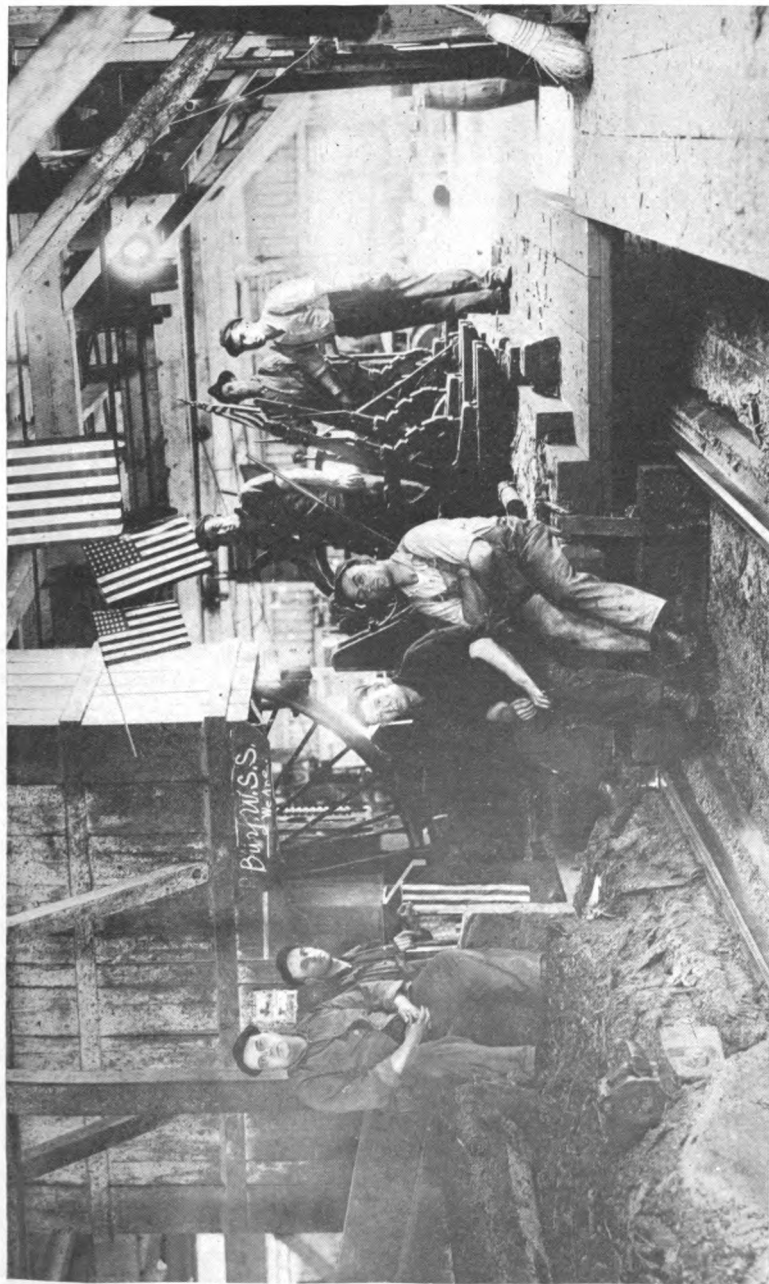
The fast cutting and handling of logs in this mill is remarkable. The band mill recently slabbed 21 logs in three minutes and delivered them to the gang, and to give an idea of the feed carried, on one occasion upon measuring the feed of a band saw we found it to be 57 inches, which means "some" travel of carriage when the saw is making 244 revolutions per minute. The gang has a 20-inch stroke, runs 250 revolutions per minute and has a feed of from 1 inch to 1½ inch per stroke. Disston saws are used on both the band and gang.

It is very interesting to the layman as well as veteran sawmill men to see this mill in operation, as there is no perceptible difference in the movement of the carriage whether it is loading, unloading or the turning of log, the carriage being operated to the full capacity of the 12-inch shot-gun feed in the meantime. The regular or clock-like precision of the handling of this carriage and nigger is a most interesting sight, for while the carriage is racing forward and back at a rapid speed, the setter, Mr. Ed. White, and doggers, Messrs. John Annette and Wm. Stauers, stick on the carriage, like human flies, working the set levers and dogs.

This mill cuts hemlock and spruce, and to Mr. Wm. Christian, the filer, and his helper, Mr. M. G. Jones, credit must be given for the manner in which the saws are fitted and tensioned, for, notwithstanding the enormous feed carried by Mr. E. H. Webb, the band sawyer, and Lewis Caulaugh, the gang sawyer, the saws stand up so well that a miscut is unusual.

Another marked feature of this mill is the perfect harmony that exists between the rank and file of the whole mill crew, who work as if they were going after a new record every day—truly in UNION there is strength.

## THE DISSTON CRUCIBLE



A Record-Breaking Saw Mill, Santa Clara Lumber Co., Tupper Lake, N. Y.

## He Who Fights Also Saves

**W**ITH the view of reducing to a minimum the waste in the Army, the Quartermaster General established a new Division of Conservation and Reclamation. The aim of this division is to prevent all food waste in the Army, to reclaim and salvage all worn-out and cast-off material.

No restrictions will be placed upon the amount that our soldiers may eat; but much of the food will be saved that was formerly lost through carelessness. Each organization of the Army, which conducts a "mess," will be required to separate and classify kitchen waste produced in the preparation and serving of each meal, so that it can be disposed of most advantageously. The Division of Conservation and Reclamation, co-operating with the Food Division of the Medical Department, will interest itself especially in the storage of food and in the reduction of wastes.

Further, it will have active charge of farming and garden operations for each camp and cantonment. The produce raised will be used in rationing troops and providing animals with forage. Men fit for active duty will not be required to assist in this agricultural service, for this work will be done chiefly by interned aliens, enemy prisoners, conscientious objectors and military prisoners. Best of all, enlisted men physically unsuited for service overseas or partially disabled will likely be assigned to this agricultural work. The Quartermaster General believes that after a few months of outdoor work many of these men will so improve physically that they will become fit for transfer to fighting units. Thus, the Army will reclaim men as well as materials and supplies.

In addition, the conservation and reclamation division of the Quartermaster Corps will have authority to operate laundries and provide a uniform method of turning over clothing, shoes and articles of equipment by unit supply officers for repair, dry cleaning or disinfection.

The boys at the front and at camps

and cantonments in this country are setting a pace in conservation which those at home must strive mightily to equal. What will the home folks do? The men crippled in fighting our battles, the women widowed for our freedom, the children orphaned to make the world safe for future children, they are the ones who stretch their hands to us across the seas. Our boys are answering those appeals, not alone by fighting for them, but by *saving* for them. Is not this action of our soldiers an inspiration for redoubled efforts toward saving on the part of those at home?

## Think It Over!

When things look blue,  
As they sometimes do;  
When you hit Fate's line and you  
    can't break through;  
When the dark is deep  
Where the shadows creep,  
And ghosts of trouble break up your  
    sleep—

How would you like to trade your hand,  
Facing the German host,  
With a fellow Out There in No Man's  
    Land,  
Hooked to the Listening Post?  
How would you like to trade your job,  
Swapping it wrench for wrench,  
With the fellow feeling the big gun's  
    throb  
Out in the first line trench?

When things get tough,  
Where the break is rough,  
And you slip and skid as they call  
    your bluff;  
When you're out of gear  
Where the world looks drear  
And you curse your luck with a sigh  
    or tear—

How would you like to make a trade,  
Swapping your troubles dire,  
With the fellow storming a barricade,  
Raked with machine-gun's fire?  
How would you like to trade your turn,  
Making an even swap,  
With the fellow watching the rockets  
    burn,  
At the last call—"Over the Top"?  
—Grantland Rice.



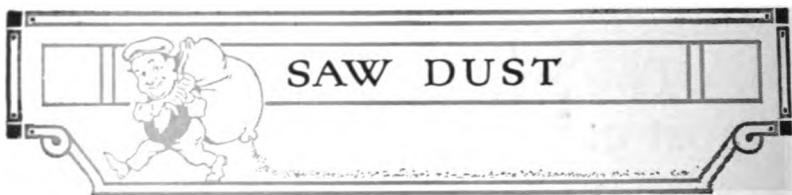
The Saws  
most carpenters  
use

DISSTON



Price is not a  
determining factor  
unless quality  
is considered.

HENRY DISSTON & SONS, INC.  
KEYSTONE SAW, TOOL, STEEL & FILE WORKS  
PHILADELPHIA, U. S. A.



### ALL UP

Two men were crossing the ocean in a storm and both became deathly sick. Finally one roused up a little and ventured to ask, "Do you suppose the moon is up yet?" The other tried several times in vain to make reply. Finally he said, "I don't know, Bill, but if that is one of the things I swallowed, it surely is up. I feel as though I had thrown up my immortal soul also."—*Exchange*.

### QUALIFIED BY NATURE

Jed has been nervous lately about being drafted and has decided to enlist. He chose the navy, and told the naval recruiting officer he was intended by nature for a sailor. When asked why, he said because he had a floating kidney.—*Salt Seller*.

### THE PROFESSOR'S TROUBLE

The professor was walking down the street when accidentally he allowed one foot to drop in the dry gutter. Thinking deeply on some obscure subject, he unconsciously continued walking with one foot on the sidewalk and the other in the gutter. A friend, seeing him, stopped and said:

"Good morning, professor. How are you feeling this morning?"

"Well," said the professor, "when I left home this morning I was feeling quite all right, but during the last few minutes I notice I have a limp in my left leg."—*Atlanta Journal*.

### WHERE IT HELPS

"Do you think early rising is good for your health?" asked the languid city visitor.

"I don't know about my health," replied Farmer Cobbles, "but next to sun, rain and fertilizer, it's the best thing there is for crops."—*Birmingham Age Herald*.

### ZEKE ZOWIE SEZ

Once there were two men. One was exceedingly truthful, and therefore when a lie was necessary he told clumsy lies. The other lied often, and from practice lied skillfully.

Because the clumsy one's infrequent lies were always discovered, he was called a Confirmed Liar.

But the skillful liar, being too clever to be caught, was esteemed as the Soul of Truth.

*Moral*—Don't lie. But if you must make it a practice, why, make it a practice.—*Pepper and Salt*.

### AN ALL-AROUND MAID

Mrs. Rankin—"Mrs. Giddigad says she takes a lot of comfort out of her new maid."

Mrs. Phyle—"But isn't a maid a great expense to a person in her circumstances?"

"Yes, but she says she gets her money's worth. The girl is so pretty both of them always get seats on the street-cars."—*Youngstown Telegram*.

### AND THEN HE KISSED HER

"Daughter," said the mother severely, "I wish to speak to you on a very serious subject."

Daughter assumed her most childlike expression and murmured: "Yes, mamma."

"I must tell you that I was passing through the hall last night and I saw that young Mr. Simpkins kiss you."

"Yes, mamma."

"Did you give him permission to kiss you?"

"No, mamma."

"Then how did he come to do it?"

"He asked me if it would offend me if he kissed me."

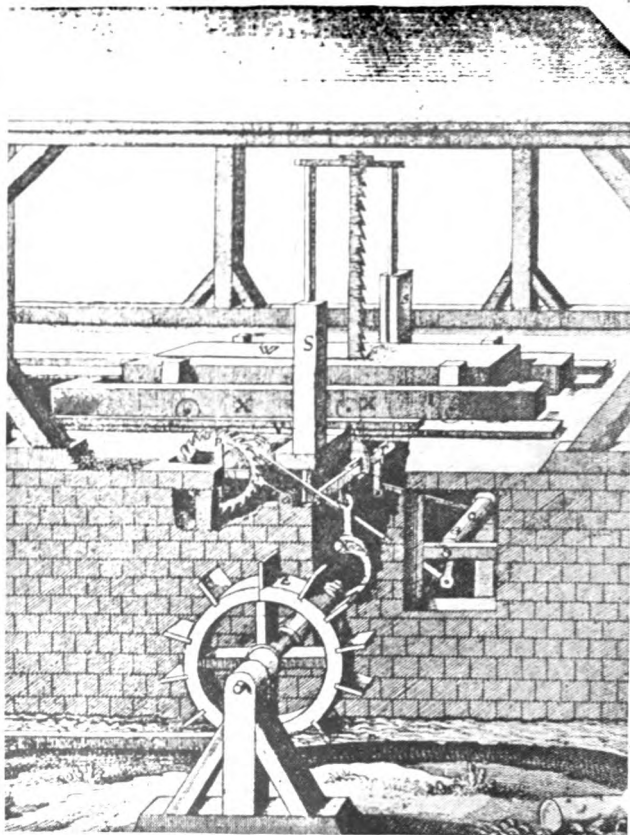
"Yes, yes. And what did you say?"

"I said how could I tell until I knew how it would affect me."—*Cleveland Plain Dealer*.

# THE DISSTON CRUCIBLE



OCTOBER



#### **OLD TIME MILLS. No. 10**

That this power driven saw mill developed from the hand mill first illustrated seems hardly possible, but the growth, almost step by step, is shown in the previous pictures.

Just as important, however, was the first invention, for without it there would have been no development.

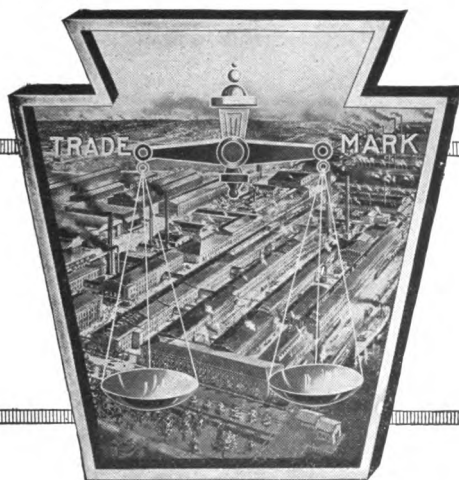


# THE DISSTON CRUCIBLE

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

**HENRY DISSTON & SONS**  
INCORPORATED

**Keystone Saw, Tool, Steel, and File Works**  
**PHILADELPHIA**

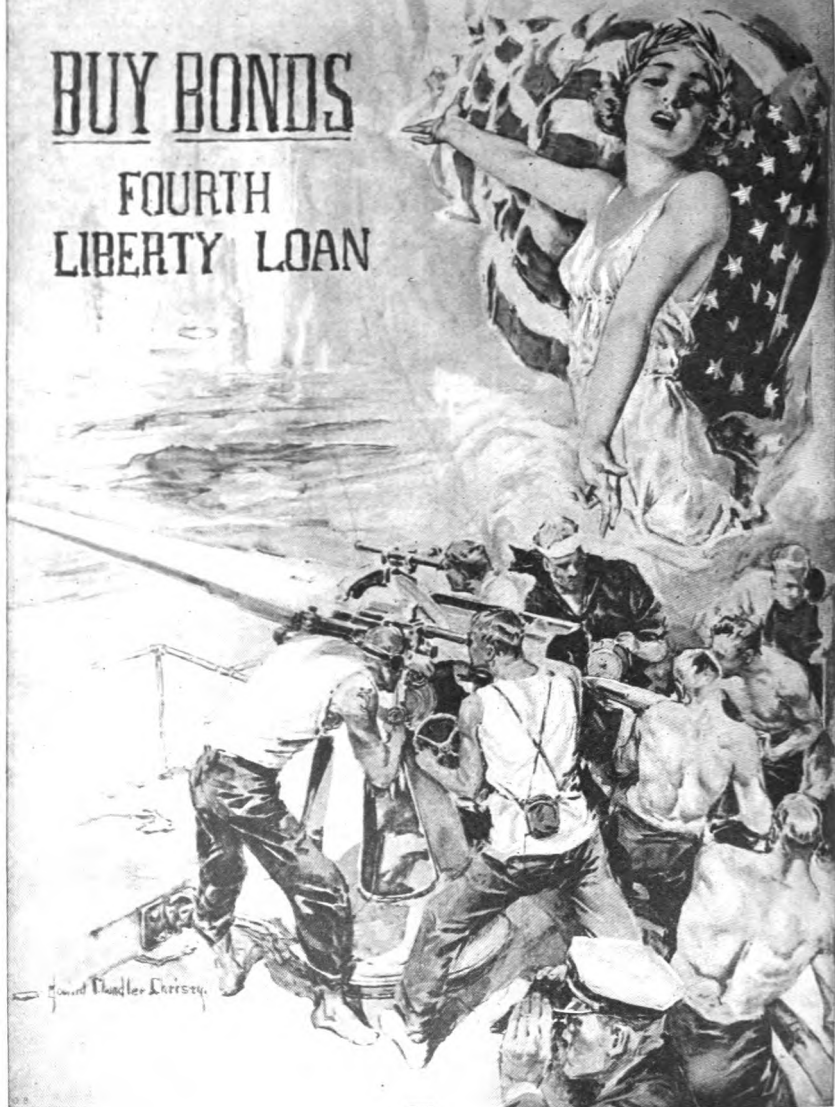
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# CLEAR THE WAY-!!

## BUY BONDS

### FOURTH LIBERTY LOAN



# THE DISTON CRUCIBLE

A MAGAZINE FOR THE MILLMAN

VOL. VII

OCTOBER, 1918

No. 9

## EDITORIAL CHAT

### Greatness

**S**OME men, they say, are born great, others achieve greatness, and still others have greatness thrust upon them.

Be this as it may, a man to retain greatness must earn it by actual work, and to be a permanent leader he must continue demonstrating his fitness by deeds performed.

A would-be leader, through his exaggerated ego and power of "talk", will convince some people for a time, but where results count his real qualifications are soon discovered, and quickly he sinks to his level.

The same principle applies to goods as well as man. Fancy appearance may please the eye, but production is the telling factor.

Efficiency is, and always will be, the keynote in man or goods.

## Philadelphia Ordnance Division Leads in Supplying U. S. Soldiers with What They Need to Win the War

**Every Fighter With Pershing Requires Four Men Behind Him to Supply His Munitions and Equipment—This City Stands First in Volume of Output of All Kinds Which Will Be Used to Lick the Hun.**

### MORE THAN 400 FACTORIES TURN IT OUT

*Prepared for the News Bulletin by J. N. Robinson, of the Production Division, Ordnance Office, War Department.*

**U. S. Ordnance Production—What does it mean to you, to Pershing, to Kaiser Wilhelm?**

**H**AVE you ever, your curiosity unsatisfied after dopping out in what way some magician did his tricks, set to figuring just how much work it took, just how many assistants were needed to get the prestidigitator primed for his performance; who put in his innumerable pockets all the little nick-knacks which had to be produced at just the right moment; who fixed the American flag so that it could be unfurled from the palmed ashes of the banners of Germany, Austria and Turkey, which had been consumed before your approving eyes; who arranged the apparatus so that the Dove of Peace would fly out of the chafing dish in which Hindenburg's goose had been cooked? Though you still admitted the magician was "some" wizard, you realized he must have had a wonderful lot of equipment to accomplish what he did.

What of Pershing? We are all thoroughly convinced that he is "some" fighter, but when we come to think of it, he must require a tremendous lot of ordnance to accomplish the defeat of the Huns.

#### SUPPLIES FOR THE FIGHTER

**HE DOES!** Every fighter under his command requires **FOUR** men behind him to keep him adequately supplied with munitions and equipment for offense and defense.

These four men represent **PRO-**

**DUCTION**, and it is with that production the **PHILADELPHIA ORDNANCE OFFICE** is vitally concerned.

At the head of this office is John Clifford Jones, the District Chief, whom you have but to see to recognize his calibre, and but to meet to realize that he is as big as he looks. And, as many an Ordnance Contractor and Government official is well aware, when it comes to energy, there are few volcanoes more active.

Co-operating with Mr. Jones is Major R. A. Greene, who holds the rôle of Production Manager. With his infinite capacity for handling detail, his unlimited patience and tireless stick-to-itiveness, he directs the supervision of production in this division with a thoroughness and finality which cannot fail to produce the required results.

