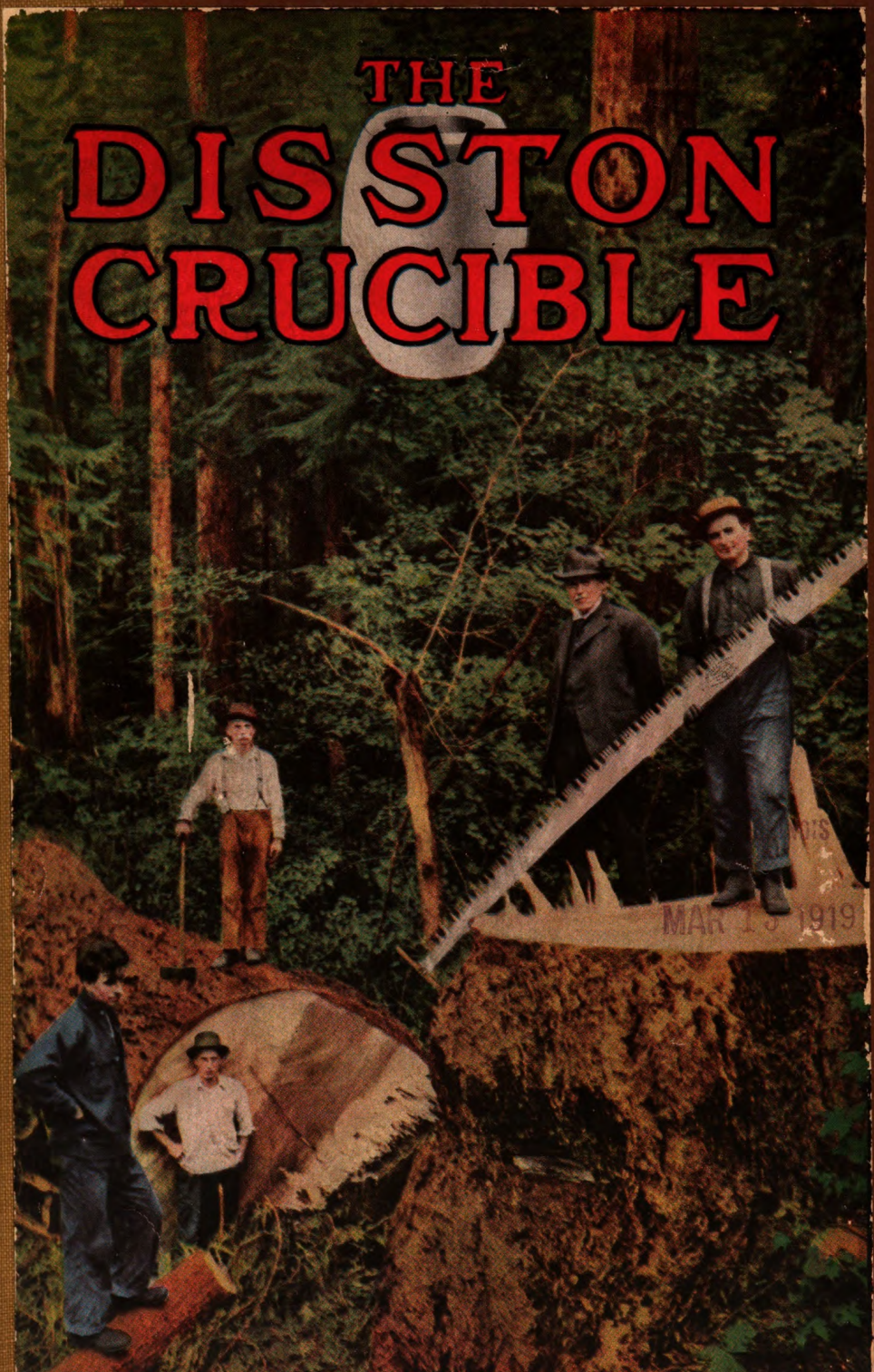
THE DISSTON CRUCIBLE

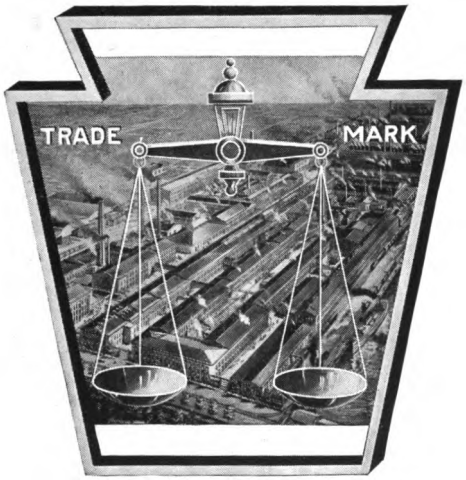


FEBRUARY 1919

THE DISSTON CRUCIBLE

PRICE 10c PER COPY $1.00 YEARLY IN ADVANCE

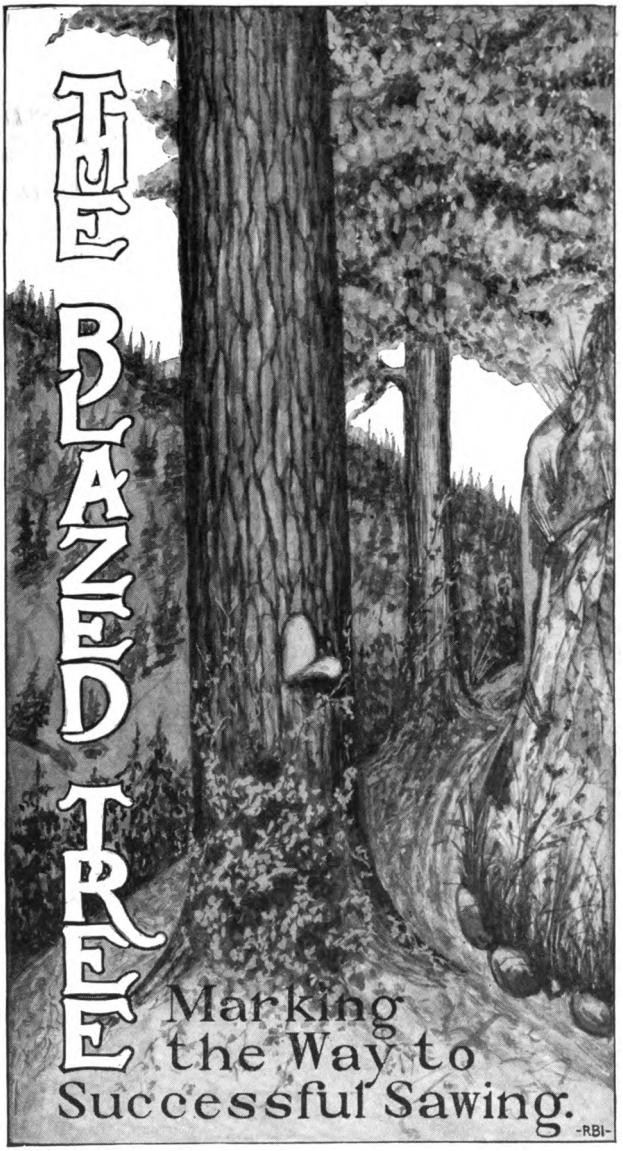
TABLE OF CONTENTS



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



This is a reproduction of the cover plate of our new booklet. It will prove of interest to you. Mailed free.

THE
DISSTON
CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VIII | FEBRUARY, 1919 | No. 1

EDITORIAL CHAT

Luck?

THE thoughtless, the ignorant, and the indolent, seeing only the apparent effects of things and not the things themselves, talk of luck, of fortune, and chance. Seeing a man grow rich, they say, "How lucky he is!" Observing another become intellectual, they exclaim, "How highly favored he is!" And noting the saintly character and wide influence of another, they remark, "How chance aids him at every turn!" They do not see the trials and failures and struggles which these men have voluntarily encountered in order to gain their experience; have no knowledge of the sacrifices they have made, of the undaunted efforts they have put forth, of the faith they have exercised that they might overcome the apparently insurmountable and realize the Vision of their heart. They do not know the darkness and the heartaches; they only see the light and joy, and call it "luck;" they do not see the long and arduous journey, but only behold the pleasant goal, and call it "good fortune;" do not understand the process, but only perceive the result, and call it "chance."

In all human affairs there are *efforts*, and there are *results*, and the strength of the effort is the measure of the result. Chance is not. "Gifts," powers, material, intellectual and spiritual possessions are the fruits of effort; they are thoughts completed, objects accomplished, visions realized.

Quality Tells

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 JANUARY ISSUE]

AND now about the other things, like drunkenness and immorality. Usually these were put fifth, sixth or seventh, in the list, and it is a significant thing that drunkenness was placed before immorality in their condemnation. I think this can be explained by the fact that they are soldiers, and that drunkenness is an open menace to the security of an army. A drunken officer endangers not only the lives of his own men but threatens the success of a whole operation. If he fails in his part of a plan, the whole scheme may come to disaster.

The punishment for drunkenness is, therefore, very severe. A second offense may mean being sent home in disgrace. I know of an officer who, for such an offense, was court-martialed and sent back to America in civilian clothes. I saw him on the train under the charge of two privates from his own company. Imagine the disgrace! I do not know whether this was an exceptional case; but you can readily understand what a terrible thing it would be for any man.

The splendid truth is that our army in France is a sober army. It is the only one in which there is no such thing as a ration of alcoholic liquor. We have the cleanest, healthiest fighting force there is. I was at a meeting in Paris when a French officer, Captain Juillard, said something about the "temperance army."

"What army do you mean?" I asked him.

"You know what I mean!" he laughed.

"Yes," I said, "but I want you to tell it to this meeting, in so many words."

"I mean the American Army," he said.

"Do you approve of our methods in this respect?" I asked.

"I emphatically do!" was his reply.

The American Army in France *is* a temperance army. And I believe it is going to prove that a temperance army can be the finest fighting army, too.

The fact that the men place "immorality" sixth on the list, and sometimes even farther down than that, surprised me at first. I couldn't understand why they had changed it from the head of the list, where they used to put it. But, as nearly as I can explain it, immorality is the *expression* of evil traits rather than a trait of character itself. It is an act, not a quality. And these boys have gone deeper than acts and have taken the qualities which are behind our actions. As I said before, it would be hard for immorality to live side by side with courage—which with them means being faithful to duty; hard for it to live with unselfishness, generosity, and humility.

The very fact that there is a prophylactic treatment for the man who is guilty of immorality perhaps makes the offense seem less terrible to him. There is no prophylactic for cowardice, for instance. There is none for the other sins they put at the head of their list. And from their point of view as soldiers—which we must not forget — immorality does not seem to them the open menace which drunkenness is.

But there is one thing which should be emphasized; and that is the fact that our doctors in France are doing their utmost to make these boys realize, from a scientific standpoint, the gravity of this danger. It is not left to the personal bias of the individual doctor. It is *officially required* that the men shall be warned unreservedly of danger and punished for failure to meet the regulations.

I know that this is being done. I have been in the prophylactic stations when the doctors in attendance did not know I was within a thousand miles of the place. I have been hidden where they could not see me; I have heard how they talked to the men. It is straight from the shoulder! No hedging, no qualifying, no minimizing of the danger. I have heard them say:

"Don't you know, you damned fool, that we can't guarantee you immunity? Don't you know you run the risk of being a diseased man the rest of your life? Cut it out! There's no sense in it. And there's no excuse for it."

When you realize that this is the *official* attitude of an army, you will understand what enormous strides have been made toward clean living. The man who goes

to the hospital because of anything of this sort is punished. If he has serious trouble as a consequence of his act, he is taken out of the army, sent back to this country—to which he has failed in duty—and, as a dishonorably discharged soldier, he may be deprived of his citizenship!

Can you conceive of a greater object lesson to young men? By the action of the military authorities, immorality is placed among the sins which are a public menace. The soldier who commits this sin is convicted of disloyalty to the army of which he is a part; and if he is disloyal to the army he is disloyal to the country which he has sworn to defend. To lose his citizenship is a thing no man can face lightly.

The army is giving its soldiers an education in health and morals which was considered impossible before the war. I talked recently with a returned officer of the medical corps, and he said that, instead of becoming more lax in this matter, now that our troops have become active fighting units, there is a tightening up of the regulations. The vigil is becoming more persistent all the time.

Those of us who have been in France have had a wonderful chance to study human nature. The whole thing has been a series of surprises. Men of whom you expected little have won your respect and admiration by their endurance and courage; while others, of whom you expected much, have astonished you—and themselves—by failing when the test comes.

I remember one of our Y secretaries, a slender, rather delicate man who had been the pastor in a university town. You would have picked him off for a quiet job somewhere in the rear. Yet that man was for months under fire, and kept right on working without any sign of breaking under the strain. One day he was having a class in a dugout which was partly under ground, with a narrow window at the top of the room. As he sat there with his class before him—for the Y has courses of instruction for the boys—a shell burst outside and a fragment came in at the window and went through his hand, splitting it open. He has probably lost two fingers as a result. He walked out, found a doctor, had his hand dressed, and then went to the canteen and began his work there, as if nothing had happened He told me that it didn't seem any more important to him than a firecracker on the Fourth of July, back home.

There was another man who came out to work with the Y who had been a football player in College, a great husky chap who looked equal to anything. And he thought he was.

"Give me a big job near the front," he said, "I'm big and strong, and that's the place for me."

We thought so, too; so he was sent up near the line. The first day he was there a shell came along while they were all at dinner and sailed through the room, in one side and out the other. He went out, got a fragment of it for a souvenir, came back—and went to pieces! He couldn't help it; he simply "broke" then and there, and had to give up and go back.

The whole experience is one of constant surprises. But I believe that to me the discovery of the whole code of morals was the most surprising thing of all. I have come to believe that it is a fundamentally sound code. I, for one, am perfectly willing to go out and preach it. And I believe that our churches will have to take it into consideration in the future. We have laid too much stress on the old surface things, the old taboo acts—dancing, card-playing, swearing, and so on. We have got to follow those boys down to the deeper things which are fundamental; courage, and unselfishness, and generosity, and humility. When you come right down to it, those are the very things which Christ preached, the very lessons which the Great Teacher Himself tried to set before the world.

What Constitutes Success

He has achieved success who has lived well, laughed often and loved much; who has gained the respect of intelligent men and the love of little children; who has filled his niche and accomplished his task; who has left the world better than he found it, whether by an improved poppy, a perfect poem or a rescued soul; who has never lacked appreciation of earth's beauty or failed to express it; who has looked for the best in others and given the best he had; whose life was an inspiration; whose memory is a benediction.—*Mrs. A. J. Stanley.*

Possibilities of Future Airplane Spruce Production in the Pacific Northwest

AXEL J. F. BRANDSTROM

THE advent of the airplane and its manufacture on a large scale have created an exceptionally heavy demand for suitable construction material. Since spruce most satisfactorily meets the stipulated requirements, combining, as it does, lightness, strength and reliability, including freedom from shattering, it has now come into general use for this purpose, and will undoubtedly become established as the most valuable wood in airplane building, both for the struts and the beams.

It is only natural that the Pacific Northwest with its extensive stands of spruce, and, above all, its gigantic straight-grained timber, which yields the best grade of airplane stock, should be called upon to supply the greater part of this abnormal demand. The fact that private industry has been unable to meet the present demand is by no means indicative of a continuous failure of airplane spruce production in this region. The labor shortage and the recent labor unrest, coupled with an unprecedented demand and subsequent inability of private capital to properly finance the necessary expansion of the industry, fully explain the present situation. As the Federal Government recently has taken the necessary steps to insure a successful realization of its gigantic aircraft program, the problem of ample production for the duration of the war may be considered as solved, if men of sufficient caliber can be found to carry out such intended measures.

The question of how great the demand for airplane spruce will be since the conclusion of this world conflict is, as yet, largely a matter of speculation. That there will be a sudden relaxation is evident and that the demand will be ebbing for a few years is likewise beyond doubt. However, it need not be feared that the industry will ever come to a standstill. The numerous inventions for improving the airplane that have been brought about in the last few years, chiefly for war purposes, have probably brought the airplane nearer perfection than decades have done under ordinary conditions. Once the airplane has become established as a feasible means of peace-time transportation, the airplane industry will undoubtedly experience an expansion similar to that of the automobile industry of this country. Then the need of an adequate supply will be far more accentuated than is now the case; in short, this region with the greatest potential possibilities of supplying the raw material will become the center of the industry.

A superficial analysis of the present airplane spruce situation in this region as regards available supply and its accessibility would by no means reveal the great potential possibilities which forever will make the Pacific Northwest the principal source of airplane stock. On the other hand, available figures, though incomplete and unreliable, are of great interest, as they very plainly illustrate the chances of an eventual spruce famine in this region. According to official estimates, summarized in the *West Coast Lumberman* of March 15, 1918, the amount of spruce in Washington and Oregon, available for immediate utilization, aggregates about eleven billion feet board measure. "Of these eleven billion feet, four billion is reasonably accessible or could be made accessible by short extensions of existing transportation routes; two and one-half billion feet is in large bodies, so inaccessible at present that extensive construction would be necessary in order to reach it." The remaining four and one-half billion feet consist either of timber of comparatively low grade or is growing in mixed stands, making it necessary either to leave this timber untouched until logging of its associated species would become feasible, or to build up an extensive system of railroads for the single purpose of getting at this scattered spruce. In the *Journal of Forestry* of December, 1917, the figure for the total amount of standing spruce in Washington and Oregon is placed at twenty-five billion feet board measure, while the present demand for airplane stock is estimated at one hundred and fifty million feet board measure; "but since the average timber will not yield to

[*Continued on page 10*]

Today

By Douglas Malloch

Sure, this world is full of trouble—
I ain't said it ain't.
Lord! I've had enough, an' double,
Reason for complaint,
Rain an' storm have come to fret me,
Skies were often gray;
Thorns an' brambles have beset me
On the road—but, say,
Ain't it fine today?

What's the use of always weepin',
Makin' trouble last?
What's the use of always keepin'
Thinkin' of the past?
Each must have his tribulation,
Water with his wine,
Life it ain't no celebration.
Trouble? I've had mine—
But today is fine.

It's today that I am livin',
Not a month ago,
Havin', losin', takin', givin',
As time wills it so.
Yesterday a cloud of sorrow
Fell across the way;
It may rain again tomorrow,
It may rain—but say,
Ain't it fine today?

—*From the Sheet of Brass.*

"C'est Ca."

I shorely ain't much ov a soldier,
Er else they w'uld give me a gun,
Instead ov a ax an' a crosscut,
Fer fightin' agin th' dern Hun.

I'll own that it shore is some safer,
Plump back from th' hell-scrappin line;
An' yit, jest a-thinkin' o' safety
T' me don't appear very fine.

There's never no chanct t' git medals
That'll shine mighty bright on your breast,
When once y'u git back t' th' Homeland
An' settle right down fer a rest.

An' even th' bloomin' ole papers
Don't carry no picters ov us;
In some ways we might as well be
A thousand o' miles frum th' fuss.

An' yit I jest kaint help a-thinkin'
O' what in th' devil we'd do
With nothin' but crosscuts an' axes—
If ever them bosches got through.

CORP. VANCE C. CRISS, Engrs.,
in Philadelphia Sunday *Press*.

As It Is Done on the Other Side of the World

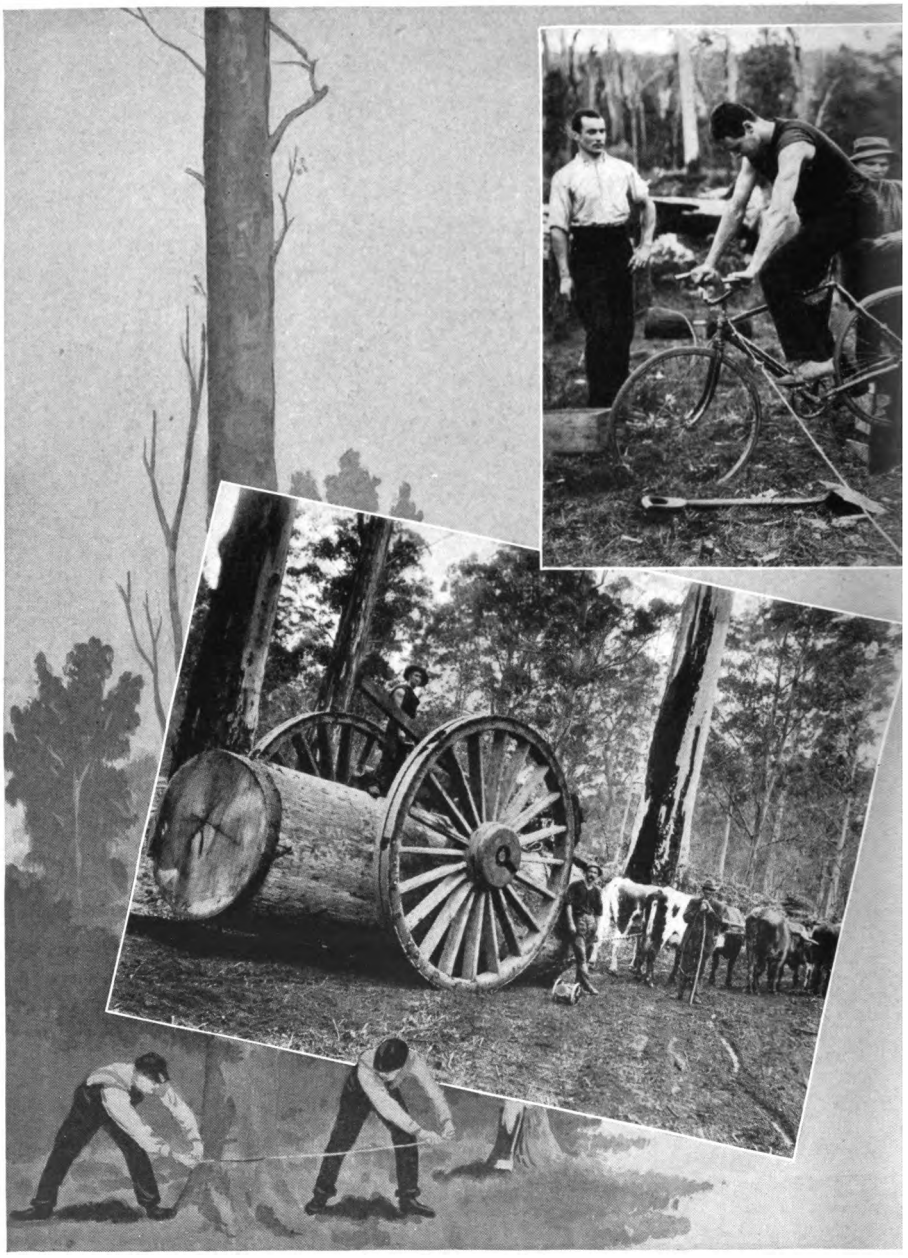
THE lumber business in Australia, as most lumbermen in America know, is quite a few years behind the times, but few of them realize how far behind they are out there with their logging operations in the woods. When you see the elaborate sky-line systems and the great bull donkeys in the woods over here the methods shown by these pictures seem very primitive. Most of the logging in the winter is done by snaking the log along the ground with either horses or bullocks. Some of the more "modern mills" have installed the steel cable, but comparatively few. The winter is generally considered the best time to log in Australia, as the ground is slippery enough as a rule to snake the log along the ground. In the summertime, the more expensive way of hauling them, as shown in the views, is resorted to. The vehicle is known as a "Whim." It is simply two huge wheels, generally from eight to ten feet in diameter, mounted on an arched axle with a short pole attached to the axle. The "Whim" is drawn astraddle the log, and the axle pulled down onto the log. This raises the pole up into the air, and by putting a chain around the log and fastening it to the axle, it is only necessary to pull the pole down to raise the log off the ground, all the weight being then on the wheels. It is then pulled either to the mill or the log-landing in the bush. On most landings they have a small donkey to load the logs onto the log cars.

These pictures may help to dispel the delusion very popular in this country that the timber is very small and the forests scanty in Australia.

The operations shown are at the State Sawmills, at Pemberton, West Australia, and the timber is a particularly hard, cantankerous species of eucalyptus, known as karri. It is a common thing to see logs eight and ten feet through and with considerably over a hundred feet of barrel up to the first branch.

The picture on pages 8 and 9 showing myself on the wheel is one method we had of gulleting our Crosscut saws. It was rather laborious, but effective.

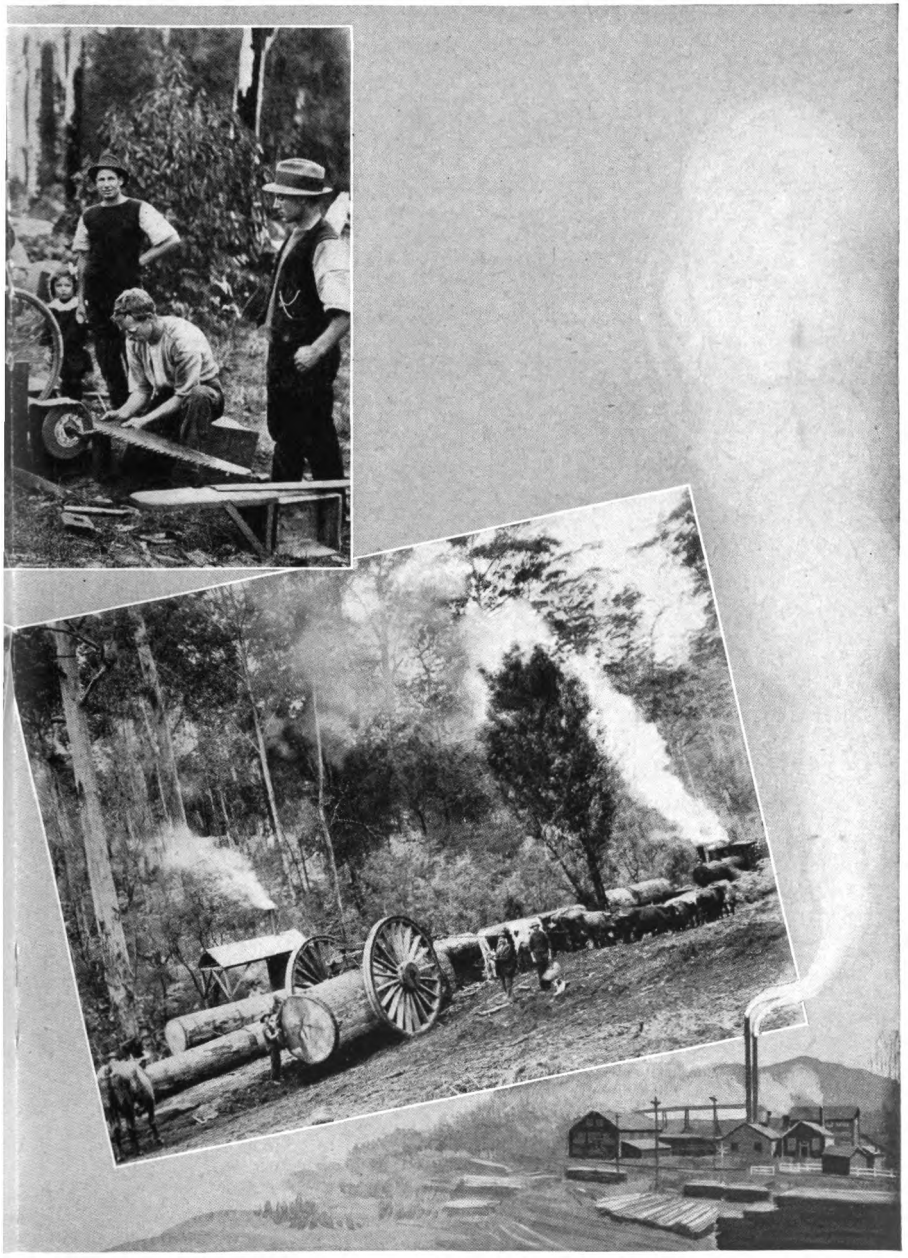
DAVID FRASER,
Glenfern Road,
Upway, Victoria, Australia.



Hauling timber with the aid
of a "Whim"

AS IT IS DONE IN AU

A laborious but effecti
crosscu



AUSTRALIA (See Page 7)

ctive method of gulleting cut saws

One of the State Sawmills at Pemberton, W. Australia

BRIDGE OF SHIPS ACROSS THE SEA

NOT long ago we were talking of our bridge of ships across the Atlantic. Many doubted it could be done. Others believed in it. From the files of the Lumber Department, Supply Division, United States Shipping Board, Emergency Fleet Corporation, came the following facts: For the requirements of the 275 wooden ships in the course of construction on the Atlantic and Pacific coasts approximately 425,000,000 feet of lumber have been requisitioned, or enough to make a bridge floor twenty-six feet wide, and one inch thick and more than three thousand miles long.

—*Popular Magazine.*

Possibilities of Future Airplane Spruce Production in the Pacific Northwest

[*Continued from page 6*]

exceed 15% of this grade, one billion feet board measure must be cut annually." With an annual demand of about one billion feet, and giving a liberal allowance for the growth in the meantime, which, as a matter of fact, does not amount to much in the practically mature spruce stands of this region, the supply would become exhausted in less than thirty years. Taking it for granted that the present abnormal demand will be of no longer duration than the war, after which it will again resume fairly normal proportions, the stern fact still remains that we by no means can look upon this supply as an inexhaustible natural resource, unless measures are taken to insure its perpetuation and expansion. According to statistics the normal consumption of spruce in Washington and Oregon aggregates about three hundred million feet board measure annually. Taking this into account and allowing for a normal increase due to increasing population, and on the assumption that the same forest policy will be pursued in the future as in the past, i. e., letting private timberlands remain subject to a process of timber mining, we can very plainly realize how soon we will begin to feel the pinch of a steadily increasing shortage. Adding to this the probability of an enormously increased demand, due to the rapidly expanding airplane industry, even though this might be partly offset by curtailing the wasteful use of this valuable timber for nonessential purposes, it appears that the day when we actually will be facing an airplane spruce famine is not put off more than a few decades.

It is safe to say that such will not be the case, for the application of scientific forestry in Europe has repeatedly illustrated the fact that it by no means is beyond human power to prevent such a calamity. And there is no apparent reason why scientific forestry, if practiced, should not be the best safeguard against a possible timber famine in this region, as well as in Europe, if we would only make up our minds to follow the rule of "making hay while the sun shines." This can be best done by taking all necessary protective measures now, while we have the timber—while there is something left to conserve. Nowhere in the world are there finer specimens of ideal airplane spruce trees of all dimensions than right here in the Pacific Northwest. While fifty or sixty years hence, gigantic spruce trees, like those that are now being converted into airplanes, probably will be listed among those strange things that belonged to "the good, old times," we may expect to find numbers of healthy, vigorously growing trees in place of each one of these old-timers. And if, as we have very good reason to expect, this war will open the eyes of the American public and its representatives to the urgent need of pursuing a wiser forest policy than hitherto by putting all our forests—both public and private—on a scientific basis, then, and then only, may we rest assured that the Pacific Northwest for all time to come will "do its bit" toward building up—and keeping up—the mighty airplane traffic of the future.

The University of Washington Forest Club Annual—1918.

Distinguishing Marks
of the
United States Army and Navy

[CONTINUED FROM JANUARY ISSUE]

Rating Badges and Distinguishing Sleeve Marks

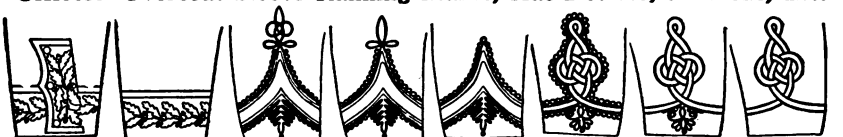
Rating Badges on blue uniform have white eagle and marks (except Hospital C., red) with red cloth chevron bars. Petty officers, receiving three consecutive good conduct medals, wear gold chevrons. On white uniform, Rating Badge is entirely blue (except Hospital Corps red mark).