The different types of Ordnance produced in the Philadelphia District, which covers all of eastern Pennsylvania, New Jersey from Trenton south and all of the State of Delaware, and which has within its boundaries over 400 great factories devoted to Government work, are too numerous and too varied to be listed in this article. Sufficient it is to state that every size of gun from the large super-cannon which gives advance notice to German fortifications well behind the lines that **WE ARE COMING**, to the little trench mortar which drops the doughboys calling cards to tell the Huns **WE ARE THERE**, as well as ammunition for these, rifles, grenades, bombs, trucks,



## THE DISSTON CRUCIBLE

tractors and tanks; in fact, almost every form of munitions and equipment are being turned out by manufacturers within the Philadelphia District.

### PHILADELPHIA DISTRICT LEADS

In number of ordnance contracts, in volume of output, and in actual RESULTS, this District stands foremost among the ten Ordnance Districts in the country. And the responsibilities of the Production Office are proportionately great. The objectives and duties of this office are to ascertain the status of the work under ordnance contracts; to seek out the low spots and causes for the same; to take action when and wherever required in connection with delays in the receipt of raw materials and components, by expediting their production and their transportation; to work out the problems of shipping, fuel, power, labor, priorities, deferred classifications; to investigate matters in connection with plant facilities, the physical conditions of plants, fire protection, safety equipment, cost-plus items, price approvals, Government machinery, gauges; by the aid of field officers and a competent civilian personnel to keep in close contact with manufacturers, production in whose plants is in need of direct supervision.

In general, the Production Division concerns itself with every problem, and every phase of every problem, that has to do with production, such as the training of unskilled labor, the mitigating of the evil of labor turn-over by solving the question of housing workmen and their

transportation, the instilling of patriotism in both employer and employee by means of public speakers, circular letters, posters and all forms of advertising, and finally, to endeavor to obtain the closest co-operation that is possible between all manufacturers and all branches of the Government.

### CO-OPERATION AIDS TO WIN

As to the matter of RESULTS, the Production Division of the Ordnance Department gives all the credit to the wonderful patriotic spirit, and to the day and night co-operation which is being given to every manufacturer and every employee in the hundreds of ordnance plants. This office itself seeks no praise, and its personnel desires no halos; problems and difficulties are its daily ration. And, as in every ordnance factory, the laborer is being taught to realize the important part he is playing in supplying our Army with the means for winning the war, so every worker in this Ordnance Department is made aware of the vital need of his giving his best at all times. There is no need for a time clock here, for within the hearts of the men, as before their eyes, is inscribed the words, "Until all is done, nothing is done."

From the Chief to the messenger boys, from the major to the privates, each and everyone devotes everything that is in him to the task in which he is engaged, with the one idea in mind, that "Nothing else under Heaven matters today, except that this War shall go on to VICTORY."

## Thrift

**T**HERE are today many men, women and children who ordinarily would not have saved a penny, but who, through the spirit of the times, have denied themselves to help Uncle Sam provide for the boys at the front, and incidentally now own Liberty Bonds, War Stamps and Thrift Stamps.

This is quite a common comment throughout the country and the lesson is obvious.

You can buy more Bonds and Stamps if you make up your mind to do it.

"CARRY ON!"

# DISTINGUISHING MARKS OF THE UNITED STATES ARMY AND NAVY

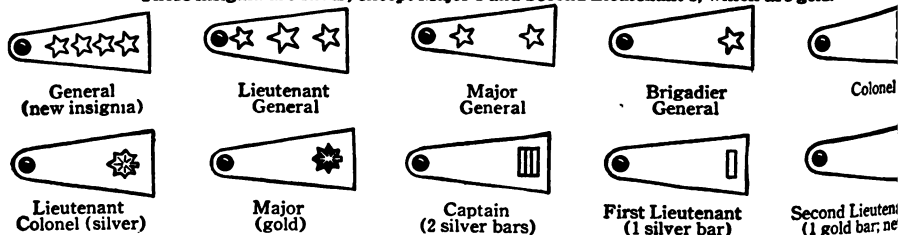
**M**ARKS of Rank, Arms of Service and Specialty worn on hats, collars, shoulder straps and sleeves in the U. S. Army, Navy and Marines, showing 280 devices, practically all Army-Navy marks of the line up to January 1, 1918.

The President of the United States is Commander-in-chief of the Army and Navy.

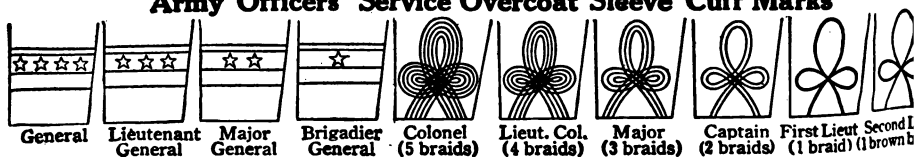
**United States Army Officers' Commands of the Line:** A general commands an army; lieutenant-general, army corps of two divisions; major-general, an army division of 27,152 men; brigadier-general, brigade of two regiments; infantry colonel, with lieutenant-colonel in second command, regiment of 3,755 men, comprising 3,078 infantry (divided into three battalions of 1,025 men each), balance being machine gun company, supply company, headquarters company, etc.; major, battalion of 1,025 men. There are 12 companies to a regiment, 4 to a battalion. Company numbers 256 men in command of captain, reserve captain, 2 first lieutenants, 2 second lieutenants. 4 platoons (59 men each) to a company, lieutenants or sergeants in command. A squad, 7 men and 1 corporal commanding, is the smallest unit. Other service commands are similar to infantry, generals are known as general officers; colonels, lieutenant-colonels and majors, field officers; captains and lieutenants, company officers.

## Officers' Shoulder Loop (Silver) Insignia

These insignia are silver, except Major's and Second Lieutenant's, which are gold.



## Army Officers' Service Overcoat Sleeve Cuff Marks



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Devices (bronze) of the arms of the service worn on army officers' coats and shirt collars; also on privates' service caps. All insignia, etc., shown relate to Army-Navy line service uniforms only.

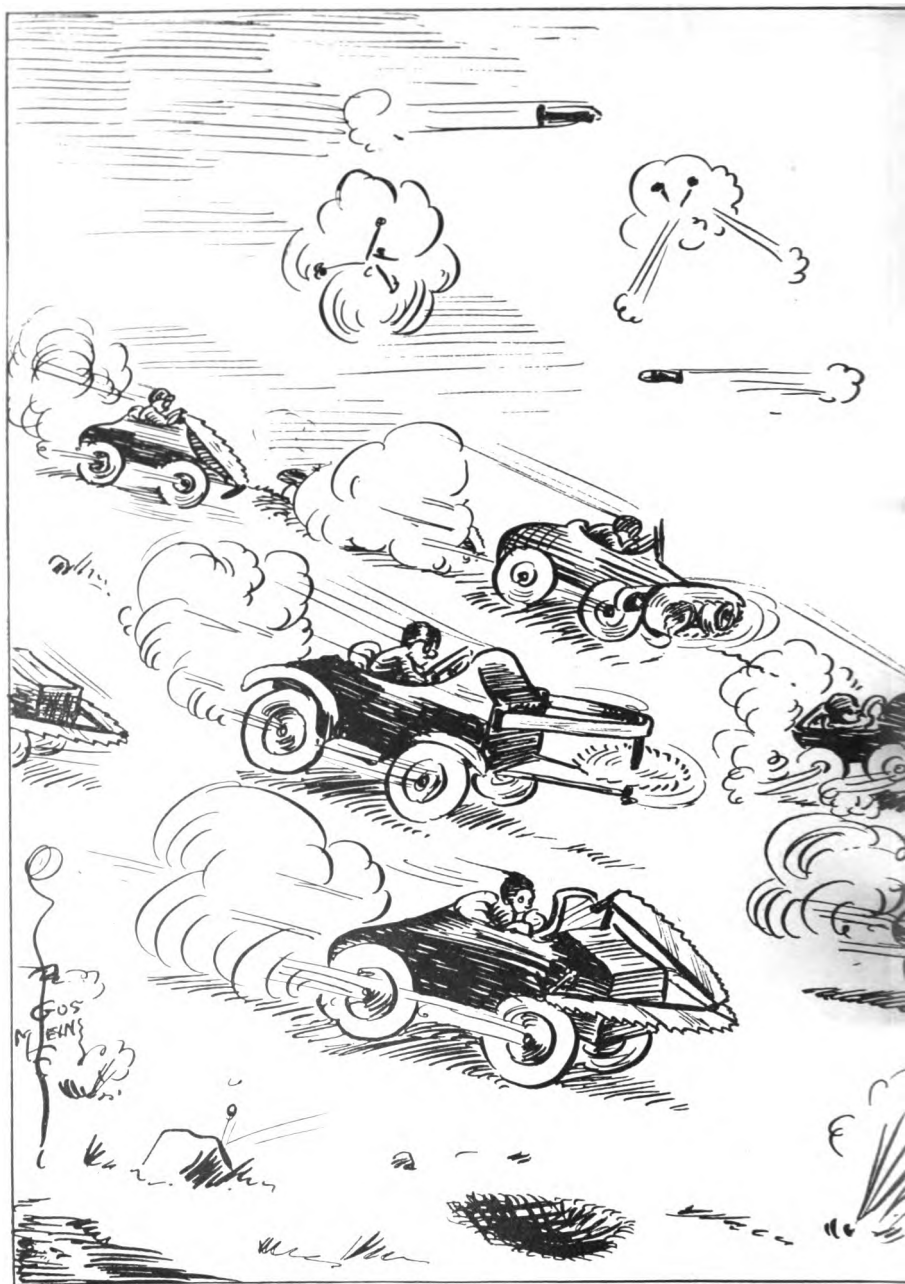
On November 8, 1917, the United States Army and Navy had a strength of 2,007,391 men, subject to constant increase. The United States Army numbered 1,735,820 men, divided as follows: United States Regular Army, 370,000; United States National Guard Army, 469,000; United States National Army, 616,820; special branches, 200,000; reserves, 80,000. A considerable proportion of the Army, including Marines, was on the French allied battlefield on that date, with constant accessions arriving.



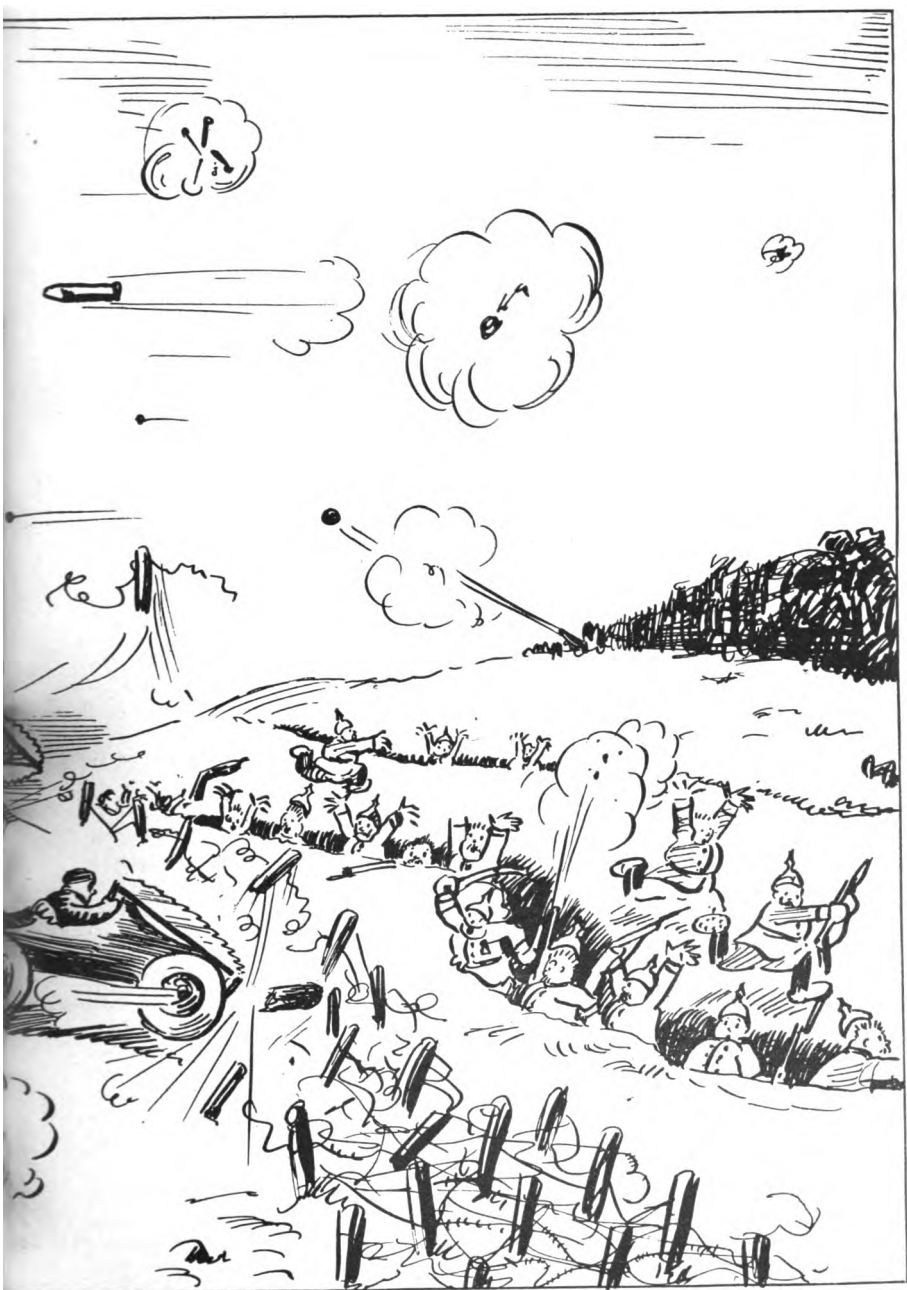
—Courtesy of United Cigar Stores of America

Ten thousand soldiers are being sent into the woods of the Northwest as the Spruce Production Division of the Signal Corps. Their duties are to get out spruce and fir for airplane stock. These men are volunteering from Western National Army camps and from civil life and from other services to counteract the trouble caused by I. W. W. agitation in western lumber camps. A monthly production of 15,000,000 board feet of spruce is required to take care of the extra needs for the aircraft construction program, and small operators are being encouraged to get out rived timbers in order to speed up production. Four New York State College of Forestry students have enlisted in these logging squadrons and have left Syracuse for Vancouver Barracks.

—American Forestry.



**If it comes to the worst a Diss**



**Saw Brigade would be effective**

## AMENDMENT TO WAR RISK INSURANCE ACT

**C**HANGES in the law affecting the money received by families and relatives of men in the Army and Navy, which may cause some confusion unless every person now drawing money on a soldier's or sailor's allotment or allowance understands what is being done, are explained by the Home Service Officials of the American Red Cross. As a result of these changes, several hundred thousand checks issued by the Bureau of War Risk Insurance beginning August 1st will be reduced in amount. The Red Cross, has, however, undertaken to see that no relative of a man in the army or navy shall suffer for lack of money while allowances are delayed or through any other misfortune.

**DEPENDENTS OF A MAN GETTING \$30 A MONTH AND allotting \$15** to his wife and children are not affected and will continue to receive the same amounts.

**A MAN GETTING MORE THAN \$30 a month**, under the old system, had to allot at least \$15, and frequently much more than that up to half his pay. Under the new regulations, however, the amount which every enlisted man is required to allot to his wife and children, irrespective of the amount of pay he is receiving, is \$15. If he has been contributing more than this and wishes to continue to do so, he may make a new allotment for the difference through the War or Navy Departments. Prompt notice of these facts has been sent to men in all branches of the military and naval service, but it will, of course, require some time for the new forms to be executed and returned to Washington.

**FOR DEPENDENT PARENTS, BROTHERS, SISTERS and GRAND-CHILDREN**, the flat voluntary allotment of a man is now \$15 in order to obtain the full allowance, unless a compulsory allotment is also being made to a wife and children, in which case it is only \$5, making the total allotment \$20.

**THE WAR RISK INSURANCE BUREAU WILL DISCONTINUE THE HANDLING OF ALLOTMENTS WHICH DO NOT CARRY ALLOWANCES.** In many cases men have made ALLOTMENTS to parents, brothers or sisters through the War Risk Insurance Bureau, but have NOT requested the Government ALLOWANCE. If the man wishes them to continue to get the allotment, he must make a NEW application through the War and Navy Departments. If he decides that he does not care to do this, these relatives will cease to receive any payments whatever.

If such a relative should deem himself entitled to the Government allowance by reason of dependency, he can only secure it in the future by ASKING THE MAN to discontinue his allotment through the War or Navy Departments, for instance, and to MAKE APPLICATION to the Bureau of War Risk Insurance, stating that he wishes to make an allotment which will carry an allowance with it.

**RELATIVES OR FRIENDS OF ENLISTED MEN NOT INCLUDED IN EITHER OF THE ABOVE GROUPS**—wife, child or former wife divorced, who has not remarried and to whom alimony has been decreed, or parent, brother, sister or grandchild—to whom allotments have been made, will continue to receive them through the War Department or Navy Department as previously. Allotments to such persons were never handled by the Bureau of War Risk Insurance and no change is contemplated in this regard.

## THE DISSTON CRUCIBLE

THE WAR AND NAVY DEPARTMENT OFFICES, WHICH WILL HANDLE SUCH ALLOTMENTS UNDER THE NEW PLAN as can no longer be made through the Bureau of War Risk Insurance, are as follows:

In the Army, through the "Office of the Quartermaster-General, U. S. Army, Washington, D. C."

In the Navy, through the "Navy Allotment Officer, Navy Department, Washington, D. C."

In the Marine Corps, through the "Paymaster, U. S. Marine Corps Headquarters, Washington, D. C."

In the Coast Guard, through the "Captain Commandant, U. S. Coast Guard, Washington, D. C."

**SOLDIERS' AND SAILORS' FAMILIES SHOULD UNDERSTAND** that the changes outlined above were determined upon after careful study and with the approval of the War Department and Navy Department for the purpose of speeding up delivery of Government checks to the relatives of enlisted men.

Under the new plan the payment of allotments and allowances is simplified. The Bureau of War Risk Insurance will now handle allotments of only two amounts—\$15 and \$20. Formerly the allotment was on a sliding scale and had to be changed every time a man's pay was increased by promotion or otherwise. This required from 150,000 to 200,000 changes per month.

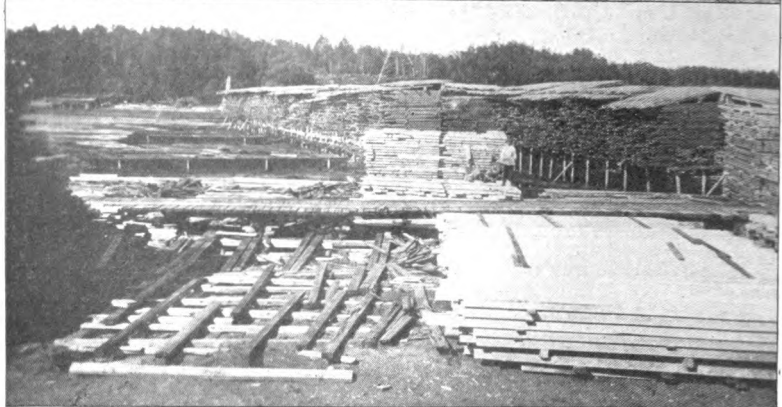
By transferring to the War and Navy Departments all allotments **NOT CARRYING ALLOWANCES**, the Bureau of War Risk Insurance can concentrate all its attention upon payments to persons entitled to the Government allowance, and it is believed that this simplification of the work will tend to speed up the delivery of checks to these persons.

Although the institution of these changes may cause temporary delay and concern to soldiers' families, unless the reasons for the changes are understood, it is expected that the ultimate result will greatly redound to their benefit, and the Office of the Quartermaster-General states that no delay is anticipated.

In some instances, however, relatives of a soldier or sailor may find that their man in the service has not taken the necessary steps outlined above to see that his people at home continue to receive the same payments as formerly, through the War or Navy Departments, **INSTEAD OF** through the Bureau of War Risk Insurance. In such cases the relative should write him urging upon him the necessity of taking the necessary action. It is a matter which lies purely in his discretion. He is under no compulsion from the Government.

**THE HOME SERVICE AGENTS OF AMERICAN RED CROSS WILL RELIEVE ANY RESULTING HARDSHIP.** Soldiers and sailors and their families should be inspired with confidence that if distress results in any case by reason of these changes in governmental procedure, the Red Cross Home Service stands ready to relieve it. Where necessary to prevent hardship, the Red Cross will make payment from its own funds until the Government checks arrive. Relatives of the enlisted men should not regard this as charity, but as part of the responsibility which the Red Cross has assumed for maintaining the morale of American soldiers and sailors by instilling them with confidence that their families will not suffer for the necessities of life during their absence.

## THE DISSTON CRUCIBLE



**MONTGOMERY & SONS' MILL,**  
**New Richmond, Quebec.**  
(See Page 141)



## MONTGOMERY & SONS, New Richmond, Quebec

**T**HERE has been a saw mill at this place for nearly 100 years. For a number of years it was run in connection with a grist mill, and used for getting out timber for ship building.

Montgomery has owned the mill for about half a century and has been a staunch friend of Disston saws, using them almost exclusively.

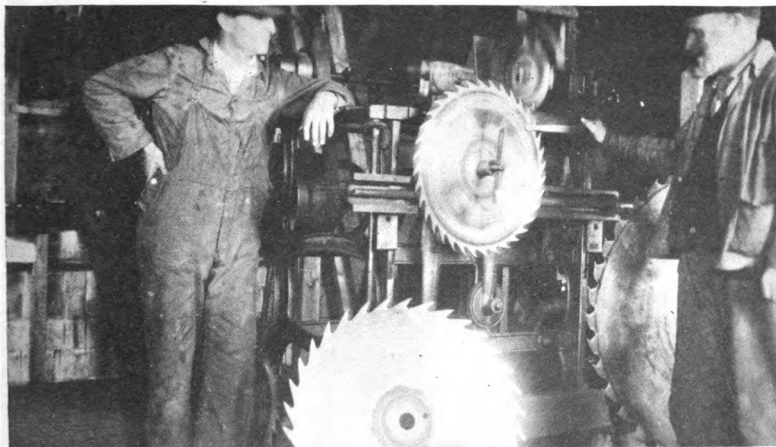
The old gentleman still lives and takes an active part in the business.

There are two sons, one of them looks entirely after the woods and getting in drives in winter and spring, while in summer applies his time to the mill and lumber yard. The other brother does most of the office work and looks after the store run in connection with their business.

They are all very pleasant gentlemen, and always glad to see a representative of Henry Disston & Sons call on them.

The mill is a circular mill and is a very fast cutting one, averaging about 50,000 feet per ten hours.

No. 1, View of mill from main road. No. 2, View of mill from opposite direction. No. 3, View of wharf where lumber is loaded. No. 4, Partial view of filing room, showing filers.



JOHN GILKER — Filers — WM. POWELL

### Necessity of Food Reserve

**T**HE effect in England of the greatly increased shipments of meat from this country during the past two months is indicated by a cable received from the British ministry of food.

During April, 359,058,000 pounds of beef and pork products were exported, as compared with 161,000,000 pounds in April, 1917, and 43,700,000 pounds in April, 1914, before the war

began. The total exports of meat products last April were therefore about 220 per cent. of exports in the same month last year and about 830 per cent. of those in April, 1914.

The cable which follows emphasizes the necessity for building up a food reserve against any contingency and urges that there be no slackening of effort on this side of the Atlantic:

"Thanks to the splendid response  
(Continued on page 142)

## ITALY'S NEED FOR WOOD

**I**TALY will need unusual quantities of American lumber after the war. Authorities estimate that in the first five years of peace that nation must import from three to five times as much as it imported per year in the pre-war period, and for the ten years succeeding these five years, about double the annual pre-war imports. In other words, Italy will require for the first five years 3,000,000,000 to 5,000,000,000 board feet of rough and square lumber per year, and 2,000,000,000 per year for the ten years following. The longer the war is prolonged the greater will be the demand, and another factor will be the price at which lumber can be laid down in Italian ports.

Temporary construction for war purposes has required great quantities of lumber in Italy, while the difficulties attending the importation of lumber and the lack of coal within the country have made it necessary to use enormous amounts of wood for fuel.

State forestry began in Italy about 1877, the country being almost forestless until the state took hold. From forests and wood lots existing at the beginning of the war it is estimated that approximately 50 per cent. of all standing timber has been cut to date.

Before the war, except for small quantities of black walnut from the United States and a little cabinet wood, all the imports were of cheap commercial lumber, coming mostly from Austria-Hungary and the United States. The chief source of supply was Austria-Hungary, but since the war none has been secured from that source.

The building situation in Italy has been peculiar for centuries. Scarcity of lumber for hundreds of years has brought about methods of construction in which a minimum of lumber is used.

Beds of excellent clay suitable for brick and tile making, good building stone and limestone capable of yielding fine qualities of lime and cement, are found in almost every part of Italy. Added to this a surplus of labor before the war kept wages at a point that made stone and brick construction possible at prices that would seem incredibly low in new countries. Wooden houses are more common along the northern frontier of Italy, in districts near the forests of Switzerland and Austria-Hungary, where wood is plentiful and comparatively cheap.

—*From American Forestry.*

### Necessity of Food Reserve—(Continued from page 141)

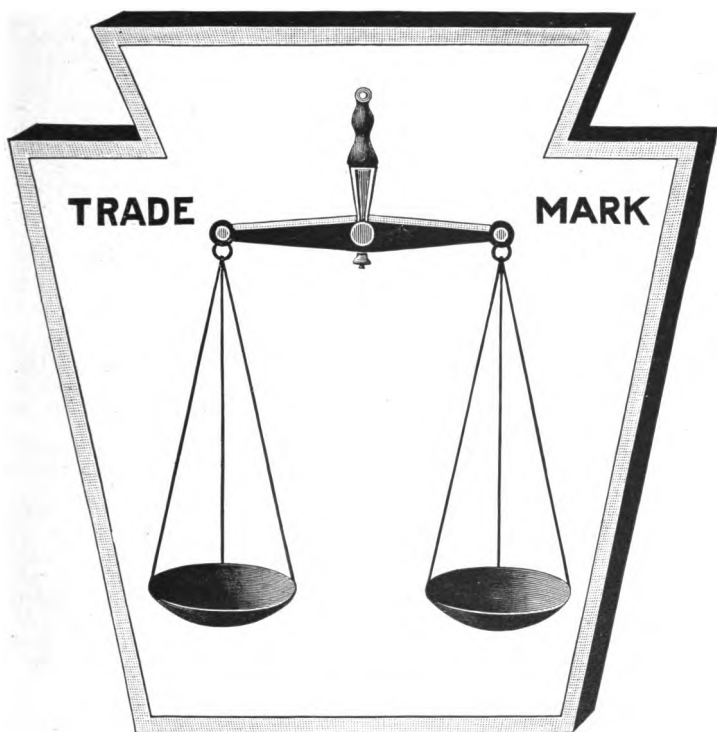
from America, the shortage which was threatened in beef and bacon is now no longer as serious as it has been during recent weeks, and the meat ration, which was reduced, from the workingman's point of view, almost to the vanishing point, has now been restored to the normal amount under the compulsory rationing system. The willingness with which the population as a whole has accepted compulsory rationing and the success of the rationing arrangements have produced a marked decrease in consumption, and this also naturally eases the food situation.

"Supplies of butter and cheese, however, are still inadequate to meet

the requirements, but it is hoped that imports from America will remove anxiety as regards our position in these commodities.

"The fact that it is now feasible to maintain the scale of compulsory rationing must not be taken to mean that there is any surplus of food in the country. Under conditions of war such as this it would obviously be an elementary precaution to build up as large a reserve of food as possible in an island which is menaced by submarine blockade. No such reserve is yet in sight and there should be no slackening in American efforts to provide foodstuffs for the allied nations."

# You can't go wrong when you buy saws bearing this brand



It is the mark placed on saws that have kept pace with the increasing requirements.

It is the mark recognized the world over as signifying absolute worth and reliability.

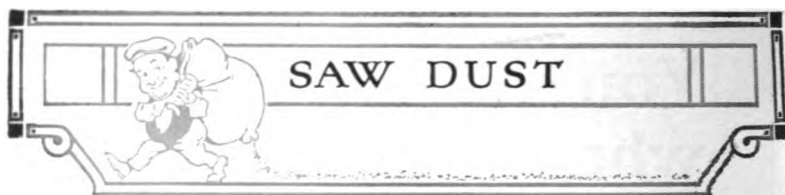
It is the mark for saws that have stood all practical tests for more than 78 years.

It is the mark of the largest saw works in the world.

It is the mark that distinguishes the saws which produce results and profits for you.

## **HENRY DISSTON & SONS, Inc.**

**KEYSTONE SAW, TOOL, STEEL & FILE WORKS  
PHILADELPHIA, U. S. A.**



### SELF-BETRAYAL

"My old man," said the old auntie, "is so fond of chicken that if he couldn't get it no other way, he—he'd buy it!"—*Exchange.*

### LOGIC

"You can't get in here on a half ticket," exclaimed the doorkeeper at the five-ring circus.

"I thought I could," apologized the small-town citizen. "I have a bad eye and I only expected to see half the show."

"Then you'll have to get two tickets," the doorkeeper announced. "If you have only one good eye it'll take you twice as long to see the show."  
—*Service.*

### WAS EQUAL TO THE EMERGENCY

Henry Ward Beecher was amused when he went into a Bowery restaurant on one occasion and heard the waiter give such orders to the cook as, "Ham and —," "Sinkers an' cow," etc. "Now you watch me feaze that waiter with an order which I believe he won't abbreviate," remarked Beecher at length as the waiter approached. Then he said: "Give us poached eggs on toast for two, with the yolks broken." But the waiter, who was equal to the emergency, walked to the end of the room and yelled: "Adam and Eve on a raft. Wreck 'em." It is reported that Mr. Beecher nearly fainted.

—*Sheet of Brass.*

With a stormy look on his face, the master of the house waylaid the servant in the kitchen.

"Look here," he began, angrily, "how dare you tell my wife what time I came home this morning after I told you not to?"

The Irish girl eyed him steadily.

"Sure an' Oi didn't," she replied

calmly. "She asked me pwhat toime yez came in, and Oi only towld hir that Oi was too busy gettin' the breakfast ready to look at the clock."  
—*Tit-Bits.*

"Why the noise?"

"The barber is shaving himself."

"But why the argument?"

"He is trying to persuade himself to have a shampoo."—*Record.*

### THE GLEANER

First Father—"Your son is an undertaker! Why, I thought you said he was a doctor?"

Second Father—"No; I said that he followed the medical profession."  
—*Exchange.*

### HOW PAT WOULD EVADE IT

Two Irishmen, on their way home from a funeral, were conversing about the uncertainty of life. Says Pat:

"Sure and I'd give a thousand dollars, Moike, if I knew th' place where I was goin' t' die."

"Faith, Pat, and phat good would that do yez?"

"Begorra, I'd nivver go near th' place at all, at all," says Pat.

Aug.—*Just a Little Better.*

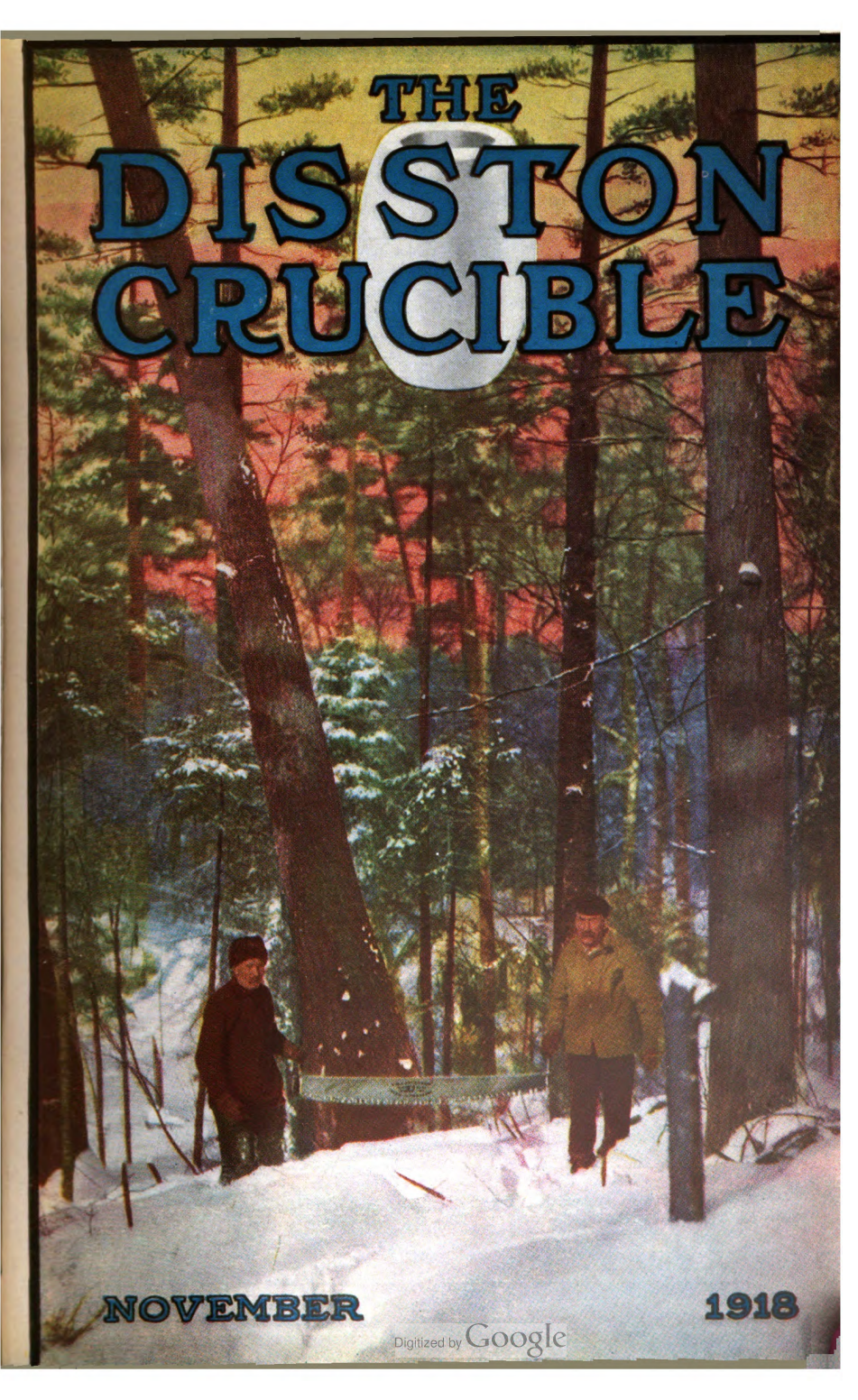
### HANDING IT BACK

American tourists who are shaky as to their French have often been embarrassed by the voluble replies which their carefully studied phrases bring forth from French lips. Just now the tables are frequently turned, and the Frenchman or woman is puzzled by the fluent American vernacular. An example:

Yankee Trooper—"Parly-voo English, mademoiselle?"

French Maid—"Yes, a vari leetle."

Yankee Trooper—"Good work! Say, could you put me wise where I could line up against good eats in this burg?"—*Chicago News.*



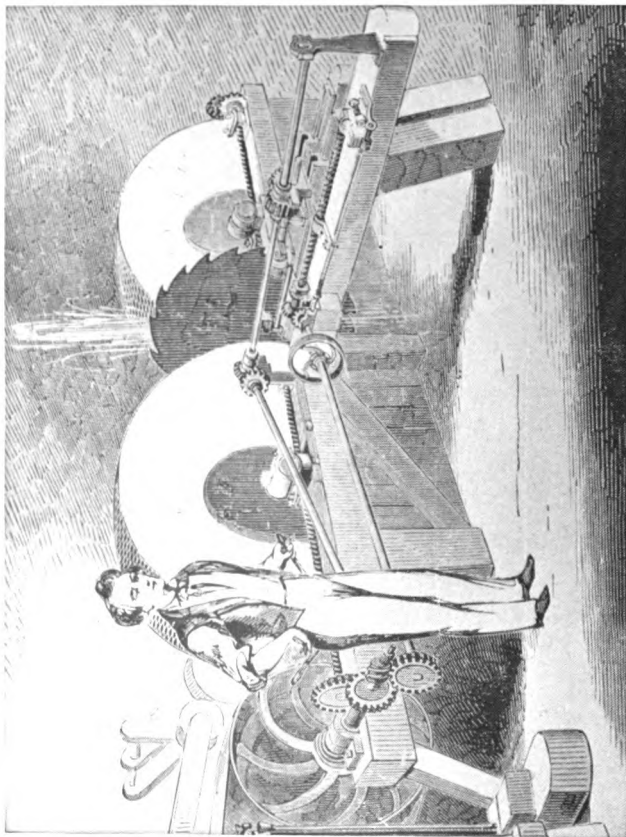
# THE DISTON CRUCIBLE

NOVEMBER

1918

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### OLD-TIME SAW GRINDING MACHINE

In line with the Old Time Mills illustrated in previous numbers of this Magazine, the drawing above shows the beginning of power grinding as first used by Henry Diaston, some time after 1840. This also was a great advance, at the time, in the method of grinding circular saws.

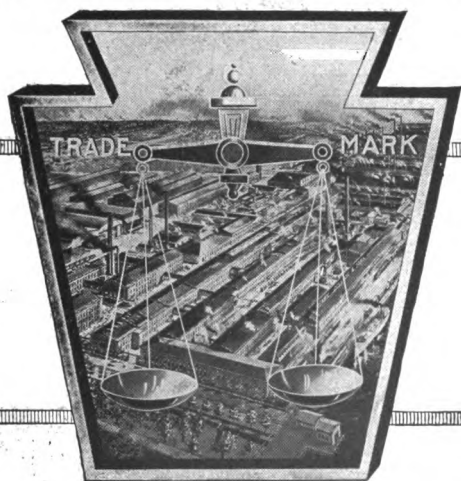
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New Orleans, La. Memphis, Tenn. San Francisco, Cal. Sydney, Aus. Vancouver, B. C.  
Canadian Works, Toronto, Canada.



**A tremendously large Rock in the vicinity of the Hewitt Lumber Co. Mill, at Wolf Creek over the W, Va. and Kentucky line.**

**Photographed by Mr. Mitt Smith, filer of the Mill.**



# THE DISSTON CRUCIBLE

A MAGAZINE FOR THE MILLMAN

VOL. VII

NOVEMBER, 1918

No. 10

## EDITORIAL CHAT

### The Call

**W**E have answered, and it is still imperative that every manufacturer turn all resources at his command toward production of supplies for the Government, whether they be the articles regularly made or others of special nature essential for war work.

To this end we have, at the suggestion of the Government, eliminated for the present many items of our lines, retaining only the most staple and of these the sizes are limited.

By this conservation there is released a quantity of high grade steel as well as skilled labor for the increased production of absolutely essential articles.

"Win the War" is our slogan, and we are devoting in full measure the resources of our steel works and factory that so far as we can help there may be no shortage of articles in our line for military or civil use.

Great are the demands upon the manufacturers for Government necessities and on this account, while we cannot freely supply the trade, we shall spare no effort toward obtaining greatest production, and, furthermore, there never shall be the slightest sacrifice of that high quality of material and workmanship which for so long a time has characterized and won distinction for all saws, tools and files bearing the brand DISSTON.

And when this war is won by America and its Allies the superior facilities of these immense works, in greater measure than ever before, will assist in the upbuilding of these great United States and its fellow countries.

Yours for complete victory,

HENRY DISSTON & SONS.