Chief Quartermaster Naval Flying Corps | Machinist's Mate, Naval Flying Corps | Carpenter's Mate, Naval Flying Corps | Chief Master at Arms | Boatswain's Mate 1st Class | Gunner's Mate 2nd Class | Quartermaster 3rd Class | Torpedo Man | Ex-Apprentice

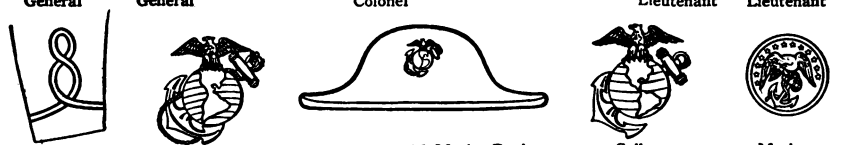
Expert Rifleman | Ship's Cooks, Bakers | Bugler | Seaman Gunner | Gun Captain | Gun Pointer 1st Class | Gun Pointer 2d Class | Excellence (Merit Mark) | Radio Operator

UNITED STATES MARINES

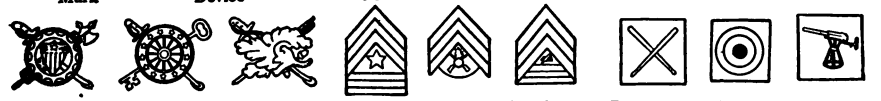
Officers' Overcoat Sleeve Ranking Marks, Hat Devices, Chevrons, Etc.



Major General | Brigadier General | Colonel | Lieutenant Colonel | Major | Captain | First Lieutenant | Second Lieutenant



Warrant Officer's Overcoat Sleeve Mark | Hat, Cap and Helmet Device | Steel Helmet with Marine Device, worn by U. S. Marines on French Battlefront | Collar Device | Marine Button



Adjutant and Inspector Dept. | Quartermaster Dept. | Paymaster Dept. | Drum Major Chevron | Gunnery Sergeant Chevron | Pay Sergt. Chevron | Drummer Chevron | Navy Expert Chevron | Gun Pointer Chevron

Ranking devices of the Marines are generally similar to Army; most of those differing are shown here. Marine chevrons are red on winter field forester green uniform. Summer field uniform is lighter khaki than Army. Marines wear Corps device on service hat, cap and steel helmet. Officers wear hat cord of gold striped with red; men, no cord. Men's summer field coats have top pockets only; men wear trousers, with leggings added for active service; officers wear breeches. Overcoats have shoulder loops and loop insignia. Major General is highest ranking officer. Marine Corps is part of U. S. Navy but on French front is under War Dept. Devices of the three Marine Corps departments are shown above.

Courtesy of United Cigar Stores Co. of America.

THE UNITED STATES A GOING CONCERN

THERE is a passing uneasiness in the public mind in the United States which is manifesting itself in various ways. The war has shaken individuals out of their former easy habits of thinking—or not thinking—and the acquisition of knowledge is proving acutely painful to many kinds of brains. Some of them are unequal to the strain of absorbing truth. They are turning sour, pessimistic or bolshevist, according to the temperament of the individual. One type of mind that seems to be increasing in numbers is that which would throw away all the good that has been acquired through a century of effort, to embrace notions that cannot stand ten minutes of quiet analysis. This kind of hair-trigger American is reveling now in the chaotic state of affairs hoping to see a complete overturn in which he will stand a chance of grabbing some advantage which he cannot hope to acquire in honest competition with his fellows.

The fault however, does not lie with the shallow-pated or the merely unripe intellects. Some of the strongest business men in the country are behaving as though their brains had deserted them. Instead of concentrating upon the new problems that are presented and quietly conferring upon ways and means to cooperate on a sensible course of action, they are throwing fuel upon the bolshevik bonfires by ill-considered speech and unwise acts. Others have drawn into their shells, refusing to loosen their minds or their pocketbooks for the sake of keeping the wheels turning. They excuse this turtle-like maneuver by asserting that "no one knows what is coming," and "we must wait to see what the peace conference will will do," or similar nonsense.

Of course, no one knows what is coming. But is it not presumable that the richest, strongest, most solvent, most active and most independently-placed nation in the world will continue on the map? Surely that is not a violent assumption, although, strictly speaking, it is no more capable of demonstration than any other future proposition. It is suffiicient, however, for the ordinary American if he will but stop to think that he and his fate are bound up in the fate of the country. If the United States is to go down, the average American would just as soon go down with it; and if the United States is to go forward, the average citizen is satisfied to go along, rather than seek his fortune in other countries.

The banks are bulging with money. The people of this country are rich. Their Government borrowed billions, but it borrowed from the people who have recovered most of the money in business and at the same time hold the bonds, which are drawing interest. The bankers of the country are cautious—a good trait in bankers, if it does not degenerate into mere sheepish timidity. Would it not be well for the bankers to examine themselves and the country and ask if they are not a bit too cautious for the best interest of all concerned? Does the United States depend upon the peace conference after all? Is it not rather a fact that the United States has been held back too long in its normal domestic development until it is too cramped? The 100,000,000 individuals of this country want more railroads, more buildings, more homes, more schools more churches, more suburbs, more farms, more gardens, more of everything that brings comfort. Why shouldn't the people have what they want when they have the money to buy it?

With all due respect to the strength of the late German Empire, it seems to us that too many Americans are conceding too much to the prowess of the enemy when they are afraid to go forward in business because of "unsettled conditions." Are they afraid that Germany will come back and start another war? Not a chance! Nor will anybody else start a war that need bother the United States. This mighty, eager nation is suffering now from nothing more than a false state of mind on the part of its own people. They have been shaken and are uneasy. Let them think twice and they will perceive that the old United States is intact, bigger and richer than ever, with greater prestige

abroad and greater markets both at home and abroad than ever before. The victory of liberty did not hurt the United States, however terribly it wounded Germany. The free nations will give us a better market than Germany ever dreamed of giving. All that Americans need to do now, if they wish prosperity, is to cut out foreign notions of government, throw away their worry over the peace conference and the settlement of foreign questions, roll up their sleeves and get busy.

Editorial from *The Washington Post*, Jan. 29, 1919.

Thriftograms

By ABRAHAM LINCOLN

Keep pegging away.

Answer with facts, not arguments.

We all like the man who "sticks through thick and thin."

The value of life is to improve one's condition.

Nothing is so local as not to be of some general benefit.

May the vast future not have to lament that you neglected it.

Shall he who cannot do much be for that reason excused if he do nothing?

What is it that we hold most dear? Our own liberty and prosperity.

Be a patriot! Don't mar the immortal emblem of humanity, the Declaration of Independence.

The hired laborer of yesterday labors on his own account today and will hire others to labor for him tomorrow.

Teach economy, that is one of the first and highest virtues. It begins with saving money.

Follow Lincoln's advice—you have the opportunity. All he says here applies to you now. Buy War Savings Stamps and Thrift Stamps.

We must all do our best to make the change from War Work to Peace Work as easy as possible. Co-operation is the Big Thing needed NOW.

U. S. DEPT. OF LABOR,
WM. B. WILSON, *Secretary*.

Forest Studies in Canada

Owing to the tremendous consumption of timber and pulp, the exhaustion of Canada's forest resources can no longer be regarded as an eventuality of the indefinitely remote future. Regulative measures are accordingly in order; but these must be based on scientific information, little of which has heretofore been available. In order, therefore, to obtain the scientific background for future remedial steps, as well as to curtail present wasteful practices, the Advisory Board of the Forestry Branch of the Dominion Department of the Interior recommended that a complete inventory be taken of the standing timber of eastern Canada, that a quick reconnaissance survey be made on the conditions of all cut-over lands, that a study be initiated of the possibilities and the successful methods of insuring reproduction of the more important timber trees, with special attention to white pine and spruce, and that an early determination be made of the volumetric rate of growth of the principal species, both when isolated and when in forest stands, in order that calculation against the future may be possible.

Some of this work has been attacked before, both in Canada and elsewhere. The Commission of Conservation has covered a good deal of the ground mentioned with reference to British Columbia and Nova Scotia. The study of reproduction rates of European trees has been undertaken, and a beginning has been made in the United States.

In view of all this, when the matter was put before the Dominion Research Council, it was suggested that the investigations in question be made on the Petawawa Military Reserve. Of this reservation only 25 square miles is in actual military use, the remaining 80 square miles being available for other purposes, and constituting ample territory for much of the proposed work. The reservation is part of an old cut-over timber district, on which second forest has begun to develop, and the timber now present is at a stage of growth that renders it highly suitable for the project in hand. In 1917 the Research Council recommended that a grant be given to carry out the investigation.—*Selected.*

French Lumbering

As Viewed by a Washington Forester

THE following letter received from Isaac J. Crumb, Sergeant, Company D, 10th Engineers (Forestry), who left the College of Forestry of the University of Washington during the first month of the war to enlist, gives some very interesting sidelights on French forests and how they impress the foresters from the state of Washington. The letter, in part, follows:

"There are a number of University of Washington foresters in France. Many are in the 10th and 20th Engineers (Forestry). As you know we are 'lumberjacks' and are doing our small 'bit' by furnishing lumber of every description for our troops. Our regiment has been divided, some going north, east, south and west, to the timbered regions of France. We are doing everything from felling to transporting the milled product. We have constructed our own buildings, barracks and mills. We have built stoves, bakeries, field kitchens and all our camp equipment. Our mills are designed to cut from 6,000 to 10,000 feet per day for the portable types, to 35,000 feet B. M. for the stationary ones. Of course, we run the mills night and day. In the logging operations we are skidding with horses and roading with motor trucks, drays, wagon trucks or sleds, according to the varying conditions. In this camp we are hauling logs on sleds, as we have had cold weather, with plenty of snow. Twenty inches of snow is the most that has fallen. My company is now located near one of the large coniferous forests of France. The stands are very pure fir (Abies) or pine. The fir resembles our white fir, and the spruce in these forests is much like Sitka spruce. The timber is not large. A fir 40 inches in diameter, breast height, is an exceptional specimen. The logs number usually about eight per 1,000 feet B. M. Trees 90 to 100 feet high are about 120 years old. A stand of from 35 to 40 M. feet B. M. per acre is considered very good.

"All lumber is scaled in cubic meters and the areas are all in hectares. French forests are mostly artificial and are well cared for. A forest here certainly does not look much like the lumber woods of Washington. The French do their logging with bulls; frequently one sees ten or twelve bulls hitched to one log. They haul the entire tree to the mill and cut it into the desired lengths on the log deck. The logs are loaded on the trucks with hand jackscrews.

"The forests are traversed by many good roads. France is a land of beautiful roads. The French often haul their logs ten miles to the mill. All French mills that I have seen have upright saws and vertical engines. The saws are fastened in a frame by means of keys, and the logs are fed into the saw by a ratchet wheel turned by hand. The entire log is sawn into boards in one setting. The French manufacture fine lumber, but certainly take their time about doing it. Much of the common work is done by women. Part of this company has taken over a French mill and are operating at night, the French working during the day-time. The French cannot 'compre' our speed in doing things.

"I can only deal in generalities because of the censor. I am glad to be here doing my 'bit,' but regret that I could not return to school. I have been in charge of mill construction, but since coming here expect to go with 'Paul Bunyan' into the woods when things get to going better in the mill. I should be glad to hear from any of the fellows. I send regards to all and wish them well."

Forest Club Annual.

"EVER READY"

SAW DUST

USUAL OCCURRENCE

It was a dark and stormy night, also very late. I wanted to see Dan Kelley. From the hotel they directed me through devious ways which were hard for a stranger to comprehend. I arrived at what I guessed might be the place and to the lady who opened the door I inquired, "Is this where Dan Kelley lives?" Without hesitation she answered, "Yes, bring him in."—*Just a Little Better.*

NO WASTER

"Urry on, please!" urged the guard.

The stout lady struggled to enter a narrow carriage-doorway, but struggled in vain.

"Urry on there!" yelled the guard, approaching her with fire in his eyes. "Urry on! Git in edgeways, mum! Git in edgeways."

The would-be traveler showed a red, perspiring face over her plump shoulder, and regarded the official with an angry glare. "An' wot," she snapped bitterly, ceasing her endeavors for the moment, "Wot if I ain't got no edge?"—*The Salt Seller.*

A certain learned Queen's counsel was arguing a commercial case before a learned judge. In doing so, he had occasion to speak repeatedly of an "eccentric," and the judge at length asked him what an eccentric was. The magistrate said he was familiar with the term as applied to individuals, but not to things. The Queen's counsel at once complied. "An eccentric," he said, "is a circular disk whose center is not in the middle."—*Ex.*

A FATHER'S FORESIGHT

Some one noticed that Pat used both hands equally well. "When I was a boy," he explained, "me father always said to me: 'Pat, learn to cut your finger nails with yer left hand, fer some day yez might lose yer right hand.'"

—Elmer N. Herman, N. Y.

HE TAKES THE CAKE!

Billy Sunday converted a Japanese recently, who was a butler. The next day his hostess had a large dinner party and the Jap was told to do his best. Course after course came on and the guests were delighted with the dinner. Finally the Jap brought on a huge cake, as a final touch, and remembering that Billy Sunday had closed his service with prayer, the Jap figured out that he should close the dinner with a religious sentiment. Not knowing much of the language or of the Bible, he decided to choose the phrase which converted him. So the guests were amazed to find on the cake in sugared writing: "Prepare to meet thy God."

"I tell you, gentlemen," said the great explorer to the crowd in the hotel smoking room, who were listening breathlessly, "you can't imagine what things are like out in the Arctic regions!"

"Oh, I don't know!" said one. "Even if we haven't seen it, we can imagine what it feels like!"

"I doubt it. It's impossible until you've seen it; until you've stood there, a small, insignificant atom, surrounded by vast stretches of white—"

"Yes, I know. I've been like that."

"Really? Where was it, may I ask?"

"First time I appeared in public in a dress shirt!"—*Ex.*

"What are the passengers looking out of the windows for?" asked a nervous lady of the conductor.

"We ran over a cat, madam," said the conductor.

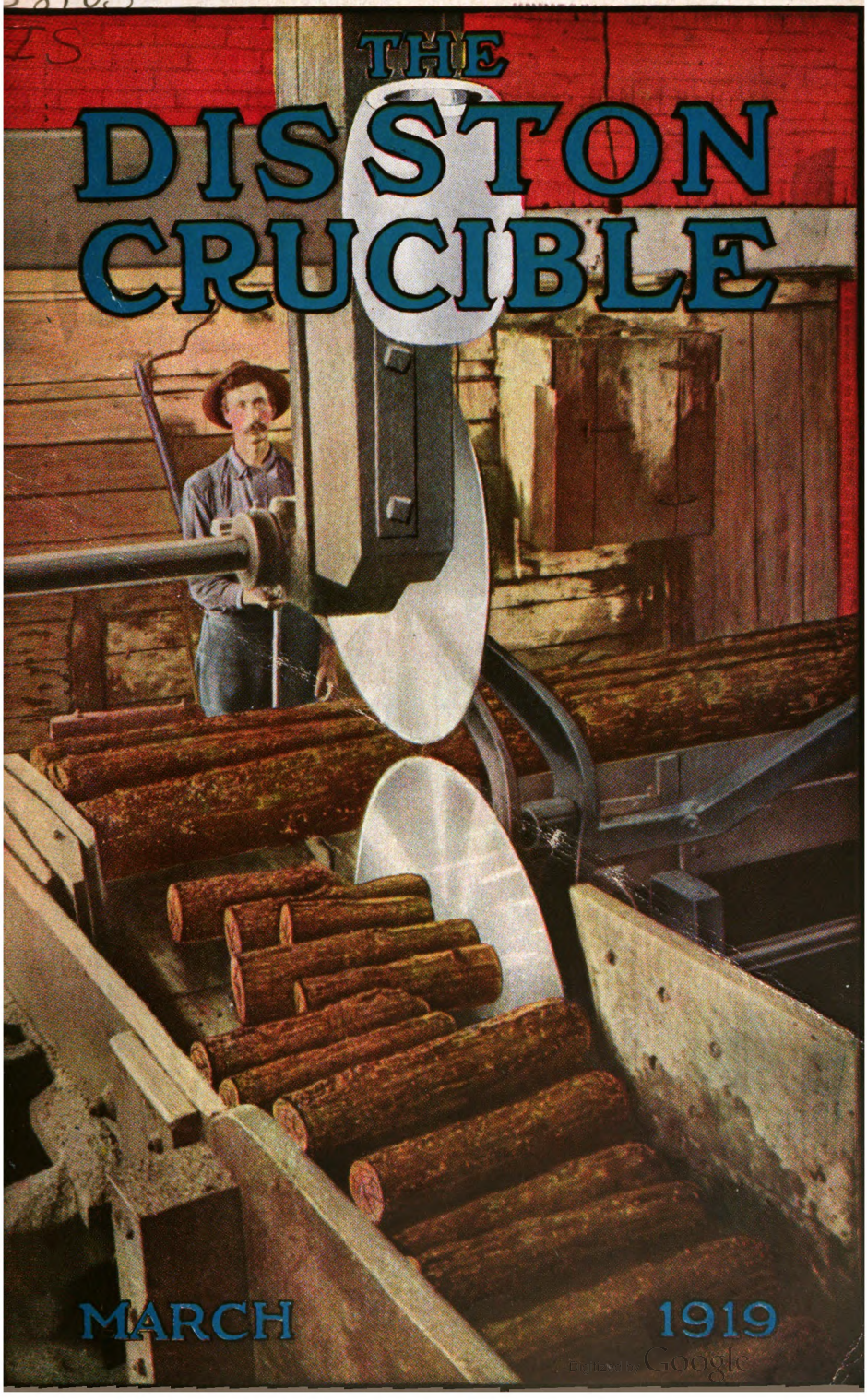
"Was the cat on the track?"

"Oh, no, madam, the locomotive chased it up an alley."—*Ex.*

Teacher—"Johnnie, how did they discover iron ore?"

Johnnie—"I heard father say they smelt it."—Conn.

THE DISSTON CRUCIBLE



MARCH 1919

ASK THE MAN WHO RUNS ONE

He will tell you that he has found

DISSTON BAND SAWS

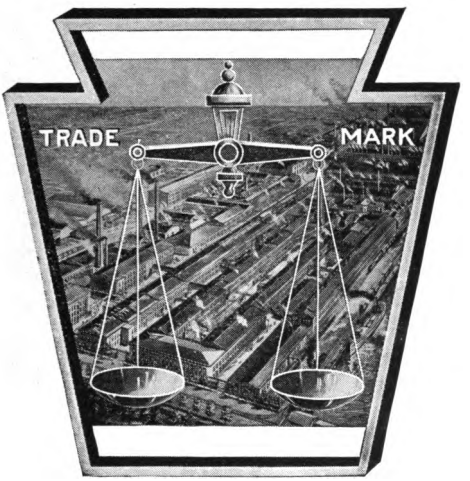
the most satisfactory, and the most economical, because they hold their tension, cutting edges, and corners under the greatest amount of feed for the longest possible time.

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

THE DISSTON CRUCIBLE

PRICE 10c PER COPY **$1.00 YEARLY IN ADVANCE**

TABLE OF CONTENTS



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

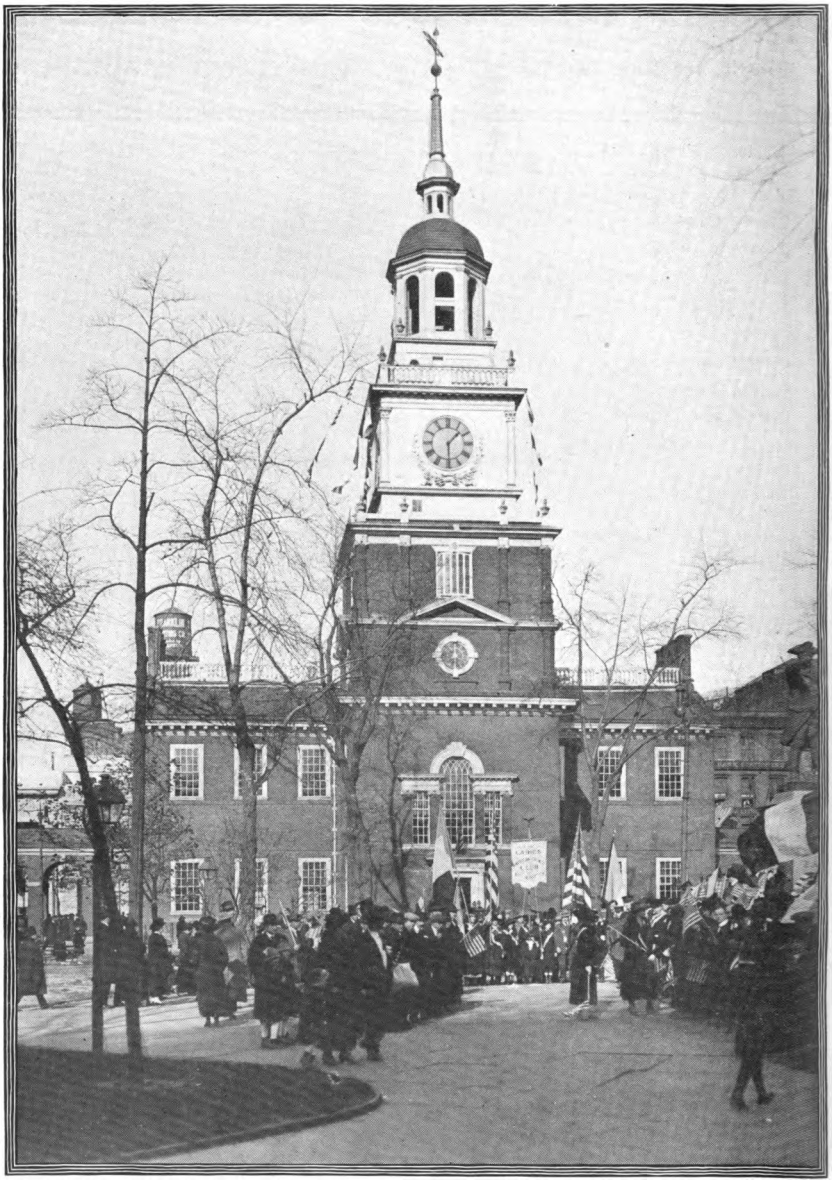
HENRY DISSTON & SONS

INCORPORATED

Keystone Saw, Tool, Steel and File Works

PHILADELPHIA

BRANCH HOUSES: Chicago, Ill.; Boston, Mass.; Cincinnati, Ohio; Seattle, Wash.; Portland, Ore.; New Orleans, La.; Memphis, Tenn.; San Francisco, Cal.; Sydney, Aus.; Vancouver, B. C. Canadian Works: Toronto, Canada



Photograph of Independence Hall, Philadelphia, taken by Privates Ralph W. Young and Chas. P. Jones on the day Armistice was declared.

THE
DISSTON
CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VIII | MARCH, 1919 | No. 2

EDITORIAL CHAT

Be Sensible

THINGS are not always so bad as they seem. Usually there is too much talk, too much agitation about unsettled conditions, lack of work, the restlessness of labor, more so than is warranted by actual conditions, and this can only serve to breed discontent.

Before joining in a general acclaim, it is well for each and every one to view the existing facts, and consider both sides of the question. Are things really so bad as some would have us believe? Is it not but natural, owing to the great changes caused by the recent war, for business and work to run out of the regular channel? And is it not just as natural, if we are patient and assist in every way possible, for matters to resume their regular course?

There is every reason for continued faith in our great and glorious United States. It has firmly established its principles, which surely will never be changed. Its resources, wealth and power are immense and, continued to be wielded for the good of mankind, the glowing prestige of this country will expand and its prosperity increase.

The vital factors in the upbuilding and maintenance of a Nation, as well as of a business, are faith, loyalty and work.

Quality Tells

With the Wounded

By JOHN P. FREY

THIS article appeared in the "Horseshoer's Magazine," and is reprinted here for the reason that it contains such a graphic description of the shocking horrors caused by the war, unthought of and unrealized by those who remained at home in comparative peace. The description of the intense suffering, horrible mutilation and vast destruction must produce such an indelible impression that it will ever arise when thought of war is mentioned.

We were passing over a road which had recently been heavily shelled, and the bellowing thunder of guns in front told the story that the battle was still actively in progress.

A short distance ahead there were several dug-outs in a hillside, and as there seemed to be considerable activity, we left our automobiles to meet whoever we might find at the spot which had attracted our attention.

On reaching these dug-outs we found that we had come upon a first-aid station, where one or two doctors and a number of Red Cross workers were engaged in giving temporary relief to those who had been brought back from the front.

Some of the wounded had been able to walk to the station, their wounds not having prevented this; others had been able to come with but slight assistance, while a number were being carried on stretchers. There were bullet wounds which had to be staunched; there were cases where shrapnel had torn and mangled flesh and bone to such an extent that unless arteries were immediately tied up the wounded would die long before a base hospital could be reached. Bullets had furrowed scalps; shrapnel had torn them loose; splinters of steel and iron and wood had been driven through the flesh; clothing and the mud of the trenches had entered into many of these wounds, and all these had to receive prompt attention if a soldier's life was to be saved. Broken bones were placed in temporary splints; heads were bandaged; lacerated bodies were given temporary relief; and kind faces with cheering words helped the sufferers as they were carried away.

Some spirit of wonderful fortitude and heroism had entered the wounded. Every man made light of his own wounds, and none seemed to be particularly depressed. Occasionally a groan might be heard, but where the wounded were conscious they seemed more inclined to make light of their troubles than to complain. Everyone seemed to think that his condition might be much worse than it was.

These first-aid stations were anything but inviting places. There was none of the spotless cleanliness, the whiteness of walls, and the well-kept beds which are found in hospitals. These first-aid stations were emergency places, shifting as the tide of battle shifted, the surgeons and nurses who worked in them performing their labor under most difficult, dangerous and harrowing circumstances.

Just as battles do not stop with sundown, or when a whistle blows, so the attendants at the first-aid stations were called upon to work night and day, frequently short-handed, and often to a point where complete physical exhaustion forced a temporary rest. But the work which they performed saved hundreds of thousands of lives, and enabled the base hospitals to accomplish results which could never be obtained had it not been for these great-hearted brothers and sisters of mercy who, frequently under shell-fire, gave attention to the injured as rapidly as they could be brought back from the front.

While the wounded were waiting their turn a chaplain would frequently go from man to man, talking with them, and inquiring if there was anything he could do to be of assistance.

Many of these chaplains wear hero medals because they went over the top in more than one instance with their own men, and because of the wounded they had rescued while under fire. And these chaplains did something more, for, laying denominationalism to one side, they gave spiritual assistance to every one, regardless of their faith.

There is the touching story of the Jewish Rabbi's lifting the cross before the rapidly dimming eyes of a dying Catholic; of Protestant clergymen placing rosaries in the hands of the dying soldiers; of Catholic clergymen holding the hand and offering up prayers by the death-bed of Protestants; of their tender care of Jews during their last moments. In the stress of battle where all men fought for one high purpose, denominationalism found but little place—men were men; they had risked their lives in their country's defense, and, if the enemy got them, they were the children of the Great Creator, the Father of all.

On the battlefields, in the carnage which occurred, denominationalism did not separate men from each other. The chaplains of all creeds gave assistance and comfort to all of those with whom they came into contact, and particularly was this true with the mortally wounded. So far as the soldiers' opinions were concerned—and we heard many of them express themselves—it was not the chaplain's denomination, but the kind of man he was, which influenced them as much, if not more, than anything else; chaplains being popular or unpopular depending upon the qualities which they possessed.

From the first-aid stations the wounded were carried in litters and ambulances to the nearest railroad, and then taken by train to a base hospital. Some of these were of enormous extent, being able to care for several thousand wounded at one time.

It was because we were impressed by sentiments of duty more than anything else that we visited these, for we knew that they were places of suffering, sometimes of the most intense kind, and that the sights which would be witnessed would leave their depressing recollections for many days. But the work which our surgeons and nurses were doing, and the necessity of a strange face now and then going through the wards and talking to our soldier boys, led us to inspect several base hospitals, including the largest built by the American forces.

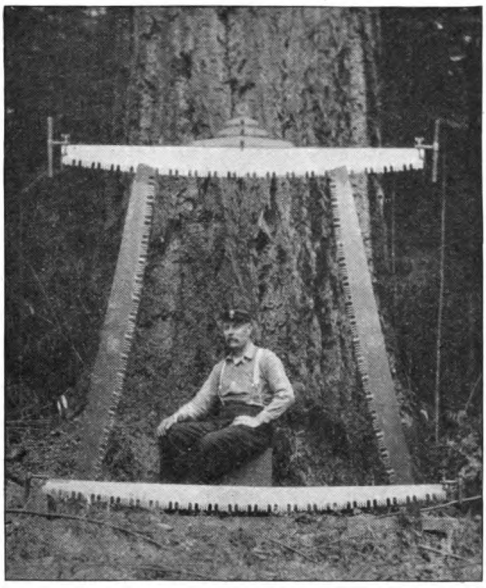
We arrived at this place while our troops were engaged in a severe battle. Traveling over the roads with us were long lines of ambulances. We found the hospital courtyard filled with them, and when we entered the receiving station the space was filled with stretchers upon which the wounded rested, awaiting their turn in the operating room. We entered this chamber of skill and science, where some of the most wonderful surgery the world has ever known was being performed.

The battlefields, strewn with the wreckage of war, covered with the bodies of dead men, torn and mangled with shell-fire, create emotions which are difficult to overcome. But nothing can touch the heart more deeply than to enter a large operating room while the entire staff is occupied in salvaging human bodies and saving life.

The atmosphere reeks with the fumes of chloroform; long rows of bright surgical instruments meet the eye, and each of the many operating tables carry the unconscious forms of wounded soldiers. At one table, a bare and blood-covered arm showed where a bullet had splintered the bone, and we saw the surgeons extracting fragments of bone from the open wound, tying the tendons together, and so repairing the injury that in time the victim's arm may again be of service to him.

At another table was a bloody mass which had once been a human face, more than half of which had been carried away by a shell fragment. Quickly and skillfully the destroyed portions were removed with the surgeon's scalpel, severed nerves were united, folds of sound flesh were detached and moved to a new position so that the scar surface might be lessened, the wound was thoroughly cleansed, and then roll after roll of antiseptic bandages were wrapped around the sufferer's head, and another victim was carried to the cot where he must remain for many weeks.

One soldier had been hit with a jagged fragment which had split the leg open for a foot or more, torn out the kneecap and the tendons which held it in place. Into this gaping wound the surgeons probe for the fragments of bone and the particles of dirt which had been forced into the flesh. With their instruments they trimmed and cut until all of the detached pieces of flesh had been removed, and in the course of half an hour the edges of this jagged gash had been brought together. In all probability a leg has been saved even though it had lost its suppleness. [*Continued on Page 30.*



John Sells

is the Filer for the English Logging Company, Mt. Vernon, Washington, to whom we are indebted for this interesting photograph.

The English Logging Company is one of the oldest concerns in their line in that section. They are great believers in Disston Saws, as is Mr. Sells, who has been Filer for the Company for twenty-five years, a record of which one should be proud.

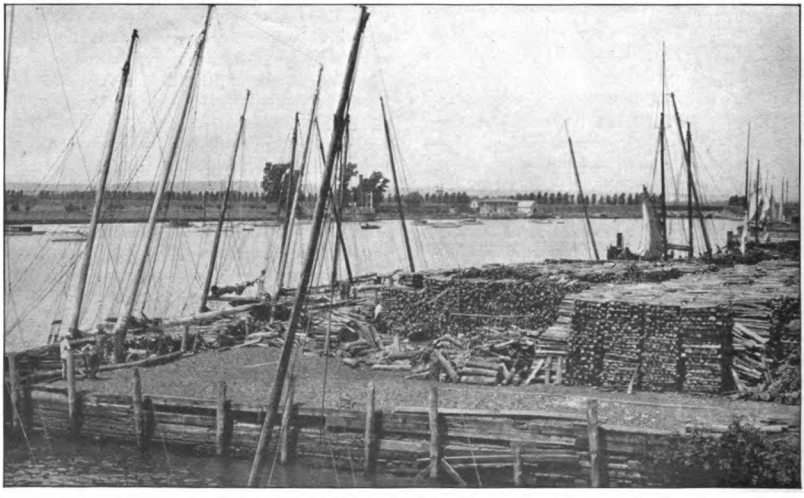
Do It Now

Now is the time. Ah, friend,
no longer wait
To scatter loving smiles and
words of cheer
To those around whose lives
are now so dear,
They may not meet you in the
coming year.
Now is the time.

2000 Cords of Wood

Approximately two thousand cords of wood are stored in the five-thousand-cord capacity fuel yard along the front of the City of Washington. Many a saw could be used to good advantage in reducing this four-foot wood to stove-wood sizes.

Courtesy of PAUL D. KELLETER, U. S. Department of Agriculture.



KAURI TIMBER

THINKING it may be of interest to you, I am handing you herewith a copy of the "Auckland Weekly News," showing a particularly fine view of a New Zealand Kauri forest. (See pages 24 and 25.)

The Kauri is a noble tree, and grows to a considerable height, as you will be able to judge by comparing the trees in the picture to the size of the building in the foreground.

A most remarkable feature of the tree is that it only grows in the northern portion of the North Island of the Dominion, known as the Auckland Province.

Unfortunately, however, the forests are being rapidly cut out and there is not more than another ten to fifteen years' supply available.

Large quantities of the timber are used in New Zealand, while Australia takes practically all that can be supplied.

Prior to the outbreak of war, shipments were even sent to England and other parts of Europe, but the local demand is so great that this trade is not much sought.

It makes an excellent timber for shipbuilding. The Maoris knew this when they made their war canoes out of Kauri logs before the advent of the white man.

It is also much in demand for building, cabinet-making, pattern-making, etc. It is easy to work and so free from knots that it makes an ideal boat-building timber.

Perhaps a few words on the method of obtaining the timber may not be out of place.

The most popular method is by means of a Steam Log-Hauler. These haulers are used extensively in New Zealand for timber getting. The hauler is in reality a large steam winch, on the drum of which is wound a length of wire rope varying in thickness from $\frac{3}{4}''$ to $\frac{1}{8}''$. The length of the rope is usually twenty chains, and on a smaller drum is wound forty chains of small wire rope about $\frac{3}{8}''$ diameter, known as the tail rope.

The hauler is generally stationed near the edge of the bush, where the logs can be placed on the tramway for dispatch to the mill.

A system of snatch blocks with wooden pins is run from the hauler to wherever the trees are being felled. The rope is run out and fastened to the log, which can be pulled in any desired direction to avoid obstacles. Right angle, zigzag, over hills, down gullies; it makes no difference whatever. As soon as things are in motion and the log strikes one of the blocks, the wooden pin breaks, out flies the rope, and the direction is changed for the next block, and so it goes on till the hauler is reached.

A man follows up and replaces the pins, at the same time adjusting the tail or smaller rope by which means the large rope is again pulled out ready to bring in the next log.

Once at the mill and you know the rest of the story. Here the logs are soon converted into marketable lumber. Needless to say, Disston Saws are playing a large part in this process.

I have omitted to mention the large amount of valuable gum these trees produce, but this in itself would form quite an interesting story. One of these days I will tell you about it. Meanwhile, I beg to remain. Your friend,

C. N. SPILLER,
With T. M. Goodall & Co.
Sydney, N. S. W., Australia.

War's Lessons Always Good

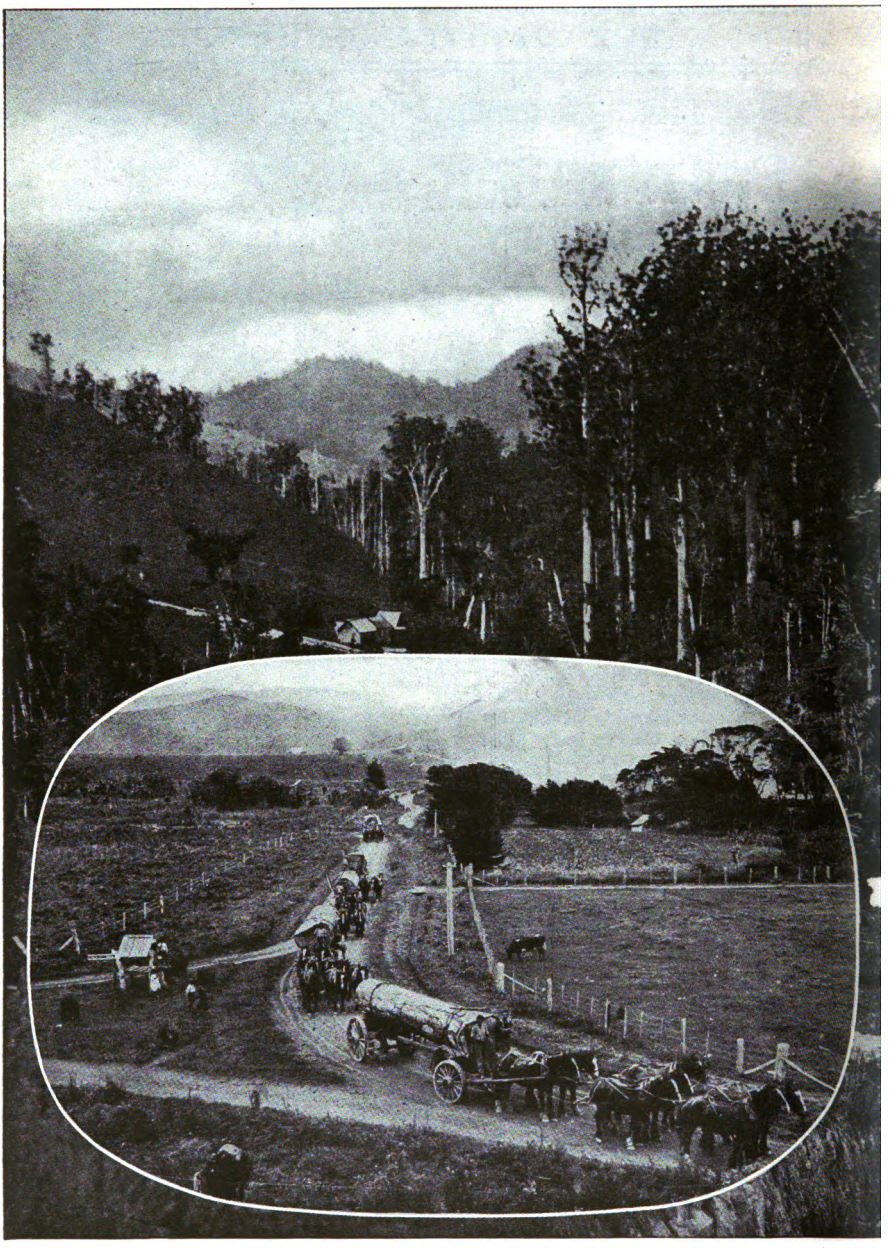
Sociologists and political economists throughout the country are emphasizing the fact that those qualities which are needed to make a nation effective in war are exactly the qualities which will make it most efficient in time of peace.

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 is 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.*



THE VANISHING KAURI: FINE VIEW OF A NORTH AU

The Kauri grows only in the Auckland district. The girth of marketable trees ranges from about 3000 feet. The magnitude of the trees can be gauged by a

JCKLAND KAURI FOREST BEING WORKED FOR THE MILL

14 feet to 30 feet and sometimes more, the general average being about 12 feet and the contents a comparison with the building and the other trees in the foreground

From The Auckland Weekly News. A. J. Northwood, Photo.

V. D. U-BOAT

No. 13

A SLINKING submarine, one of Von Tirpitz's trusted deep-sea brigands, has just completed its murderous task. A passenger ship has been "spurlos versankt" and the grey ocean waves are strewn with bodies of men, women and children. Another masterpiece for the gallery of frightfulness.

Uncle Sam and his Allies were compelled to adopt every advanced method for combating these marine murderers. A relentless posse of destroyers trailed them at sea and depth charges constantly searched them out beneath its surface; the first advantage was attained, however, through a destruction of the U-boat bases. The blow at once deprived them of their source of supplies and their main base for future operations.

Within our own borders, from coast to coast, from Maine to the Gulf, another stealthy enemy lurks. Its casualty list surpasses that of the German Submarine and it rendered most effective aid to Junkerism and its exponents during the war. Venereal disease is the name of this foe within our gates and no ally of the Kaiser was more deserving of the Iron Cross.

Our Government has taken the initiative among nations in openly fighting this malignant foe. It is waging a Twentieth Century Campaign against an enemy which has sailed the ocean of Humanity for years, protected by its camouflage of prudery and mock-modesty.

Veneral Diseases and the dishonorable wounds resulting from them incapacitated more than 200,000 men and boys of our National Army during the months intervening between mobilization and the signing of the armistice. One hundred millions of dollars and over 2,000,000 soldier days were lost to our military establishment at a time when *all* forces, financial as well as physical, were vitally needed to reinforce Pershing's men on the fighting line.

"Why did our military authorities tolerate such conditions?" you ask. They did not! Our American Expeditionary Force over there has been and is the cleanest army ever known in the world's history. Here is the crux of the problem. *More than five-sixths of the veneral cases treated in our National Army were brought in from civil life*—contracted by the men before they were inducted into service. No one section of the country is responsible for this black record; cities, towns and hamlets in every part of the United States contributed their full quota to the venereal wards. This fact proves that every man and woman, every business and fraternal organization and all municipal authorities must take steps not so much to protect the general public from the soldier as the soldier from the surroundings he will encounter on his return to civil life.

Aside from its tremendous importance as a war measure, however, the battle must be fought to protect this and future generations of mankind who may never don the blue or khaki. Venereal Disease takes its toll, also, from the non-combatants; syphilis and gonorrhea show no mercy to women and babies. They are the U-boats of the disease forces.

Their two main bases are prostitution and ignorance.

Prostitution, priced and private, is the source of most venereal infections. The majority of professional prostitutes, according to authoritative data, are venereally diseased. After prostitution has planted the infection, its chief assistant, ignorance, makes the result certain by permitting the disease to develop unhindered.

During the past twenty months, the War Department and the United States Public Health Service evolved a program for combating this menace—a program already adopted by many of our most progressive towns, cities and States. The two most important features—those which will, if properly carried on, destroy the venereal peril, are education and legislation.

Civic organizations are taking measures to educate the executive and law-enforcing officials of their community on the necessity for immediately and drastically sup-

pressing prostitution. Business and professional men, through their Chambers of Commerce and Rotary Clubs, are working to eliminate vice and venereal disease. Women's clubs are taking their proper place in the van of the clean national army. Our greatest industries, such as the Emergency Fleet Corporation, Dupont Powder Company, Phelps-Dodge Corporation, General Electric Company and hundreds of others are telling their employees in plain language the tremendous toll, in money and health, exacted by this plague.

The venereal pacifist has always insisted that houses of prostitution, a segregated district and the double standard of morality are necessary threads in our social fabric. When the War Department took a firm, honest stand—backed by medical and scientific proof, and said conclusively, "The red-light district, with its disease breeders and carriers, is a menace to our country and *must go*," the reactionaries combined with the vicious element in saying, "It can't be done."

Uncle Sam accepted the challenge with the result that practically every "red-light" district in the country has been closed—most of them through voluntary local action. When an article is made difficult of purchase there is certain to be a decrease in its sales.

Not content with attacking this main stronghold of prostitution, however, the Government program has been extended to include the detention and medical treatment of prostitutes, homes for the after-care of many who are feeble-minded, and industrial farms for the rehabilitation and education of those who show any promise of becoming useful members of the community in the future.

Back of the army—back of the daring and dying is the nation.

Our new Surgeon-General, Merrit W. Ireland, recently said of the United States, "No country demands such care of the men in the field, and from no country in the world do they get such excellent care." This being true of our boys "over there," what are you going to do to aid the Government in protecting them when they return victorious from the Great War for Civilization?

The fight must hereafter be waged most relentlessly by civilians in *their own* communities. On them lies the burden of making their home surroundings clean and fit to receive the men who have fought and bled in their behalf. *You* can do your share in helping to carry on this epoch-making campaign.

The Division of Social Hygiene, working under the War Department Commission on Training Camp Activities, was formed especially to aid and inspire "the man behind the man behind the gun." Publicity is the Government's greatest weapon—motion pictures, literature which hits from the shoulder, lectures and other means for informing soldier and civilian on the real truths concerning the subject are provided.

The powerful equipment of the United States Public Health Service is being used for a vigorous continuance of the campaign now and after demobilization. Already its aid has been offered and accepted in many communities and will increase in effectiveness as new ones avail themselves of its service. A standardized program for industries, large or small, has been compiled. The financial outlay for this material is but slight, and full details will be sent for the asking.

You who have done your share for the Liberty Loan and Red Cross Drives! You who scanned the columns of the newspaper dreading the casualty list and praying that *his* name might never appear on it —this is your *big* opportunity to help him.

Is the U-Boat Veneral Disease, hiding in your community? Fight it as you would the Hun. Destroy its bases and urge relentless warfare on it. Don't be misled by false cries of "Kamerad," but carry on until the crew, profiteers and practisers of prostitution strike their flag in token of unconditional surrender.

If you want information, or will help in the permanent campaign of education and law enforcement, write to

THE UNITED STATES PUBLIC HEALTH SERVICE,
Division of Venereal Diseases,
228 First Street, N. W.,
Washington, D. C.

The only road to good times and prosperity is by everyone now being patient and helping in the change from War Work to Peace Work.

U. S. DEPT. OF LABOR,
Wm. B. Wilson, Sec.

Roosevelt's Last Plea for Americanism

AN extract from the last message of Col. Theodore Roosevelt read at a meeting which he was too ill to attend:

"There must be no sagging back in the fight for Americanism merely because the war is over.

"There are plenty of persons who have already made the assertion that they believe the American people have a short memory and that they intend to revive all the foreign associations which most directly interfere with the complete Americanization of our people. Our principle in this matter should be absolutely simple.

"In the first place, we should insist that if the immigrant who comes here does in good faith become an American and assimilates himself to us, he shall be treated on an exact equality with everyone else, for it is an outrage to discriminate against any such man because of creed or birthplace or origin. But this is predicated upon the man's becoming in very fact an American and nothing but an American.

"If he tries to keep segregated with men of his own origin and separated from the rest of America, then he isn't doing his part as an American. There can be no divided allegiance at all.

"We have room for but one flag, the American flag, and this excludes the red flag, which symbolizes all wars against liberal and civilization just as much as it excludes any foreign flag of a nation to which we are hostile. We have room for but one language here and that is the English language, for we intend to see that the crucible turns people out as Americans, of American nationality, and not as dwellers in a polyglot boardinghouse; and we have room for but one soul loyalty, and that is loyalty to the American people."

—*Americanization Magazine.*

Opportunity

With doubt and dismay you are smitten,
You think there's no chance for you, son?
Why, the best books haven't been written,
The best race hasn't been run;
The best score hasn't been made yet,
The best song hasn't been sung;
The best tune hasn't been played yet,
Cheer up, for the world is young!

No chance? Why the world is just eager
For things that you ought to create,
Its store of true wealth is still meager,
Its needs are incessant and great;
It yearns for more power and beauty,
More laughter and love and romance,
More loyalty, labor and duty,
No chance—why there's nothing but chance!

For the best verse hasn't been rhymed yet,
The best house hasn't been planned;
The highest peak hasn't been climbed yet,
The mightiest rivers aren't spanned;
Don't worry and fret, faint hearted,
The chances have just begun,
For the best jobs haven't been started,
The best work hasn't been done.

—BERTON BRALEY, in *Hardware World.*

Bonds

"All 'bond values' and 'yield tables' are figured on the supposition that the coupon clipper shall add the amount of the interest to the principal each coupon day. Any man who fails to do this loses the magic 'compound interest' and fails to get the most out of his investment. Every Liberty Bond coupon ought to be immediately invested. U. S. Thirft Stamps at 25 cents apiece may be bought at any postoffice or bank. Sixteen of these stamps accompanied by an 'exchange fee' of 22 cents will amount to $4.22 for which the Government will give a War Savings Stamp redeemable for $5 in 1923.

"To make the matter clear: If you have a $100 Liberty Bond of the Converted Second Loan you will have a coupon worth $2.13. Add 12 cents, take the $2.25 to the postoffice and buy nine Thrift Stamps. Paste these on your Thrift Card with the seven you already have adding 22 cents for the exchange and you will receive a $5 War Savings Stamp. Thus, you make 78 cents clear by the transaction. In other words: Clip your coupons and lend the interest money to the United States Government, by investing in Thrift Stamps."

—From *Barrel & Box.*

Distinguishing Marks
of the
United States Army and Navy

[CONCLUDED FROM FEBRUARY ISSUE]

Army-Navy Information; Uniform Details; Army Hat Cord Colors, Etc.


Naval Officer's Button


Enlisted Men's Button


Commissioned Officer's Cap Device


Warrant Officer's Cap Device


Chief Petty Officer


Ch. Petty Officer Coast Guard


Midshipman


Aviator Gold Breast Mark


Naval Reserve Button

Above are Naval cap devices, buttons and Naval Flying Corps officer's mark.

NAVAL RESERVE.—The Naval Reserve units are distinguished in the U. S. Navy by a distinctive button and an individual collar device, same as Commissioned Officer's cap device instead of the anchor markings of the regular Naval service. Note the Naval Reserve Lieutenant's marking here shown. Lieutenant-Commander is (Dec. 1917) the highest ranking officer of Naval Reserve.

NAVAL MILITIA, ETC.—The distinguishing marks are for officers, a circle around a star, and for enlisted men an anchor in a diamond. Commodore is the highest ranking officer in the Naval Militias of the States. The Coast Guard has marks of its own, chief of which is the eagle with head turned to its right, instead of left, as in Navy; U. S. Shield (as shown above), etc. U. S. Public Health Service has its own marks.

SERVICE STRIPES.—On blue dress uniform of the Army, on blue and field uniforms of the Marines on the blue service and dress uniforms of the Navy, service stripes are worn by enlisted men on the lower left sleeve. Each stripe represents four year's service in the Navy and Marines and three years' service in the Army. Enlistment now is for the period of the war in the Army and Marine Corps.

NAVY SHOULDER STRIPES.—Non-rated enlisted men wear braid around shoulder. A man of the Deck Force wears white braid on the right shoulder seam. A man of the Engineer Force wears red braid on the left shoulder seam. Petty Officers of the Deck Force wear rating badges on right sleeves; Petty Officers of the Engineer Force and special branches wear rating badges on their left sleeves. Shoulder seam stripes were formerly Watch Marks.

NAVY CUFF STRIPES.—Three white stripes on sailor's blouse cuff indicate a seaman, first class; two stripes indicate a seaman, second class; one stripe, apprentice seaman. Firemen and Messmen (officer's mess attendants, etc.) have same 1st, 2nd and 3d class wrist stripes, but wear no shoulder seam marks.

NAVAL AVIATORS wear a summer khaki uniform similar to the Marines; also Naval cap and shoulder straps with naval ranking marks, aviation insignia above left coat pocket top, and cloth spiral leg puttees. Forester green is the winter service wear of the Naval Flying Corps. Marine aviators wear regulation Marine uniforms.

NAVAL OFFICERS' COMMANDS.—Naval Officers' Commands may be one of the following: Admiral, a fleet. Vice-Admiral, a division. Rear Admiral, battleship squadron, force, station. Captain, a battleship, cruiser, destroyer fleet or submarine flotilla. Commander, smaller ships. Lieutenant Commander, destroyer fleet or submarine fleet, 3rd or 4th class ship, navigation, gunnery, engineer, battleship executive officer, fleet gunnery officer. Lieutenant, destroyer, submarine, torpedo boat, navigator, gunnery, engineer, watch or executive officer, etc. Lieutenant Junior Grade, submarine, torpedo or lesser ships, various ship duties. Ensign, submarine or lesser ships, various ship duties.

NAVY DEPARTMENTS.—Naval Operations, Navigation, Judge Advocate, Medical, Yards and Docks, Ordnance, Construction, Supply and Accounts, Steam Engineering, Hydrographic, Naval Militia.

On Nov. 8, 1917, the U. S. Army and Navy numbered 2,007,319 and was daily rapidly increasing. The U. S. Navy numbered 271,571 men, divided as follows: Officers, 15,200; enlisted men, 147,871; Naval Reserve 50,000; Naval Militia, 15,000; Hospital Corps, 6,500; Coast Guard, 5,000; Marine Corps, 32,000.

ARMS OF THE SERVICE IN THE U. S. ARMY.—General Staff, Army direction and administration; Adjutant General's Dept., records, orders, literature, etc.; Inspector General's Dept., Army conduct, discipline, expenditure, condition, supervision, etc.; Judge Advocate's Dept., legal, records, court martials, inquiries, etc.; Signal Corps, communication and signalling, including aviation; Engineers Corps, survey, construction of roads, bridges, land and coast fortifications, etc. Field Artillery, mobile artillery; Coast Artillery, coast and harbor defense; Cavalry, mounted and dismounted; Infantry, foot troops; Quartermaster Corps, transportation, paymaster, all supplies except ordnance; Ordnance Dept., arms, ammunition; Medical Dept., care wounded, medical, dental, veterinary, attendance, sanitation; Insular Affairs, Colonial Army; Bureau Militia Affairs, National Guard matters. The U. S. Army in France has Transportation Dept. and (armored) Tank Corps (Nov., 1917).

CORRESPONDING RANKS OF ARMY AND NAVY OFFICERS.—Army General—Naval Admiral. Army Lieutenant General—Naval Vice-Admiral. Army Major General—Naval Rear Admiral. Army Brigadier General—Naval Commodore (discontinued). Army Colonel—Naval Captain. Army Lieutenant Colonel—Naval Commander. Army Major—Naval Lieutenant Commander. Army Captain—Naval Lieutenant. Army First Lieutenant—Naval Lieutenant, Junior. Army Second Lieutenant—Naval Ensign. West Point Cadets—Naval Midshipmen.

ARMY SERVICE HAT CORD COLORS.—Army war headgear are: Service Cap, Service Hat, Steel Helmet. On Service Hat Generals wear gold cord; officers of all Arms of the Service, black and gold cord with gold acorns.

The Arm of the Service, of the enlisted man is shown by the color of the cord on his Service field hat. The colors for the different Arms of the Service are as follows: Orange and White—Signal Corps (including Aviators). Red and White—Engineer Corps. Red—Artillery. Yellow—Cavalry. Light Blue—Infantry Buff—Quartermaster Corps. Maroon and White—Medical Dept. Black and Red—Ordnance Dept. Black and Silver—Headquarters Field Clerks (new). Red, White and Blue—Reserve Officers' Training Camps. Faded hat cords often make identification difficult. Do not confuse U. S. A. uniforms and marks with others.

ARMY LEGGINGS, UNIFORMS.—Army officers wear leather leggings. Mounted officers may wear boots. Canvas leggings are the regular Army issue to enlisted men, excepting certain troops which wear leather or combination leather and canvas leggings. Army service winter uniform is O. D. (olive drab), woolen; summer service, O. D., cotton, both commonly called "khaki."

Courtesy of United Cigar Stores Co. of America.

With the Wounded

[Continued from page 21]

On another table lay a young boy whose shoulder-blade had been torn out, and not far from him was an older man, pierced through the chest with a fragment of shrapnel, the penetrating of the lung being apparent through the bloody foam which issued from the wound. Yet the surgeons and the nurses went about their work with assurance and confidence, never failing, never weakening because of the suffering which they witnessed, or overcome by the red tide which almost flowed from the operating tables.

Men's bodies, torn and mutilated in every conceivable manner, were coming into the operating room, and only the surgeon's skillful hand and the nurse's faithful care could save them. Their heroism, their devotion to duty was as great as that of those upon the firing line. At all times their lives were in danger because of the brutal practice of bombing these hospitals, which was carried out by the German military authorities.

In the wards the scene was different; there was the odor of iodoform and other disinfection, but the sickish, sweetish presence of chloroform did not assail the nostrils. The operating room, because of the character of the wounds and the flow of blood, almost reminded one of a slaughter house, but in the wards nothing of this kind impressed itself. Long rows of white beds took its place, and those in them desired to have the visitors stop and talk with them for only a moment. True, too, the same spirit which we found at the first-aid station, they did not care to talk about their wounds, but about something else—of their families and homes, of the pals they had lost, of the good care being taken of them, and of the time soon to come when they would rejoin their regiments. But some of them little knew of the seriousness of their wounds, and here and there a screen around a cot testified that another of our boys in khaki was about to pay the supreme sacrifice for his country.

Although the beds were white and clean, and the atmosphere far more cheerful than could be expected in such a place, the fact that these cots contained armless, legless and sightless men could not help but touch the deeper sentiments.

Depressing as these were and overpowering as the scenes had been which we witnessed in the operating room, none of these compared with the chamber of horrors where the gassed victims were confined. Dante would have written additional chapters to his "Inferno" had he passed through the ward of the gassed. His vivid imagination never conceived anything more terrible than this.

Here were many victims whose lung surface had been almost destroyed by the poisonous fumes, their breath coming and going with a ghastly, gurgling, whistling noise which can never be described. Many of the victims we saw were the victims of mustard gas, which burns and bites into the skin like fire, which had penetrated the clothing so that in some places the victim's entire body had been burnt. It destroyed the lens of the eye; it lifted the skin of the body into enormous blisters; it burned up and consolidated the air-cells in the lungs; men's hands were swollen twice their natural size; and where they had been without gas-masks the face had lost all human semblance, it was nothing but an irregular mass of puffed skin and flesh, red and sometimes mottled with bluish, greenish, yellowish patches. The nose would be puffed up to fantastic proportions, the lips so swollen as to lose all their natural expression, sometimes the tongue so inflamed that it protruded from the mouth, and the victims lay there struggling and fighting for a little air so that the spark of life could be retained.

We had seen destroyed towns and cities, we had looked over ruined countrysides, we had gone through the wreckage of hospitals destroyed by airplane bombs, had seen the long lines of old men and women driven from their homes, and seeking for relief which could not be found, but nothing aroused our spirit and our feelings that the military machine which had caused this might be crushed, regardless of the cost, so much as the few minutes spent in this ward where the victims of poisonous gasses were suffering untold agony and in many instances breathing their last, unable to speak a word or give a sign that would convey their final message to the loved ones at home.

First-aid stations and base hospitals were a part of the war, and into them came much of the concentrated agony of the battlefields. They were places where the attendants had to possess steel nerves, for the sights they witnessed were as horrible as any to be found upon the battlefields.

The nation owes a debt of gratitude, which it can never pay, to the women and the men who gave every waking moment, and who often contributed their lives to the welfare of the wounded. We will erect monuments to our heroic dead in every city and hamlet, we will place their name on bronze tablets so that future generations may know who they were, and, when our soldier boys return, we will give them the greatest welcome which our hearts are capable of extending, and they will deserve it all and much more. But we must not forget the surgeons and the nurses; they, too, are entitled to all the honor, to all of the appreciation which we show to our fighting men. They braved every danger, they gave all of their energy so that our fighting men could be given every care which medical and surgical science could provide, and all the attention and cheerfulness which the nurses could supply.

Hats off to these indispensable and heroic non-combatants.

Disaster Is the Fertilizer of the Human Will

Today Europe is a huge blood-stain. Devastation has flailed nations to their knees. A million women are weeping for those who will never return.

The proudest fabrics that a thousand years of genius wrought are snaggled and sullen ruins.

Memorable cities are now but memories and the workshop of civilization lies in wreckage.

Captains of industry, masters of craft, leaders in every art and science lie in nameless graves.

Arteries of commerce have been slashed; the course of progress arrested; industrial, educational and commercial systems disrupted; everybody of importance and every venture of significance groping for readjustment—making new calculations—and all is part of the incalculable price paid when militarism runs amuck.

But tomorrow will clothe the world. Old Father Time has his medicine for every ill of earth, and knows the healing of all hurts.

An epoch of reconstruction as spectacular as the tragedy which inspired it, is inevitable. Man has always achieved his noblest works under the pressing needs of necessity.

Those who survive will stumble through the immediate future with burdens of responsibility that will strain every resource and every energy they have. At least an entire generation will be devoted to the task of repair and rehabilitation.

Everybody will have to try harder, think harder, work harder. Humanity *en masse* must soon lay its will and intelligence upon the whetstone of necessity.

Yesterday's average of efficiency is too low, much too low, for tomorrow's tremendous necessities. Hundreds of thousands of trained brains and cunning fingers will never again play their part. In estimating the potentialities of this gigantic misfortune, we must cast aside the statistics of the past, and prepare ourselves for staggering inadequacies in the personnel of every organization.

Those who will replace the dead experts will be youths educated under great handicaps, and grey-haired seniors reclaimed from the discard. For remember the fighting man is mainly the young man, and mortality will be proportionate to majorities.

Not entirely a disheartening prospect, for new equations mean new mental proportions and leaders will be forced by hothouse growth. The opportunities so suddenly created by the decimation in all ranks will offer unparalleled encouragement to the ambitious.

With the cry of independence ringing in one ear, and the voice of fortune shouting encouragement in the other, the man of today must accomplish more in less time than ever did his predecessors. The old tools won't do; we have lost too much ground. We must have bigger, better and faster machines, and bigger, better and faster men to overcome the deficit.

Wherever the eye turns it will find inspiration for analytical and creative brains. We never do our best until we face the worst. Disaster is the fertilizer of the human will.—*Sunset Magazine.*

SAW DUST

NOT GUILTY

An old negro went to the office of the commission of registration in a Missouri town and applied for registration papers.

"What is you name?" asked the official.

"George Washington," was the reply.

"Well, George, are you the man who cut down the cherry tree?"

"No, suh, I ain't done no work for nigh onto a year."—*Exchange.*

INTELLIGENT HENS

A journalist keeps hens about a mile away from his home, and daily his wife fetches home about fifty eggs.

For three consecutive days now she has found all the nests empty. The hen-house door was intact, so was the lock, therefore how had the thieves got into the shed?

She could not tell, and Mr. and Mrs. Henfruit sat up the three nights discussing the thefts and how to catch the thief. But they were baffled.

On the following morning, when returning fruitlessly from the shed, she met all the hens on the road, nearly half-way between the shed and the house. Whatever they were doing there she could not tell.

When she next went to tend the fire she was surprised and delighted to find a solution to the mystery. There in the coal-place were all her eggs.

"Now, how thoughtful of those hens to save me the trouble of fetching the eggs," she thought.

And she fully understood, when the journalist got home that night and told her of having seen all their hens in a row on a fence, looking at a new poster:—

"Now is the time to lay in coals."

SHOO FLY

"They tell me Brown has a great ear for music," said Norman.