*Quality  
Sells*

## WOOD AND WAR

**A**S has been said for food, it might also be said, that "Wood will win the war."

It can at least be said that without wood we could not hope to win. Sixty thousand feet, board measure, of lumber are required per mile of trench, or fifteen billion feet for the French front alone, not including the millions of feet for shelters, artillery screens, etc. Because of the ease with which it is shaped and built into its final position, wood cannot be substituted by any other material. Speed is a prime factor in war. Wood makes speed possible. Problems in mining, transportation and housing behind the lines are absolutely dependent upon it. Our great cantonments, requiring over two billion feet of lumber, could never have been built in the short space of time needed of any other satisfactory material. The success of building up the merchant marine hinged upon our ability to supply large timbers in great quantities in the least possible time. The whole aircraft program, now recognized as one of the most important features of modern warfare, hinged not only on getting wood, but it required great quantities of certain species.

England stands today as a living example of the dependence of warring nations upon ample local wood supplies. Her past supine attitude toward reforestation and forest management has cost her dearly. Dependent upon other countries for her wood supply, it cost her during 1915 and 1916, 37,000,000 pounds (or \$180,000,000) more than its pre-war value for timber imported. Later the necessity of saving tonnage caused by an import embargo to be placed on lumber because of its bulky character, making it necessary to practically strip such woodlands as she had. Not only has this been a detriment to her efficient promulgation of the war, but it has cost her

the trees and woods that have been the pride of her great estates for centuries past.

Thus, in addition to showing the great need of timber for war-time activities, England's plight shows that on account of its bulky character, wood cannot be transported long distances where transportation systems are overburdened. Even the United States, far from the scene of actual warfare, has had her difficulties in the transportation of war materials. France and Germany have been able to maintain their place because, they, long ago—centuries ago—began handling their forests on a continuous production basis. Instead of treating them as timber mines, they have in the past protected the forests, which are now mature and which are now furnishing all the wood they need, and even under the stress of the greatest necessity, the French foresters are carefully guarding the cuttings, so as not to destroy the forests completely. "Conservation is the middle name of the French forester," writes one of the men in the Forestry Regiment. England has now learned her lesson, and has already established a committee on reforestation. This committee, known as the Forestry Committee of the Ministry, is now recommending the reforestation of 1,799,000 acres of timber lands, and we may rest assured that the resulting forests will be handled according to the best principles of forestry practice. Her *Laissez Faire* attitude of the past has cost her too dearly.

But not only has the war shown the need of forests for National safety in time of WAR, but it has accentuated the need for forests to meet the needs in the every-day pursuits of the civil population that make for general prosperity in time of peace. The success of the men at the fighting front is dependent upon the construction and maintenance of

## THE DISSTON CRUCIBLE

industries at home. Wood has demonstrated its importance in speeding up these industries, and hence has emphasized its great importance in our general industrial fabric as never before. *The lesson is plain.* National safety in peace and war demands that an adequate portion of the forest land in each locality where any forest land occurs, should be kept producing forests to insure the local supplies of timber.

America must wake up to her needs and her opportunities. The sufficiency of our virgin forests has made it possible for us, unprepared as we were, to get into this great war on a huge scale in comparatively a very short while. The drain on our forests has been tremendous, not only in quantity because of the exacting needs for airplane and ship construction, but also as to quality. The heavy drain will continue for some years after the war, during the period of reconstruction. Building operations of every kind not directly needed for war, have been held in abeyance in all parts of the world, even in regions as far away from the front as the Orient and Australia. These countries are now clamoring for lumber. The heavy inroads made upon the European forests will mean a heavy curtailment of cuttings in the forests of the warring nations for some years to come, and the reconstruction of the war-torn territories will demand tremendous quantities of wood.

It is impossible to prepare working plans for any of the American forests overnight, and it will be a

matter of years before they can be prepared for all that should be placed on the sustained yield basis. England's plight should be an example to the American people of what they should avoid; France and Germany of what to strive for in the matter of forest conservation. The attitude of the American people in the matter has been supine. Now is the time for the National Forest Service and the State Foresters to use the lessons learned from the war in Europe to start something *definite* along the line of scientific forest management. The Forest Service should come out boldly before the people with its needs. Unless it does so it will not be fulfilling the functions for which it was created, and all scientific and popular forestry organizations should urge Congress and their State Legislators to get busy immediately after the war.

America must wake up. SHE WILL WAKE UP! The foresters who have learned the lesson at first hand behind the lines in Europe will spread it to the four corners of our land. The people here at home are going to draw their own conclusions when, after the close of the war, they get time to review at leisure the activities of this war. The only rays of hope through the smoke-laden clouds of this horrible war are that it will bring many changes for the better. One of these will be that America will go forward rapidly in the practice of scientific management of her forest lands.

—From *The University of Washington Forest Club Annual*, 1918.



# LYON LUMBER COMPANY

Garyville, La.

By S. H. BUSSER

**I**N the interesting old city of New Orleans is the firm of C. T. Patterson Company dealing in mill supplies and covering a large portion of southern territory for Henry Disston & Sons. It was my privilege to call on the Patterson Company a few weeks ago during a business trip to the south. Through the courtesy of Mr. W. P. Simpson, President of the Company, and his associates, Messrs. Kellaheer and Charbonnet, I was permitted to visit several of the large lumber operations going on near New Orleans.

One of the most interesting experiences was the trip to the plant and pine timber of the Lyon Lumber Company at Garyville, a train trip of an hour and a half from New Orleans. Armed with a letter of introduction from C. T. Patterson Company, I first called upon Mr. G. P. Robbins, who is designated as purchasing agent of the Lyon Company, but who seemed to combine many other executive duties with the important responsibilities of his position.

I took a New Orleans commercial photographer to Garyville on this trip and by permission of Mr. Robbins, and with the help of Mill Superintendent Mr. Brown, secured several interesting views in and about the mill.

While a comprehensive idea of the activity in a saw mill can be had only by viewing the work itself, still, some conception will be conveyed of the great production by the Lyon Lumber Co., at Garyville, when it is stated that their average daily "cut" of Pine is 245,000 feet, and of hardwood 75,000 feet in every ten hour run—this means that each hour 32,000 feet of well-sawed lumber leaves the saws.

The Lyon mill uses Disston saws exclusively. The huge double cutting Disston bands are the chief features of interest. The way they sing through the logs is thrilling to any-

one who likes to watch real work; while the speed with which the logs are handled and the perfect harmony of understanding between the sawyer and the men on the carriage are sure to excite the wonder of anyone who sees this work for the first time. The re-saws and the smaller sawing operations throughout the mill are interesting in their way, but the real sight, the real thrill, is to be found watching the big bands zip and zing through the long logs, cutting boards each way as they go back and forth.

After a day at the mill, we started for the pine timber, located about thirty-five miles from the mill. Mr. Robbins had said he would send us out to the woods in a car and we went to sleep that night expecting a pleasant motor trip the next day. It did turn out a motor trip, but not on rubber tires. The "car" was a kind I had never seen, but a type largely used in lumbering. It had four wheels and ran on the rails like a hand car with a small gasoline motor taking the place of the hands. The company's railroad is called the Garyville Northern, and it was over these tracks we went that day on the "One-lung Special."

Arriving at Livingston, the company's camp, we were taken in charge by Mr. Watts, the logging superintendent, who took us aboard his red car and showed us something of the labyrinth of railway tracks the company maintains throughout the timber where work is under way.

We saw the whole process, from the felling of the trees to the loading of the log train. The Lyon Lumber Company has very efficient equipment: much of the work done by hand and horse power in other sections is here done by machinery; for example, after the logs are felled, huge "skidders" go along the tracks and pull or "snake" the logs from where they fell up to the railroad line, where they can be loaded on the log trains.

# THE DISSTON CRUCIBLE

The skidder is like a large derrick with heavy wire ropes, four of which are used, two on each side. It should be understood that there is a track every 2,000 feet, and the wire rope going from each side is 1,000 feet long, thus reaching one-half way to the next track. The rope is pulled out to the trees, big hooks are put around the logs and the skidder begins to puff. The log comes in, crushing small things in its path. Log cars are then brought along, and the loader, another kind of a derrick, lifts the logs onto the cars. Twice a day a train-load goes to the mill.

When they reach the mill they are dropped into the pond from which they are pulled up to the saws.

The trip to the woods was a splendid experience. I enjoyed the novelty of it, and was glad to meet the real men who "carry on" there for their company and their country.

We came back on the "Swamp" train and reached Garyville just in time to make our evening train for New Orleans.

If you would see something really worth while, go look at a big lumber camp and saw mill, a few views of which are shown on pages 152 and 153.

## Not "Made in Germany"

"WHY hand it to the Hun?" inquires Professor Townes Randolph Leigh of Georgetown College. "What epoch-making invention or discovery is of German origin, except a stamp on which is inscribed 'Made in Germany'?"

History reveals that invention is the Teuton's weak point and adaptation is his chief claim to scientific recognition. Here are just a few of the things brought forth by the brains of other nations and for which Germany can have no credit:

### What Others Have Done

#### Inventions of Peace:

steam engine  
telegraph  
cable  
telephone  
wireless  
reaping machine  
threshing machine  
cotton gin  
spinning-jenny  
spinning frame  
fly shuttle  
knitting machine  
power loom

#### Lighting Inventions:

electric light  
gas light  
acetylene light  
kerosene light  
searchlight  
flashlight  
safety lamp  
candle dip  
safety match

#### Inventions of Pleasure:

photography  
motion pictures  
phonograph

#### Inventions of War:

gunpowder  
smokeless powder  
percussion cap  
nitroglycerine

guncotton  
dynamite  
torpedo  
shrapnel  
automatic cannon  
magazine rifles  
breech-loading gun  
Gatling gun  
revolver  
Maxim silencer  
hammerless gun  
gunboat  
ironclad batteries  
ship armor plate  
revolving turret  
submarine  
airplane

#### Scientific Discoveries

telescope  
microscope  
bacteriology  
antiseptic surgery  
vaccination  
circulation of blood  
anæsthetics

#### The Sciences:

modern chemistry  
botany  
geology  
marine physiography  
analytical geometry  
sociology  
geographical discoveries

#### Devices of Prosperity:

aniline dye  
vulcanized rubber  
liquid gases  
gas engine  
water gas  
thermometer  
barometer  
pianoforte  
barbed wire  
cut nails  
plate glass  
circular saw  
cable car  
electric car  
sleeping car  
airbrake  
bicycle  
automobile  
pneumatic tire  
sewing machine  
typewriter  
calculating machine  
cash register  
steel writing pen

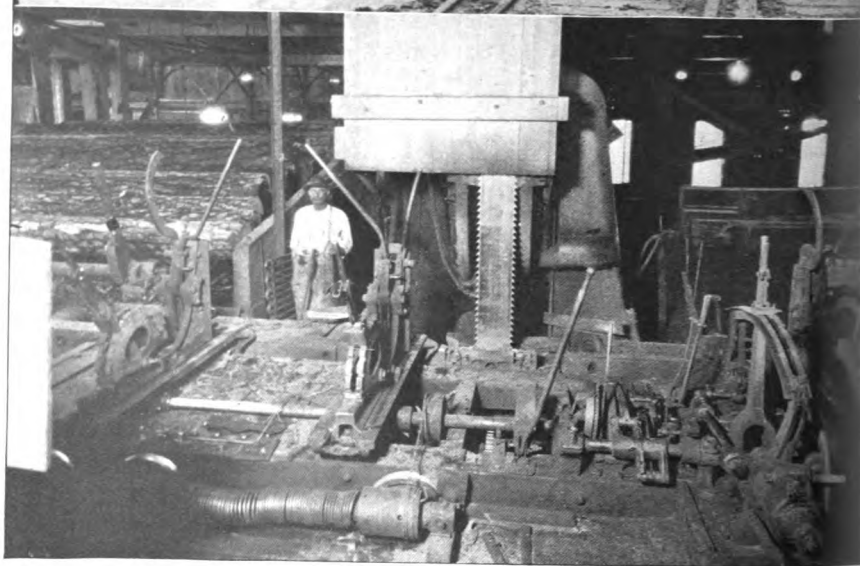
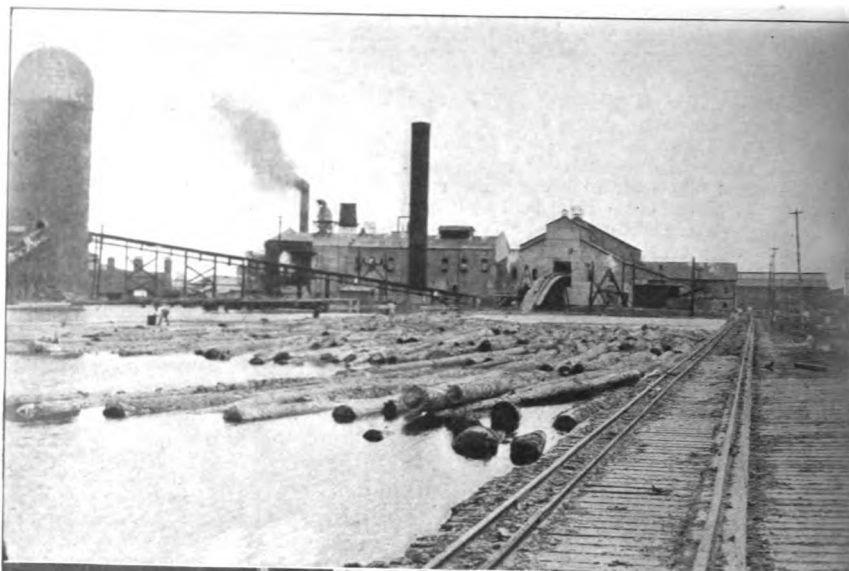
#### Engineering Skill:

Suez Canal  
Panama Canal

#### Scientific Processes:

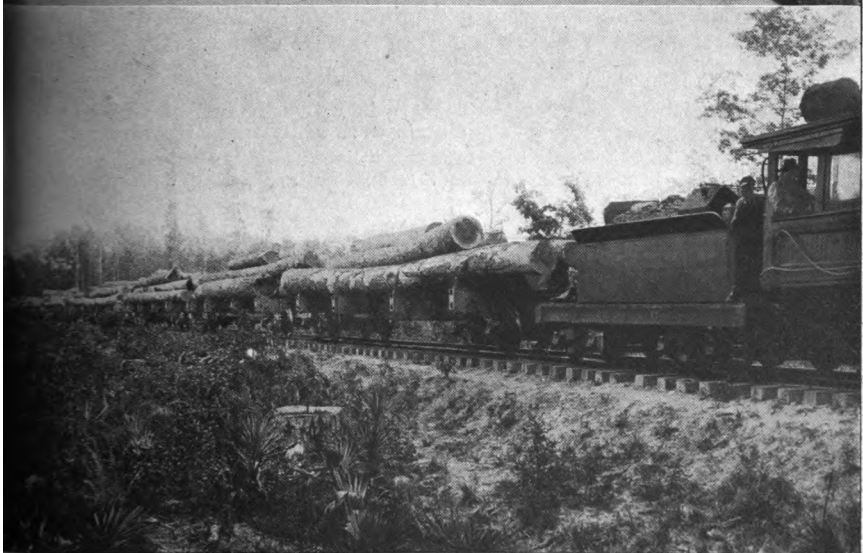
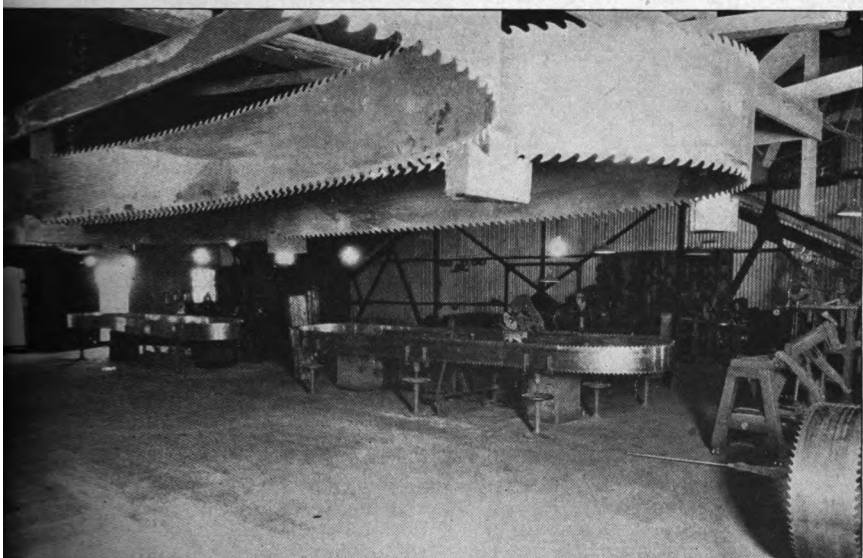
decimal or metric system  
Steel Manufacture  
"Hurbanked" fruit and vegetables

—From *The Shield*.



## LYON LUMBER CON

1. View of Mill.
2. One of the Disston Double-Edge Bands in use.  
J. D. Brown, Superintendent.



ANY, Garyville, La.

3. View of Filing Room.
4. Log train on the "Garyville Northern," their Railroad from the Timber at Livingston to Mill.

## The Shape of Teeth in Log Band Saws and Band Re-Saws

**T**HE importance of the shape of the teeth in band saws is generally well known to filers, but there are some who feel that the amount of tension put into their saws has more to do with obtaining capacity from the mill than the shape of the tooth, or the size of the gullets.

In contrast to this idea, there is the experience of a number of competent filers, in mills producing the maximum output of well-sawed lumber, who believe that a large open gullet is a factor which enters into the problem very largely.

These filers claim that where the shape of tooth, the hook and the throat room are adequate for the kind of timber and the type of mill it is not necessary to carry so much tension and as a result there is less liability of the saws cracking than where a heavy tension is depended upon to take care of an excessive feed.

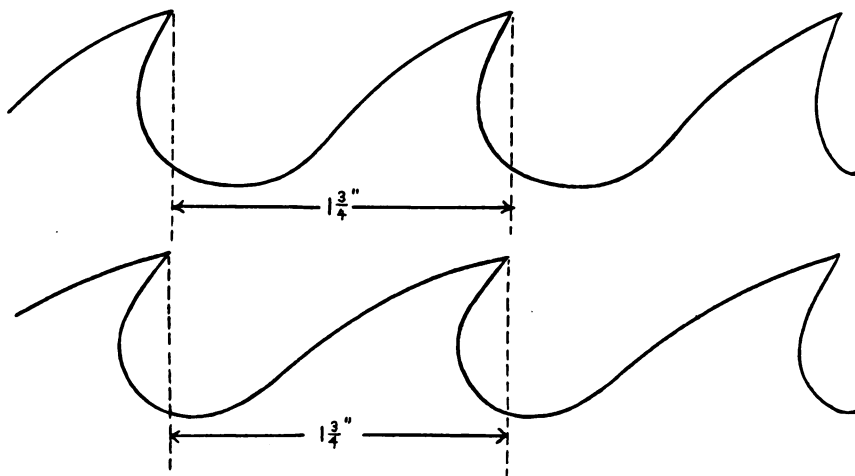
Since most of the advances in the arts and crafts have been made through combination of ideas, and not through the individual efforts of a single man, it surely would aid band saw filers generally if they would let us have their experience in this direction for publication in *THE DISSTON CRUCIBLE*, so that greater efficiency all around may be attained.

We are publishing in connection with this article several examples of log and hand re-saw teeth, showing large throats, which do not weaken the teeth.

These examples are from saws which are in actual operation, and the mills from which they come are doing splendid work and making record runs.

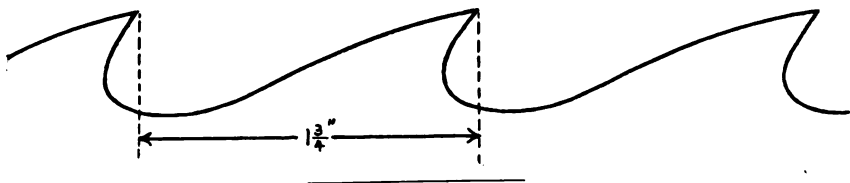
We hope our filer friends will take up this question seriously, and submit full size sketches of the shapes of teeth they are using, with their reasons for adopting them.

Discussion of this subject will be helpful to all, and we will be glad to add an editorial word from time to time as the letters are received and published.