"Yes," replied Fogg; "I know he has a great ear, two of them, in fact; but I did not think that they were for music; I supposed they were for brushing the flies off the top of his head!"—*Just a Little Better.*

A CAPITAL AFFRONT

Micky came home from school sniffling. "You've been licked," said his mother. "I ain't," said Micky. "There was a doctor at school this mornin' examined us, and he said I had ad'noids." "Phwat's thim?" asked his mother. "They're things in your head as has to be taken out," answered Micky. "It's a dom lie," angrily exploded mother. "I've fine-combed yure head ivry Saturday night and niver an ad'noid did I find!"—*The Merry Circle.*

TAKING HIS MEASURE

"Do you ever drink to excess?" asked the girl's father.

"I never touch liquor of any kind, sir."

"How about tobacco?"

"I do not smoke. I have never had a cigar or a cigarette in my mouth."

"Ever gamble?"

"Never. I do not know one card from another."

"I suppose you swear sometimes?"

"No sir. An oath has never passed my lips."

"Um. All right. Come out and have a stick of candy with me."—*Exchange.*

WENT HIM ONE BETTER

An English lord who had just arrived from England was talking to an American Boy Scout.

"My grandfather," he said, "was a very great man. One day Queen Victoria touched his shoulder with a sword and made him a lord."

"Aw, that's nothin'," the Boy Scout replied. "One day Red Wing, an Indian, touched my grandfather on the head with a tomahawk and made him an angel."

—*Boys' Life.*

SURROUNDED

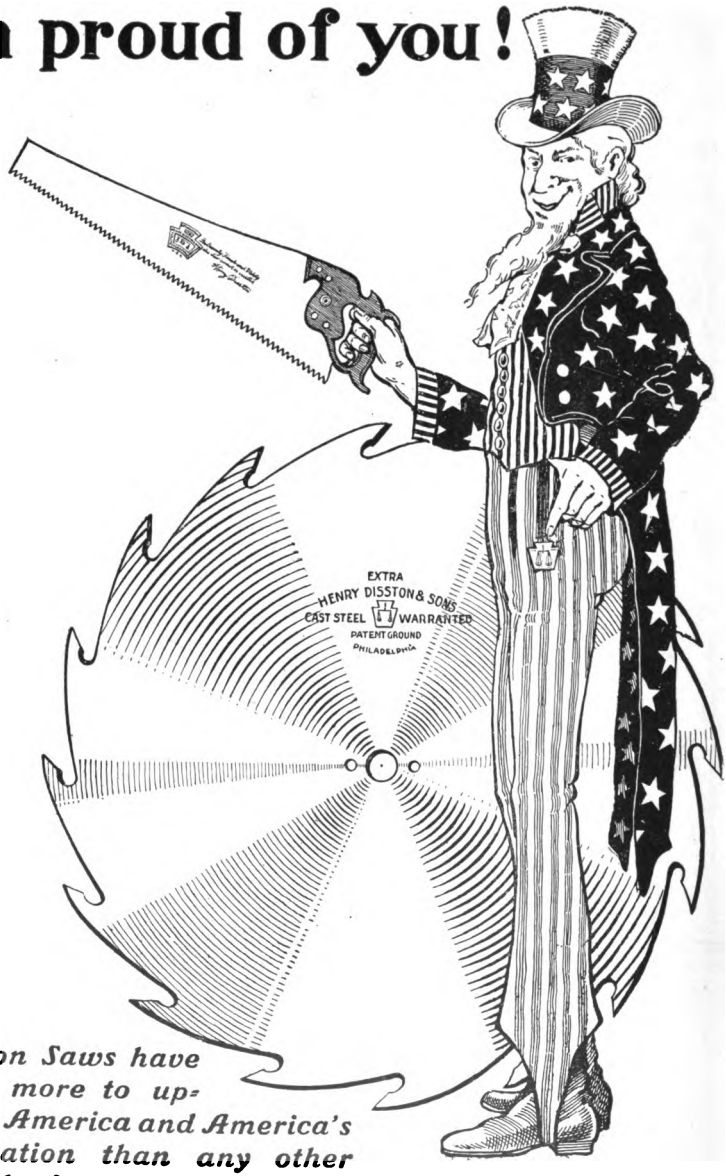
A drunken man threw his arms around a telegraph pole and then began to feel the pole with his hands. Round and round he went. Finally he gave it up and muttered: "No use. Walled in!"

—*Exchange.*

THE DISSTON CRUCIBLE

APRIL 1919

I'm proud of you!

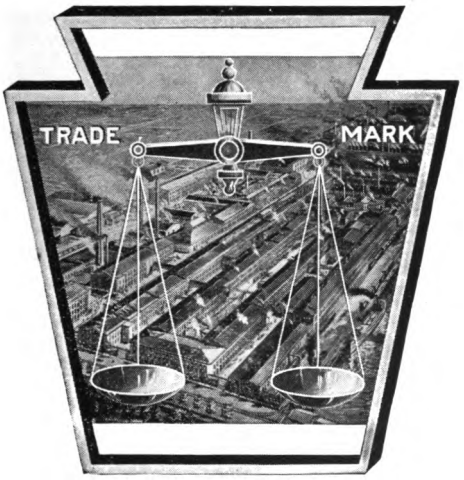


Disston Saws have done more to upbuild America and America's reputation than any other brand of tool.

THE DISSTON CRUCIBLE

PRICE 10c PER COPY $1.00 YEARLY IN ADVANCE

TABLE OF CONTENTS



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

HENRY DISSTON & SONS

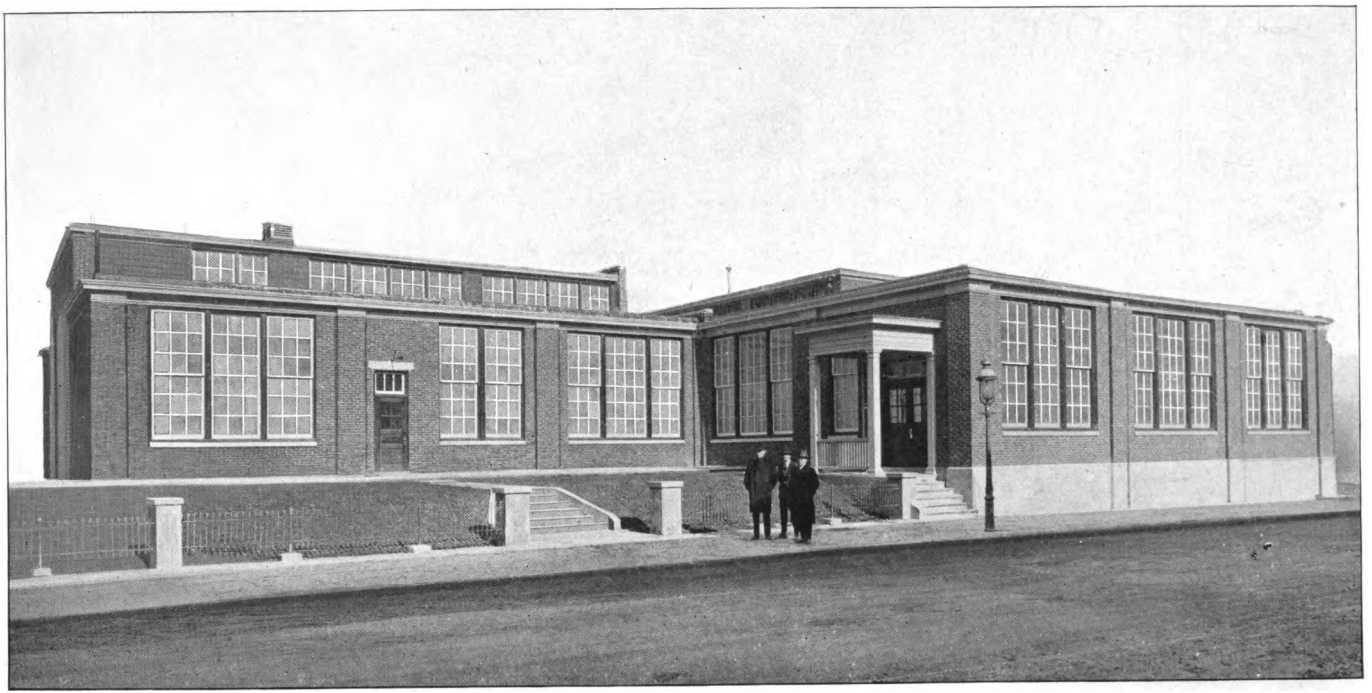
INCORPORATED

Keystone Saw, Tool, Steel and File Works

PHILADELPHIA

BRANCH HOUSES: Chicago, Ill.; Boston, Mass.; Cincinnati, Ohio; Seattle, Wash.; Portland, Ore.; New Orleans, La.; Memphis Tenn.; San Francisco, Cal.; Sydney Aus.; Vancouver, B. C. Canadian Works: Toronto, Canada

THE DISSTON CAFETERIA



Opened Wednesday, April 9, 1919. *See Page 44.*

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VIII APRIL, 1919 No. 3

EDITORIAL CHAT

The Fiery Furnace

THE adjusting of affairs of the world today reminds one somewhat of the processes of making high quality steel.

The crude ore, filling the melting-pot, when subjected to the forceful effects of the fiery furnace, melts, mixes and bubbles, causing the dross to separate, and this, floating on top, is readily removed.

The purified molten metal, then poured in a mold, is roughly formed. Again it is subjected to a high degree of heat that it may be reformed and fashioned into articles beautiful in appearance and of great utility to man.

And so is this wonderful world of ours now undergoing a transition —a refining process.

Things are in a chaotic state, brought about by the awful catastrophe due to the war. The great sacrifice of life, intense suffering and dire misery causing a melting and mixing of the best qualities of mankind, and with the dross eliminated, through the wisdom and efforts of master minds, there will finally evolve a purified spirit of peace and good will, making the whole world freer, better and once again a fit place in which to live.

Quality Tells.

Reforestation Controlled Burnings

HENRY E. HARDTNER, Urania Lumber Co., Urania, La.

FIRE, uncontrolled, is the most destructive thing with which we are as yet acquainted; yet controlled, it is our best friend. "Fire, the worst of masters, the best of servants."

In fashioning stone into useful implements, an accidental spark in dry grass or straw must have caused many destructive blazes before it occurred to any one to control it or turn it into beneficial use. Osiris is the man who has the credit for having discovered the benefits from "controlled burnings." He lived in Egypt many thousand years ago, on a small island in the Nile, near the first cataract, and as the news of his discovery reached other portions of the world that fire could be used in such a beneficial way as to entirely change the habits of a primitive people, and controlled burnings were in general use, he became a great leader and finally a god. Without fire, man would still be in the primitive state, in the stone age, confined to the tropics.

Human culture began with fire and increased from age to age as the people learned to control and use it. The first public building was to preserve the tribal fire and men were appointed to keep these fires going so as to furnish the various households with coals of fire when needed. The Egyptians had one in every temple; the Medes, Persians, Greeks and Latins in every town and village. All ancient nations did the same and so did the American Indians.

In ancient times all civil and political life grouped around the public fire. Hence in time, the fire house became the town hall or gossiping resort, where all business was transacted by the light and warmth of the common fire. The men who attended these fires were highly honored, cared for at the public expense and as they grew to old age were lovingly called "city fathers." This board of firemen still survives as board of aldermen or city councils. From the fire house or temple of the ancients, we now have the capitol, courthouse, city hall, tabernacle, cathedral, church, hospital, school, etc., all legitimate descendants of the original fire house.

Controlled Burnings

Not so many years ago we all remember the custom of going a mile or so away to some neighbor's house to "borrow a chunk of fire," which we never returned. Now, if primitive man learned the value of "controlled burnings," and the people in all ages have used fire as a servant or friend, why should we longer have destructive forest fires which annually cause hundreds of people to lose their lives and money losses of millions of dollars? Virgin forests completely destroyed; denuded lands having burned up the small trees that are left after logging, which in twenty years would make a fine forest; seedlings and saplings one to ten years old, the beginning of a regenerated forest which would be ready for the saw in another thirty or forty years, completely wiped out by a hot grass fire; grazing destroyed, the soil parched and made barren—all because we have not learned the use of "controlled burnings," or because some of our skilled foresters have declared that fires in forests or forest lands should never occur.

An Aid to Forestry

I once entertained the same idea; but for the past five years I have studied this question every day and now I am firmly convinced that "controlled burnings" should be practiced in every forest as an aid to successful forestry. In logging any tract of timber land which will cut as much as 5,000 feet per acre a considerable amount of slash accumulates on the ground, often in great heaps. Fire inevitably follows, whether a few weeks after cutting or a few years. Where there is so much inflammable material, fire surely follows, and at times when the conflagration cannot be stopped.

While there is seldom loss of life in the South, the damage to soil, cattle range, mature timber, seedlings and saplings is incalculable. My training is such that when I am entrusted with the use of a natural resource, such as timber lands, I must handle them in such a way as not

to make the lands worthless after the timber has been removed. In short, after I have removed the valuable mature trees, if the lands are unsuited for successful agriculture, it is my duty to see that reforestation takes place as early as possible, so that I may hand to future generations a property that is as valuable as I found it. No person has a right to destroy property, though the title happens to be in his name. *The average lumberman is a destroyer and the State has permitted and encouraged him to destroy, but the time is at hand when forests are nearing extinction and indifference and carelessness should cease.* To leave seed-bearing trees, saplings or seedlings on a logged-over area is not sufficient; they must be protected and cared for. The day is coming when all slash will be utilized and the fire menace will not then be so great, but before that time comes, our virgin forests will be only a memory.

Best Periods for Controlled Burnings

Our summers, commencing in June and ending in September, are usually dry and hot. The soil, grass, tree, trunks, foliage and straw are parched and hot. The slash in great heaps dries quickly and conditions are ripe for a great forest fire, and the fire inevitably follows, with the result that any young timber, seed trees, seedlings or vegetation left after logging is completely destroyed. A fire in October and November, especially if the season is very dry and there has been an accumulation of litter since summer, is also disastrous. From the first of December to the first of June the damage is not great. One thing sure and certain—a summer fire in recently logged-over lands means complete destruction to anything remaining on the land, unless controlled burnings are resorted to.

What is "controlled burnings?" It is simply using fire as a friend or ally at the right time and in the right way to slowly and gradually destroy inflammable material without seriously injuring valuable property. This can safely be done from November 1 to June 1, especially selecting a time when the ground is damp and cold. From June 1 to October 1 is the really dangerous time for fires, and where it is impossible to protect cut-over areas until the winter or wet season and then burn it, extreme care and attention are necessary in resorting to immediate "controlled burning." The woods should always be burned over two or three months before logging, usually from January to March, thus disposing of a great deal of litter, such as leaves, straw, dried grass and rotten logs, which later on, added to the great piles of slash, would serve as kindling for a hot fire. Two or more men should follow behind the skidder or teams and, with axes, lop off the limbs from the fallen tops, allowing them to fall as close to the ground as possible. These limbs and tops should be pulled away from young trees, or seed trees that are left standing, a distance of several feet. Burnings should commence two weeks after cutting, if possible, as the straw is then dry enough to burn.

Method of Fire Control

The men will prepare pine torches and in the evening about seven o'clock, when there is no wind, will go all over the area that is ready and set fire to the slash in dozens or hundreds of places. The slash, being only partly dry, together with the evening dampness and no wind to fan a flame, the fire will burn slowly and gently, sending out very little heat, but consuming much of the slash. Very little if any serious damage will be done to the trees that are left standing. It is usually high winds which fan the flames into a big hot fire that causes so much destruction to forests.

Careful, experienced foresters or wardens, by taking advantage of weather conditions, need never have any losses from "controlled burnings." Years of observation and experience have convinced me that forest fires are only destructive when conditions are just ripe, and when used properly or controlled, are a great aid to successful forestry. I have seen thousands of acres of denuded lands, on which there was a good growth of small trees remaining, absolutely destroyed from fire sweeping over it at a time when everything was favorable and no protection whatever, which could have been saved by a little effort and the expenditure of a few dollars.

Plans of Urania Company

During the year 1919 my plans call for controlled burning on 2,500 acres which I expect to cut. This area is principally short

leaf and loblolly pines, with some oak. The trees are small and medium and will cut 8,000 feet to the acre. There are many young trees too small for profitable logging—four to eight inches diameter—probably twenty-five to fifty to the acre and considerable brush. It is what would be called "brush woods." I have employed a good man at a salary of $75 a month as "Master of the Fires." From January 1 to March 1 he will carefully burn over this area, which is to be logged. Where the timber has been cut before June 1 the slash can be burned without lopping the tops. After June 1 and up to October 1 lopping commences, and care is taken to pull the slash away from young trees, to prevent fires heating them too much. The fires are to be continuous, burning at all times when conditions are favorable. It may be necessary to set fire to the same area three or four times before all the slash is burned, but it is better to have two or three light fires than one extremely hot and uncontrolled. The young timber left on this area after logging will have a value of at least $20 an acre and in twenty years can be logged again, yielding at least 5,000 feet to the acre. Why let uncontrolled fires destroy it?—From *Lumber World Review*.

The Woodlands

There stands a house in a valley,
Yes, in a valley green and cool;
Its shingles are made of cedar
Cut from a tree by a mountain pool.

Its sides are made from a pine tree
Which grew on a mountain side,
And roaring down a flume-way
They were sent with a woodsman's pride.

Its floors are made of maple
Cut in the woods where the syrup flows,
Where the woodsman's ax rings clearly
And the chips fly to and fro.

Its finish is made from the oak tree
Which grows by the frozen streams;
The frost on its limbs cracked sharply
Where the wary bob cat screams.

Its doors are made from the birch tree
Which grew in the shady dell;
Its bark is white as a snowdrift
And its wood as clear as a bell.

If the woodsman's ax stopped ringing.
If the buzz-saws failed to hum,
We'd live in a tent by the roadside
Or be hitting the trail like a bum.

So we can thank the Lord for the woodlands
That grow in this land so fair,
From the time we hit the cradle
Until we climb the golden stair.

FLAGLER, COLO.

G. S. C. in *American Lumberman*.

Quick-Fire Philosophy

Play your cards, not your counters. The size of your stack can't reduce their nature. The best hand sweeps the board.

Ability creates capital. You are your own mint. Resolution *plus* ideas *equals* money.

It's nonsense to believe that you are handicapped by empty pockets.

Inherited assets, sufficient to permit dawdling, stifle initiative, and make a cipher out of many a man who, under the spur of necessity, might otherwise have developed into a big figure.

When you are unpracticed in the processes which produce riches you are not qualified to protect your holdings from those who have been trained to take advantage of every weak opening.

A bank roll is not a substitute for wisdom.

If you have brains enough to conserve wealth, you possess all the qualities necessary to secure it.

There is no enduring poverty except lack of character, purpose, and determination.

Only the very busy are very happy. Industry is a talisman against worry and want. Occupation sweetens even the rich man's loaf.—*Herbert Kaufman*.

Saw Milling in Tasmania

Lilydale, Tasmania, Dec. 16, 1918.
HENRY DISSTON & SONS, INC.
Gentlemen:—

I have often been going to thank you for the CRUCIBLE. It is instructive and interesting to a saw miller. If you care to, publish the enclosed brief notes, re "Saw Milling in Tasmania." At the present time, trade is very brisk and many new outfits are going up—nearly all small power plants as the one in photo. It comprises a vertical Frame Break Down Saw capable of cutting logs up to six feet in diameter and twenty-five feet long. Engine is 8 H. P. Traction, ordinary circular saw, breast bench, capacity up to three thousand feet per day. There are about forty of these plants at work in this district.

Now as to timber: It is chiefly Hardwood, Stringy Bark, Gum, Blackwood, Pine and Sassafras. The Gums grow to a very large size, many up to twenty-five feet girth, quite sound, and one hundred feet to first limb. Some time since I cut a tree with three twelve feet logs in butt log—first, twenty-three feet girth; second, twenty-one feet, and third, nineteen feet, measured at small end. It is a common occurrence to have one tree cut 10,000 feet of lumber, but the best-paying logs are three to four feet diameter or ten to twelve feet girth. There is a stump a short distance from mill site you can measure twelve feet across every way, quite sound. If you would like a photo, I can send you one of the end of first log.

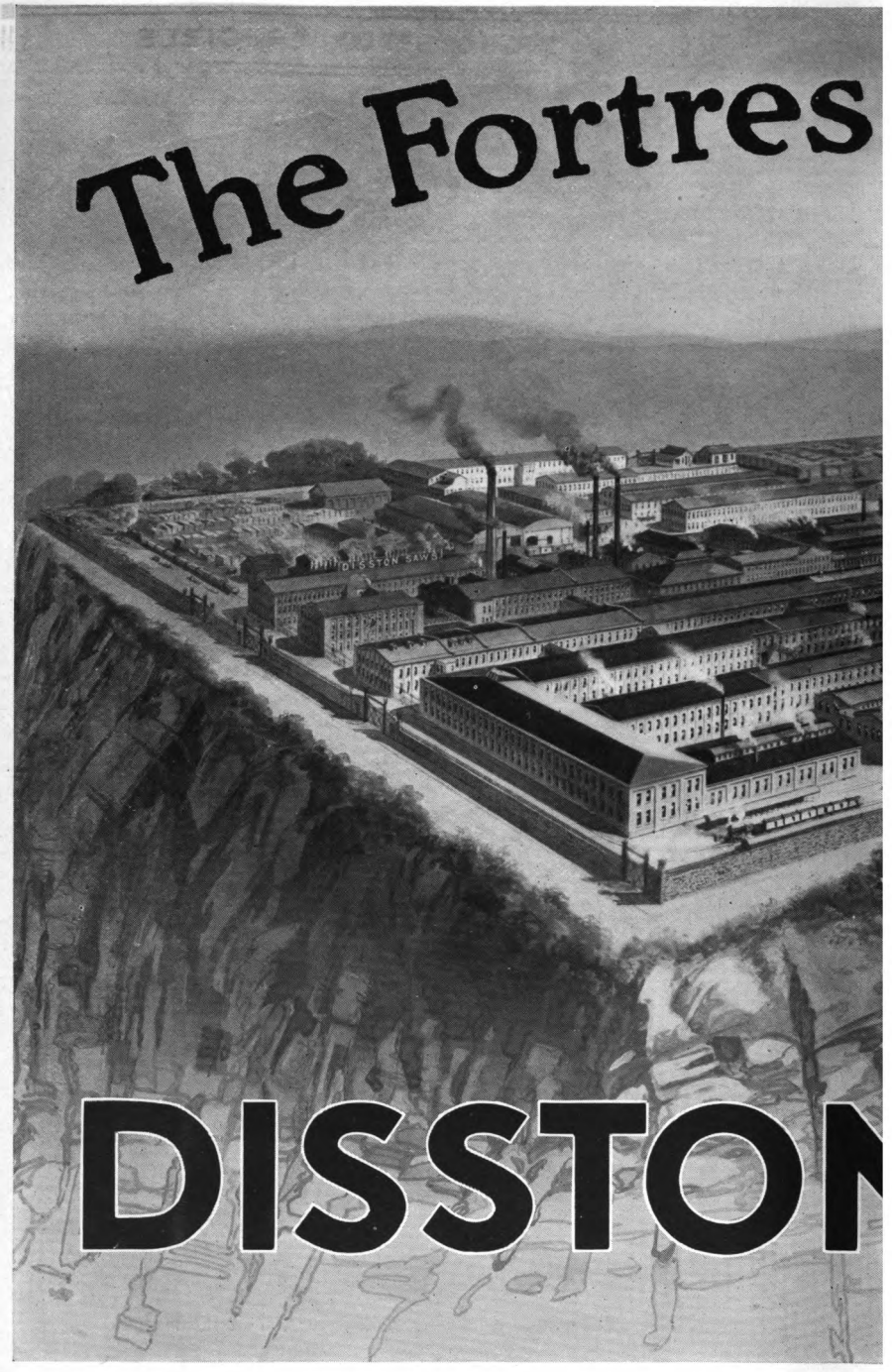
If this is of any interest, I shall be glad to learn if you would like any further particulars.

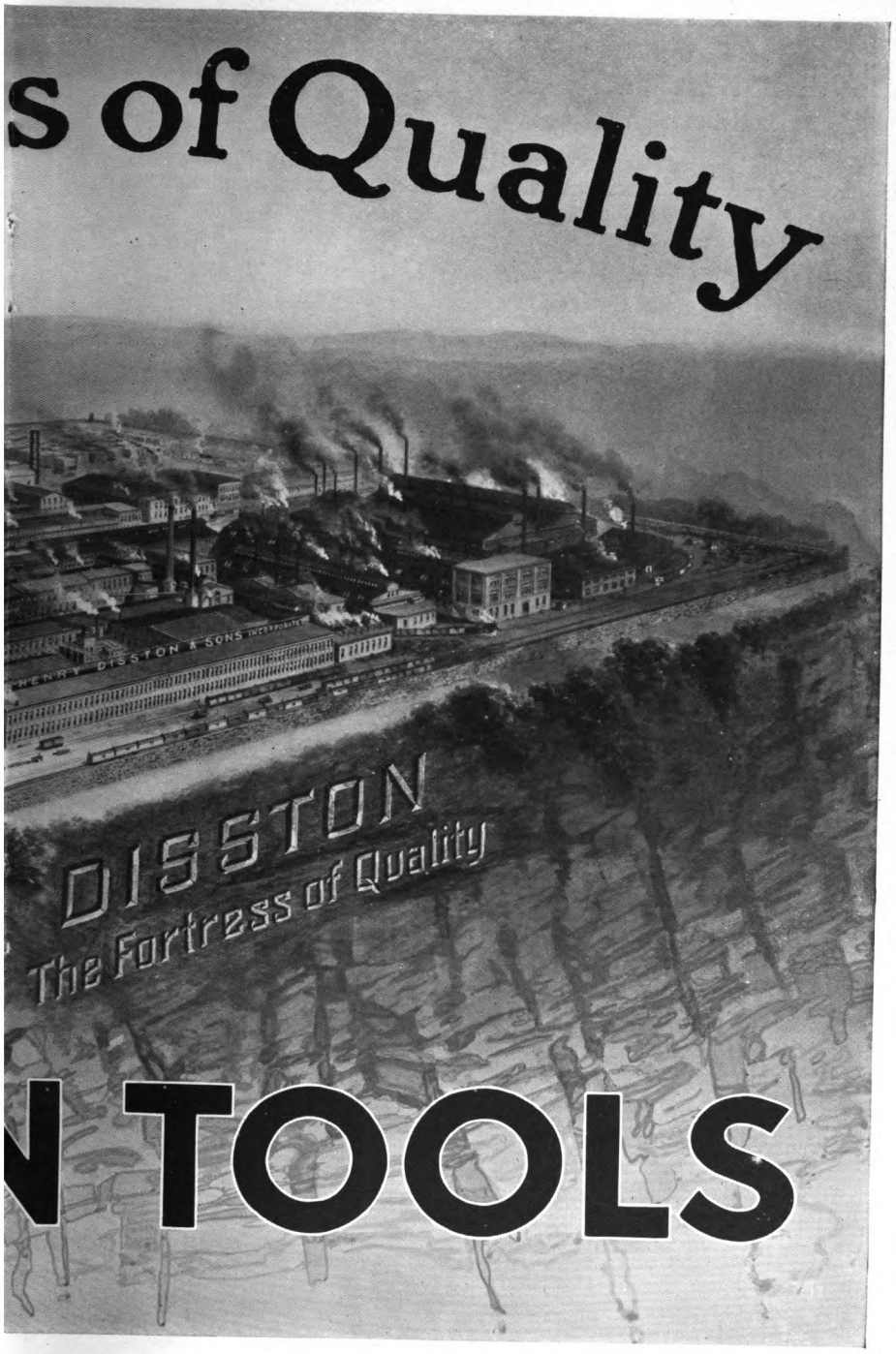
I use some of your Saws in mill.

Yours very truly,

CHAS. H. LOWE,
Lowe's Mill, Lilydale,
Tasmania, Australia.

Mr. Lowe, his five daughters and six sons, at the saw mill





Rounded Out His 58th Year

Reminiscences of Service With Henry Disston & Sons

By FRED SMITH

I WAS bound apprentice with Pruyn & Lansing, Boiler, Machine and Saw Works, Albany, N. Y. The talk of civil war coming on, things were getting very slack; we had not much work to do, so they closed down their saw business and asked me if I would like my freedom papers. They were made out, and the next day I started for Philadelphia, carpet bag in hand, as we were called carpet-baggers who came from one State to another. I arrived in Philadelphia Monday Morning, March 10, 1861, at the old Kensington R. R. Depot. Being a stranger in a strange land, I asked the way to Disston's, and was directed by the colored porter to take a straight course down Front Street till I got there. It being early in the morning, I wandered around until the shop opened. The first man I met was, I learned later, David Bickley. I asked him if he could direct me to the office of Henry Disston's Saw Works. He asked me what I wanted. I said I would like a job of work. I told him what I could do and he hired me right away. Having no place to go, tired and hungry, putting hat and coat on, we started out to find one. Went to work at noon time. Mr. Disston received me when he saw me, and called me runaway apprentice, but I satisfied him and I was all right with him then.

Mr. Bickley had the contract for mak-

ing all the Long Saws. It did not take many of us, about eight. The output was about twenty-five (25) dozen a week. There was not much machinery for making saws, one Toothing Press, and one Horizontal Grinding Machine. We did not have any Dies or Flattening Presses at that time. Our saws were hardened and tempered on Furnace Bottom, all hand work. Later on the factory consisted of two dwelling houses made into one. Grinding Hand Saws in cellar; Blacksmith Shop, first floor; second floor, Hand Saws and other kinds of saws; Long Saw machine out in yard facing Laurel Street. At that time we did not have more than seventy-five men working for us. On April 15 the war started. Quite a number of our men enlisted, so that left us with very few, but we got along very well. When we were not making saws we had plenty of Government work to do. Things commenced to look brighter. We were getting new machinery right along, machines for grinding hand saws and long saws, extending the building till we got to Richmond Street. Then Mr. Disston got the old flour mill and started in to make his own steel. Built new rolling mill on Laurel Street. After going along nicely, on July 2, 1865, our factory burned down, losing most of everything. But in a short time Mr. Disston put up a fine building, all new machinery, plenty of room. During the building of the new mill we had a very large shop on the other side of Haydock Street, then across Canal to Richmond Street. There we had our Hardening Shop. Everyone who had a contract did his own hardening and tempering. It was no easy job to smith saws in those days, for if we did twenty-five dozen in a week we were doing well, while now, with the Disston improvements in appliances and machinery, many times this quantity is being turned out of better quality and workmanship and with greater ease by the men.

In 1874 our factory burned down again the second time, but it was soon rebuilt on a larger scale than before, the business steadily increasing.

The enormous production of these works today is wonderful. If Mr. Disston, the founder, could have lived to see the fruits of his industry and that of his sons, the immensity of the establishment would be a source of great satisfaction and pride. They are fine people. I have found it to be so in my fifty-eight years with them.

Our work was mostly done by contract system until Mr. Hamilton Disston came into the firm. Then the system was altered entirely, going back to day work under foremanship, everyone working directly for the firm. I often stop to think what changes there have been in my time—from a little place to such a tremendously large one, the big army of men employed, the great improvements and many new inventions of machinery, and the enormous output compared with that of the time I first went with them.

I have every reason to be loyal, and take this opportunity to thank the members of the firm for their kindness to me in all the years I have been with them.

Speech and Thought

Judge Gary, who always speaks deliberately and in a manner fitting the directive head of the United States Steel Corporation, says:

"Upon a careful survey of the situation it will be found there are many reasons for believing prosperity in this country should be continued. The United States is the richest of all countries. It possesses one-third or more of the total wealth of the world. It has become the leader of finance and in this respect may properly exercise a commanding influence. Its natural resources are immense, and are susceptible of increasing development. If industry is protected and fostered in accordance with its merit, the war burdens surely, even though gradually, will be lifted.

"And with all this is connected the thought that as a net result of the war the volume of cash and cash resources has been increased in a marked degree and will be extended for purposes of expansion and development in this rich and growing country. Much depends upon the attitude and the speech of men."

Get the habit of doing things right. This will mean: Greater production, less waste, increased earnings. Work for good times all the time.

U. S. Dept. of Labor,
Wm. B. Wilson, Secretary.

The Disston Cafeteria

By A. N. BLUM

THE Restaurant opened Wednesday, April 9, 1919. Everything was in readiness for the numerous employees as they filed in and along the counters, eager to satisfy the inner-man from the ample quantities and choice varieties of food prepared for them.

The hearty disposition of the food and the happy repartee at tables and counters were evidences that the meal was enjoyed and the advantages of the Cafeteria appreciated.

Judging from the liberal patronage, the happy good will manifested, and unanimous commendation, the firm can feel that the object in building the Cafeteria has been attained, and that they have been justified in this enterprise.

The establishment covers 14,400 square feet. The main dining room is a lofty, well-lighted and ventilated hall, 60′ x 160′, and has a seating capacity of 900 persons. The kitchen, or actual food preparing shop, is equipped with all modern mechanical appliances for preparing meals.

Meat, dairy products and vegetables are stored in refrigerated rooms, cooled by an electrically-driven ice machine. Meat, as well as vegetables, is prepared before cooking in special rooms where mechanical appliances, in the form of an electric meat chopper and an electric paring machine, are provided. Modern ranges are installed for cooking all meats and vegetables.

Vegetables are cooked in steam cabinets and soup in steam jacketed kettles. There is a special pie-baking department with gas oven where homemade pies are made.

The food is cut and prepared on steam-heated tables and transferred on trucks to the service counter piping hot.

Each patron is provided with a tray, knife, fork and spoon, and passes along the serving-counter, where the foods are displayed ready to be picked out, starting with hot soup and meats, and finishing with pies, salads and coffee. In such a way, the service is very rapid; up to twenty people can be served per minute.

In addition to the main counter, there is a counter for milk, ice cream, candy, cigars and tobacco.

The soiled dishes are gathered in small trucks and transported to a special dish-washing department, where an electric dish-washing machine, capable of washing 5000 dishes per hour, cleans them.

The company spent a large sum of money on the building and equipment, and has no intention of making any profit on its operation or interest on the investment. On the contrary, it shall be the endeavor of the management of the Cafeteria to provide the best and healthiest food at the lowest prices.

It is the intention to furnish food at lower prices than can be obtained at home by reason of purchases being made in wholesale quantities and at wholesale prices. For instance, meat will be bought not in pounds but in carcasses; potatoes, not in bushels but in wagon loads, and so with all other commodities.

It is now up to the men and women to make it a complete success, by co-operation in the way of keeping the restaurant clean and making the stay there agreeable to everybody. A person buying a piece of pie, or getting a cup of coffee will be just as welcome as anybody buying a full meal.

In establishing the Cafeteria, it is the earnest desire of the Company to create an institution available and beneficial to every one of the employees. It is to be conducted for their special benefit and so create another link of good fellowship and understanding between the employees and the firm.

A Partner of Uncle Sam

You are a citizen.

Probably a good citizen.

But are you an *active* citizen—a real partner of Uncle Sam?

Have you put your money into his business—gone into financial partnership with him to finish up his war deal and capitalize peace?

War Savings Stamps make you such a partner—a democratic privilege—in fact the duty of every *active* citizen.

The first entertainment in the Disston Cafeteria was the initial performance of The Disston Minstrels on February 28, 1919.

What Is Americanization?

P. P. CLAXTON

Commissioner of Education

EXCEPT for a quarter million North American Indians, descendants of the natives whom the white settlers found here, the people of the United States are all foreign born or the descendants of foreign-born ancestors. All are immigrants or the offspring of immigrants. The oldest American families are so new in this country that they have hardly forgotten the traditions and the home ties of the countries from which they came. Though we are now more than a hundred millions of people between our double oceans, we have yet to celebrate the 300th anniversary of the founding of the second of the colonies out of which the nation has grown; 150 years ago there were less than three millions of us.

From all the world we have come, mostly sons of the poor, all striving to better our condition in some way, all looking for a larger measure of freedom than was possible for us in the countries from which we came. Here, free from the domination of autocratic government and from the poisoning influences of decadent aristocracies, forgetting our fears and servile habits, we have elevated the best from all countries into a common possession, transfused and transformed it by our highest and best ideals, and called it Americanism. A new thing this is in the world, and the most precious possession the world has. Though incomplete and still in the formative stage, growing richer and grander as the years go by, constantly clearing and purifying itself, its form and spirit are quite well determined.

To enter into this common heritage of the best of all, to be inspired with these ideals, to learn to understand the institutions which guarantee our freedom and rights and enable us to work together for the common good, to resolve to forget all purely selfish means for the work of the highest welfare of our country and of the world is to become Americanized. To give to the foreign-born population in the United States and all others the fullest and freest opportunity for this is what we in the Bureau of Education mean by Americanization. Every part of our program is directed to this end.

Americanization is a process of education, of winning the mind and heart through instruction and enlightenment. From the very nature of the thing it can make little or no use of force. It must depend rather on the attractive power and the sweet reasonableness of the thing itself. Were it to resort to force, by that very act it would destroy its spirit and cease to be American. It would also cease to be American if it should become narrow and fixed and exclusive, losing its faith in humanity and rejecting vital and enriching elements from any source whatever.

Our program of education does not compel, but invites and allures. It may, therefore, probably must, in the beginning be slow; but in the end it will be swift and sure.

Americanization is not something which the Government or a group of individuals may do for the foreign born or others. It is what these persons do for themselves when the opportunity is offered and they are shown the way; what they do for the country and the thing called democracy. The function of the Government and all other agencies interested in Americanization is to offer the opportunity, make the appeal and inspire the desire. They can and should attempt nothing more than to reveal in all their fullness the profit and the joy of working together for the common good and the attainment of our high ideals, to create the desire to have a part in the inspiring task, to show the way by which each may do his part best, and to help him set his feet squarely on the way.

Prosperity gives us friends and adversity proves them.

You can complete a good work, but you can never end it.

All our thoughts are original—either with ourselves or others.

A weak back doesn't necessarily imply that a man is behind the times.

Ever notice how easy it is for a man to be good natured when everything is coming his way?

Men are born, but husbands are made.

Only the man who has nothing to live for can afford to loaf.

DISSTON SAWS

RUN EASIEST
CUT FASTEST
LAST LONGEST

SAW DUST

IMPOSSIBLE

Hub—"I don't believe in parading my virtues."

Wife—"You couldn't, anyway. It takes quite a number to make a parade."—*Boston Transcript.*

DIPLOMATIC

Doctor—"Tell your wife not to worry about her deafness, as it is merely an indication of advancing years."

Mr. Meekman—"Er—would you mind telling her yourself, doctor?"—*Tit-Bits.*

SHE KNEW IT

"The professor seems to be a man of rare gifts," remarked Mrs. Naybor.

"He is," agreed the professor's wife. "He hasn't given me one since we were married."—*Philadelphia Public Ledger.*

LIMERICK

One night a wild, ravaging leopard
Was fired at by a bold sheopard;
Next morn it was found
Lying dead on the ground
The leopard the sheopard had peopard.
—*Boston Transcript.*

CONVENIENT

A farmer had come up to town for a few days. Before he started he had promised to bring his daughter a present, so he went into a jeweler's shop and said to the assistant: "I want a pair of earrings, cheap, but pretty."

"Yes, sir," said the jeweler; "you want something loud, I suppose?"

"Well, I don't mind if one of them is a little loud," replied the farmer. "My girl is slightly deaf in one ear."—*Tit-Bits.*

LEGS AT BARGAIN RATES

Old Lady (to severely wounded soldier)—"Poor man, have you lost your leg?"

Tommy—"Yes, mum."

Old Lady—"Oh, poor fellow! Do have an apple."

Tommy (to his chum, when the old lady had departed)—"Bill, I think I'll have my other leg off before she comes next week. I might get a banana."—*Tit-Bits.*

IT NEEDS TO BE SOME LIFE

After all, the biggest peace problem is to make life in America worth the price being charged for it.—*Hutchinson Gazette.*

THESE CHANGED TIMES

"Who are the plain people, anyhow?"

"Well, I wouldn't apply the term to the lady voters."—*Pittsburg Sun.*

SIMPLE EXPLANATION

"Your husband tells me he has quit betting on horses!"

"Oh, dear!" exclaimed young Mrs. Torkins. "Charley's broke again!"—*Washington Star.*

RETURNING THE COMPLIMENT

Speaker (to persistent heckler)—"I look upon you as a confounded rascal."

Heckler—"You may look upon me in any character you choose to assume."—*Tit-Bits.*

NEVER BEEN TRIED SINCE

She—"Why are you looking so thoughtful, my dear?"

He—"I was wondering how Jonah got away with it when his wife asked him where he had been away from home all that time, and he told her a whale had swallowed him."—*Baltimore American.*

NOBLE MARINERS

Miss Softleigh (watching revolving light of the lighthouse)—"How patient sailors are!"

Coast Guard—"How, indeed?"

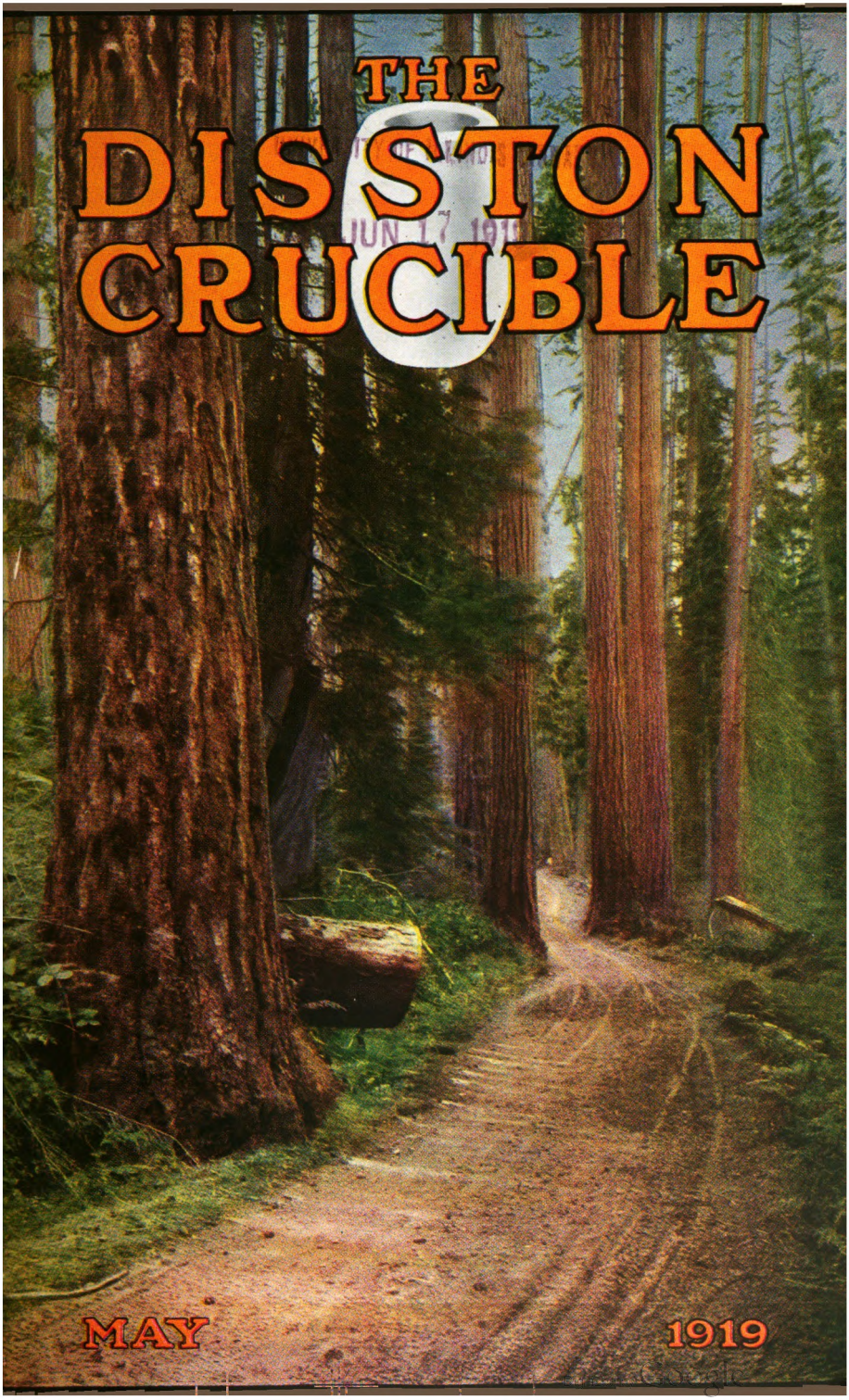
Miss Softleigh—"They must be. The wind has blown out the light six times and they still keep lighting it again."—*Marine News.*

TRY THIS BEFORE EASTER

Wifey—"There are times when I wish I were a man."

Hubby—"When?"

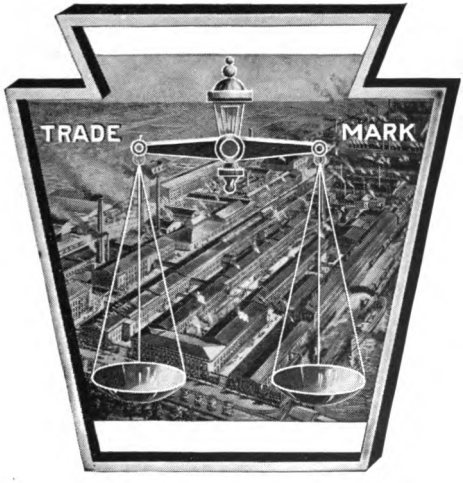
Wifey—"When I pass a milliner's shop and think how happy I could make my wife by giving her a present of a new hat."—*Cleveland Leader.*


THE
DISSTON
CRUCIBLE
MAY
1919

THE DISSTON CRUCIBLE

PRICE 10c PER COPY **$1.00 YEARLY IN ADVANCE**

TABLE OF CONTENTS



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

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VIII MAY, 1919 No. 4

EDITORIAL CHAT

Welcome Home, Boys!

FITTING, indeed, was the great and glorious welcome given the boys of the 28th Division as they traversed the route of parade through the City of Philadelphia on May 15th. As one viewed the bronzed faces, steady step and numerous scars, he was impressed with the thought that these boys from the Iron Division were not the raw recruits who went to Camp Hancock in the summer of 1917, but stalwart, disciplined veterans, who were tested in the bloody carnage along the Marne and baptized in the flaming fires at Fismes.

These were the boys who so heroically helped maintain the reputation and honor of the Stars and Stripes—the symbol of Liberty and Humanity. These were the boys who with their brothers from the North, the South, the East and the West, and with those across the sea, who were akin in thought and purpose, bravely faced a vicious and unprincipled foe for the protection of Country and Home, the security of women and children, and for the propagation of the principles of Freedom throughout the world.

Well could the vast throng that lined the streets doff their hats and shout their praises and appreciation to the wearers of the Red Keystone, the insignia of the great Commonwealth of Pennsylvania, which has been the veritable birthplace of Liberty and Independence, for everything that the insignia implies had been loyally exemplified by the State's noble sons.

Welcome, a thousand times welcome, to these boys who have returned to us from their gruelling experience and heroic deeds. May peace, prosperity and happiness be theirs as they resume their places as civilians once again, with their broadened vision, higher ideals, and a keener appreciation and conception of the homeland as a result of contrast and contact during their enforced absence abroad.

And everlasting will be the memory of their comrades who gave their all on the battlefield and now lie sleeping in foreign lands, but that they did not die in vain affords some measure of consolation for the supreme sacrifice.

Quality Tells

The Toughest Timbers on Earth Grow in Australia

THIS looks a toughish proposition at first sight, but it expresses nothing more than simple fact. When a carpenter trained in the British Islands or any other European country first starts to practice his handicraft in Australia on native timbers his tools and his temper alike are quickly ruined. But the Australian born worker in wood, accustomed from his youth up to the hardwoods of his land, takes them as a matter of course. He admits that all of them are tough. Indeed in expansive moments he has been known to qualify the word "tough" with adjectives that are out of order except in the pulpit. In Western Australia some of these hardwoods, jarrah and karri for example, are exported in large quantities to Europe, India and Africa and find ready use in quite a number of directions, more particularly sleepers and railway rolling stock work.

To appreciate the toughness of these timbers one has only to look at the tables which set out hardness and toughness tests of various timbers. In regard to Oregon, an American authority gives the extreme fibre stress in pounds per square inch at apparent elastic limit as 4,690 lbs. Similar figures for the timbers of Western Australia range from 11,000 to 17,000 lbs. These figures exhibit the relative toughnesses in a way which carries conviction, and they also suggest that for purposes where toughness and durability are necessary the timbers of Western Australia fill the bill and also the margin completely. Another of the features of these timbers is their weight. Hardly any of them are under 50 lbs. in weight per cu. ft. at 12 per cent moisture. Some run as high as 71 lbs. and the average is something like 66 lbs. The combined weight, hardness and toughness of these woods immediately suggest uses for them. It is not unlikely that Henry Disston & Sons would find them capable of meeting all their requirements in the way of tool handles of all kinds, and now that the fact is brought to the notice of the world's top-notch sawbuilders they may see their way to profit by it.

In Western Australia, in the early days of the Colony—say 60 or 80 years ago—when railways were non-existent and roads were only bush tracks, the question of getting timber from the forests to the seaboard was a serious one; but those hardy colonists were not to be beaten. It occurred to them that perfectly good railways could be made of the native timbers. So they sawed out rails of wood and for many years these wooden rails carried logs and sawn timber from the bush to the coast. It will be admitted that this is proof of some toughness. One more item of evidence: logs were then and are still carried from the forests to the tramway by means of whims. As these logs weighed anything from 5 to 15 tons, it will easily be understood that the whims had to be built solidly. The wheels of those whims were from 7′ to 9′ in diameter, connected by a heavy arch, underneath which the log was slung, but, iron being scarce, not many of the early whim wheels carrying these logs were provided with tyres. In fact, they were used without tyres, doing the work on their wooden rims only. It must be admitted that timber which can stand stresses and strains of that kind is indeed tough. Still another item of testimony: In the early days already spoken of, when the colonists wanted to grind their wheat, having no iron they constructed the machinery of their flour mills entirely of the local hardwoods. They were honest souls these early colonists and simple at that. So convinced were they of the value of their timbers for machinery purposes that some of them proposed to export West Australian hardwoods to London to make machinery for British factories.

"EUCALYPT,"
Western Australia.

Nothing else jolts a small-minded man like being forced to admit that he is wrong.

RARE WOODS

WITH the development of the woodworking art and the expansion of the furniture trade there came a demand for new and rare woods, and explorers searched the forests of the earth for different effects of grain and color. From the Andaman Islands, from unexplored Africa, from Borneo, from the remotest corners of the earth, woods rivaling the mahogany of Mexico and Cuba have thus been brought to light. From the Philippine and Hawaiian Islands, and from the forests of South America, strange woods have been obtained of wonderful grain and color effect, which are still hardly known by name.

Lately, attention has turned more to fields at hand. Gnarled old trees, twisted and insect-stung, despised by the lumbermen, are yielding ornamental woods worth many thousands of dollars. Curly-birch is but the twisted grain of the ordinary tree, obtained usually from a crotch or where a trunk has been twisted by frequent windstorms. Today the birch-tree that yields the greatest number of these curly knots is considered more valuable than the tall, straight tree without a variation in its normally developed texture. Bird's-eye maple is caused by the sting of an insect whose poison produces a sore in the tree. Nature, attempting to heal the injury, pours new sap into the wound to neutralize the effect of the poison. The outward effect is of a number of excrescences; but when the wood is cut, veneered and polished the beautiful bird's-eye maple effect is obtained. It is generally the apparently worthless small scrub-oak that gives those delightful pith rays, flaming curls and intricate patterns of light and dark shades that quarter-sawing brings out.

The finest Circassian walnut comes from misshapen, dwarfed trees on the shores of the Black Sea; and the most beautiful parts come from the twisted roots and curls caused by insect stings. Such growths are so interwoven that they produce the curious and irregular graining which makes the wood more valuable for veneers than mahogany.

No two mahogany trees are quite alike. Formerly only the tall, well-formed trees were cut for trade; now it is the misshapen tree that is more keenly sought. The wood expert searches the forests for some abnormal growth. Pieces cut from the crotch mostly show the graceful curls so much desired in fine furniture. Sometimes the figure shown is a flame-like tuft, called "feather" in the trade. As often happens in some mahogany trees, the fibres are arranged spirally by a freak of nature, and when cut lengthwise light and dark stripes are exposed.

The ebony from southern India and Ceylon has a perfectly white outer wood which is neither beautiful nor useful. There is no grain to it. It is the intensely black heart-wood that is used so extensively for inlay work. The tiger-wood, or Congo walnut, owes its flaming effect to some unknown freak of nature, for the best of it comes only from a limited number of selected trees. East India mahogany, or vermilion wood, owes its coloring to soil, climate and other natural agencies.

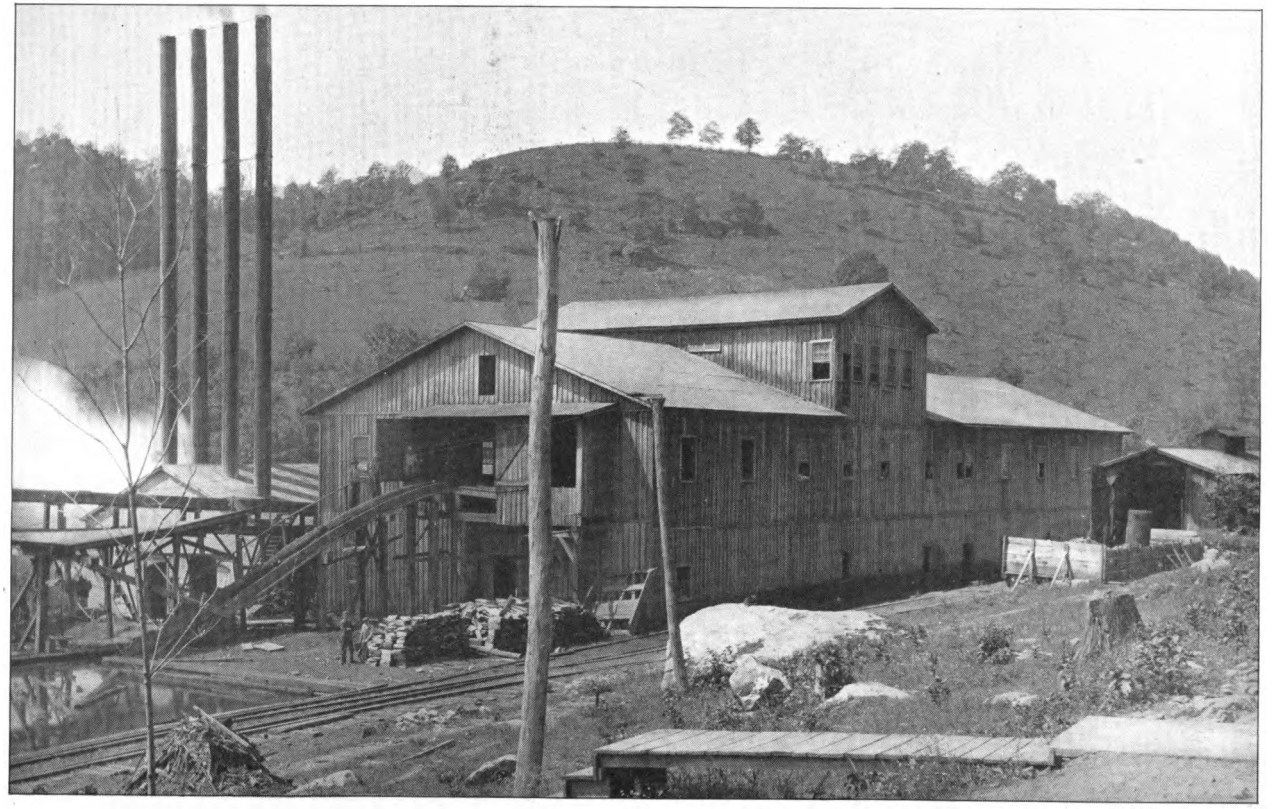
But all these woods, and other unnamed, require the application of industrial art and science. Skillful dressing and polishing are necessary to bring out their veining and other characteristics. Science is brought to bear in making their exploitation commercially possible; for instance, enabling veneers to be cut to less than a hundredth of an inch in thickness. So the architect and furniture designer get the great choice of beautifully grained woods which they blend and work into the harmonious effects in which we so excel today, surpassing the highest ambitions of the artists in wood of the preceding century.—*Western Lumberman.*

THE FIRST FOOD-MONOPOLIST

"This ought to make life easy from now on," remarked Noah as the ark landed.

"To what do you refer?" inquired Japhet.

"Our monopoly of eggs, butter, milk, beef, etc., with not a soul on earth to start an investigation."—*Washington Star.*



Moore-Keppel Co. Saw Mill, Ellamore, W. Va.

Readjustment of Business

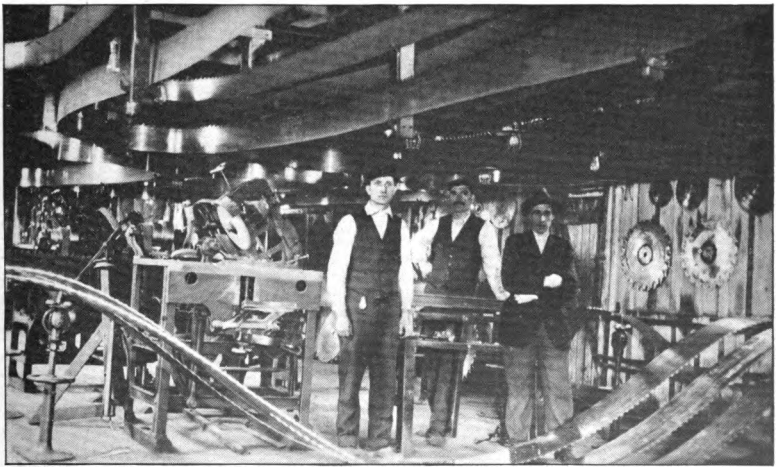
THE readjustment of business to meet the new conditions is largely a matter of mental attitude, psychology, sane thinking. For four years we lived under conditions that were described as abnormal, but so easily does humanity adapt itself to circumstances that as the months and years passed the abnormal came to be regarded as normal. War, scarcity of labor, high prices, spies, rumors, food restrictions—all were a part of the every-day game, and each new regulation occasioned small surprise or protest. It was all a part of the exciting game that might go on for years more. Suddenly at eleven o'clock on November 11, 1918, the great motive force that controlled and influenced the minds of a billion people stopped, and after the first mad demonstration of joy that ran like wildfire 'round the world came the bewildering reaction that attends complete revolution in thought.

Under the circumstances it is natural that business should suffer from partial paralysis. The cutting off of government contracts and the complete cessation of war-time manufacturing would naturally throw out of balance the financial and labor markets. Thousands of men have been laid off, and business conditions will not be such that will provide immediate employment. Capital is abnormally timid, and many business ventures have been temporarily abandoned because the projectors do not know exactly what is going to happen, so they play safe by marking time.

This condition cannot long continue. The world must be fed, clothed and amused, and gradually the fear of the unknown future will fade away. The farmers will plant and harvest their crops, the thousands of industries hampered and restricted by the war will resume their old activities and the world will move along, not the way it did prior to 1914, but with greater force and greater achievements.

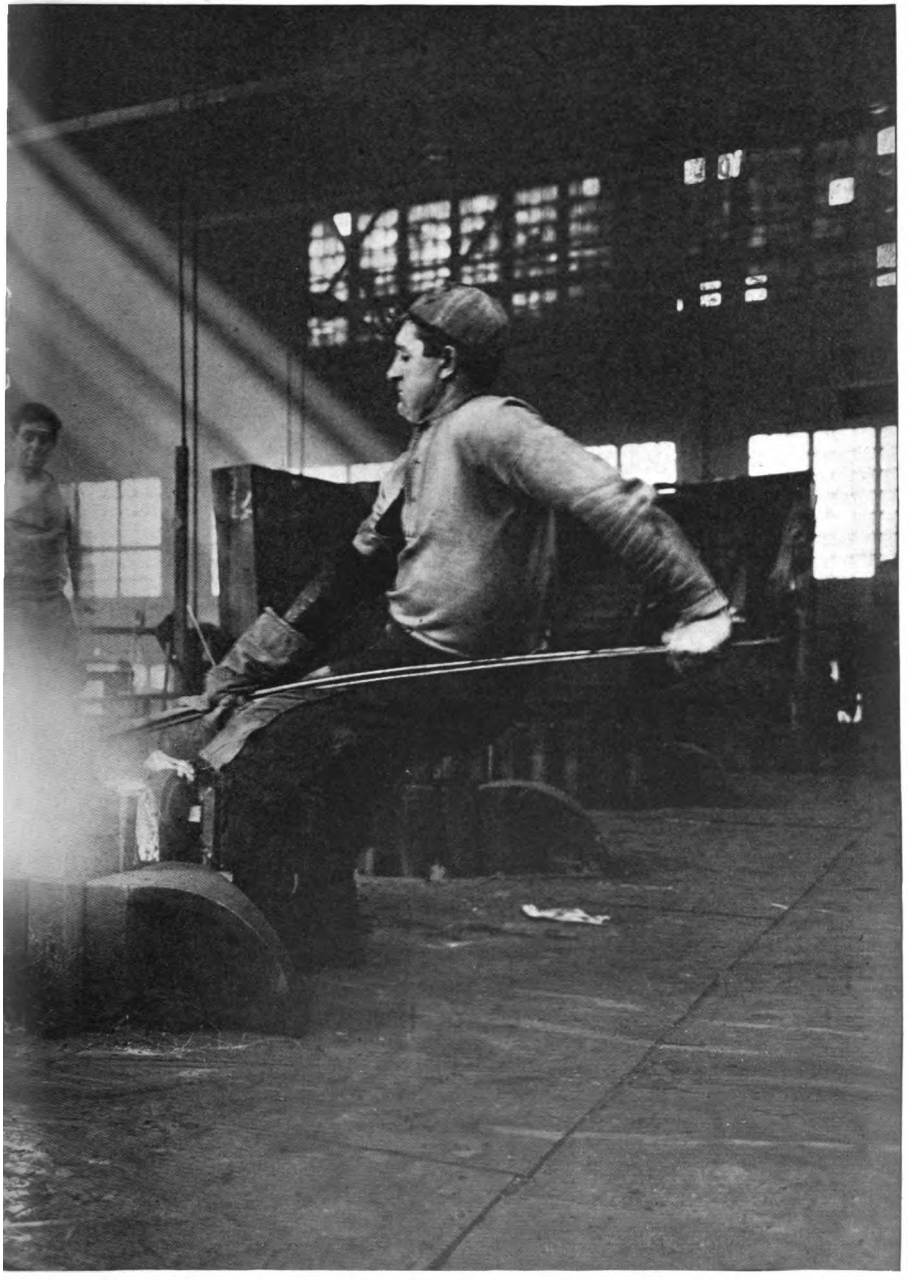
There is more kindness, more humanity, more unselfishness in the world than existed five years ago, and the lessons of sacrifice and co-operation will not be forgotten.

—*Timkin Magazine*, Feb., 1919.