# THE DISSTON CRUCIBLE



## Save Food—Build Up Reserves

**“W**E can not administer the food problem on the basis of one year’s war. We must prepare for its long continuance if we are to insure absolute victory,” declare the Food Controllers of the United States, France, Italy, and Great Britain, in a joint resolution adopted at their conference in London. The resolution, which was cabled to the United States Food Administration, emphasizes the necessity of building up reserves in North America as an insurance against possible crop failures here and elsewhere and the diminution of agricultural labor. The resolution follows:

*“Resolved, That while the increased production of the United States renders it possible to relax some of the restrictions which have borne with peculiar hardship upon all our peoples, yet it is absolutely necessary that rigid economy and elimination of waste in the consumption and handling of all foodstuffs, as well as increased production, should be maintained throughout the European allied countries and in North America. It is only by such economy and elimination of waste that the transportation of the necessary men and supplies from North America to the European front can be accomplished and that stocks of foodstuffs can be built up in North America as an insurance against the ever-present danger of harvest failure and the possible necessity for large and emergency drafts to Europe. We can not administer the food problem on the basis of one year’s war. We must prepare for*

*its long continuance if we are to insure of absolute victory.”*

Furthermore, considering the hundreds of thousands of war prisoners, together with the great number of sections abroad, devastated and non-producing, whose inhabitants, even now, are suffering from lack of food, all these peoples must be taken care of by the Allies and the United States, which necessitates even greater conservation of food on our part than ever before.

Humanity calls on you for help.



**Lunch hour’s a good time!  
Why not start your own War Savings Society?**

**You—and you—and you!  
Get some system to your saving. A single Thrift Stamp buyer is like a soldier fighting alone—his saving looks so small.**

**But when your “club” reports for the week, the “net total” should be enough to \*feed ten hungry soldiers continuously for the rest of the war.**

*\*This is possible if 112 members buy only one Thrift Stamp a week.*

# DISTINGUISHING MARKS OF THE UNITED STATES ARMY AND NAVY

(Continued from October Issue)



Regimental Sergeant-Major    Regimental Supply-Sergeant    Battalion Sergeant-Major    Color Sergeant    First Sergeant    Band Leader    Assistant Band Leader    Sergeant Drum Major    Sergeant    Corporal



Sergeant Bugler    Master Hospital Sgt. Med. D.    Hospital Sgt. Med. D.    Sergeant 1st Class Med. D.    Sergeant Med. D.    Corporal Med. D.    Master Eng. Senior Grade Eng. C.    Master Eng. Junior Grade Eng. C.    Sergeant 1st Class Eng. C.    Battalion Supply Sgt. Eng. C.



Master Signal Electrician    Sergeant 1st Class S. C.    Sergeant S. C.    Corporal S. C.    Ordnance Sergeant    Sergeant 1st Class Ord. D.    Corporal of Ordnance    Q. M. Sergeant Sr. Grade    Q. M. Sergeant Q. M. C.    Sergeant 1st Class Q. M. C.



Sergeant Q. M. C.    Corporal Q. M. C.    Chief Mechanic F. A.    Engineer C. A. C.    Asst. Engineer C. A. C.    Fireman C. A. C.    Master Gunner C. A. C.    Master Electrician C. A. C.    Elec. Sergt. 1st Class C. A. C.    Elec. Sergt. 2nd Class C. A. C.    Radio Sergeant C. A. C.



Coxswain C. A. C.    Plotter C. A. C.    Casemate Elect., Chief Planter    Observer 1st Class C. A. C.    Observer 2nd Class C. A. C.    Chief Loader C. A. C.    Gun Commander C. A. C.    Gun Pointer C. A. C.    1st Class Gunner C. A. C., F. A.



2nd Class Gunner C. A. C., F. A.    1st Class Gunner Mine Co. C. A. C.    2nd Class Gunner Mine Co. C. A. C.    Target Excellence C. A. C.    Farrier Med. D.    Saddler    Wagoner    Horseshoer    Military Police (arm band)



Mechanic    Cook    1st Class Private Inf.    U. S. Training Camp    Rea. Off. Training Camp    Bugler    Stable Sergt.    Mess. Sergt.    Batt. Supply Co. Sergt.    Supply Co. Sergt.

There are First Class Private service chevrons in Inf., Cav., F. A., C. A. C., S. C., Eng. C., Q. M. C., Ord. D., Med. D.

—Courtesy of United Cigar Stores Co. of America.

## Rauss Mitt 'Em

**A**FTER four years outraging peace  
 The German beast with bloody paws  
 Now begs that war forthwith may cease  
 In condescending word and clause.  
 With diplomatic Judas kiss,  
 Because he sees his doom is sealed,  
 The Hun suggests an armistice  
 To all now fighting in the field.

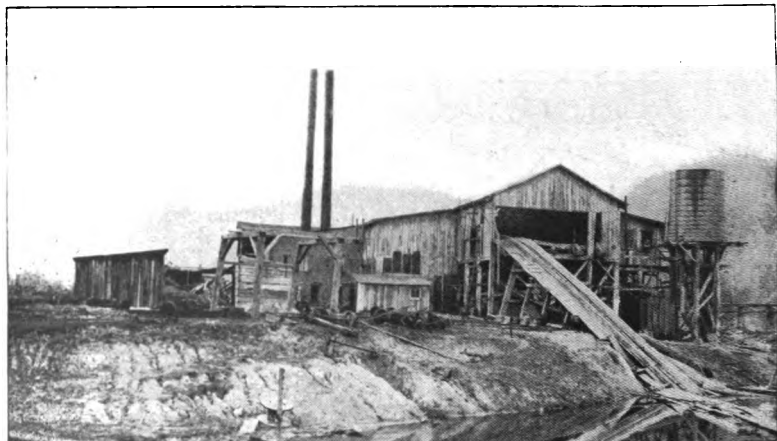
Who cares for any Prussian thing  
 With smoking gun and shining sword,  
 Be he a Kaiser or a king  
 Or any other overlord?  
 What does it matter in the least  
 What any Hapsburg knave may write?  
 No one can trust them west or east  
 As long as they have strength to fight.

The whining for the loss of life  
 Comes surely with a sorry grace  
 From that arch stirrer-up of strife  
 The ruler of the Teuton race.  
 With Freeman's blood in torrents spilled  
 For lawless conquest undisguised,  
 And Freeman by the million killed,  
 Can Freeman now be compromised?

No—Attila of modern times,  
 Your propositions come too late;  
 The sum of your colossal crimes  
 Preserves you for another fate.  
 In vain will High or Low harangue  
 The leaders of the Allied Powers  
 While any of the Potsdam gang  
 Are left to stain this earth of ours!

—JAMES D. LAW.

## D. E. HEWITT LUMBER CO.



D. E. HEWITT LUMBER CO.

**T**HIS mill is located at the mouth of Wolf Creek, just over the West Virginia and Kentucky line in Kentucky. The above mentioned concern has about ten years' cut of Virginia timber, which is said to be the best in that part of the State.

Mr. Mitt Smith is the largest red-headed saw filer in existence, and we wish to state here, the best. Mr. Smith is noted for his photography and love of nature as you will note photograph of one of the tremendously large rocks of peculiar formation, of which numerous ones are to be found in the vicinity of the mill.

We have been acquainted with Mr. Smith for several years, having known him to successfully handle some of the largest filing positions in the country, he having filed for the Bogolusa Mill, at Bogolusa, La., for about two years, also having held various positions in North Carolina.

We are certainly pleased to have the opportunity of informing Mr. Smith's friends of his whereabouts and inserting some of his photographs in our CRUCIBLE.

*C. E. Mather.*

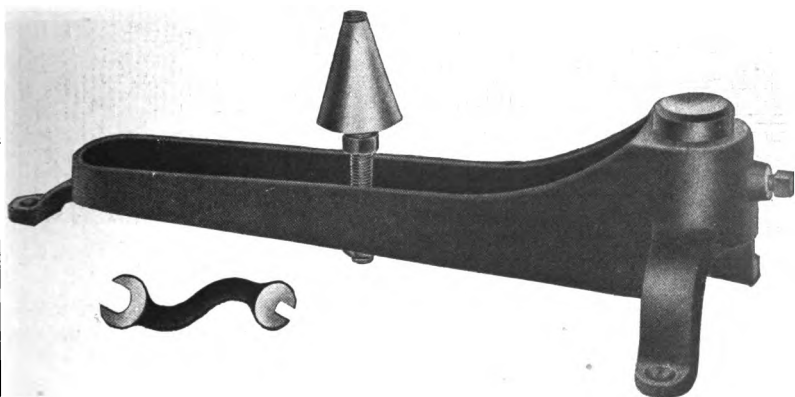
Timber 4,000 years old, probably the oldest timber in the world which has been subjected to the use of man, is found in the ancient temple of Egypt, in connection with stonework which is known to be at least 4,000 years old. This was the only wood used in the construction of the temple, and is in the form of ties, holding the end of one stone to another. When two blocks were laid in place an excavation about an inch deep was made in each block in which one of these wooden ties shaped like an hour-glass was driven.

*—Boston Traveler.*

# SETTING SAWS

In the care of small circular saws such as Bolters, Lath Saws, Equalizer Saws, Trimmers, Jump Saws and Log Deck Saws, there is nothing better for securing an accurate set on the teeth than the

## Disston Improved Adjustable Setting Stake



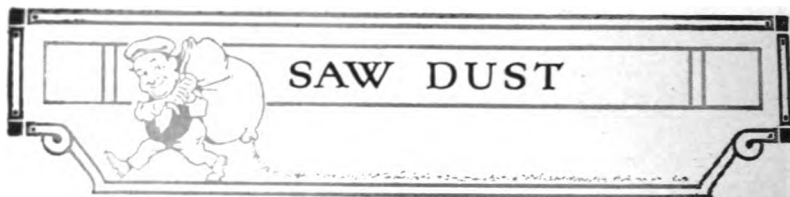
This Setting Stake is made in two sizes, the small one for saws from six to thirty inches in diameter, the large one for saws to fifty-six inches in diameter.

The proper way to set the teeth of a circular saw is with a hammer, and this device provides the facilities for doing the work in a first-class, expeditious and uniform manner.

With its aid the set is placed on the "point" without bending the body of tooth.

**HENRY DISSTON & SONS**  
INCORPORATED

KEYSTONE SAW, TOOL, STEEL & FILE WORKS  
PHILADELPHIA, U. S. A.



### REAL SPEED

There are still some parts of the country where an automobile is an unfamiliar sight. A touring car passed through a small town in northern Kentucky at top speed. As it disappeared from sight in a cloud of dust one old settler, rubbing his bulging eyes, remarked: "Gosh! Them horses sure must ha' been traveling some when they got loose from that gentlemen's kerridge!"—*Service*.

### INCREASING THE PINCHES

A clever young wife did not like her husband's going out evenings so much and determined to cure him by playing on his vanity. When he came to order his next pair of shoes, she persuaded him to buy a smaller size. This she repeated until the poor man was content to get out of his shoes, when he reached home, and get into his slippers.—*Exchange*.

### AFTER THE REVIVAL

"Ask and ye shall receive," said the evangelist. "Pray for anything you want, with faith, and your prayer will be answered."

That night the grocer's youngest son was heard to pray for the first time, as follows: "O Lord, here is a small trial order. Please send us 10 pails of candy, 10 sacks of sugar, 10 barrels of flour, and 10 barrels of pepper. Oh! h—! that's too much pepper!"—*Just a Little Better*.

### TROUBLE FOR THE DRAFT BOARD

"What became of Plute Pete?" asked the visitor at Crimson Gulch.

"He joined the army," answered Broncho Bob.

"Thought he was too old to fight."

"He was. But he was such a fighter that nobody dast tell him so."

—*Washington Star*.

### HOPE DEFERRED

"Can the doctors give the relatives of that rich old man no hope?"

"None whatever. They say he is likely to live for years."

—*Baltimore American*.

### ALL HE WANTED

Steward—"We're held up by a submarine, sir."

Seasick Passenger—"Good! I hope the darn pirate relieves this ship of her roll!"—*Buffalo Express*.

### TELEPHONE CONVERSATION,

A. D. 6000

Spiritualistic lady has just called up her husband, who is dead:

S. L.—John, dear, is that you?

John—Yes, my dear.

S. L.—John, are you happy?

John—Yes, my dear.

S. L.—John, dear, are you happier than you were on earth with me?

John—Yes, my dear.

S. L. (*sighing*)—Heaven must be a wonderful place.

John—I'm not there, Mary.

—*Awgican*.

### OVERTIME

"I say," said the office boy to the cashier, "I think the guv'nor ought to give me a dollar extra this week, but I suppose he won't."

"What for?" asked the cashier.

"For overtime. I wuz dreamin' about my work last night."

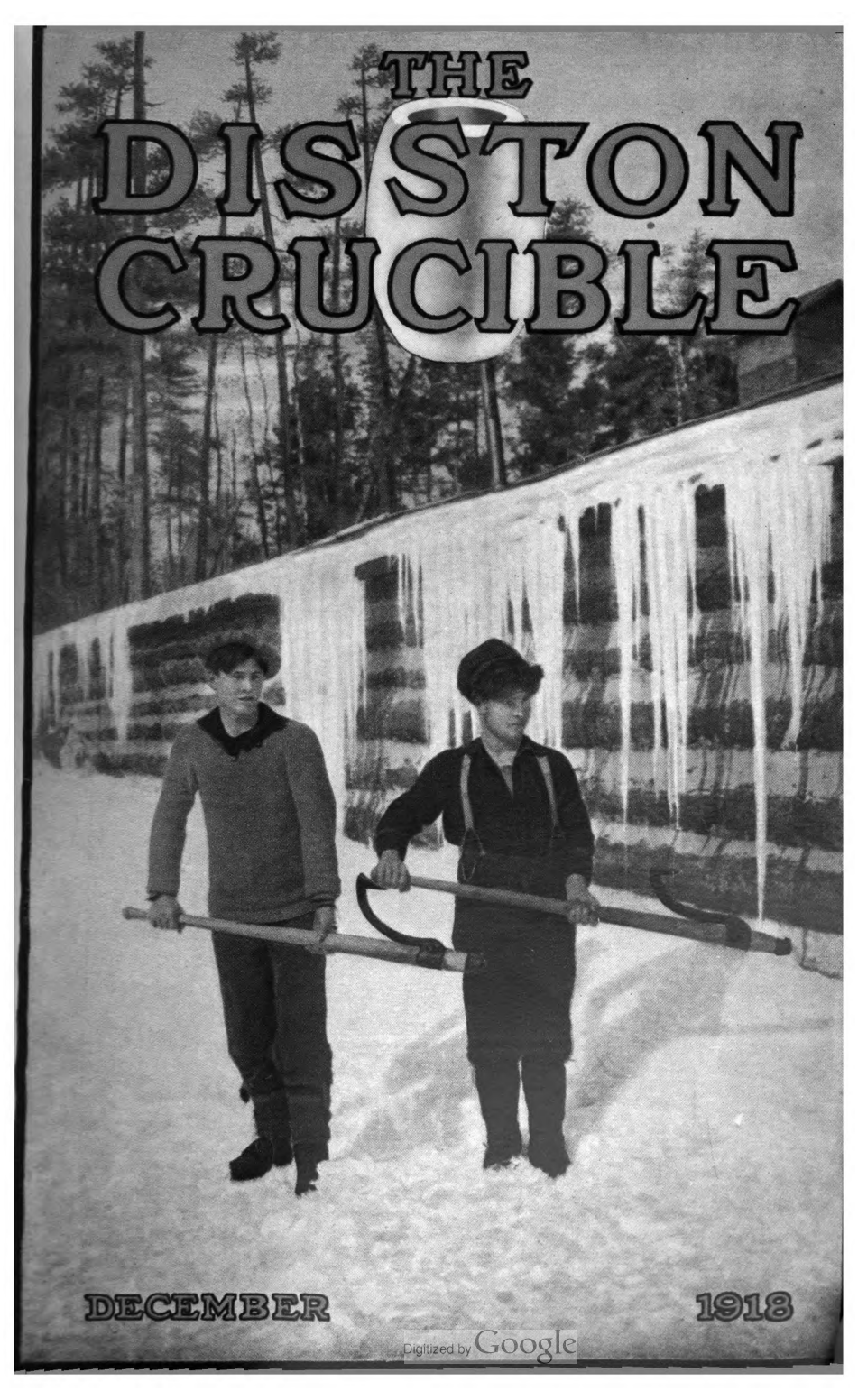
—*Boston Transcript*.

### LETTER PERFECT

Employer—Do you understand the duties of an office boy?

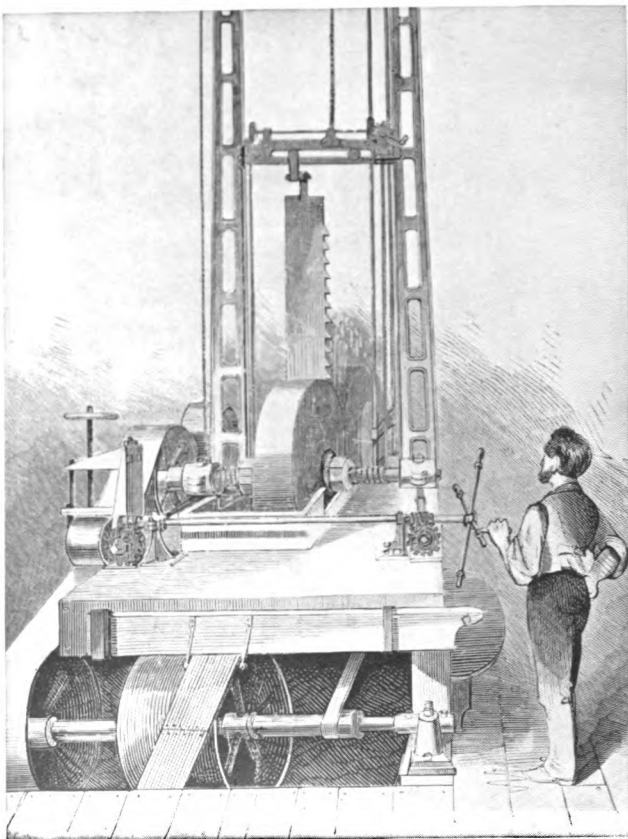
Applicant—Yes, sir. You wake up the bookkeeper when you hear the boss coming.—*Milestones*.

# THE DISTON CRUCIBLE



DECEMBER

1918



### **OLD-TIME SAW GRINDING MACHINE**

The automatic grinding of circular saws led to the invention of a machine for grinding "Long Saws," whereby greater uniformity was secured in the production of Disston Saws.



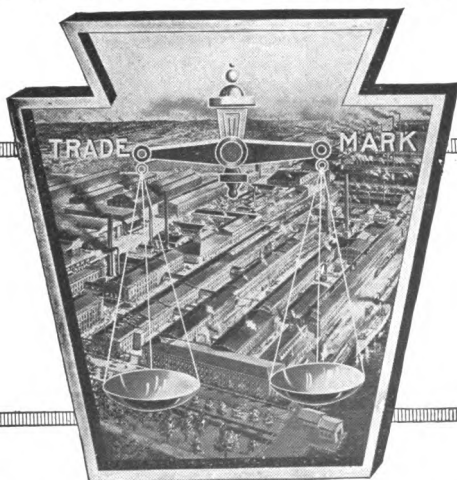
# THE DISSTON CRUCIBLE

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

**HENRY DISSTON & SONS**  
INCORPORATED

**Keystone Saw, Tool, Steel, and File Works**

**PHILADELPHIA**

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



Have you answered the Red Cross  
Christmas Roll Call ?

# THE DISTON CRUCIBLE

A MAGAZINE FOR THE MILLMAN

VOL. VII

DECEMBER, 1918

No. 11

## EDITORIAL CHAT

### Christmas

**V**IEWING the events of the last four years, contrasting conditions during this period of war with the now comparatively peaceful times, causes a deep feeling of relief.