Filing Room of Moore-Keppel Co., Ellamore, W. Va.
Saws in the room are all DISSTON

CASTING STEEL INGOTS *Realizing the importance of having*
of Saws, in 1855 Henry Disston c
To this is due in great measure the high efficiency and durability of Disston Brand



teel of special and uniform quality, and particularly adapted for the requirements
nmenced the manufacture of his own crucible Steel in connection with the Saw Works.
aws.

We Must At Once Americanize Our Aliens

More Than Eight Million People in This Country, Above Ten Years of Age, Cannot Read or Write English—Proposed Nation Shall Educate Them

EIGHT and a half million persons in the United States over ten years of age cannot read a newspaper, billboard, car card, sign, booklet or letter in the American language. Five and a half millions of them cannot read anything in any language.

These astounding facts demand the immediate consideration of the Nation. The war has demonstrated some of the dangers from large numbers of foreign-born persons who have not been assimilated or Americanized. It has also brought to light thousands upon thousands of native-born Americans who cannot read or write.

These illiterates and aliens outnumber all the people in Nevada, Wyoming, Delaware, Arizona, Idaho, Mississippi, Vermont, Rhode Island, North Dakota, South Dakota, Oregon, Maine, Florida, Connecticut and Washington combined. They exceed the total population of the Dominion of Canada. As voters their ballots will outweigh the influence of greater New York, Philadelphia and Chicago in national affairs.

Such people must be educated at least sufficiently to read the Constitution of the United States and American newspapers, and to know something of what it means to be an American.

This problem is national. The South leads in illiterates. The North leads in non-English speaking. Seventeen and one-fourth per cent of the people of the east south central states are illiterate, and 15.8 per cent of the people in Passaic, New Jersey, cannot read, speak or write English. Sixteen per cent of the people of the south Atlantic states are illiterate and so are 13.2 per cent of the people of Lawrence and Fall River, Massachusetts.

These civic and economic "seconds" are beyond all help from printed warnings or advice in the English language. Their ignorance and inaccessibility to essential public information are constant drags upon progress.

The Secretary of the Interior has graphically painted the situation by the nationally accusatory questions he has asked in his recent letter to the President:

What should be said of a world-leading democracy wherein 10 per cent of the adult population cannot read the laws which they are presumed to know?

What should be said of a democracy which sends an army to preach democracy wherein there was drafted out of the first 2,000,000 men a total of 200,000 men who could not read their orders or understand them when delivered, or read the letters sent them from home?

What should be said of a democracy which calls upon its citizens to consider the wisdom of forming a league of nations, of passing judgment upon a code which will insure the freedom of the seas, or of sacrificing the daily stint of wheat or meat for the benefit of the Roumanians or the Jugo-Slavs when 18 per cent of the coming citizens of that democracy do not go to school?

What should be said of a democracy which permits tens of thousands of its native-born children to be taught American history in a foreign language—the Declaration of Independence and Lincoln's Gettysburg speech in German and other tongues?

What should be said of a democracy which permits men and women to work in masses where they seldom or never hear a word of English spoken?

Senator Hoke Smith has just introduced in the senate, and William B. Bankhead in the house, the Smith-Bankhead Americanization bill; senate bill 5464, house bill 15,402.

This bill directs the Secretary of the Interior through the Bureau of Education to co-operate with the several states in the education of the above mentioned peoples and in the preparation of teachers for the work.

The appropriations begin at once and end in 1926.

A state, to secure the money, acts through its chief school officer and shall not participate until it has required the instruction of illiterate and non-English

speaking minors more than 16 years of age in the American language for at least 200 hours per year.

Federal money shall be used only for salaries or training teachers and no Federal money shall be used for buildings or equipment or for support of religious or private schools.

Each state receives money in proportion to the number of her illiterates and persons unable to speak English, as compared to the total number of such persons in the United States.

The other provisions of the act concern details of administration.

These 8,500,000 when taught to read will be an immense new market for every form of merchandise. They will mean 8,500,000 new readers of newspapers, periodicals, farm journals, books in general and advertisements of manufactured products. At present they can't make use of any product of the printer's labor. They can't read even a moving picture title or a Victory Loan poster.

The elimination of illiteracy means the elimination of falsified merchandise, and the reduction of cheating by manufacturers and retailers who rely upon illiterate groups for their main support.

From every humanitarian and business viewpoint, it is of the utmost importance to all with messages, educational or commercial, that these eight and a half millions be taught at least sufficiently to read a poster or a newspaper. Every user of the printed word, writer, manufacturer, merchant, and advertising man should immediately express his opinion of the importance and urgency of this legislation to Congress.—*Mill Supplies.*

Sawdust Briquets

There are now at least three firms on the Pacific coast engaged in the manufacture of sawdust briquetting machinery, and at least three plants for the manufacture of this fuel have been established there.

The main market for briquets will probably be for domestic use, where the cleanliness and easy kindling qualities of the briquet are a fine asset. For this use the briquet might be able to compete with coal at only $8.50 a ton, the housewife being willing to pay a little more for the same heat value on account of these desirable properties. The almost total absence of ash, the absolute absence of clinker, and the lack of smoke are great advantage of briquets over coal.

In competing with cordwood the briquet has certain advantages, such as requiring less labor in preparing for the fire, containing less moisture and more wood per pound, and obviating the need for kindling wood.

The best chance for the success of the wood or sawdust briquet is in those regions where sawdust is abundant and coal is expensive. The region best fulfilling these conditions in this country is the Pacific coast, and it is a significant fact that the companies now establishing the industry in America are all, as far as the author knows, on the Pacific coast.

—U. S. DEPT. OF AGRICULTURE.

A School of Forestry in the Philippines

A School of Forestry in the Philippines, which was established in 1910 as part of the College of Agriculture, University of the Philippines, has made excellent progress, and has been well attended. The college and school are situated near Los Baños, at the base of Mount Maquiling, about forty-two miles from Manila. The mountain, which is almost wholly forested, constitutes a forest reserve of about 15,000 acres, furnishing the students ample practice in the various branches of forestry. Besides general work in the reserve, each class is expected to improve one hectare (two and a half acres), making a modest forest on a small scale to remain as a monument to the class. The course covers two years. Students are selected from all parts of the Islands. On graduation they are sent to provinces other than their own, and after four years' service they are to return to their home provinces. One of the difficult features of forestry in the Philippines is the great number of tree species, all of which the forester should be able to recognize. The Philippine Herbarium contains specimens of more than 2,500 species of trees.

Submit Labor Program

Principles of Industrial Relations Put Before Business Bodies

Washington, April 16.—A statement of principles of industrial relations, prepared with a view to furnishing a basis on which American industry can build a national labor program, has been submitted to a referendum vote of the membership of the Chamber of Commerce of the United States.

The principles, numbering thirteen, were prepared by a committee of the chamber which has been investigating industrial relations.

The principles, which will be voted on separate, were as follows:

"Industrial enterprise, as a source of livelihood for both employer and employe, should be so conducted that due consideration is given to the situation of all persons dependent upon it.

"The public interest requires adjustment of industrial relations by peaceful methods.

"Regularity and continuity of employment should be sought to the fullest extent possible and constitute a responsibility resting alike upon employers, wage earners and the public.

"The right of workers to organize is as clearly recognized as that of any other element or part of the community.

"Industrial harmony and prosperity will be most effectually promoted by adequate representation of the parties in interest.

"Whenever agreements are made with respect to industrial relations they should be faithfully observed.

"Such agreements should contain provision for prompt and final interpretation in the event of controversy regarding meaning or application.

"Wages should be adjusted with the due regard to the purchasing power of the wage and to the right of every man to an opportunity to earn a living at fair wages, to reasonable hours of work and working conditions, to a decent home, and to the enjoyment of proper social conditions.

"Fixing a basic day as a device for increasing compensation is a subterfuge that should be condemned.

"Efficient production in conjunction with adequate wages is essential to successful industry.

"Consideration of reduction in wages should not be reached until possibility of reduction of costs in all other directions has been exhausted.

"Administration of employment and management of labor should be recognized as a distinct and important function of management and accorded its proper responsibility in administrative organization.

"A system of national employment offices, with due provisions for co-operation with existing State and municipal systems, can be made, under efficient management and if conducted with due regard to the equal interests of employers and employes in its proper administration, a most helpful agency, but only if all appointments are made strictly subject to the civil service law and rules."

—*Evening Bulletin*, April 16, 1919.

The Other Fellow's Problem

The greatest need we face today is that of understanding. We have had too much talk about "masses" and "classes" and too little recognition of the truth that in the main all men are very much alike; that they are actuated pretty much alike by the desire to live and to get the joys that life should be made to provide. Some succeed better than others, but that is merely a prank of Mother Nature. She makes no two things exactly alike and yet she sees to it that the man with the hoe is little different from the man of wealth. If we but had a better appreciation of the other fellow's problems, it would make for greater contentment and greater progress. The time is at hand when Capital must give more thought to the workers' problems and the worker must be informed as to the problems of business and industry. That we are making progress toward that better understanding is my fond hope.

—J. Ogden Armour.

English As She Is Writ

Tricks of Language Which War Risk Bureau Clerks Struggle With

When the United States Government decided to double a private's pay so that he could contribute to the support of his family while in the service, and added thereto an allowance which varied according to the size of the family, it added another burden to its shoulders—that of translating tens of thousands of letters into understandable English, and find out just what the writers were driving at.

The quotations which follow are taken from genuine letters received by the Bureau of War Risk Insurance, in Washington, and explain the wear and tear on that office and, no doubt, many delays in answering.

"We have your letter. I am his grandmother and his grandfather. He was born and brought up in this house according to your letter."

"You will please send my money as soon as possible, as I am walking around the city like a bloody pauper."

"If I do not receive my husband's pay I will be compelled to live an immortal life."

"You have taken my man away to fight, and he was the best I ever had—who is going to keep me if you don't?"

"My bill has been put in charge of a spitton (platoon). Will I get any more money?"

"I am writing to ask you why I have never received my elopment."

"Please send my allotment. I have a little boy and kneed it every day. I ain't got no book lurnin and write you for inflamation."

"Just a line to let you know that I am a widow and four children."

"Previous to his departure we were married by Justice of the piece. He was inducted into the surface."

"I have four months baby and he is my only support."

"Date of birth—not yet but soon."

"I did not know my husband had a middle name and if he has I don't believe it."

"Dear sir: We have another war baby in our house, how much do I get?"

"As I need his assistance to keep me inclosed."

"Owing to my condition which I havent walk in four months from a broke leg whose number is 975."

"Your relationship to him—just a mere aunt and a few cousins."

"He left me with materially nothing to live on. He beat me for no reason whatever."

"Both sides of our parents are old and poor."

"To whom it may consume."

"Kind Sir or She."

"I enclose, Lovingly yours."

"I'm left with a child seven months old and she is a baby and cant work."

"Please send me a wife's form."

"Your relationship to the enlisted man. I am still his beloved wife."

"Father writes and says I have not received my son's money, mother has died, kindly change her address."

'You have changed my little girl to a boy, will that make any difference?"

"I am sitting on the Y. M. C. A. writing this letter while the piano plays in my uniform."

Some Army Facts

An army corps is 60,000 men.
An infantry division is 19,000 men.
An infantry brigade is 7,000 men.
A regiment of infantry is 3,000 men.
A battalion is 1,000 men.
A company is 250 men.
A platoon is 60 men.
A corporal's squad is 11 men.
A field battery has 195 men.
A firing squad is 20 men.
A supply train has 283 men.
A machine gun battalion has 296 men.
An engineer's regiment has 1,098 men.
An ambulance company has 66 men.
A field hospital has 55 men.
A medicine detachment has 13 men.
A major general heads the field army and also each army corps.
A brigadier general heads each infantry brigade.
A colonel heads each regiment.
A lieutenant-colonel is next in rank below a colonel.
A major heads a battalion.
A captain heads a company.
A lieutenant heads a platoon.
A sergeant is next below a lieutenant.
A corporal is a squad officer.

Concentrate on the Leaders

In every community there will be found a group of people who by common consent are looked upon as leaders. They point the way, set the standards and furnish the inspiration for what is most worth while in community life.

In the various sorts of business enterprises we find the same thing. In every line there are the leaders, who attain their position by virtue of their enterprise, thrift, integrity, business efficiency, resourcefulness, originality and all-round forceful qualities.

As it is in the social life of the village or city community and in business life, so it is in the open country. In every township and county there are the recognized leaders. Because of superior capacity, education or natural strength of character, they come to places of great influence among their neighbors. They are the first to adopt improved methods of farming, to introduce pure bred live stock, to build better homes and furnish them attractively, to buy up-to-date machinery. And in time the whole neighborhood follows the example set by these leaders.

In this time of world turmoil, the more closely the leaders in the business and manufacturing world and the leaders on the farm are drawn together, the better it will be both for them and for the country. They live too far apart to enjoy much social intercourse; but through satisfactory business dealings not only can they help one another in a material way, but they will come to have a mutual confidence and esteem which will lead them to stand together and to work together both for their own good and the good of their common country during the trying reconstruction period.—*Ex.*

Have charity; have patience; have mercy. Never bring a human being, however silly, ignorant, or weak—above all, any little child—to shame and confusion of face. Never by petulance, by suspicion, by ridicule, even by selfish and silly haste—never, above all, by indulging in the devilish pleasure of a sneer—crush what is finest and rouse up what is coarsest in the heart of any fellow-creature.—CHARLES KINGSLEY.

Value of Liberty Bonds

The following, which appeared editorially in a recent issue of the Philadelphia *Evening Bulletin*, is so pertinent to our needs that we quote it in full:

"Many readers are confused over the varying prices of Liberty Bonds and cannot understand why those bearing the same rate of interest should sell at different prices. To those who intend to keep their bonds there is no need to worry.

"No two of the Liberty issues thus far mature at the same dates. Some are definitely payable at a rather distant date, with the right reserved to retire them sooner if the Government desires. The third issue is absolutely redeemable in gold ten years from the date of issue. These bonds command the highest prices among the 4¼ per cents because the term is so short. Buying them around 95 means that there is one-half per cent per annum of profit accruing, which means really that much more interest. Other bonds have longer to run.

"The First Loan is untaxable for any purpose, and hence commands the highest price. The others are liable, in the case of large holders, to supertaxes only. Should the nation at any time suspend supertaxes on private incomes these bonds would increase in selling value. The original 4 per cents, which were not converted, command the lowest price of any, but even these have an approximate yield on recent market prices of 4.45, and with their income tax exemption are the equivalent of a security yielding 4.65 and subject to the normal income levy. The third series of bonds has an approximate yield of 4.90, an attractive basis of investment."

The fit of the tailor made suits often depends upon the pockets.

Don't prolong a quarrel. Make one hard fight and then quit.

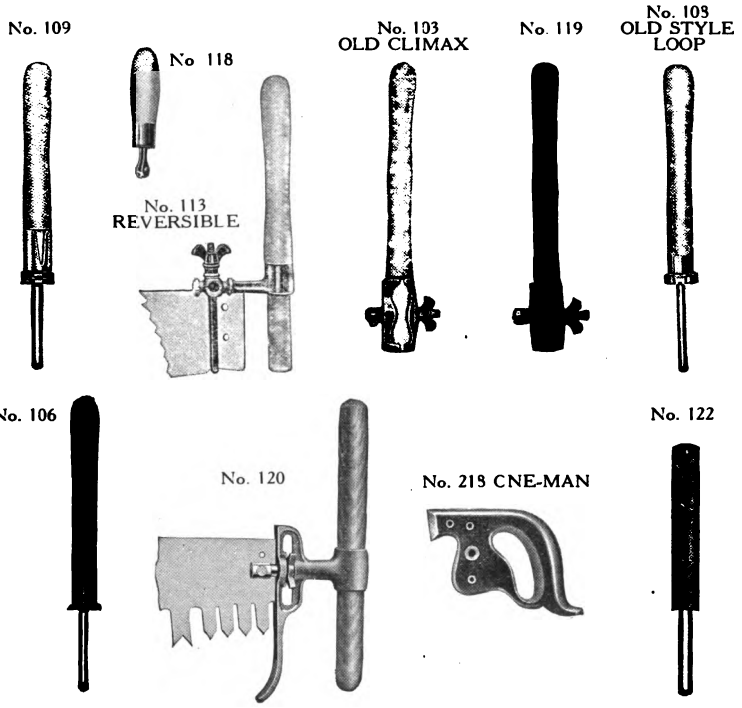
Many a man who thinks he is a politician is really a joke.

In some circumstances silence has the most telling effect.

People who are too anxious to live on velvet soon get called on the carpet.

Consistency is a jewel, but it does not bring a very high price.

DISSTON
Cross-Cut Saw Handles



The DISSTON Cross-cut Saw HANDLES are made of carefully selected, thoroughly seasoned wood, properly fitted with best malleable iron castings. They are strong and durable, readily adjusted to the blade, and have an easy, comfortable grip.

Quality of material and workmanship, design and weight of castings being considered, the Disston Handles for Cross-cut Saws are the lowest in price of any on the market, and should not be compared with those of inferior make.

HENRY DISSTON & SONS, Inc.
Keystone Saw, Tool, Steel and File Works
PHILADELPHIA, U. S. A.

SAWDUST

NOT A COLYUM

"Did you see Trajan's Column when you were in Rome?"

"Read it every morning."—*Boston Transcript.*

THE VICE IN ADVICE

Advice is the most worthless commodity in the world. Those who might profit by it don't need it, and those who do need it won't profit by it—if they could, they wouldn't need it.—*Life.*

FEMININE

"My husband is so jealous."

"How absurd!"

"Why, isn't yours?"

"Of course not."

"How humiliating!"

—*Boston Transcript.*

A TIP FOR THE LEAGUE OF NATIONS

Paderewski is going to be the President of Poland. Then, why not place John McCormack, the Irish sweet singer, at the head of the population of the Emerald Isle, and elect Caruso President of Italy? Thus might harmony be established in Europe.—*New York Globe.*

A GOOD MATCH

"When I get a car, I want one which will suit me."

"Then, my dear, you had better get a runabout."—*Baltimore American.*

BASEBALL JOKE REAPPEARS

She—"Would you leave your home for me?"

He—"I'd leave a baseball game in the ninth inning with the score a tie."

—*Philadelphia Public Ledger.*

CUPID AND CUPIDITY

A Galveston widow says the latest proposal she has received was from a Houston insurance agent who said he had loved her ever since her first husband stung the company for $10,000.

—*Galveston News.*

HARMONY AT VERSAILLES

Harmony? Of course there will be harmony at that Peace Conference. It will go something like this:

Chairman—"It has been thought best to fix the indemnity that Germany shall pay at one hundred billion dollars. Are there any objections?"

Three or Four Frenzied Voices—"*Mein Gott,* yes! It is an outrage, an—"

Chairman—"There being no objection, the secretary will cast one vote for the proposition and it will be so ordered." . .

"Now we come to the matter of territorial adjustments. We boys have sort of talked it over and we think it would be about right if we took all of Germany as far as the Elbe, including, of course, the city of Hamburg and the port of Cuxhaven. Is there anybody opposed?"

Agonized Guttural Voices—"Yes! *Gott in Himmel,* yes! ! Listen—"

Chairman—"If not, we shall regard the matter as settled and the secretary will make a note of it so that it may be included later in the treaty.

"Now, gentlemen, what is your pleasure in regard to punishing all the German prison commanders who mistreated Allied soldiers under their charge? There seems to be quite a strong feeling among the delegates that they should be hanged. What say you—does anybody object?"

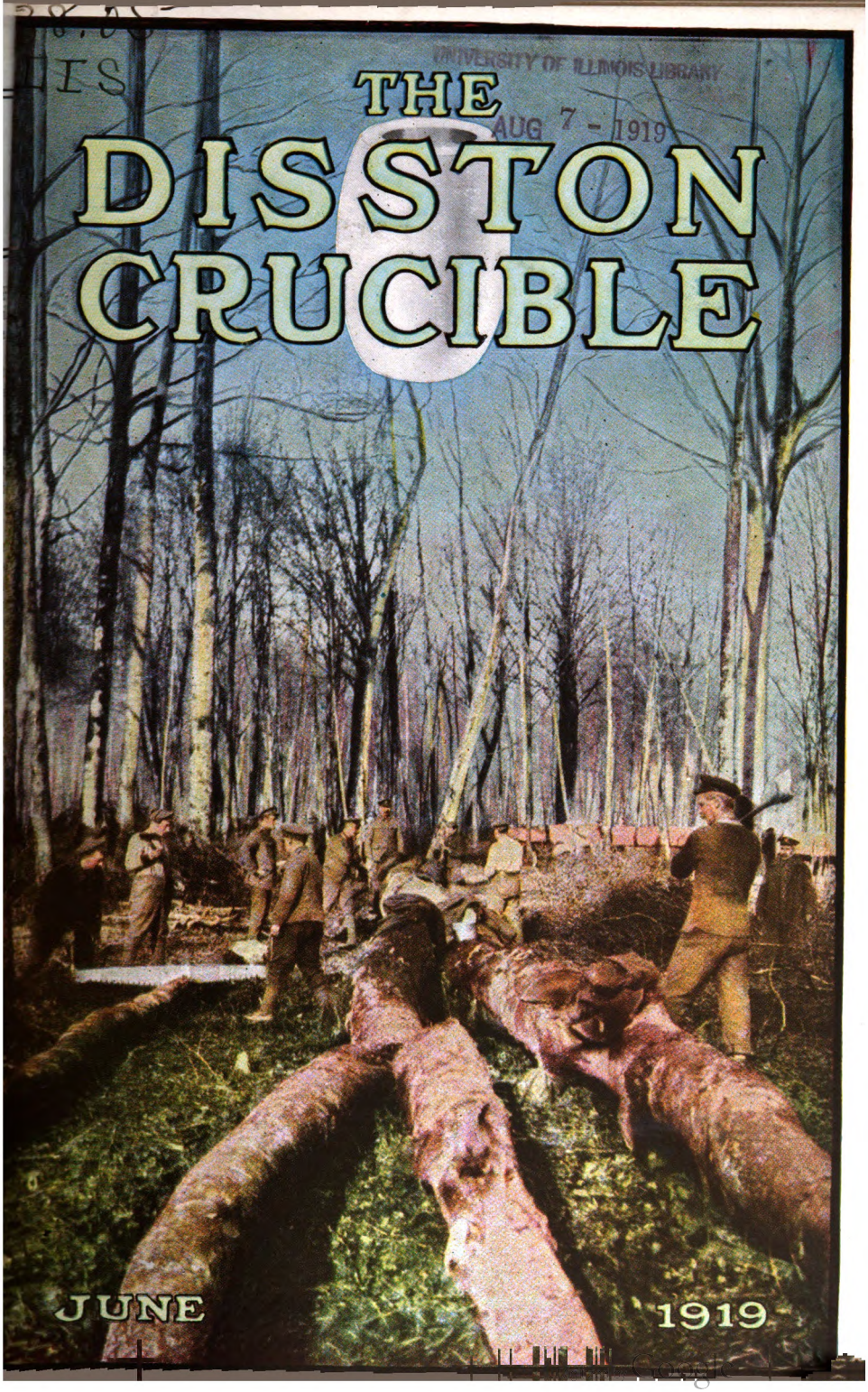
Chorus of Despairing Voices—"*Ach, Himmel,* yes! We object! We demand —"

Chairman—"Since no one objects, it is so ordered. The money for the rope may be taken from the contingent fund. And now, gentlemen, a motion to adjourn is in order. But first I wish to congratulate you on the wonderful harmony which has prevailed during this session and which, I am sure, will continue throughout the Conference. It is a real privilege to preside over a body of men whose thoughts and aims are in such perfect agreement."—*Syracuse Herald.*

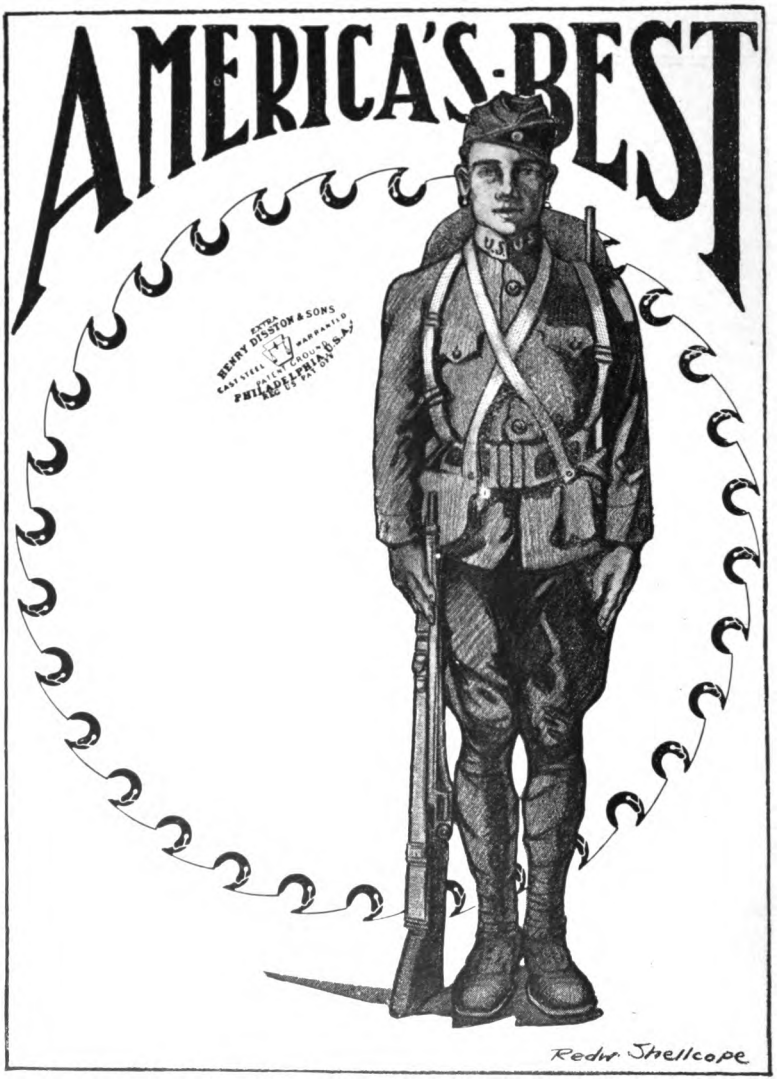
"This fish is very rich."

"Yes, it is well supplied with bones."—*Boston Transcript.*

THE DISSTON CRUCIBLE



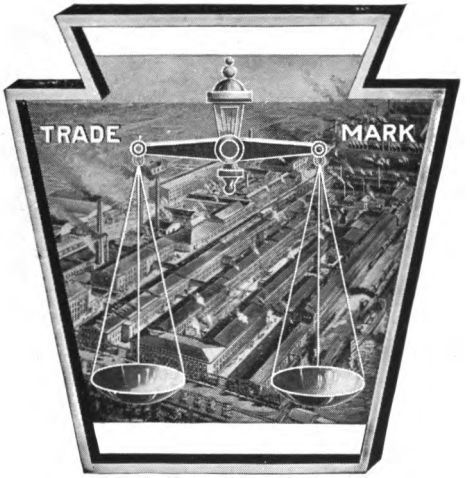
JUNE 1919



THE DISSTON CRUCIBLE

PRICE 10c PER COPY $1.00 YEARLY IN ADVANCE

TABLE OF CONTENTS



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

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VIII JUNE, 1919 No. 5

EDITORIAL CHAT

The Spirit of '76

LOOKING back to the events in this Country in the year 1776, it seems hardly possible that thru the thoughts, actions and influence of a few men such a wonderful change could have been made in the living conditions and circumstances of millions of peoples as exists here today. Who could have foretold that these men, sincerely and firmly believing in the righteousness of their causes, subscribing their lives and fortunes, risking their all in the endeavor to secure justice, promote the freedom and welfare of humanity, were planting the seed that was destined to form and ultimately grow into a great, prosperous and powerful Nation?

And more than that, the ennobling spirit of this American Nation is now pervading the world. Its principles, policies and high ideals have been tried and proved in the recent World War. It has shown that its aims and objects are for the betterment of mankind, for the attainment of which it has freely given in abundance of its vast moral, physical and financial strength.

That same spirit of '76 is growing stronger and stronger, and its influence in the very nature of things will spread and increase wherever humanity reigns, so that in time to come, not only these glorious United States, but every civilized section of the globe will celebrate its

INDEPENDENCE DAY

Ringing Reports of Advancing Prices of Lumber Everywhere

THE news columns of the *Southern Lumber Journal* today fairly ring with reports of advancing prices of lumber from one end of the land to the other, from the treeless West and Middle West, from the far-flung battle line of the Pacific Coast, as well as the great markets and distributing points and consuming centers in the Northern, New England and Middle Western States. It is welcome news to the lumber man in the South especially and other parts of the country in general, with which and wherein we rejoice heartily and share freely with the man in the woods and around the mills, for a better day and a brighter outlook. Ring the bells, beat the drum and sound the tambourine! For many of the mills and manufacturers in the South it has been a long lane and thorny path many have had to travel, but in the new order of things there will be found that measure of reward which comes to all who work and wait in the faithful discharge of their duties.

During the balance of the current year we expect to see better and more profitable conditions obtaining among the lumber people and in the lumber markets generally. Conditions are ripe for such a change which have been in the making for weeks and months. Let no one think for a moment that the new scale of prices is going to affect lumber people only, for such a conclusion would be altogether illogical and erroneous. Possibly no other industry in this country is more interlocked with other and allied interests than that of lumber. For example, the prosperity of the lumber industry means an expanded market for mill supplies, cotton and woolen factory products, agricultural and packing house products, banking and merchandise as well. Thus it will be seen that the prosperity of the lumber business spells prosperity and better things for many other lines which are not always taken into account when reference is made to the prosperity or adversity of the lumber industry. Also it should be remembered that the lumber industry gives more employment to adult laborers than any other industry in the South and that, of course, carries with it regular and profitable employment to the greater army of employes in our midst.

One of the striking features of the present advance in the lumber prices is to be found in the fact that the present increase covers practically every item made or manufactured, although, quite naturally, the increase is greater on some items than others and likewise greater in some species than others. But the advance covers practically everything listed in lumber circles. While some people criticised the Government harshly last year in connection with prices and cost of production, if we were called upon today to give our views as to the chief reason for the recent advance in prices we should assign first the knowledge possessed by an overwhelming majority of the manufacturers as to the cost prices of production such as the Government last year forced the mill men to investigate for themselves; and while they may have complained at the time and possibly regarded such investigation as a hardship, they are nevertheless today able to turn that experience and that chapter in their business career to a good account.

Indeed, we might go further and say that no one else was in a position or could have gotten in position to have compelled obedience to this law of business ethics other than "Uncle Sam." Whether regarded in the light of a blessing in disguise or otherwise, it is a fact all the same that the mill men are today profiting as the result of experiences forced upon them by the Government in an emergency last year. We are indulging in these observations because we think it wise and well for the lumber people to take their soundings at this time and learn of the reasons why for many of the blessings with which they are surrounded and how long they are likely to last. In the brightening outlook we find much

to rejoice over and many things for the lumber people to be grateful for, as many things are certainly taking a rather roseate hue. It is no time, however, for shortwinded or sensational action, but long and steady strokes. If this much is done the reward will be swift and sure.

Labor Conditions

Aliens are leaving this country in such numbers that there is a fear in some quarters of labor shortage. Immigration officials announce that passports are being issued at the rate of 1000 a day and it is said most of these aliens have no intention of ever returning to the United States. Some of them have made their fortunes here and others see big opportunities ahead in the rebuilding of devastated parts of Europe.