Now comes the time for readjustment and reconstruction, in which charity and humaneness must be prevail. It is for this—the Liberty and Freedom of humanity—that the fight was waged, and “our boys” with the Allies proved their manhood in a manner that makes us justly proud, their wonderful spirit and courage commanding the highest esteem of all the Nations.

The cost of the war in treasure, of immense proportion in itself, counts but little compared to the loss of lives. The latter is incalculable, though the sacrifice, great as it was, will undoubtedly have a moral effect that will be felt and appreciated by generations to come.

The experiences during this time undoubtedly will lead to lessening extravagance, promoting thrift and economy, and perfecting organizations that in the years to come there will be a more general co-operation for the good of mankind.

Forgetting, temporarily, our personal losses and sacrifices, and joining in a sincere demonstration for the resulting greatest good to the greatest number, the grand achievement of Peace and Victory, giving Liberty to all the Nations of the World is worthy cause for celebration.

This year the spirit of Christmas will have greater and wider significance than ever before, and the feeling of fellowship will spread throughout the world.

## Four Sins Soldiers Say They Hate

You may be surprised when you find out what they are

By FRED B. SMITH

**I**N France, several months ago, I made a discovery about our soldiers over there which deeply interested me. At first, I was a good deal puzzled—even a little disappointed. But I thought about it and studied over it until, while my surprise remained, my disappointment gave place to a genuine pride and satisfaction.

The only way in which I can describe what this thing was is to say that the American soldiers in France have evolved for themselves a new code of morals. Your boys in the Expeditionary Force have definitely and more or less consciously decided on a set of standards of right and wrong. And these standards are *not* the ones which young men used to give me when I asked them about it before the war. There has been an extraordinary and significant change; and it is a change which we, here at home, will have to take into account in our own lives and in our future dealings with these young men.

Before the war, I often visited our universities as a Y. M. C. A. worker, and took advantage of this opportunity to question the students about their ideas of right and wrong. I found then that they had a fairly uniform code of morals. Over and over again, when asked what they considered the worst sin a man could be guilty of, they would give the same answer, "Immorality." After that they put drinking, gambling, dishonesty, and so on.

Apparently it was a universal standard, for, no matter where the test was made, the same things were put into the list and in the same relative positions.

This inquiry has been immensely interesting to me; and when I went to France and had the chance to talk to thousands of our men over there, I determined to try the same questions on them. Not that I expected to get a different set of answers! I

had no idea that they would tell me anything new. But it is a good thing to make a man examine his own mind on the subject of right and wrong. If he gets "down to dots" about things, it helps to open his eyes. When he has gone through the list, and has said deliberately, "I think that these are the very worst things a fellow could do," he is bound to get a shock if he has to add, "and I am doing these very things!" So it seemed worth while to find out from the boys themselves just what their ideas were.

The army over there can be divided roughly into four groups; the men who have just landed at the debarkation ports; those at the great training camps; those at the various headquarters behind the lines; and the troops which are actually at the front. The length of time they have been in France varies from a few days to many months.

I carried my investigation into each of these groups, and also into two camps in Great Britain. And one extraordinary thing about it is that the result was practically the same in every single case.

As an example of how the inquiry was made, let me tell of one experience with a crowd of five hundred men in a Y. M. C. A. hut. The place was packed, as usual. There is never any trouble about getting an audience over there! And no more interesting or responsive one can be found anywhere than these crowds of soldiers in France. When I got up to speak, I said:

"Now, I'm not going to give you an address to-night. This is to be a sort of open meeting, because I want *you* to tell *me* things. I want to know how you feel about what is right and what is wrong. Every man has a pretty definite idea in his own mind of what are the worst things a fellow can do. And I'm going to ask what you think these things are."

## THE DISSTON CRUCIBLE

I talked to them for about ten minutes, chiefly to give them a chance to do a little thinking, and then I said:

"Now, I want you to tell me what you regard as the meanest sin a man can be guilty of. Just so that you won't all talk at once, I'll ask those of you who want to speak to stand up."

Immediately twenty or thirty boys were on their feet. I picked out a clear-eyed, intelligent-looking chap and said:

"Well, what do *you* think?"

He said his say and sat down. I asked another, and then another, and so on, until all of them had spoken. I'll tell you later what they said. But first let me describe the whole proceeding.

When all of them had finished, I asked the crowd if they agreed with what had been said, and their response left no room for doubt on that point. Then I asked for what they put second in the list of sins, and we got that settled in the same way. And so on, until we had a list of six or seven of these sins. On the first four there was so little variation that the verdict was practically unanimous.

The test was made repeatedly among soldiers everywhere, from the landing ports to the trenches. In one case, where two regiments had just come out of action, fifty men were chosen from them and brought together. This time I used cards, and had the boys write down, in the order of their choice, what they thought were the highest virtues men should have. Then we took the cards and tabulated the list. Later, I submitted the results to a group of men in Paris, which included Doctor John H. Finley, Judge Ben Lindsey and Raymond Fosdick; and they were as surprised and pleased as I was.

All these tests, among widely separated groups, produced answers so nearly identical that it seems beyond question that we may take the result

as the code of morals which our soldiers have set up for themselves.

Now, what is this code?

First—Courage.

Second—Unselfishness.

Third—Generosity.

Fourth—Modesty or Humility.

These four qualities were put at the top by such an overwhelming majority that there was absolutely no question of their place there. And when we reversed the process and asked for the "meanest sins," the answers checked up the same. For the sins placed at the head of the list were:

First—Cowardice.

Second—Selfishness.

Third—Stinginess.

Fourth—Boastfulness.

Or, as the men put it, "Being a blow-hard."

Those were the things they most despised in others and most dreaded in themselves. Next to these came drunkenness and immorality, with a scattering of other things like gambling, cruelty, profanity, and so on.

It seems strange to me now that, at first, I was a little disappointed. I had imagined they would name a sequence of vices led by immorality, tangible things that you could get hold of and dramatize eloquently. This seemed a come-down to things that were vague and even trivial; a kind of hot milk diet which strong men would find very unsatisfying.

But the more I thought about it, the more it seemed these soldiers had gone down to bedrock. They had passed the superficial layer of what is merely legal or illegal, and had reached the things which are fundamental. And these qualities, these traces, which they have made the basis of their code, are fundamental not merely in their life as soldiers, they are just as truly the basis for all right living, anywhere and everywhere.

*[To be Continued]*

# DAD

**D**EAR DAD: I am writing this to you, though you have been dead thirty years.

From your seat in the Place Beyond I hope you can see these lines. I feel I must say some things to you, things I didn't know when I was a boy in your house, and things I was too stupid to say.

It's only now, after passing through the long, hard school of years, only now, when my own hair is gray, that I understand how you felt.

I must have been a bitter trial to you. I was such an ass. I believed my own petty wisdom, and I know now how ridiculous it was, compared to that calm, ripe, wholesome wisdom of yours.

Most of all, I want to confess my worst sin against you. It was the feeling that you "did not understand."

When I look back over it now I know that you did understand. You understood me better than I did myself. Your wisdom flowed around mine like the ocean around an island.

And how patient you were with me! How full of long-suffering and kindness!

And how pathetic, it now comes home to me, were your efforts to get close to me, to win my confidence, to be my pal.

I wouldn't let you. I couldn't. What was it held me aloof? I don't know. But it is tragic—that wall that rises between a boy and his father, and their frantic attempts to see through it and climb over it.

I wish you were here now, across the table from me, just for an hour, so that I could tell you how there's no wall any more; I understand you now, Dad, and God! how I love you and wish I could go back and be your boy again.

I know how I could make you happy every day. I know how you felt.

Well, it won't be long, Dad, till I am over, and I believe you'll be the first one to take me by the hand and help me up the further slope.

And I'll put in the first thousand years or so making you realize that not one pang of yearning you spent on me was wasted.

It took a good many years for this prodigal son—and all sons are in a measure prodigal—to come to himself; but I've come; I see it all now.

I know that the richest, most priceless thing on earth, and the thing least understood, is that mighty love and tenderness and craving to help which a father feels toward his boy.

For I have a boy of my own.

And it is he that makes me want to go back to you, and get down on my knees to you.

Up there somewhere in the Silence, hear me, Dad, and believe me.

—DR. FRANK CRANE

## WHALEN PULP AND PAPER MILLS, Limited

**P**ROMINENT among the mills devoted to the pulp and paper industry in British Columbia are those of the British Columbia Sulphite Fibre Company, Ltd., The Empire Pulp and Paper Mills, Ltd., and The Colonial Lumber & Paper Mills, Ltd. These three big plants have only recently been amalgamated into one organization under the name of the Whalen Pulp & Paper Mills, Ltd., with a capitalization of \$10,102,500.00, forming what is probably one of the largest pulp and paper manufacturing industries in the Dominion of Canada.

The head office of the Company is in Vancouver.

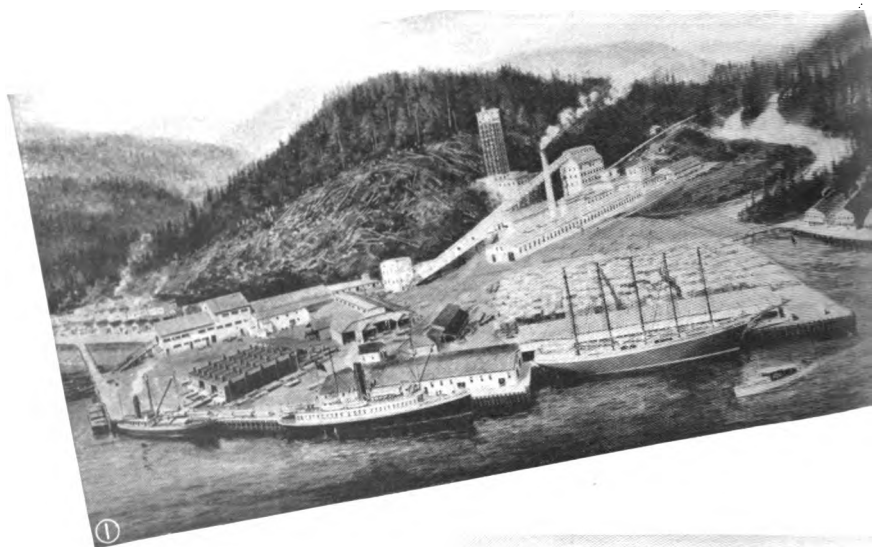
The growth of these concerns has been no less remarkable than the progress made by the province itself during the past few years. It was in 1909 that the British Columbia Sulphite Fibre Company, Ltd., was first organized. A mill was erected at Mill Creek, on Howe Sound, about thirty miles from Vancouver, having a capacity of thirty tons of high-grade sulphite fibre daily. This was gradually enlarged until the present capacity is in the neighborhood of 80 tons per day, and equipment is now being installed which will bring the daily output up to 100 tons.

The Empire Pulp & Paper Mills, Ltd., started operations in 1916, with a capacity of 50 tons of pulp daily. This mill, located at Swanson Bay, turns out, in addition 600,000 shingles and 200,000 feet of lumber daily. The Colonial, which is the latest addition to the Company's interests, is now being built at Port Alice on Quatsino Sound and will be in operation about December, 1918. This immense plant, when finished, will turn out 100 tons of sulphite fibre, 300,000 feet of lumber and 500,000 shingles daily.

The Whalen Pulp & Paper Mills, Ltd., in the operation of their various plants give employment to some 2,500 men all the year around. A fleet of steamers and tugs is also employed in conveying the raw and finished product to and from the mills. Each plant manufactures both easy bleaching and strong sulphite pulp equal to the best qualities manufactured in the Scandinavian and other European mills. This pulp, which is used principally for the manufacture of high-grade bond and writing papers, is exported to Japan, Australia, United States and South America.

British Columbia has every reason to be proud of such industries and of the men who have made them possible. That they will continue to grow is beyond question, and in the near future the citizens of this province will point with pride to the fact that a large portion of the world's paper supply has its origin in the vast forests of British Columbia.

Disston saws and machine knives are used throughout these mills.



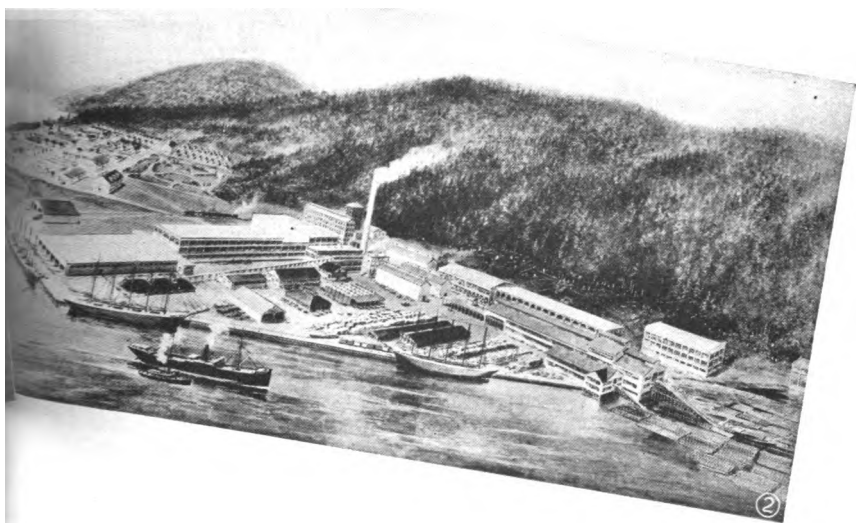
**Whalen Pulp**

**Main Office.**

**No. 1 Swanson Bay Plant**

**No. 3 Mil**





## l Paper Mills

ouver, B. C.

ek Plant

No. 2 Port Alice Plant

## New National Forests in the East

**P**RESIDENT WILSON has issued a proclamation establishing three new National Forests in the east—the White Mountain in Maine and New Hampshire, the Shenandoah in Virginia and West Virginia, and the Natural Bridge in Virginia.

Proclaiming the Forests is the final step in carrying out the law for building up eastern National Forests through the purchase of lands in the mountains. Ever since the law was passed in 1911 the Government has been engaged in acquiring lands about the headwaters of the principal rivers, both in New England and in the southern Appalachians. As the lands are bought or contracted for they are put under administration as "Purchase Areas," pending the time when their accumulation has reached a point justifying the proclamation which gives the lands their final status. The Pisgah National Forest, in North Carolina, and the Alabama National Forest, in Alabama, are the only eastern areas which had received this status before the new proclamations were issued.

The White Mountain National Forest is located in Grafton, Carroll and Coos Counties, New Hampshire, and Oxford County, Maine. The Government has actually taken title to about 267,000 acres, and in addition about 124,000 acres more have been approved for purchase, making a total of about 391,000 acres under Federal protection. This Forest protects in part the watersheds of the Androscoggin, Saco, Connecticut and Ammonoosuc Rivers. The White Mountain region, long famous as one of the most important recreation grounds of the Nation and located as it is in close proximity to the most densely populated portion of the country, has great value, not only for the protection of stream-flow and the production of timber, but also as a public playground, and is administered with a view to its use for all three purposes.

The Shenandoah National Forest is situated in Rockingham, Augusta, Bath and Highland Counties, Virginia, and Pendleton County, West Virginia. The Government has acquired to date slightly in excess of 100,000 acres, and an additional area of approximately 65,000 acres has been approved for purchase, making a total of approximately 165,000 acres under Federal protection. The Forest is for the most part on the watershed of the Shenandoah River, and it also protects a portion of the watersheds of the Potomac and the James. On the area and still intact are trench systems constructed during the Civil War under the supervision of Stonewall Jackson.

The Natural Bridge National Forest is situated in Rockingham, Nelson, Amherst, Botetourt and Bedford Counties, Virginia. The Federal Government has actually acquired title to a little over 73,000 acres, and an additional area of approximately 29,000 acres has been approved for purchase. The Forest, which protects a portion of the watershed of the James River, does not include the Natural Bridge, but this scenic feature is within three or four miles of the boundary. It is expected that visitors to the region will take advantage of the splendid opportunities which the Forest affords, for recreation and outdoor life in the mountains.

—From *American Forestry*.

# The Yankees on the Marne

ACCORDING TO T. ATKINS

OH, the English and the Irish, and the 'owlin' Scotties, too,  
The Canucks and Austryleyuns, and the 'airy French Pollu,  
The only thing that bothered us a year before we knew,  
Was 'ow in 'ell the Yanks 'ud look, an' wot in 'ell they'd do.

They 'adn't 'ad no trynein', they didn't know the gyne,  
They 'adn't never marched it much—their shootin' was the syme;  
An' the only thing that bothered us that day in lawst July  
Was 'ow in 'ell the line 'd 'old if they should run aw'y.

Them leggy, nosey new 'uns, just come across the sea—  
We couldn't 'elp but wonder 'ow in 'ell their guts 'ud be.  
An' the only thing that bothered us in all our staggerin' ranks  
Was wot in 'ell 'ud 'appen w'en the 'Uns 'ad 'it the Yanks.  
My word! It 'appened sudden w'en the drive 'ad first begun,  
We seed the Yanks a-runnin'—Gaw blimy! 'ow they run!  
But the only thing that bothered us that seed the chase begin,  
Was 'ow in 'ell to stop them 'fore they got into Berlin!

They didn't 'ave no tactics but the bloody manual,  
They 'adn't learned no horders but "Ooray!" and "Give 'em 'ell!"  
But the only thing that bothered us about them leggy lads  
Was 'ow in 'ell to get the chow to feed their "Kamerads!"

So we're standin' all together in a stiffish firin' line,  
If anyone should awsk you, you can say we're doin' fine—  
But the only thing that bothers us—an' that don't bother much—  
Is 'ow in 'ell to get the dirt to bury all the Dutch.

Gaw's trewth! it's rotten fightin' that all our troops 'as seen,  
The 'Un's a dirty pl'yer, becos 'e's alwus been;  
But the only thing that bothers us in 'andin' 'im our thanks  
Is 'ow in 'ell we'd done it if it weren't for the Yanks.  
Oh, the English and the Irish an' the 'owlin' Scotties, too,  
The Canucks and Austryleyuns, 'an the 'airy French Pollu,  
The only thing that bothered us don't bother us no more,  
It's why in 'ell we didn't know the Yankee boys before!

EMERSON HOUGH, of the Vigilantes.

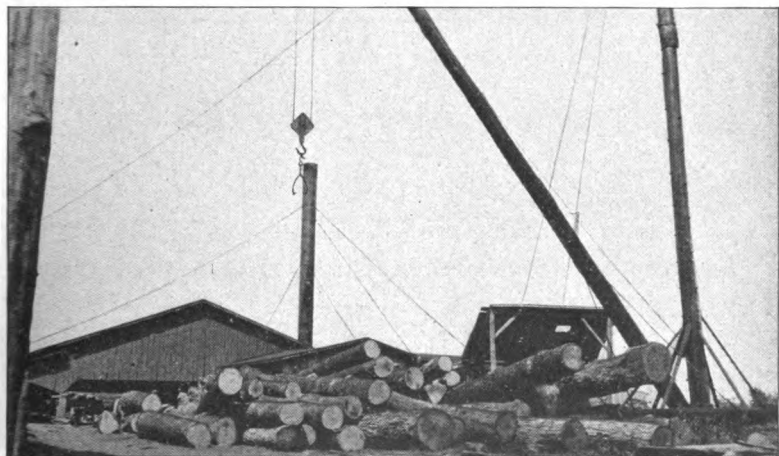


Mr. TERRY, Filer

MILL FOREMAN

of the River Mill of  
**King Mill and Lumber Co.**  
**Paducah, Ky.**

## THE DISSTON CRUCIBLE



**View of Section of  
King Mill and Lumber Co.,  
Paducah, Ky.**

**O**N the opposite page we reproduce a photograph of the Filer and Mill Foreman of the Mill. The taller one is Mr. Terry, the Filer.

Note in the picture the string of twenty-six Chain Dogs, all of which have been cut with Disston saws. Mr. Terry advises that he has never had to retoothe or braze the saw, and is continually encountering this type of iron, due to the fact that all their logs are rafted.

Mr. King states that Mr. Terry is the best filer in Western Kentucky, and as all who are acquainted with Disston saws are aware, the combination of a good filer and Disston saws is hard to be beat when it comes to making lumber of quantity and quality.