"The effect of this migration on the American labor market will certainly be interesting, and may be serious," says the *New York Sun*. "The general assumption that after the war we shall have more workers in the United States than we need, an assumption which has been at the bottom of much heated discussion of industrial and commercial prospects, is not to be accepted without careful study. The belligerent nations of Europe have lost millions of workers who have been maimed or killed. Their places must be filled. Foreign governments are going to discourage emigration as much as they can. This will also be the policy of the neutral nations, as has been proved by the action already taken in the Scandinavian countries.

"The United States received 1,218,480 immigrants in 1914. In the four years following it received an average of only 250,000 a year, the number falling to 110,618 in 1918. Thousands of aliens quit America to serve in the armies of their countries before the United States entered the war. It should be remembered that in 1916 this country was suffering from a labor shortage in industrial districts which drew large numbers of negroes from the South to the North, and this movement is still in progress.

"Previous to the month of April, 1917, many German aliens and more than a few American citizens of German antecedents declared that as soon as they could get to Germany they would leave this country. These persons then looked forward confidently to Teutonic victory in the war. How their plans have been affected by German defeat and the overthrow of the central empires we shall not know until normal conditions of travel between the United States and Europe are re-established. Probably this movement will be light, and though a Jewish state may be set up in Palestine, it is not likely to draw heavily from the Jews in this country. Nevertheless, these factors must be considered in any study of the labor situation.

"The United States is at least as likely to want labor after peace is signed as it is to be troubled with a surplus of workers."—*York Dispatch.*

Honesty

No amount of ability, energy, strength, or initiative can offset the absence of honesty.

This is a fundamental—no employer wants a man whom he cannot fully trust.

The question of honesty goes deeper than a mere question of money. That is, of course, essential, but I refer to loyalty and devotion to duty, fair dealing, truthfulness, willingness to acknowledge error, etc.

The boss wants the man he can rely on; the man who will carry out his orders as given; the man who will stick until the job is finished; the man who, when asked for important details, is certain to give the absolute facts.

The man who is honest with the boss is honest with himself. He who cheats his boss, either of time or money, is himself the greater loser.

Character is a matter of growth. What you do and say today determines what you will be tomorrow. The shifty, unreliable man of today is preparing under his feet a quicksand which will in time engulf him. —*N. C. R. News.*

This is an age of Organization, Centralization and Co-operation, and success in dealing with the many difficult problems is only secured by Concerted Action.

Public Action Must Now Force Right Handling of Private Timber Lands

By HENRY S. GRAVES, U. S. Forester

THE time has come for constructive public action that will bring about a right handling of our private timber lands. The practice of forestry on private timber lands is entirely possible, when coupled with a liberal policy of public co-operation and assistance. Such public help should be provided and forestry be made mandatory.

Our country is progressively destroying its forests. The consequences are very far-reaching. The exhaustion of the forest is followed by the closing of industries, the steady increase of waste lands, the abandonment of farms that depend for their market on the lumber communities, and the impoverishment of many regions.

No section of the country can afford to have a large part of its land an unproductive waste, with the loss of taxable values, of industries and of population that would be supported if these lands were productive. No section can afford to be dependent for its supplies of wood products on another section from one to three thousand miles away.

The leaders of the southern pine industry say that the original supplies of pine in the South will be exhausted in ten years, and that within five to seven years more than three thousand mills will go out of existence. Already there is an acute problem of supplies for paper mills and for other industries in the East which use specialized material. Pacific Coast timber is entering the Eastern markets. This means that the price of home-grown timber has risen to a point making it possible to ship timber 3000 miles in competition with it.

Timber land owners have not recognized an obligation to prevent their properties from becoming a source of injury to the community. Even in organized fire protection the chief effort is confined to the stands of merchantable timber. The character of the forest problem is such as to require the participation and direction of the public. We are not going to meet the situation until the public takes hold of it.

There should be compulsory fire protection of cut-over lands as well as standing timber. The public should prohibit destructive methods of cutting that injure the community and the public at large.

At the same time there should be recognized a public obligation not to throw the entire burden on private owners through merely restrictive measures, but liberal action to aid owners in introducing forestry should be taken. The public should provide a sane system of taxation; it should co-operate in such problems as overproduction of lumber, land classification, colonization, problems of labor, technical questions relating to methods of practice, and other economic, industrial and technical matters involved in a constructive program of forestry.—*Army & Navy.*

The Cover Picture

Activity was never so great as at the war front. Here roads were built, railroads constructed, buildings for barracks, storehouses, etc., put up in a few days, when ordinarily months were required. Strenuous, indeed, were the efforts of the engineers and their helpers, and like magic was the transformation made. Everywhere lumber was used in immense quantities, and the part it played in the war program cannot be over-estimated.

While only an infinitesimal part of the work is represented in the cover picture of this issue, which is taken from an official photograph, it gives a glimpse of the work on the British Western Front, and shows the British soldiers cutting wood in a section that has been visibly shell-torn by the Germans.

No business man can realize his greatest possibilities who does not make a careful study of all possible means of keeping his equipment strictly up to the requirements of the day, selecting for himself those which enable him to keep pace with the ceaseless advance of progress.

Appreciation Expressed In Verse

The excellent treatment and ideal conditions that are afforded employees of the Tipler-Grossman Lumber Co., at "Siding 83," are described in verse by V. E. Cole, one of the concern's employees, as follows:

In Wisconsin's northern forests there's a little sawmill town,
It goes by the name of Tipler and they saw the whole year round,
Their output is the class of stock no mill on earth can beat,
For they are expert sawmill men and a jolly bunch to meet.

They pay the best of wages and they want the best of work,
And it's surely there they get it, for not a man will shirk.
Their men get all they want to eat, they can't be better fed,
And if a man's not satisfied, he's not balanced in the head.

They have as good a cook as ever crossed the Soo,
Whose name is Teles Brouillard, and he satisfies the crew.
His wife and daughter help him in the kitchen there
And if you wish for something good just try his bill-of-fare.

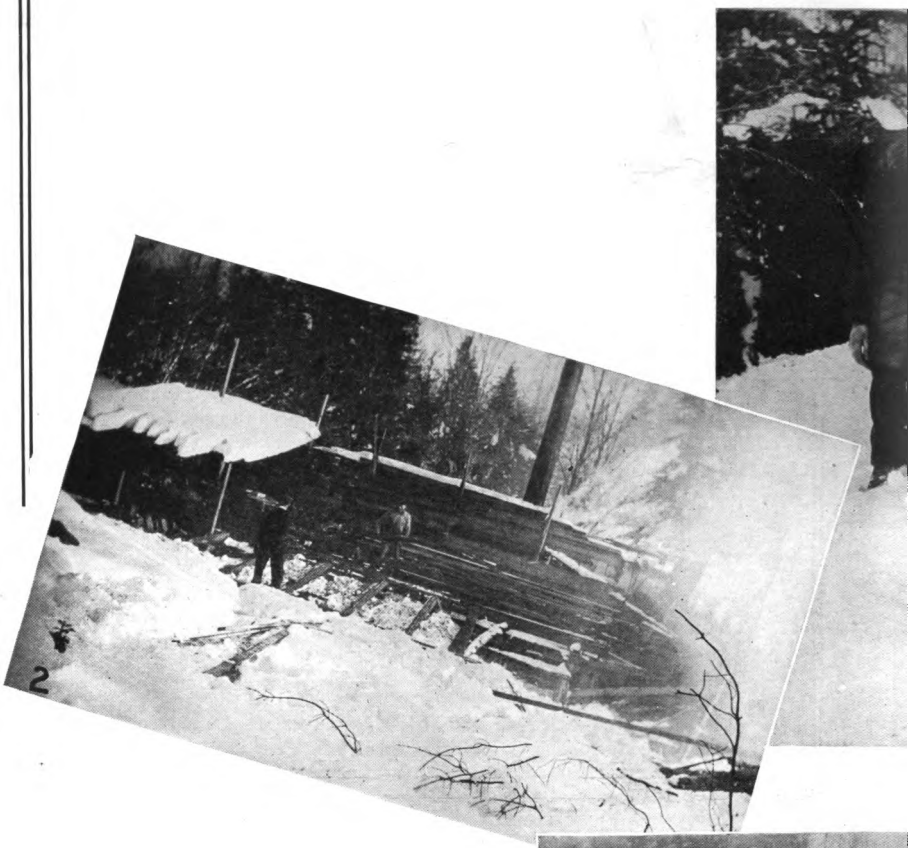
But of course there are always kickers, go anywhere you may,
You will find some men 'most anywhere who chew the rag today.
Such men as these are hard to please, but when we size them up
We find them used to war-time bread or any kind of chuck.

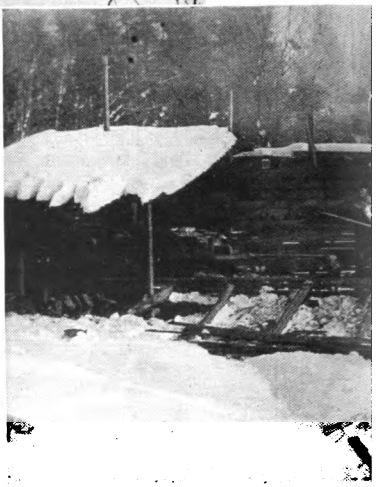
This little town of Tipler, altho but two years old,
Has a population of more than 200 so I have been told,
And I think these figures are correct as near as I can see,
For I've worked some time in this town for Tipler-Grossman Company.

Now as to a little pastime, they have a baseball team,
And when upon the diamond their work is sure supreme.
They are called the Forest Panthers and they challenge any nine
From the little burg of Gillett to the Northern Michigan line.

Now if it's work you want, my boys, I'll tell you what to do,
Just head in for this company twenty miles above the Soo.
Don't be afraid, they use you white, as you will promptly see,
And you will never miss it with a ticket to Siding eighty-three.

—*American Lumberman.*





Views of Alex. McLeod's Mill,

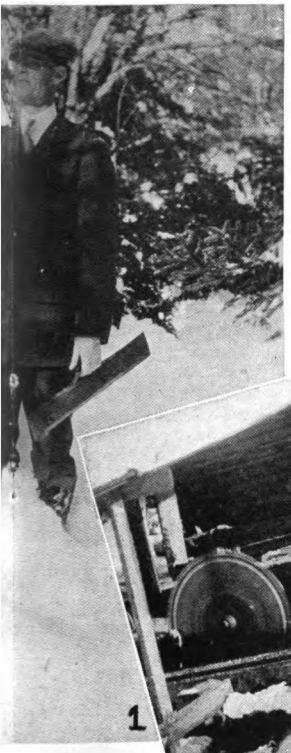
Londonderry, N. S., in the Folley Mountains

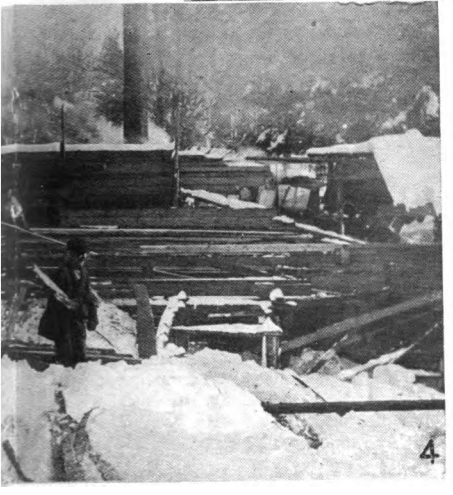
Photo No. 1—Mr. William Simpson, our Rotary Saw Mill Expert.

Photo No. 2—His arrival at the mill.

Photo No. 3—Saw Mill Gang.

Photo No. 4—Getting away with the lumber from the mill.





Some of the difficulties encountered in looking after Rotary Saw Mill business in Nova Scotia:

The Alex. McLeod Mill operates a 48″ No. 7 Pattern Disston Inserted Tooth Saw throughout the year, winter and summer, and even when the thermometer reads 50 degrees below zero. There is usually four to five feet of snow all during the winter.

The mill is an open one, no steam heat to keep you warm, necessary to hustle to keep your blood from freezing.

The daily cut of the mill is from 20,000 to 25,000 feet, cutting mostly spruce.

Great Forces, Working at Accelerated Speed, Are Fast Driving Onward

WHEREAS, six months ago there hung lowering over the country, portentous of trouble, a heavy cloud of pessimism, today there rules everywhere the brave spirit of optimism. And it rests upon far more secure grounds than did the fears and anxieties of a half year ago. Psychology is far from everything, but it is none the less a very potent influence, and just now it is working strongly in constructive ways. People see ahead a period of bright prosperity, and they are reaching, striving for it to make it a reality. Today the go-ahead impulse possesses the American people.

It is this, buttressed by the fast-developing expansion in almost all lines of human endeavor, which is getting its manifestations in more and more tangible ways. The consensus of American opinion and hope is being currently expressed in the securities markets in terms easily comprehended. The rise in prices makes something of very concrete kind. Of course, it can be carried too far, or, rather, for the present, too fast, but those in business read daily the strong trend of things in terms of copper, leather, wool, coal and gross earnings, all of which carry the same message.

There are going forward great things, and they are leading on to yet greater. Certainly there are risks, but they are never to be escaped in any operation, no matter how carefully and conservatively prosecuted. The manufacturer, the merchant, the banker, all who do things which are not completed on the instant they are undertaken, are subject to possibilities of loss and failure. But that does not dissuade doers from working forward. All progress depends upon combined effort and courage. What the stock market has been engaged in doing consistently and bravely during some weeks now is to discount what has been developing and is now unfolding at an accelerating pace.

Many demonstrations are being afforded of the strong confidence which men of long and big business experience have in the situation as it opens forward. The Midvale Steel and Ordnance Company last week adopted a construction program involving expenditures on plant reconstruction and extensions of $8,000,000. A small steel concern undertook similar projects to cost above $1,000,000. The Bethlehem Steel Corporation is going ahead with new plant operations running into very big figures. Motor and other companies in many lines of activity have arranged and are preparing to handle greatly expanded business.

One big distributing concern is about to establish an important branch in Philadelphia. The wheels of industrial activity and progress are turning faster, and there exists a huge field for them to cover. In fact, the war credits of the world, although they stand as an inflation to be reckoned with, are just now released to the uses of industry, business, construction and speculation, even as are the millions of men and women who, directly and indirectly, constituted the vast war machine whose activities ceased last fall.—*North American*, June 9, 1919.

A Valuable Asset

The most valuable asset in all life is to have—wants! To be perfectly satisfied, to have everything desired—such a human being never lived. But this is very important—the more you have, the less you desire to keep what you have.

The beggar has a greater world for imagination than has either Mr. Carnegie or Mr. Rockefeller. For he has nothing but wants.

Success is paved all the way with wants. But to find success it is necessary to climb each separate want—as we would mount a stairway.

There are wants for money, for fame, for knowledge, for food, for clothes, for pleasure, for happiness—but the greatest want of all is the want—to serve. So, in all your wanting—want to be somebody that the world will miss—after you have done with your job.—*Exchange.*

America's Heritage

FRANKLIN K. LANE, Secretary of the Interior

The right of revolution does not exist in America. We had a revolution one hundred and forty years ago which made it unnecessary to have any other revolution in this country because it was fundamental. One of the many meanings of democracy is that it is a form of government in which the right of revolution has been lost by giving the Government wholly to the people. Revolution means revolt. Against whom are we to revolt in the United States excepting the people of the United States?

If we Americans do not like officials, programs, policies, measures, systems, we can try others, but in Europe the right of self-determination as to domestic concerns has been denied, and therefore the right of revolution has been preached.

No man can be a sound and sterling American who believes that force is necessary to effectuate the popular will. As we have taken from the duelist his pistol and compelled him to seek redress in the law, so in the larger affairs of the Nation we have said, "This is your country. Make it what you will; but you must not use force, for when you came here and became a citizen you gave over the right to resort to anything but public opinion and the methods of the law in the determination of national policies. If you are in a minority you must wait until you become a majority, and as a majority you must be content to prevail by processes which respect the rights of the minority."

Americanism does not mean that any one economic system is right, or that the United States is a perfected land; it does not mean that any one social philosophy must be accepted as the final expression of truth; but Americanism does mean that we have evolved for ourselves machinery by which revolution, as a method of changing our life, is outgrown and outlawed.—*Americanization*

Forestry

It will not do for communities in wooded regions to depend on the chance growth of wood for their future fuel supply. Already many communities, especially in the Northeast, are finding it necessary each year to go farther and farther back for their wood, or to cut smaller trees each succeeding year, because the available supply of standing wood is too small to allow the trees to grow to the proper size before they are cut.

It is not too much to expect that the time will come—and soon in some regions—when it will be necessary to provide definitely that certain areas be set aside to produce wood. and that they be so managed as to produce the maximum amount of wood possible within the shortest possible time. It is not desirable to devote good agricultural land to growing an annual supply of fuel; generally the inferior land on farms will grow sufficient fuel to supply regularly each year's needs. Farms with such land are numerous in the hilly sections of the country, and are found almost everywhere except in the prairie and plains regions and in limited areas in the river bottoms.

Meanwhile, the least that should be done is to see that fire and other destructive agents are kept out of growing woodland, and that when cutting is done for firewood only that material is taken out whose removal will not cause injury to the productive capacity of the remaining stand. Advice on these matters will be freely given by the various State forestry departments, or where they are not available, by the Forest Service of the United States Department of Agriculture.—*United States Dept. Agriculture.*

> Let not him who is houseless pull down the house of another, but let him work diligently and build one for himself, thus, by example, showing that his own shall be safe from violence when built.
>
> —THEODORE ROOSEVELT

The Keystone of the Gettysburg Address

AS TO the Gettysburg Address, that is classed as one of Lincoln's four greatest addresses. Colonel John Nicolay, who was one of his private secretaries and a member of the presidential party on this occasion, says:

"There is neither recorded evidence nor well-founded tradition that Mr. Lincoln did any writing or made any notes on the journey between Washington and Gettysburg." The best available evidence from Nicolay and others is to the effect that the first draft of this speech was prepared in Washington the day before the trip.

Mr. Wills, President Lincoln's host at Gettsburg, says that the President retired about nine o'clock and sent his servant downstairs for writing materials. These were taken to Mr. Lincoln's room by Mr. Wills himself. Thereupon Mr. Lincoln said to him: "Mr. Wills, what do you expect from me tomorrow?" Mr. Wills replied: "A brief address, Mr. President."

Mr. Wills reports that in about half an hour after his visit to the President's room, Mr. Lincoln came downstairs, and had some sheets of paper with him, and with Mr. Wills he went to the house in which Secretary Seward was a guest and submitted to the Secretary his manuscript. They then returned to the Wills home. The next morning a further revision of the manuscript was made.

At the time of the speech, Mr. Nicolay advises us, the President held the manuscript in his hand, though he did not read from it, but in his delivery of the speech he further revised the matter and the style of the manuscript.

So that the preponderance of evidence is clear, from those who ought to know, that this speech was most carefully considered, drafted, and redrafted by Mr. Lincoln before its delivery. But if any further evidence were needed to corroborate painstaking preparation, both as to logic and utterance, the speech itself furnishes that evidence.

For years I had a sort of subconscious feeling that there was something about this address that I had not discovered. I could feel its effect. It was exhilarating, but elusive; when I reached out for it it would seem to be just beyond me. My curiosity to discover this mystery persisted to the point that I was led to put the speech into parts, to see what, if anything, would be disclosed. . . This dissection of the Gettysburg speech developed the keystone idea of Lincoln upon this occasion. His art in putting this central idea in every one of the ten sentences demonstrates beyond a doubt his unapproachable excellence in logic and language.

How closely it is reasoned, how cleverly expressed! The polish in his patriotism, the philosophy in his propositions, the unity of his ideas are all typical of his great life and his devotion to the union of the States.

What is this keystone idea throughout the address? Dedication.

In these ten sentences the word "dedicate" expressly appears six times. In the fifth sentence the definitive adjective "this" is used for "dedicate." In the seventh sentence the word "consecrate" is used for "dedicate." In the third sentence we have the word "battlefield," and in the eighth sentence we have the words "what they did here," the simplest, strongest, and most picturesque language possible to express the active idea of dedication.

How this idea is bound together and linked on to sentence one, and sentence three linked on in turn to sentence two, and so on through ten sentences, link on link, until he had forged a chain of consecration, dedicating the Nation to liberty, equality, and Democracy. . .

Truly has Job written "How forcible are right words."—R. M. Wanamaker, in "The Voice of Lincoln."

"BUSINESS is BUSINESS", but there are rules of the game which must be observed by all contestants if they wish to win and gain general commendation. Business has its rules of fairness and unfairness which cannot be ignored with impunity.

Fuel Value of Wood

It takes a cord and a half of short-leaf pine, hemlock, red gum, Douglas fir, sycamore or soft maple, which weigh about 3000 pounds a cord, to equal a ton of coal, while for cedar, redwood, poplar, catalpa, Norway pine, cypress, basswood, spruce and white pine, two cords, weighing about 2000 pounds each, are required. Resin affords about twice as much heat as wood, so that resinous woods have a greater relative heat value than non-resinous woods. The heat value of wood depends also on the moisture content, as heat is taken up in evaporating the water.

Heat value is not the only test of usefulness in fuel wood. Since 95 per cent of it is consumed for domestic purposes, mostly in farm houses, such factors as rapidity of burning and ease of lighting are important. Different sections of the country favor different woods. Of the non-resinous species, hickory has the highest fuel value per unit volume, and it has another advantage in that it burns easily and holds the heat. Next comes the oak, followed by the birch and maple. White pine, while of a relatively low heat value, burns readily and gives out a hot flame which dies down quickly. This makes it a favorite summer wood, being particularly adapted for warm days in the kitchen. The same is true of white birch. With the resinous pines their oily, black smoke is a drawback.

—*Western Lumberman.*

Hand Grenades Novel Savings Banks

When the armistice was signed, the War Department had fifteen million regulation hand grenades ready to be thrown into the German trenches, dugouts and machine gun nests. As they were no longer needed for that purpose, the Treasury Department secured them for ammunition in the campaign for national financial preparedness.

They will be used to clean out the entrenchments of the national enemies of waste and careless spending and will be handled by the army of American school children.

Each grenade complete except for the fuse and explosive charge will be turned into a savings bank for dimes and pennies. Under a distribution plan approved by the Treasury Department one of these banks would be given to every schoolboy and girl under ten years old who can show one War Savings Stamp earned during vacation when school reopens next fall and tell how it was earned. Every boy and girl over ten who earns two War Savings Stamps and who shows them together with an account of how they were earned would win one of these prizes. The distribution of the grenade banks will be completely under the control of the Savings Directors of the twelve Federal Reserve Districts.

—BUY W.S.S.—

The Lightest Wood

Balsa wood comes from the tropic regions of Central and South America. It is little known at present, but promises to have an extended field of usefulness in connection with cold storage structures, where heat insulation is important. The wood is remarkable for its lightness, its microscopical structures, its absence of fiber, its elasticity, and its heat insulating qualities. It seems to be the lightest commercially useful wood known, while it is of remarkable structural strength. Missouri corkwood, previously believed to be the lightest valuable wood, weighs 18.1 pounds a cubic foot, whereas balsa wood weighs only 7.3 pounds.

The lightness of this wood at once suggested its suitability for life preservers, etc. On experiment, however, it was found valueless for the purpose, because it absorbed water freely, because it rotted quickly and because it warped in use. Lately, what is known as the Marr process of wood treatment seems to be proving successful in overcoming these faults. The wood is treated in a bath, of which the principal ingredient is paraffin, by a process which coats the interior cell without clogging up the porous system. The paraffin remains as a coating over the interior cell walls, preventing the absorption of moisture and the resulting decay, and also protecting the material from dry rot, which follows mere surface treatment for the preservation of such types of wood. This method also drives out any moisture already present and makes the wood thoroughly waterproof.

—*Western Lumberman.*

One Thousand Miles of Homes

Under the above striking caption the *American Lumberman* directs the attention of its readers to the tremendous change likely to be wrought in the everyday life of the American people should prohibition become a national enactment, in accordance with the votes recorded by a qualifying number of states of the union. According to that widely read journal, the tremendous influence upon the country thereby exerted will mean great things for the lumber industry if the manufacturers are sufficiently wideawake to grasp the fact and plan for bigger business without loss of time. The arguments presented sound good to us, because they apply with equal force to our own favored portion of the continent. Our cotem says:

"The United States has spent each year for liquor $2,400,000,000 which now it will have for the purchase of other things. Doubtless there are thousands of families whose first desire is a comfortable home, and much of this money should be turned in the direction of making it possible to build homes. Each community throughout the United States is going to share in the redistribution of this great sum. To what better use could it be put than to build homes that are needed and to improve homes already built?

"Are the lumbermen of this country going to make a united effort to turn the attention of the people toward home building, home owning?

"Liquor made its appeal to the individual. In the new spending his whole family will have a share. A higher standard of living will come, and the making of a better and more comfortable home. Is it not obvious to the lumbermen of America that better homes means better housing?

"*The sum first mentioned above is equivalent to 800,000 dwellings at an average cost of $3000 each—a row over a thousand miles long if built on fifty-foot lots.*

"How much of that money will be spent that way? We do not know. The answer lies largely in the salesmanship of the people who are interested in selling houses. It is offered as a suggestion for the lumbermen to be thinking about and planning for. With all the war calls for money we have more funds in savings banks than ever before, and now prohibition pours these added billions into our laps."—*Western Lumberman.*

Industrial Health

BERNARD J. NEWMAN, Sanitarian, United States Public Health Service

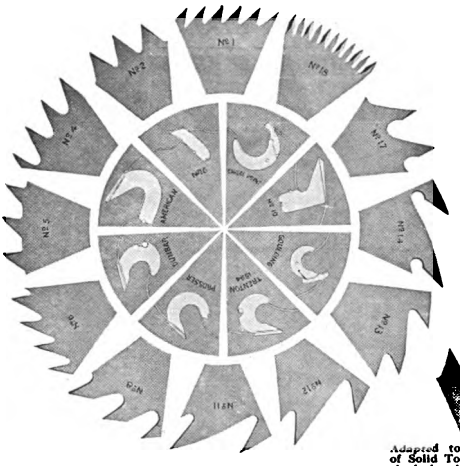
Numerous as are the losses through accidents due to ignorance of hazards and inability to understand English, they are but a minor percentage of the losses of man power in industry resulting from sickness due to preventable causes. It matters not whether the foreign born come to these shores in search of gold or personal liberty or escape from Old World autocracies, if the grind into which he is thrown turns their days into prolonged toil and subjects them to undue exposure they will lack the leisure and strength to cultivate Americanism. Such hazards as are present in industry can be removed by the simple program of plant hygiene, personal hygiene, and the engineering and medical skill and organization that necessarily attends both. Managers of industry do not deliberately want to maintain conditions which thus bear heavily on their employes. The great difficulty has been the definite lack of knowledge of the hazards and the means to keep them under control.

Industry should study the two fields fruitful of hazards to her workers—the industrial plant and the industrial zone surrounding such a plant. It is in this latter field that more self-evident causes of diseases commonly known can be found and against which prophylactic measures may readily be adopted. In this zone the responsibility is a dual one, resting alike on the community and the plant management. No plant should be allowed to operate which does not have some form of organization for medical and surgical care. It does not follow that such organization should be uniform, as different conditions call for different forms of organization.

DISSTON STANDARD PATTERNS

Solid and Inserted Teeth

MADE IN VARIOUS SIZES



SLOTTED RIM

Adapted to any pattern of Solid Tooth Saw, particularly circular Cut-off Saws. Allows for expansion and contraction of rim, lessening risk of breakage.

The above cut illustrates various **Styles of Teeth** for Circular Saws. By referring to this when ordering, customers will be enabled to indicate to us the style of tooth required; gauge or thickness per list below.

SOLID TOOTH: For Crosscutting Nos. 2, 4 5 and 17 — Ripping Nos. 11, 12, 13 and 14 — Ripping or Crosscutting Nos. 1, 6 and 8 — Mitreing or Crosscutting No. 18

INSERTED TOOTH: The CHISEL TOOTH is the best form for general mill use. No. 10 is used principally on the Pacific Coast. No. 16 is adapted for thin saws, re-sawing, etc. The AMERICAN, TRENTON, PROSSER, DUNBAR and GOULDING are styles formerly made by The American Saw Co.

DISSTON STANDARD GAUGE

CORRESPONDS EXACTLY WITH THE STUBBS' ENGLISH GAUGE

Gauge	Decimals of Inch	Fractional Part of Inch	Millimeter Equivalent	Gauge	Decimals of Inch	Fractional Part of Inch	Millimeter Equivalent
0000	.454	.....	11.53	17	.058	1-16 Scant	1.47
000	.425	.....	10.79	18	.049	3-64 Full	1.24
00	.380	.....	9.65	19	.042	3-64 Scant	1.07
0	.340	22-64 Scant	8.64	20	.035	1-32 Full	.89
1	.300	19-64 Full	7.62	21	.032	.....	.81
2	.284	9-32 Full	7.21	22	.028	.....	.71
3	.259	17-64 Scant	6.58	23	.025	.....	.63
4	.238	15-64 Full	6.04	24	.022	.....	.56
5	.220	7-32 Full	5.59	25	.020	.....	.51
6	.203	13-64 Scant	5.16	26	.018	.....	.46
7	.180	3-16 Scant	4.57	27	.016	.....	.41
8	.165	11-64 Scant	4.19	28	.014	.....	.36
9	.148	9-64 Full	3.76	29	.013	.....	.33
10	.134	1-8 Full	3.40	30	.012	.....	.30
11	.120	1-8 Scant	3.05	31	.010	.....	.25
12	.109	7-64	2.77	32	.009	.....	.23
13	.095	3-32 Full	2.41	33	.008	.....	.20
14	.083	5-64 Full	2.11	34	.007	.....	.18
15	.072	5-64 Scant	1.83	35	.005	.....	.13
16	.065	1-16 Full	1.65				

HENRY DISSTON & SONS

INCORPORATED

Keystone Saw, Tool, Steel and File Works

PHILADELPHIA, U. S. A.

SAWDUST

TIME CONSCIENCE WORKED

"It says here that a Missouri man boasts that he has an umbrella that has been in his possession for twenty years," said Smith.

"Well," replied Jones, "that's long enough. He ought to return it."—*Cincinnati Enquirer.*

COULDN'T BE OTHERWISE

"Are you of the opinion, James," asked a slim-looking man of his companion, "that Dr. Smith's medicine does any good?"

"Not unless you follow the directions."

"What are the directions?"

"Keep the bottle tightly corked."—*Tit-Bits.*

ADMIRED HIS PLUCK

"Well," said Uncle Si Bruggins after a solo by a fashionable church choir tenor, "if that ain't the rudest thing I ever saw. Just as soon as that young man began to sing, every other member of the choir stopped. But he went through with it, and I must say I admire his spunk."—*Boston Transcript.*

NO TIME TO FIGHT

A tough old bird was dying and his wife sent out for a preacher. The preacher came and said to the dying sinner:

"You had better renounce the devil, my friend."

"Renounce the devil!" exclaimed the dying man. "Why, I ain't in a position to make any enemies right now."—*Cincinnati Enquirer.*

WHEN HE GETS BACK HOME

If they's anything the lad wants when he gits back home—from the land that we live on to the honey in the comb; every single blessin' in the country that they is—let him look like he wants 'em, an' they'll all be his! That's the way we're feelin'! We're here to make a fuss, with the highest halleluiahs, 'bout the boys that fought fer us!—*Atlanta Constitution.*

JUST SO

He—"My ideal of a wife is one who can make good bread."

She—"My ideal of a husband is one who can raise the dough in the hour of 'knead'."

OBEDIENT SON

"I don't see why old Smith is so angry with his son. The boy did just what he was told."

"What was that?"

"His father told him to go out and find an opening, and the next thing he sent his father word he was in a hole."