# DISTINGUISHING MARKS OF THE UNITED STATES ARMY AND NAVY

(Continued from November Issue)

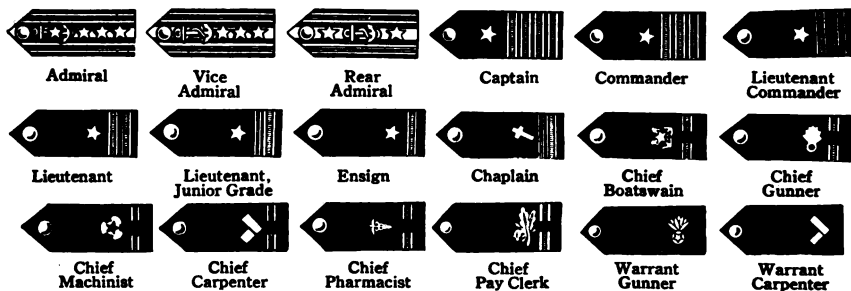


## Army Enlisted Mens' (Bronze) Collar Service Devices, (New, Oct., 1917)



## UNITED STATES NAVY

### Officers' Shoulder (Gold) Marks, on Overcoats and Summer Blouses



Warrant Officers' marks are same as Chief Warrant Officers, but without stripe, as Warrant Gunner shown here.

—Courtesy of United Cigar Stores Co. of America.

**THE FOREST**

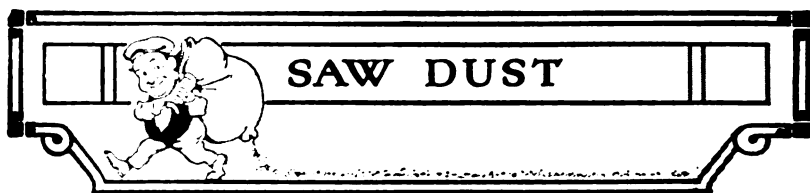
**THE SAW MILL**

**THE LUMBER YARD**

The agencies by which the timber of Nature's mighty forests is transformed into lumber to provide shelter and protection, comfort and convenience for mankind.

**DISSTON SAWS**

PHILADELPHIA  
U.S.A.



### THE TYPO'S REVENGE

"Bill!" the poet gasped, as he entered his friend's room.

"Why, what's wrong?" the friend inquired.

"Wrong! I wrote a poem about my little boy. I began the first verse with these lines: 'My son! My pigmy counterpart.'"

"Yes? Yes?"

The poet drew a newspaper from his pocket.

"Read!" he blazed. "See what that compositor did to my opening line."

The friend read aloud: "My son! my pig, my counterpart!"

—*Exchange.*

### MAYBE

If two red lips were upturned to your own,

With no one to gossip about it,  
Would you pray for endurance to let them alone?

Maybe you would—but I doubt it.

—*Penn State Froth.*

### NO OTHER USE

Two travelers began talking—and became friendly.

"Have a cigar?" began one.

"Don't think I'll take one, thank you!" said the other.

"Have a cigarette, then?"

"No, thank you!"

"How about a chew?" the first persisted in desperation.

"Don't use tobacco at all, thank you!"

"Well," the first man ejaculated in consternation, "what in the name of guinea-pigs do ye do with yer mouth?"

—*Exchange.*

### GROUNDS FOR THIS

Teacher—"Your answer is about as clear as mud."

Pupil—"Well, that covers the ground, doesn't it?"

—*Exchange.*

### IT'S HARD TO BEAT THE IRISH

An Irish soldier, captured in one of the big German "pushes," was confined in a "Cage" which was closely guarded. To amuse himself, every time a German guard walked past him, he would exclaim in a loud whisper, "Be gorry, us Irish licked hell out of you Fritzes on the Marne, what?" This began to get Fritz's "goat" at last and Mike was hauled before a drumhead court and given his choice of swearing allegiance to the Kaiser or being shot at sunrise, as it was claimed he was weakening the morale of the German army. Mike promptly swore allegiance to "Bloody Bill"—for the time being. His conversation with his guards thereafter changed slightly: "Be gorry, thim Irish licked hell out of us Fritzes on the Marne, what?" He was exchanged.

—*Pacific Coast Shipper.*

### A SAD CONFESSION

Roundabout Pryer—"Are you still at your mother-in-law's?"

Doleful Henpeck—"Yes—still er than ever."

—*Sheet of Brass.*

### SOFTENING THE OATH

"Oh, war!" she suddenly cried.

"Why, war?" he queried.

"Well, I just turned on my ankle, and you know what war is."

—*Northern Baptist.*

### WHY VEGETABLES COST MORE

Mrs. Smith—"Really, Mr. Giles, your prices are getting exorbitant."

Farmer Giles—"Well, mum, it's this way: When a chap 'as to know the botanical name of what 'e grows, an' the zoological name of the hinsect wot eats it, an' the chemical name of wot kills the hinsect, some one's got to pay for it!"

—*Passing Show.*



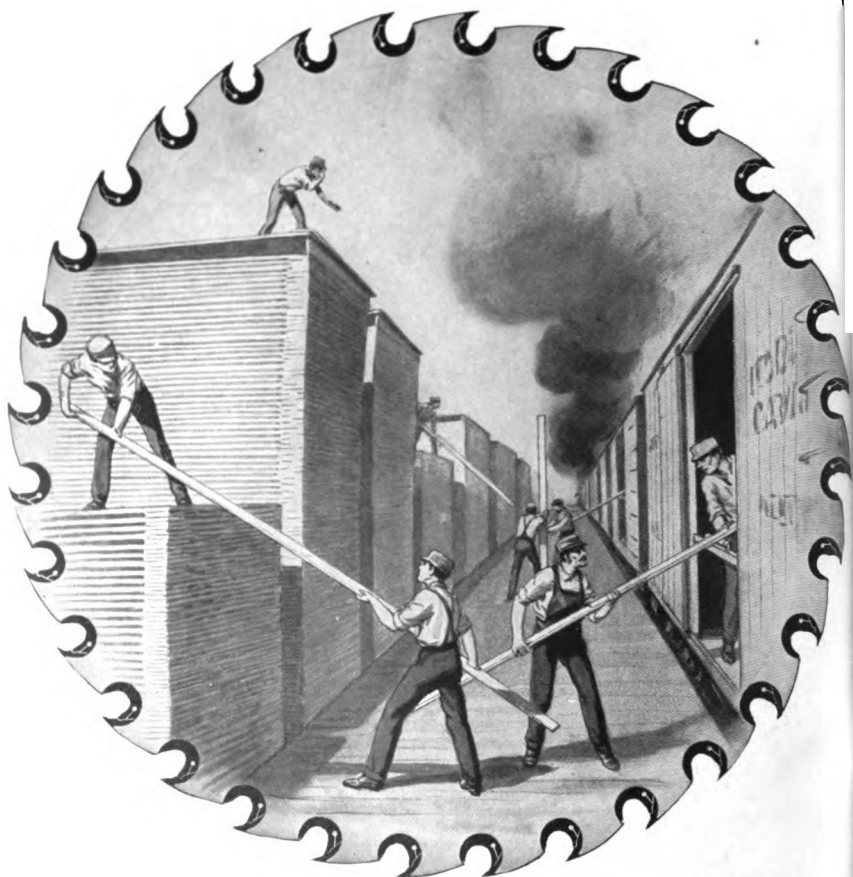
# THE DISSTON CRUCIBLE

January

1919



WELL MANUFACTURED  
LUMBER IS HALF SOLD



USE  
DISSTON SAWS

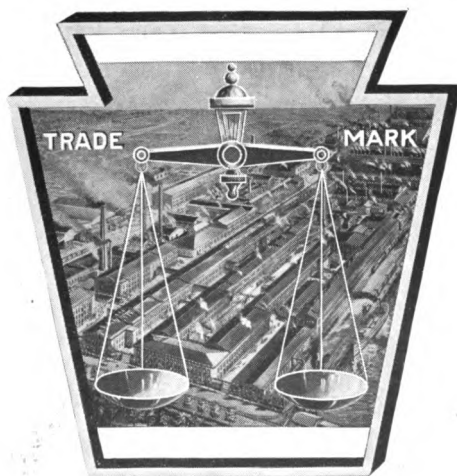
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\$1.00 YEARLY IN ADVANCE

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**THIS PICTURE OF A FAMOUS POPLAR TREE WAS FURNISHED BY  
JOS. ECHSTEIN LUMBER CO., OF JASPER, INDIANA. SEE PAGE 182**

# THE DISTON CRUCIBLE

A MAGAZINE FOR THE MILLMAN

VOL. VII

JANUARY, 1919

No. 12

## EDITORIAL CHAT

### RECONSTRUCTION

**D**ESPITE the great calamity and wide destruction caused by the long, ruthless war, the world moves on. The devastated areas must be rebuilt, and the requirements of humanity supplied.

To the farseeing and thoughtful, who broadly view and consider conditions, past, present and looking to the future, there can be but one conclusion—the demand for material and supplies will be greater than ever.

Quoting from an article by Mr. Dudley Bartlett, of the Commercial Museums: "Knowing the energy and industry of the people as we do, we cannot doubt that out of all this desolation will rise new factories, that roads will be repaired and buildings, both public and private, re-erected. The demands for iron and steel, cement, lumber, machinery, tools and all kinds of equipment will be enormous, even if they be much less than many prophesy. Pennsylvania, outranking all other States in the production of the great essentials—ought to be able to supply a large proportion of the raw material and manufactured and semi-manufactured products that will be used in replacing old and, possibly, in the inauguration of new industries.

"Building materials of all kinds, looms for textile mills, machine tools for the iron and steel working plants, factory equipment of every nature, agricultural implements and machinery for the cultivation of the land, coal mining machinery, road-building machinery, foods in great variety, builders' hardware, textiles, leather, wearing apparel—in fact, nearly everything that a civilized community needs—Pennsylvania can supply.

"No State in the Union has such diversified industries and no country in the world can, upon demand, supply such a varied assortment of manufactures. It is not a question of the State's ability to supply—but rather one of the nature of the demand that will be made upon it and the alertness of its manufacturers in ascertaining and meeting those demands—or better still—in forseeing and providing for the demand when it shall come. This is, after all, the crux of the situation."

*Quality  
Sells*

## Four Sins Soldiers Say They Hate

*You may be surprised when you find out what they are*

By FRED B. SMITH in the *American Magazine*

[CONTINUED FROM DECEMBER ISSUE]

AS I see it, immorality, drunkenness and gambling cannot live side by side with courage, unselfishness, generosity and humility. The more you study this set of standards your boys have placed before them, the more you will be amazed by the unerring way in which they have picked out the great essentials of character. War strips the veneer from life. And just because they are soldiers, these young men have instinctively left the surface things go, and have found the influences beneath which mould that surface.

I don't claim that every man in the American Army has these standards. The draft is a great net which has drawn together more than two million men of all classes, all degrees of education. They are not angels! Some of them are far from it. But the code which is here given does express the prevailing sentiment in that human mass which makes up our army in France.

What they hate most is cowardice. To show a streak of yellow is the thing they despise and cannot excuse. Before they have had the chance to prove themselves, many of them secretly wonder whether THEY are going to be "yellow," whether they are going to stand the test. To be a coward is the lowest depth to which they can sink. But this is because cowardice in a soldier is *complete failure*; because it is being false to himself and his fellowmen. It is being a traitor to every obligation. That is what cowardice means to a soldier, and if you put the same analysis to work in your life, or in mine, you will admit that "To be a traitor to every obligation" is pretty comprehensive. It is, indeed, the worst sin of which anyone can be guilty.

Here is one experience which seems to me a striking example of the way the soldiers feel about cowardice. One evening I arrived at a place close behind the fighting line, and found the whole camp in the greatest excitement. It was plain even to a new arrival that something extraordinary had happened. The men were talking in little groups, the officers looked concerned, and the place was fairly electric with some undercurrent, which I couldn't understand until I found out that one of the companies had mutinied! A very serious matter, and one which, knowing our men and the conditions in our army, I found almost incredible.

But here is the explanation: Not long before this company had been ordered into the front line, and a junior officer, who was in command, had requested his superiors for a delay. As a result, the company was not sent in. The men knew nothing of this at the time. But they found out about it later, and they interpreted the officer's action to mean that *he was afraid*.

Now it is possible that he had some other reason for making this request. But, however that may be, the men decided that he was scared, that when the time came for him to go into danger—and it *was* dangerous where they would have gone—he had turned yellow. So when they received the order to go in this next time they simply refused to do it with that man as their leader. They wouldn't fight under a coward—a man they suspected, whether rightly or wrongly, of being afraid. They themselves were perfectly willing to go anywhere—but not with a man who was yellow. To their belief, he had been guilty of the worst sin of which a soldier is capable. That man could never again command those soldiers. He was transferred, as I happen to know, and another officer placed in command.



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## FOUR SINS SOLDIERS SAY THEY HATE

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Examples of cowardice, or even of suspected cowardice, are rare. Stories of courage and of the men's respect for it are common. It is almost their fetish.

Then take the second sin on the list: selfishness. The night we gave the cards to the fifty men just back from fighting, one of them stood up, after I had explained what we wanted them to do, and said:

"I know who is the best man in my regiment!"

"Wait a minute," I interrupted him, "this isn't going to be a talking affair. Not just yet, at any rate. We want you to write the things on the cards."

"Oh," the other men called out, "let him say what he's got to say."

So I told him to go ahead.

"Well," he said, "when we were going in the other night, on our way to the trenches, I forgot my blanket. It was darned cold, too. You fellows know that. And it looked to me like I was going to freeze out there. But when my pal found out the fix I was in, instead of guying me for being such a fool as to forget my stuff, he took out his knife and cut his own blanket in two and gave me half of it. I don't know whether that's what the preachers would call being good—but it's good enough for me!"

That boy wanted to put unselfishness at the top of the list. And all of them, without exception, have come to appreciate it as they never did before. There is more unselfishness along the battle line in France than anywhere else in the world. The way they help one another to endure discomfort, loneliness, suffering, danger is a splendid and beautiful thing. They have learned—and we are learning from them—not only the duty of one human being to help another, but also the joy and satisfaction that come with doing it.

Then comes "Generosity" and its opposite, "Stinginess." They may seem much the same, respectively, as unselfishness and selfishness, but they are really very different. Generosity is the giving of material things without involving special sacrifice; whereas unselfishness may not cost anything in money or material things, but be paid for in discomfort, or in suffering of body or spirit. The boys quite rightly put unselfishness higher than mere generosity; but they have a whole-souled dislike for a "tightwad," a chap that won't divide his "chow" with a comrade, that won't share his smokes, that tries to grab the best of everything, and to hang on to everything he has. And they are perfectly right. There is something fundamentally wrong with a stingy man, and they know it.

When I found that they had put "modesty" fourth in the list, I was genuinely amazed. I think that surprised me more than anything else. But I soon found out that the soldiers hate a braggart; they can't stand a "blow-hard." I had a personal experience with a case of that sort which made a great impression on me: When I went to France I had a book full of names of boys whose parents or friends on this side had asked me to look them up if I had the chance. Among them was the name of a certain young man I had known very well over here; so when I found myself one evening at the point where his regiment was stationed, I hunted him up, as I did dozens of others.

I found him alone in his billet; and the moment I went in I saw that something was decidedly wrong with him, for he was sitting there, staring straight before him, with so strained and abnormal a look in his eyes that I was simply shocked.

I tried to find out what was the matter, but couldn't get anything out of him. Even when he found that I had seen his folks just before I left America, he did not rouse from his brooding and depression. So I finally went out and hunted up a friend of his whom I also knew.

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## FOUR SINS SOLDIERS SAY THEY HATE

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"What's the matter with ——?" I asked.

"Oh, he's all right, I guess. Just a little down in the mouth."

And that was all the satisfaction I could get from him. A few minutes later I met the captain of their company, and I asked him the same question.

"Well," he said, "I wish you'd tell me! I can't make out what's wrong. He has been doing good work. His record is fine. He hasn't been up for a reprimand or anything of that sort. I don't know what to think about him, but I do know that he is in a very morbid state, and I'm worried about him."

Well, I was, too! I couldn't get him out of my mind. I was afraid he would do something desperate. So I hunted up his friend again and said:

"See here! You know what's wrong with that boy, and you've got to tell me. I know him and I know his folks back home. He's in trouble of some sort and I want to find out what it is. Now, out with it!"

"Well——" he hesitated; then he blurted out, "it's just this: the fellows are down on him. They don't like him and they won't have anything to do with him."

"But why?" I demanded.

"Oh, they think he is a blow-hard. He's done some good work, you see, and he's kind of gone around bragging a bit; and—well, the fellows won't stand for that."

I'm glad to say that we got the boy out with the crowd that night—he had been brooding by himself until he was almost desperate—and the next morning I had the satisfaction of getting a cheery "good-by" and a parting wave from him as he left with his company. But it was a revelation to me of the iron hand with which those soldiers punish vanity and boastfulness. However, I have seen also the wonderful way in which they react to simplicity and unaffectedness. They admire courage and heroism. But when it is coupled with modesty and simplicity they really adore the man who shows these qualities. (*To be Continued*)

### A BIG POPLAR

THE frontispiece shows a famous poplar tree, which was located within three miles of Jasper, Indiana, where is located the Jos. Echstein Lumber Company by whom it was cut down and sawed.

Some idea of the size of this tree will be gained from the information given us by Mr. J. B. Keith, whom we quote as follows:

"This tree made six fourteen feet logs, five of which were clear. The top of butt log measured forty-one inches in diameter. The tree made forty-five hundred feet of lumber.

"Jos. Echstein Lumber Company is operating a six foot Band Mill, Band Rip, also Circular Rip and Cut Off Saws, and make a specialty of manufacturing Indiana Timber.

"Mr. Echstein is manager of the mill and Mr. Edward Schuler is filer. Most of the saws in the mill are DISSTON SAWS, and Mr. Schuler states he has always had very satisfactory results from DISSTON SAWS."

### AN IDEAL PLACE

This description was given by a lecturer on the "Seeing San Francisco" wagon, and was repeated to us by one of our representatives:

"Ladies and Gentlemen, this is Presidio Terrace. There is more wealth to the square inch in this little hillside street than in any other place in the whole world. The blades of grass have green backs; the birds in the air have bills; every flower here has a scent, and each tree has its roots in a bank. The people use diamond tires on their cars. Yet every summer they go away to get a little change."



## A Well-Known Combination of Names OTIS—MAHOGANY

**T**O say "mahogany" without thinking of the Otis Manufacturing Company, of New Orleans, would be difficult for those interested in the mahogany business, because the Otis Manufacturing Company has been for over fifty years a prime factor in the manufacture of mahogany lumber.

Once before in these pages we illustrated this plant, but we have some recent pictures of the operation which will undoubtedly be as interesting to our readers as they are to us, because this is and always has been a most interesting and unique sawing plant, cutting as they do over three and one-half million feet per month, or approximately fifty million feet a year, with an output probably exceeding in value that of any other lumber manufacturing plant under one roof in the world.

This remarkable business is under the direction of Mr. Frank G. Otis, President and General Manager, and Mr. Clem Barthe, Superintendent, both of whom give all of their very intelligent attention to perfecting this plant, which grows in efficiency from month to month, and is of constantly increasing interest to the visitor.

Four to six steamers are employed to bring logs, mostly from British Honduras, each steamer load being kept separately in their log boom in the Mississippi River. This boom rarely contains less than a million dollars' worth of mahogany logs.

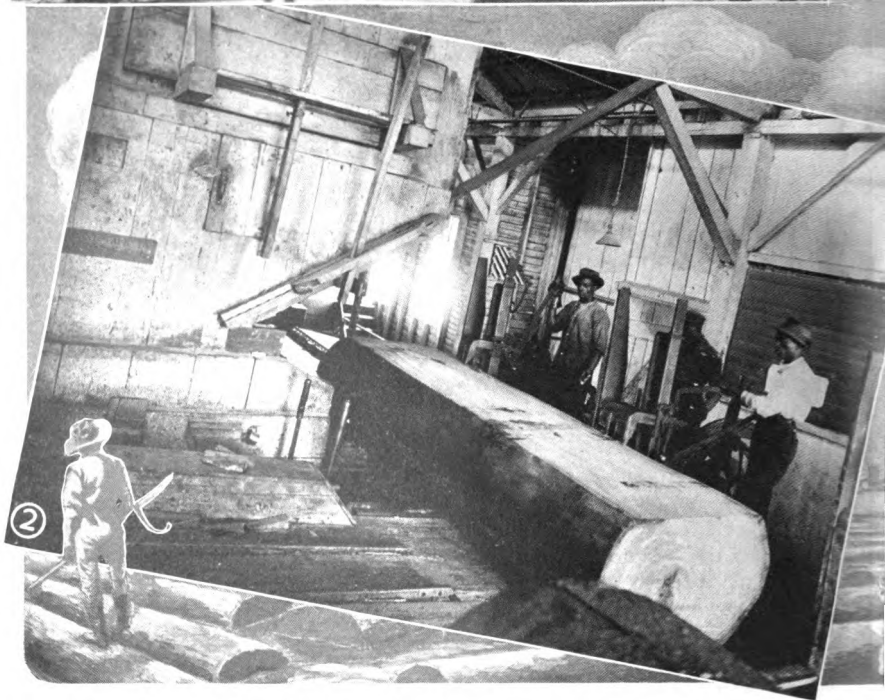
Approximately 95 per cent. of their cuttings at present consists of 1-inch mahogany boards of Government stock. The British Admiralty buys very largely from this mill in "The City that Care Forgot."

A glance at the illustrations will give you an idea of the character of mahogany logs cut, of the band-sawing machines which are cutting these logs, and of the method of piling the lumber in the yards, each of these piles being valued at from fifteen thousand to twenty thousand dollars.

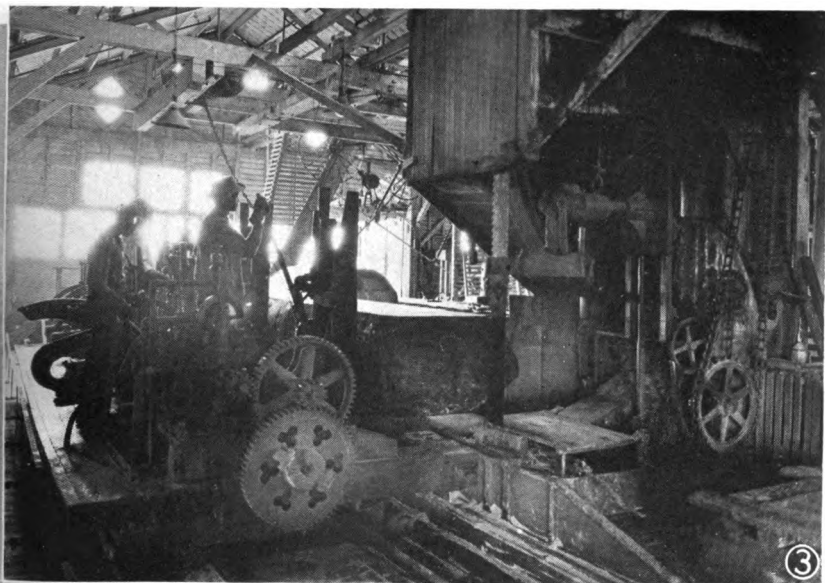
The value of a mahogany log will be better appreciated when one realizes that it takes at least one hundred years to grow a mahogany tree that is fit to cut at all, and then they rarely find more than one tree on an acre of ground.

Besides the two band mills shown in the illustration there are two smaller band mills of an unusual type. The two larger mills first "break down" the logs with 10-inch band saws 16 gauge, then pass "cants" to the smaller specially designed mills, which are equipped with veneer carriages to gain accuracy in sawing. The saws on the smaller mills are 10-inch wide 19 gauge, thus saving valuable stock, which otherwise would go into sawdust.

Instead of using circular saws on the "edger table," as is customary in most mills, the edgers in this mill are band saws, and after each board



SCENES AT THE MILL OF THE OTIS MANUFACT



ING CO., NEW ORLEANS, LA. SEE PAGES 183-186

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## A WELL-KNOWN COMBINATION OF NAMES

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is cut it passes to the hands of an expert grader, who lays out each particular board for the edger and trimmer, exactly the same as a tailor would lay out the cloth for a suit of clothes.

This is a very important item in the successful operation of a mahogany mill, because a miss of one-sixteenth of an inch on edging these boards would cost the mill at least thirty thousand dollars a year.

One of these illustrations also contains a view of the Band Saw Log Deck Cut-Off Machine. A circular saw in this position would waste more lumber than the Otis Manufacturing Company would care to pay for, and the introduction of this band saw cutting-off machine has been quite an acquisition to the mill.

In the Filing Room four expert filers are employed. There are fifty-two band saws required a day of twenty-four hours' work for this mill, and each saw has to be put into the very "pink of condition," because no mis-cuts are tolerated.

Under the able management of Mr. Clem Barthe this mill runs all the time, and it ACTUALLY RUNS, for in two and a half years it has only lost eighteen minutes' time on account of engine trouble or other breakdowns. This is what might safely be termed "100 per cent. efficiency."

The engine operating this plant has a regular factory rating of two hundred and eighty-eight horsepower, but through improvements placed on it by Mr. Barthe it is developing five hundred horsepower. In view of the fact that so little time has been lost through engine trouble in the last two and a half years, it is certain that these changes substantially increased the efficiency of the engine.

The main floor, as well as the lower floor of the mill, is of solid mahogany, an extraordinary thing for sawmill floors.

Mr. Frank G. Otis's private office is built of solid mahogany, and the wood was taken from one log of a very beautiful pattern. It is indeed one of the handsomest offices the writer has ever had the pleasure of visiting. The mahogany in it is dark, rich in color and is, of course, often used as an example to demonstrate what effects may be obtained by the use of good mahogany in an office or a living-room.

The firm has very little trouble with employees. They have a system of payment that seems to keep the five hundred employees happy, and they have a lunch-room connected with the establishment at which they furnish meals at less than cost. When other people during the war time were howling for labor, this mill was able to run on steadily, and this again speaks of the efficiency of the management.

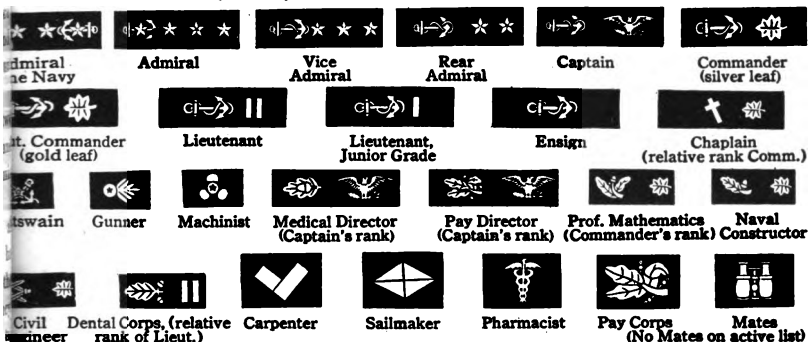
We offer our congratulations to the Otis Manufacturing Company for what they have done, and it pleases us greatly to be able to say that in this mill of such high efficiency DISSTON SAWS are used almost exclusively.

*Quality  
Sells*

# DISTINGUISHING MARKS OF THE UNITED STATES ARMY AND NAVY

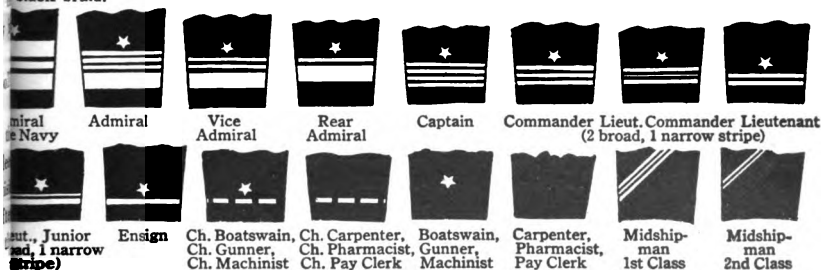
[CONTINUED FROM DECEMBER ISSUE]

## Officers' Collar (Silver) Devices—Worn on Blue Service Blouses



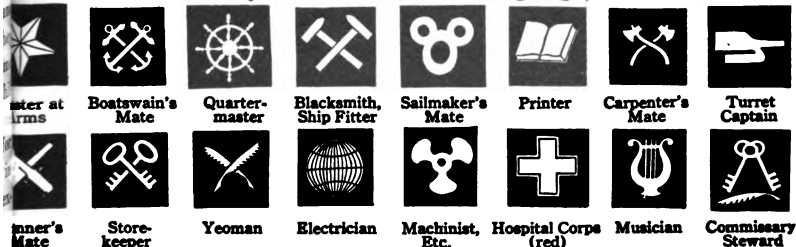
## Officers' Sleeve (Gold) Devices—Worn on Blue Service Blouses

Following branches wear colors between gold braid on shoulder marks and sleeves: Medical, maroon; Pay C., black braid.



## Petty Officers' Distinguishing Sleeve Marks

These Marks take their places above chevron bars in Rating Badges, as shown below.



COURTESY OF UNITED CIGAR STORES CO. OF AMERICA

## TAKE HIM WITH YOU

Take him with you when you go,  
Let the little fellow know  
Proper sports and proper joys,  
Be a comrade of the boy's.  
Take him swimming, now and then,  
Let him learn the ways of men;  
Take your Sunday walk with him,  
Seriously talk with him,  
Teach him how to be a man,  
Take him with you when you can.  
Never days were quite so glad  
As the bygone days I had  
Chumming with the Father, kind,  
In the years that stretch behind.  
Even now in dreams I see  
Happy hours he promised me;  
Eagerly I'd wait the day  
Hand-in-hand we'd walk away;  
Even at his office grim,  
I was proud to be with him.  
More than pleasure fine, it meant,  
When somewhere with him I went;  
Little things I couldn't see  
Father pointed out to me;  
Showed me men erect and true,  
And sometimes the false ones, too.  
And the while we walked along,  
Talked with me of right and wrong,  
And for all the years to be  
Opened wide his soul with me.  
Take him with you when you go,  
Teach him what you'd have him know,  
Let him have the joys you knew  
When you owned a Father, too;  
Walk with him and let him find  
What is hidden in your mind.  
Talk with him of men and things,  
He will need your counselings.  
Take him with you when you can,  
Teach him how to be a man. —*Edgar A. Guest.*

# SECRETARY McADOO ON WAR INSURANCE

FROM AMERICANIZATION BULLETIN, DECEMBER 1, 1918

**T**HE following statement has been officially issued by Secretary of the Treasury McAdoo with respect to War Insurance to men in the Army and Navy:

I desire to remind all America's soldiers and sailors that it is their opportunity and their privilege to keep up their insurance with the United States Government after the war has officially terminated and even after they have returned to civil life.

More than 4,000,000 officers and men of the army and navy are now insured with the United States Government through the Bureau of War Risk Insurance of the Treasury Department. The grand total of insurance is more than \$36,000,000,000.

## ANNUAL TERM INSURANCE

In its present form this insurance is annual renewable term insurance at net peace rates, issued against death and total permanent disability. Under the provisions of the war-risk insurance act every person holding this insurance may keep it up in this form even after he leaves the service for a period of five years. All that is necessary is the regular payment of premiums.

Moreover, the law provides that not later than five years after the termination of the war, as declared by Presidential proclamation, the term insurance shall be converted, without medical examination, into such form or forms of insurance as may be prescribed by regulations and as the insured may request.

## CONVERSION OF FORM

In accordance with the provisions of the law, these regulations will provide for the right to convert into ordinary life, 20-payment life, endowment maturing at age 62, and into other usual forms of insurance. This insurance will continue to be Government insurance. The various forms of policies which the Bureau of War Risk Insurance will write are now being prepared.

Every person in the military or naval service owes it to himself and to his family to hold on to Uncle Sam's insurance. It is the strongest, safest and cheapest life insurance ever written. Just as this insurance relieved our soldiers and sailors of anxiety and misgivings for the welfare of their loved ones and protected them against the hazards of war, so it will continue to protect them through the days of readjustment and reconstruction and in time of peace.

## ADVANTAGES ARE EMPHASIZED

The advantages of keeping this insurance in force cannot be emphasized too strongly. The right to continue it is a valuable right given by the Government to our fighting part of the men as compensation for their services. If this right is lost by allowing insurance to lapse it can never be regained. When Government insurance is allowed to lapse the holder cannot again obtain insurance except from private companies at a considerable increase in cost. Moreover, many of the men may have become uninsurable as a result of the war through physical impairment, and if these allow their insurance to lapse they will lose the last opportunity for their families to have the protection of life insurance.

*(Continued on page 191)*

# THE AMERICAN CITIZEN'S CREED

**I Believe** in myself, in my power to live and think and do for myself, my loved ones, my community, state and country.

**I Believe** in my neighbors, who are children of the same God, citizens of the same country, and with me equally responsible to both.

**I Believe** in the community in which I live. Our interests are one; therefore our efforts should be united to make conditions better—moral, social, industrial and civic.

**I Believe** in my state as a part of our common country; in doing my bit toward cleansing its politics, improving its moral and social conditions, developing its natural resources and its industries, and in making it an effective factor in our national life.

**I Believe** in my country; in her heroic birth and history; in the far-seeing statesmanship of her founders and the lofty patriotism of her defenders; in her manifest destiny as a leader among the nations of the world in Liberty, Intellectuality, Morality, Religion, Industry, Science and Art, and as the exponent of the highest and truest type of Civilization the world has ever seen.

**I Believe** in the Old Flag and in all that it symbolizes—the most beautiful, the strongest, the broadest and most comprehensive national emblem ever flung to the free air of Heaven.

**I Pledge**, without reservation, my intellect, my affections, my ambitions, my strength and my very life, to uphold my Country and my Flag; to sustain their noble traditions, and to do my best to help my fellow-citizens to be true to these high ideals.

“The Great Divide,” Denver



## WAR LESSONS IN FOREST MANAGEMENT

**W**AR has its lessons in forestry as in other domains. These lessons are very numerous, but it is here desired to call attention to only two main features.

First, we note that war brings out the extreme need which exists for wood, both for war needs at the front and civil populations at home. It is said about 60,000 feet B. M. of lumber are required per mile of trench, or fifteen billion for the French front, besides the large needs for shelters, artillery screens, etc., which sundries consume from \$500 to \$1,200 worth of wood apiece. Behind the front mining cannot go on nor transportation facilities be maintained without vast supplies of wood. Thus supplies of wood are essential in successful warfare. They are no less essential in peace, but the need is less accentuated because of the second factor.

This second factor brought out in war is that wood, being bulky, cannot be transported long distances when transportation systems are overburdened. Thus England has had to embargo wood imports and practically strip such small areas of forest growth as she had. Even the United States, far from the scene of war, has had difficulties in railroad transport of wood material. France and Germany have been able to maintain their place in the war because they long ago began handling their forests on a continuous production policy. Instead of securing the results we shall secure unless we change soon from a policy of forest destruction wherever we cut the virgin forests, they have in the past provided the stands which have grown to present maturity. This forest policy has always been profitable to countries in peace time, but in war it is an absolute condition of success. Even with well-distributed forests the transport problem has been difficult enough in France.

The lesson is plain. National safety in peace and war demands that a sufficient portion of the forest land in each locality where any forest land occurs should be kept producing forests to insure local supplies of timber. Where timber must be transported to a distance the transport cost is too large to permit liberal use of timber in peace time. In war time transport may be impossible and national defense be imperiled by lack of foresight in handling the country's forests.—B. P. K., in *Forest Club Annual*.

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Are we giving our best efforts to the country, or do we think that because the war is over we can take life easy? Prosperity is up to us! Keep the wheels turning!—U. S. Department of Labor, Wm. B. Wilson, Secretary.

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## WAR INSURANCE

(Continued from page 189)

The economic value of life insurance to society is so well recognized as to need no argument. The Government now has in force upon the lives of 4,000,000 American citizens who have fought its battles a life insurance group larger than all other combined. Therefore, it is manifestly of the highest importance, not only to the fighting men and their dependents, but to all the people, that the largest possible percentage of this insurance shall be continued in force after its holders shall be returned to civil life.



# SAW DUST

## HIRAM KNEW

**H**IRAM and his wife were paying their first visit to the Museum of Natural History. They were in the Egyptian section looking at the mummies. Miranda said: "Hiram, what does 'B. C. 97' on that man mean?"

Hiram replied: "Why, Miranda, don't show your ignorance; that is the license number of the automobile that killed the poor fellow."—*Exchange*.

## THEN HE STOPPED LAUGHING

**F**IVE young men went into a store to buy a hat each. Seeing they were in a joking mood, the clerk said: "Are you married?"

They each said, "Yes."

"Then I'll give a hat to the one who can truthfully say he has not kissed any other woman but his own wife since he was married."

"Hand over a hat," said one of the party. "I've won it."

"When were you married?"

"Yesterday," was the reply, and the hat was handed over.

One of the others was laughing heartily whilst telling his wife the joke, but suddenly pulled up when she said: "I say, John, how was it you didn't bring one?"—*Exchange*.

## SAFETY FIRST

**W**HY," asked a Missouri paper, "does Missouri stand at the head in raising mules?"

"Because," says another paper, "that is the only safe place to stand."—*Exchange*.

## HIS CHANCES

**W**HAT are your chances of winning that rich young girl?" "Fine, I've got her mother and father and all her uncles and aunts knocking me."—*Detroit Free Press*.

**T**HE proofreader on a small Middle Western daily was a woman of great precision and extreme propriety. One day a reporter succeeded in getting into type an item about "Willie Brown, the boy who was burned in the West End by a live wire."

On the following day the reporter found on his desk a frigid note asking: "Which is the west end of a boy?"

It took only an instant to reply: "The end the son sets on, of course."—*Safety Bulletin*.

## HIS RECORD

**G**UEST—"How much did you ever get out of your car?"

Owner—"Well, I think seven times in one mile is my record."

## REGRET

**H**E was the typical office boy, freckle-faced, red-headed and keen as a trap. He had been employed by a well-known firm of lawyers for three months. There wasn't any question about his ability. He was a smart boy; but he reached the point where he got entirely too smart, and the big boss decided to decorate him with the Order of the Can.

After he had been paid off a week in advance and told to vamp while the vamping was good, George paused at the desk of the junior partner of the firm, for whom he had always shown a distinct preference.

"Well, so long, Mr. Blank," said the irrepressible one.

"Why, where to, George?"

"Oh, I'm done! 'Sall over. The old man just give me de pink slip and I'm off."

"Well, that's too bad, George. You've been with us three months and I'd hoped we'd make a lawyer out of you."

"'Sall right, Mr. Blank; I should worry," piped the optimistic George. "Tell ye de truth, I'm sorry I learned de 'damn business."—*The Hoskinsman*.

## UNITED WE SIT—DIVIDED WE STAND

**E**X-President Taft is alleged to have bought two seats for himself for a football game at New Haven last autumn, being warmly in favor of preparedness no less than devoted to "safety first." The trouble was, however, that—as he discovered on arriving at the field—the seats were on opposite sides of an aisle.—*Brass Scrap*.

## ANTI-AIR GUN

**T**HE new night watchman at the college had noticed someone using the big telescope. Just then a star fell.

"Begorra," said the watchman, "that felly sure is a crack shot."—*Strackleton News*.

## NO HOPE FOR HIM

**H**E—"Can you give me no hope?" She—"None whatever, I'm going to marry you."—*Sheet of Brass*.

## A LINE ON MAX

**Y**OU can always tell where Maximilian Harden is. If you hear him, he is out again. If you don't hear him, he is in again.—*Kansas City Star*.

## THE CRIME OF THE DAY

**W**IVES are sold in the Fiji Islands for \$5 each."

"Ugh."

"Shame, isn't it?"

"Yep," growled the grouchy bachelor, "more profiteering."—*Kansas City Journal*.









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