PRIDE THAT WENT BEFORE A FALL

Of the innumerable stories told of the ex-Kaiser's vanity, none surpasses one concerning a little incident that took place on board a British warship a few years ago. The recently deposed emperor was being entertained at dinner during a visit to the British Fleet, and, when smoking began, took up a cigar and looked round for a cutter. One not being handy, an officer immediately offered him a penknife, which William used and returned with the solemn remark, "Keep it, and guard it well; one day it will be historic."—*The Argonaut.*

WOULD BE REPRESENTED

A couple of old codgers got into a quarrel and landed before the local magistrate. The loser, turning to his opponent in a combative frame of mind, cried: "I'll law you to the Circuit Court."

"I'm willin'," said the other.

"An' I'll law you to the Supreme Court."

"I'll be thar."

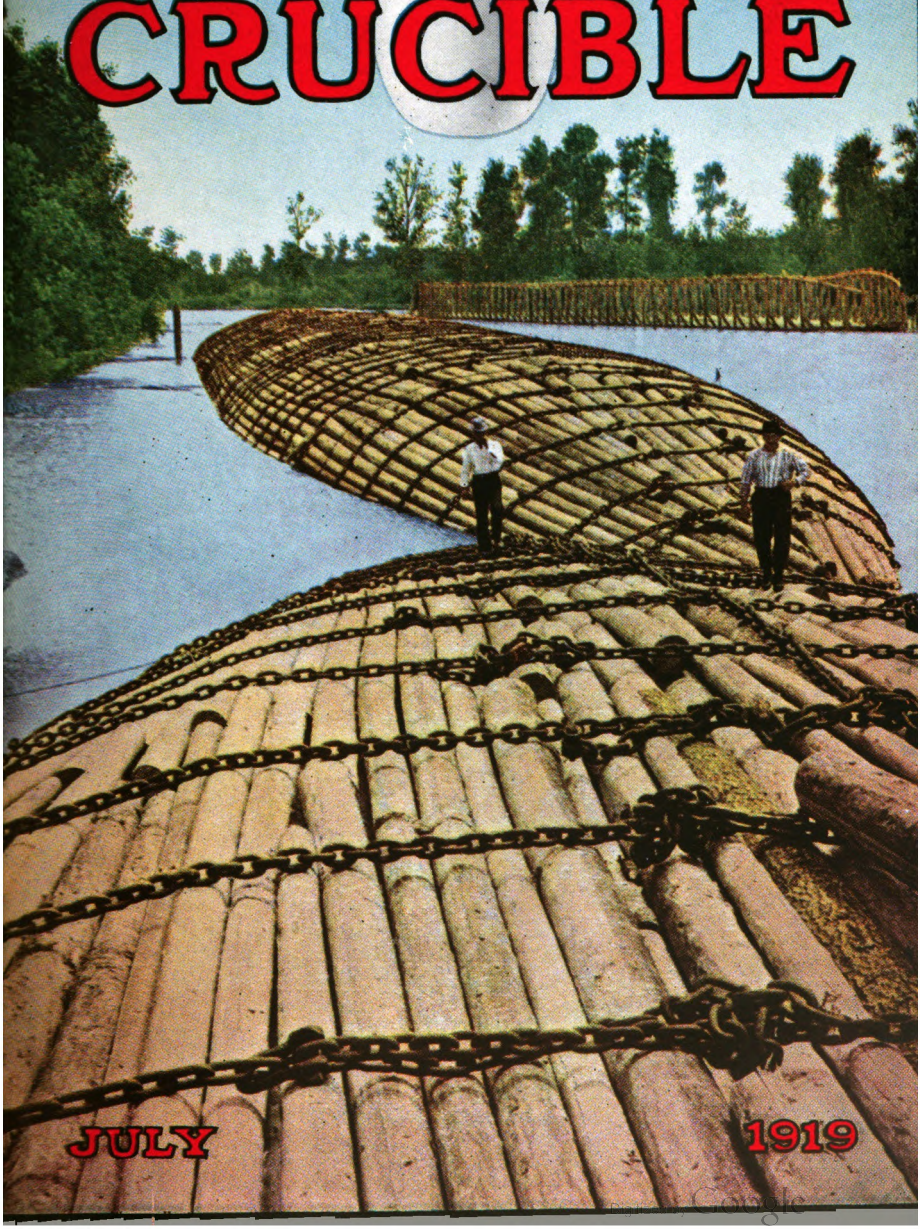
"An' I'll law to 'ell!"

"My attorney'll be there," was the calm reply.—*Boston Transcript.*

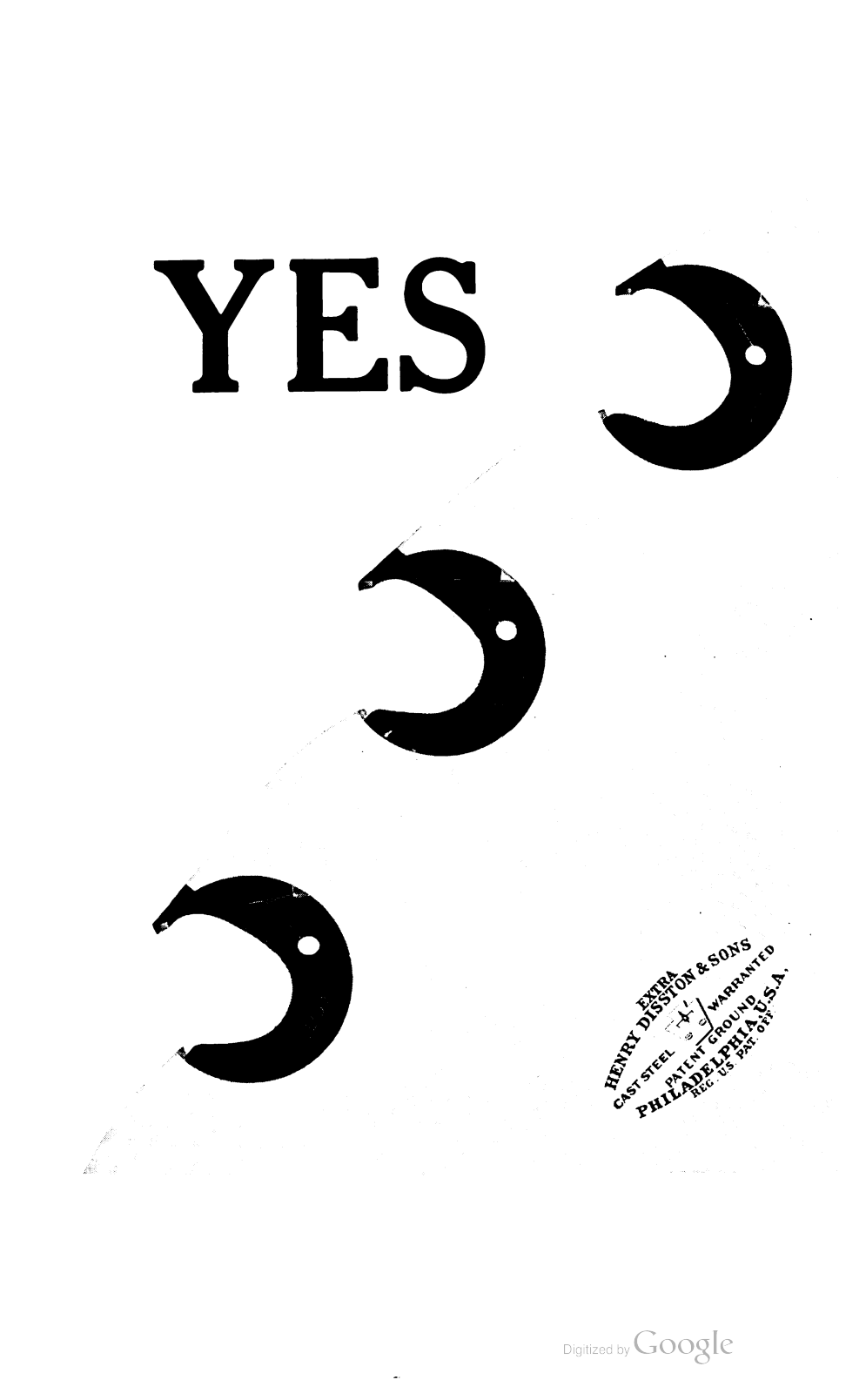
"Define the word 'deficit.'"

"A deficit is what you've got when you haven't as much as if you had just nothing."

THE DISSTON CRUCIBLE



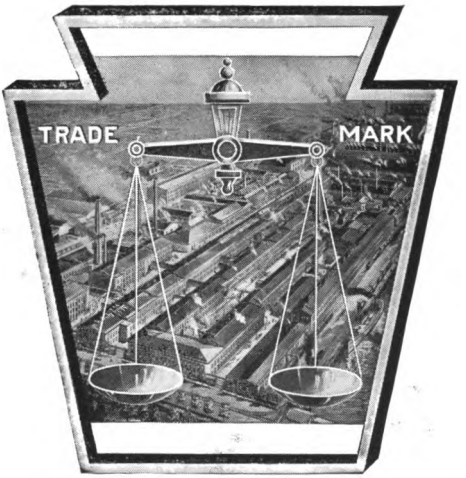
JULY 1919



THE DISSTON CRUCIBLE

PRICE 10c PER COPY $1.00 YEARLY IN ADVANCE

TABLE OF CONTENTS



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

SELDOM SEEN—A member of the Disston firm, visiting the beautiful State of California, the land of sunshine and flowers and where the stately palm grows in profusion, was surprised by suddenly coming across two men standing on a platform cutting off a section of one of these curious trees with a Disston Cross-cut Saw. At his request, the sawyers kindly paused to enable him to make the snapshot shown above. The trunk of these trees resemble the surface of a pineapple, and when ripped the grain has the appearance of innumerable tough, round fibres, similar in appearance to a wire cable, but the Disston Saw was equal to the task.

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VIII JULY, 1919 No. 6

EDITORIAL CHAT

Public Opinion and Its Makers

STUDENTS of our national foibles have often remarked that when a man has been very successful in business his opinion is valued on almost every other subject as well.

Business calls into play a wide range of faculties. The qualities which make for success in manufacturing or trade are almost impossible to define, but character, industry, honesty, judgment and knowledge of human nature are important factors. The successful business man is usually clear-headed and balanced. Perhaps this is why other men turn to him for his advice.

But, because a man has collected a great deal of money, he is not necessarily expert at anything else than this kind of work. Indeed, devotion to his principal business tends to make it more unlikely that he can master the specialties which lie apart from it. His judgment may be worth while if the commercialization of a subject is in question, but otherwise probably not.

Unfortunately there is a wide tendency to put on a pedestal the man who devotes his life to money-making and succeeds at it. And yet the country is full of sane men who deliberately reject the effort to spend their entire lives in heaping up wealth. It seems difficult for the mass of the people to accept this fact as true in a broad sense. It may be true that the majority are of this nature. Not that they refuse to earn money when they see it, but they consciously decline to give up the other things they enjoy in order to pay the price of great financial success.

This thoughtless adulation arises perhaps from a civic laziness. It is more than likely that each individual of the crowd contributes to a lowering of the average of public opinion. Tolerantly enough, he says to himself that he must let down the standard of his own opinion in order "not to go over the heads of the people." If each took exactly the opposite attitude, and held to his own judgment firmly, he would sensibly raise the level of the common thought. Personal washing of hands of responsibility always makes inferior results. If everybody in the land felt the need for his best efforts in forming public opinion, in government, in making laws, nearly all of our abuses and problems would disappear.

The composite opinion of all the sincere thoughts of the country would be an accurate appreciation of values. But when most men compromise with a supposedly lower standard, the inevitable result is an average point of view which is unworthy of them all.

The fullest exercise of personal responsibility is the acid test of citizenship in a democracy.—*Evening Bulletin.*

A Welcome Letter From "Jim"

Those of our old subscribers, who recall the "Jim Letters," which were published several years ago in the Disston CRUCIBLE will be pleased to note the article on pages 85-6 entitled "Bill," from T.H.C.'s letter of June 3, 1919.

"I'm forwarding herewith the first symptoms of the relapse or recurrence of the 'Jim Stuff,' and hope by correct and proper treatment to confine the outbursts to regular monthly periods—so dangerous spasms may be avoided. Sounds like the prelude of a possible 'Post Mortem'—but I hope not."

"Jim" himself hopes his rather prolonged absence has not entirely estranged him from his old friends, and trusts his modesty will not prevent the addition of new ones to the list, that he may, so to speak, drop into the old seat, light a stogie of the old brand, and begin his patter, just as if the lapse of time were the usual interval between issues and the echo of his last noise was still in the air. (Like a make-believe visit to the Valley of Yesterday.)

Forest Fires Every Month

But This State Has Two Distinct Forest Fire Seasons

In Pennsylvania there are two distinct forest fire seasons, but it may be a surprise to some people to know that in 1916 there were forest fires every month except February; in 1917 every month of the year, and in 1918 every month except January. Seasonal conditions determine to a large extent the possibility of fire in forests, but not necessarily the number of fires that actually occur, nor the damage done. The human factor is most uncertain. Its results cannot be foretold. In fact, the combinations which produce forest fires depend upon so many factors that the forest must be guarded at all times except when snow completely covers the ground, or when rain or snow is actually falling. Indeed, we have records of fires continuing to burn even after the ground has been covered with snow.

In 1918 the greatest number of fires occurred during March, viz., 692. April had 410, May 255, November 102, and October 88. It is unusual to have so many fires during March. Notwithstanding the heavy snows of last winter, they melted early and the March winds produced favorable conditions for fires. Railroads were known to be responsible for 274 of these fires and probably a large percentage of the 231 fires reported as of unknown origin were set by railroad engines. Brush burners were responsible for 59, incendiaries for 40, and miscellaneous causes for 76.

Brush burning and land clearing in spring are always great sources of fires. The total number of fires from this cause reported during the year was 115. Needless to state these fires are all the result of carelessness. The burning is needlessly done, improperly done, or insufficiently guarded. The proportion of incendiary fires of this year, in number 118, was not higher than usual. There did seem to be an unusual number, however, started by boys playing with matches and bonfires. Railroads were responsible for the usual percentage, the total for the year being 492. They are responsible for the greatest number of known causes, but if the fires of unknown origin could be rightly distributed the chances are that the number set for brush burning and by campers, including smokers, fishermen, and hunters, would run a close second and third.—*Forest Leaves.*

July Cover

The picture on the front cover of this issue illustrates log rafts containing millions of feet of lumber lying in the Columbia River, Washington.

These huge rafts, some of which contain five million feet of lumber, are unique in their construction. The rafts are made up in cone or cigar shapes, and so securely bound by immense chains that no difficulty is experienced in keeping them intact as they are towed down the Columbia River across the bar into the Pacific Ocean and thence to their destination, generally Los Angeles and San Diego, where they are manufactured into boards, planks, lumber and dimension timbers—the majority of the work probably being done by Disston Saws.

"BILL"

I WAS surprised one morning recently to have my friend Jim come into my office and close on his heels a medium sized, very intelligent looking short-haired dog. "Airedale" is the breed, I think. After greeting me a little more warmly than usual, he took his regular seat. The dog glanced around the office, and apparently decided instantly just where he would be least in the way of the other occupants and not lose sight of his master's face, and to my notion succeeded, like the corner had been designed for his special benefit, settled himself on the spot with about the same embarrassment Jim displayed in taking his seat.

Jim looked at the dog, looked at me, grinned and said, "Take a good look at him, Tom, and tell me, does he look like a 'bad un?' "

I frankly informed my inquiring friend as to my colossal ignorance on the question of Canine Morals generally and my entire lack of standards to render judgment in this individual case; but injudicially and personally, his appearance was very much in his favor. Jim seemed pleased.

"Now listen. I want you to hear this, for 'Hereby hangs a tale.' That dog, to my notion, is the very finest and best specimen of the dog family that ever in Dog History wagged an intelligent tail, but at present he is 'in bad.' He is handicapped and disgraced by a bad reputation. I have owned him since he was a small puppy. He was originally christened "Kaiser." Why the English owner of his mother should do a thing like that is beyond me. The puppy handn't lived long enough to exhibit traits of character that might suggest such a title, and the pup was too young to resent the insult, so to give him an even break at a dog's chance in life, I changed it to plain 'Bill' for the last few months—in my own mind I have added a prefix to his name, he has become 'Our Bill.' Cause—the remembrance of a small boy I once knew.

"During his puppyhood and adolescent period of life, for various, numerous, and all sufficient reasons we will not dwell upon. I was obliged to quite frequently remodel his environment—if he were human, I'd say change his boarding house—for a year now he has sojourned with our friend, Luke Smith, over on the Island. You know, the Island isn't as thickly populated as Blackwell's, but there is quite a sprinkling of clam-diggers, chicken-ranchers, summer boarders and Siwash. Complaints have been rife in the little community of late, having to do with mangled, mutilated, and partly devoured remains of defunct chickens; empty, shattered shells of uncooked eggs around the yards; scratched-up flower beds, disrupted vegetable gardens; to say nothing of rent linens and torn garments on exposed wash lines. Rumor seems disposed to point a finger at 'Our Bill' in connection with much of this trouble, and strychnine is easily obtained for increasing mortality in Coyote circles on the Island.

"So Luke and I decided I must find, temporarily at least, a less menacing place of abode for Bill. First, as a matter of safety for Bill, and a possible vindication of his lost reputation. You see, if in his absence, the same happenings continue to happen, any lingering doubt I may harbor as to Bill's guilt will be removed, and our relations will be as of old. You get me?"

I assured him his motives were really commendable and sought further information as to the why of the possessive qualifications of Bill's name.

Jim responded at once. "It's a good story. I'll tell it to you. This 'Our Bill' was a small boy and his home was in a small town. Bill, perhaps, had not been born bad, but from a very early period in his life acquired and achieved badness, had badness thrust upon him, until his reputation in the community, as a bad boy, had become as firmly established and almost as much a community institution and responsibility as the local Red Cross or the Ladies' Aid Society—in boyhood circles surely a greater and more interesting topic of conversation.

"Now that sort of boy, when once securely established in his unique and

perhaps undesirable position, has little difficulty in retaining his peculiar distinction. Circumstances, combined with human nature, adult and otherwise, of both sexes, invariably contribute consciously or unconsciously to keep that small boy unescapably 'Nailed to the Cross.' He becomes responsible for all unaccounted-for escapades, all undetected crime, and criminality of small boy size and capacity, by mere assertion, is credited to Bill. Many small boys of lesser capacity and no reputation succeed in escaping deserved penalties by assigning to Bill the authorship of their misdoings, and as a rule, Bill gets 'kinda' callous and don't care a darn. Sorta, 'I don't deny nothing, I don't' feeling and lets it go at that. Now Bill—Our Bill—had really reached in his juvenile depravity just that reckless stage of youthful turpitude.

"When out of that multitude of a small town crowd, all left to Bill in the way of support or defense of, or in his awful career, was one small but admiring and faithful sister. Up to the present writing, she had remained staunch and true to 'Our Bill.' Day after day her young ears were constantly assailed with tales of Bill's misdoings until even her loyalty had begun to waver, but had never been audibly admitted. On a fateful day, crossing a vacant lot in the vicinity of the Home Bungalow, her little hand clasped in that of her mother, she suddenly stopped with a gasp; a horrible wave of suffocating, acrid something swept over her, the odor of which stifled the small girl and fairly choked her. Never in her limited life and experience had she smelled such an *awful, awful* smell. With the awfulness, the *strangeness* the *unexpectedness,* came into her mind a thought worse than anything else.

"Mother realized, with her wider experience and knowledge of things strange and otherwise, the proximity, activity, and undoubted excitement of a fully matured, perfectly functioning, defensive Skunk. Quickly she gathered little sister into her arms and 'went away from there.' When they reached a zone of safety, for a long time mother's best efforts failed to quiet the sobbing child, until finally the terrible thought took form and escaped between sobs. 'Muver! Oh, Muver! Wat have our Bill been adoin' now?"

"Come on, Bill, let's go," said Jim.

Trees May Be Permanent Memorials

The memorial tree long has occupied a prominent place in history. The Charter Oak, the elm under which Washington accepted command of the American army, and the oak under which Eliot, "apostle of the Indians," preached to the red men are known to every schoolboy. Though not originally planted for the purpose, these trees have demonstrated their fitness to commemorate important events. The movement to plant trees in memory of men who lost their lives in the great war is meeting a hearty response everywhere and individual trees have been dedicated in numerous communities. In New York the secretary of the State Forestry Association, J. R. Simmons, is delivering lectures on the subject of memorial trees and memorial community forests. "The idea of the memorial forest is new," he says; "that of the memorial tree is as old as the country itself. Indeed, we may go farther than that and say that the idea is many centuries old."

"In view of the great age often attained by trees," Mr. Simmons continues, "there is very little weight in the argument that these memorials are not permanent. And granting that they are not permanent beyond a certain number of generations, can they not be easily replaced? Modern forestry methods take into consideration the removal of mature trees and the replacing of them with new stock either by natural or artificial reproduction."

But Mr. Simmons is a strong advocate of the community forest, and the arguments he presents carry a great deal of weight. "The memorial forest," he says, "makes a more satisfactory impression both in its early and its later stages than the memorial tree. Ten acres of young pines no more than a foot high are indeed beautiful to behold. But what a monument to sacrifice and heroism do they present at the age of thirty years. They are then upward of forty-five feet in height and show an average trunk diameter of about nine inches. They are typical of the upstanding ranks of sturdy warriors, and represent the future timber supply of the nation in as glorious a way as the youth represent its man power."

—*Exchange.*

GRINDSTONES

A SUBJECT of ever-increasing interest and one that shows in goodly measure the magnitude of the work done in the Disston Works is the view of the Grindstone Wall and the immense number of grindstones used in the Disston plant. For this reason we reproduce on the next page the picture which appeared some years ago in the Disston CRUCIBLE, together with the short story relating thereto, which follows:

"Probably to the great majority of people the mention of grindstones awakens recollections of toilsome, perspiry hours at the crank in the wood-shed while the old man ground the nicks out of the axe. To these the foot-treadle type of two-foot stone with the punctured tomato can water supply represents the highest development in the line.

"It probably would be difficult for them to conceive of one concern using so many grindstones that the entire time of a gang of ten men was required to handle them. Yet this is the scale on which grindstones are used in the Disston Plant—ten men are kept busy replacing worn out stones with new.

"No toys, either, these grindstones, Various sizes are used, but all of them are over four feet in diameter and many of them six feet, with faces ranging from five to thirteen inches.

"The upper right hand picture in the center-spread of this issue is a photograph of one of the two big grindstone sheds. The left hand picture shows another large collection of grindstones awaiting their turns (pardon the pun). The lower picture shows a carload of stones as they reach the Disston Plant, and it is very seldom that one or more such cars is not to be seen on the siding to be unloaded.

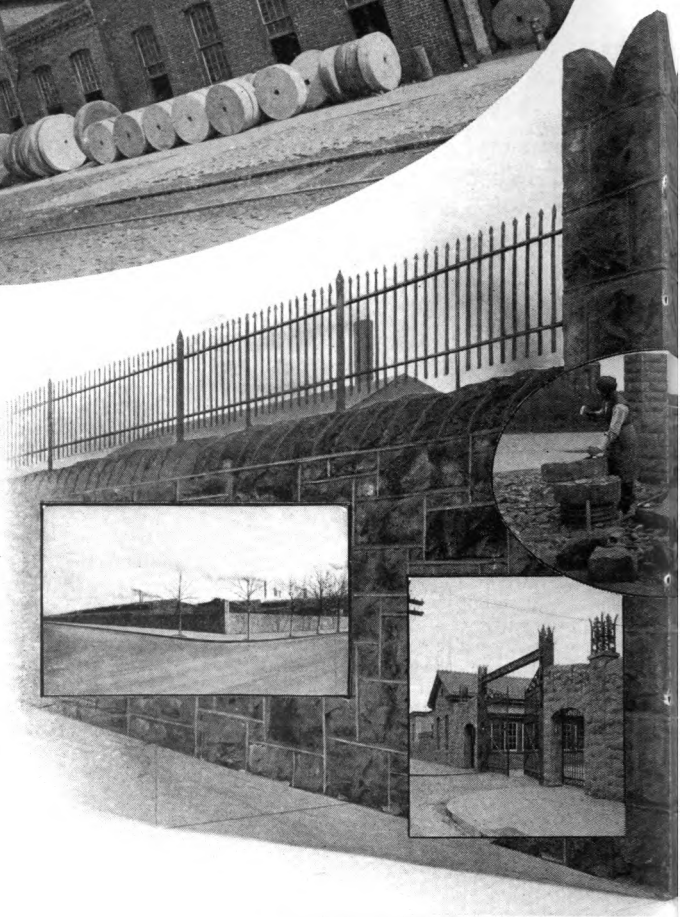
"The picture in the center is a corner of the stone wall which encloses the front and side of the immense plant of the Disston Company. The wall is seven feet high above ground, one and a half feet thick and has a net length of nearly a mile. It is made from grindstones worn down in the manufacture of Disston Saws. Moreover, these stones represent the accumulation of only the few years from 1900 to 1907, in which year the stone wall was completed.

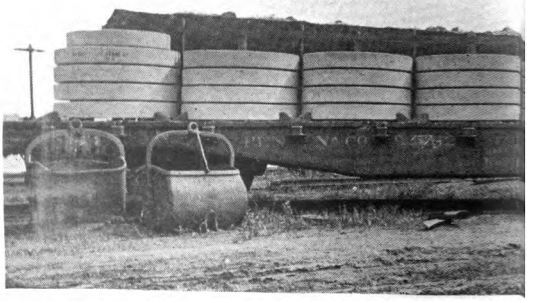
"Only these of the hundred of thousands of stones used are left. The rest are all scattered. But just think of them as placed end to end and stretching for hundreds of miles. Then think of the one in the wood-shed. 'All things are comparative.'"

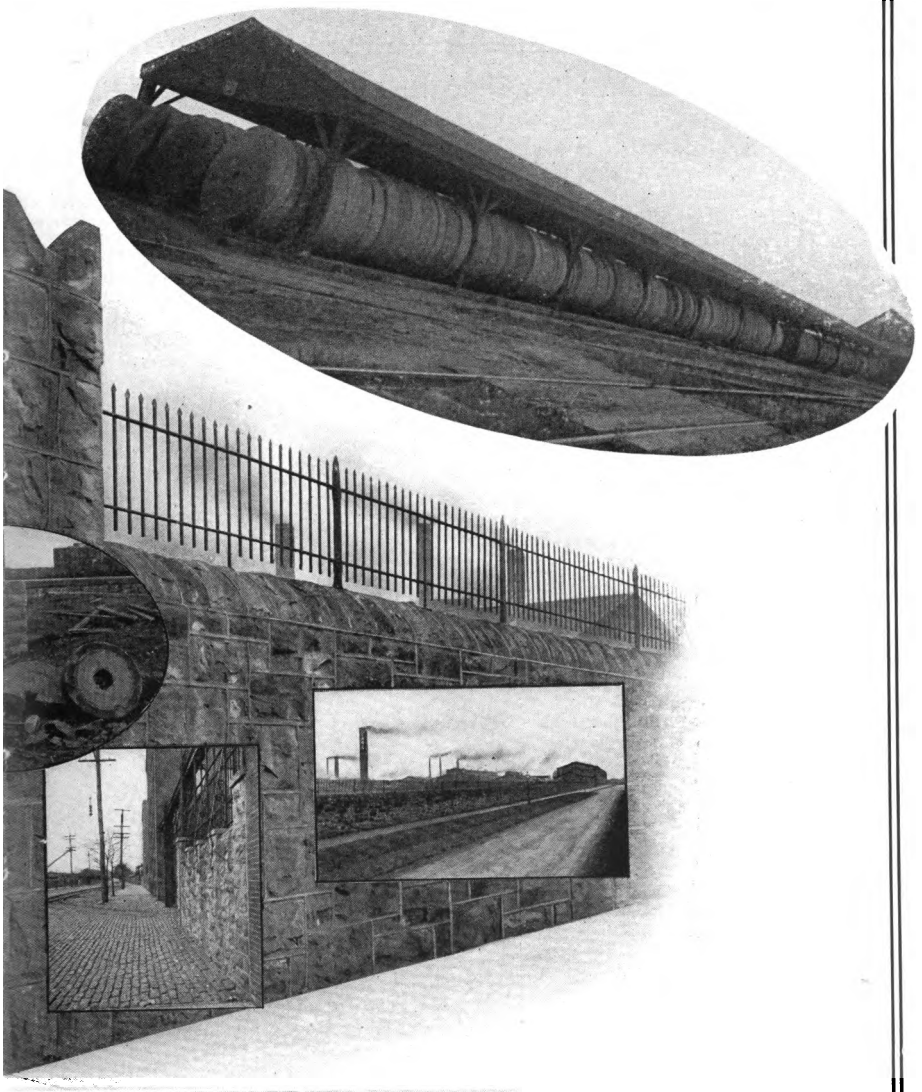
"An example of practical patriotism that might well be followed in every field of industry is set by the one hundred and fifty mine workers who, having retired from service after earning enough to support themselves in their old age, returned to the mines at Stoneboro, Pennsylvania, when they learned of the shortage of men. They mined four thousand tons of coal while they waited for the railway siding to be completed to the new opening where they were to work."

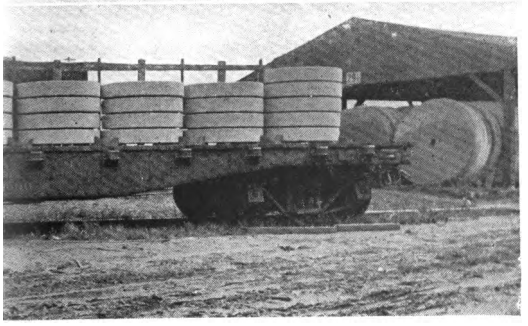
Nothing else can take the place of family life, and family life can't be happy unless it is based on the great, underlying laws of civilization, the laws of which, if broken, mean the dissolution of civilization.

—Theodore Roosevelt.









The Question of Building

Individuals and industries in this country are waiting for an intangible something to happen before they proceed with building operations. According to the Dow Service the nation is forty-six per cent underbuilt. This same authority believes that the prices of materials will rule at present levels for the remainder of the year, with total construction from forty to sixty per cent normal.

By next spring construction work will have a representation of between fifty and seventy per cent of normal, slacking off as the presidential election approaches. By 1922 the condition of construction in this country will have been so aggravated by the backwardness of builders that speculation will force a stampede of prices and building work that will be wholly unprecedented.

Of the 6,000,000 laborers in America who could return to their native shores more than 1,500,000 have already gone or are getting ready to go. They are now embarking from New York at the rate of 1000 a week. Skilled laborers who assemble the materials into a building are amply available, but factory workers to carry on the manufacture of supplies are scarce. Yards in New York, for instance, have less than a one-third normal supply of lumber on hand. Of more than one hundred brick plants in a famous Eastern district, less than seventy will be able to operate at all this year, and of those that do work the output will be not more than fifty per cent of normal. The production of glass and cement in 1919 likewise promises to be on a half-time basis, while most of the country's fabricating steel mills have less than twenty per cent of their mill capacity contracted for.

All of this forecasts an unparalleled situation in the building markets next year. The natural conclusion is that construction work can be done cheaper today than in 1920 or for years to come. The builder can now at least get deliveries, and that will be far from possible when the coming transportation shortage due to lack of rolling stock and motive power becomes a serious reality.

July 2, 1919. *Saturday Evening Post.*

Filing Room of J. W. Willis Lumber Company

On the opposite page we reproduce a picture of the J. W. Willis Lumber Company's Filing Room. This company has been in business at Washington C. H., Ohio, about thirty years.

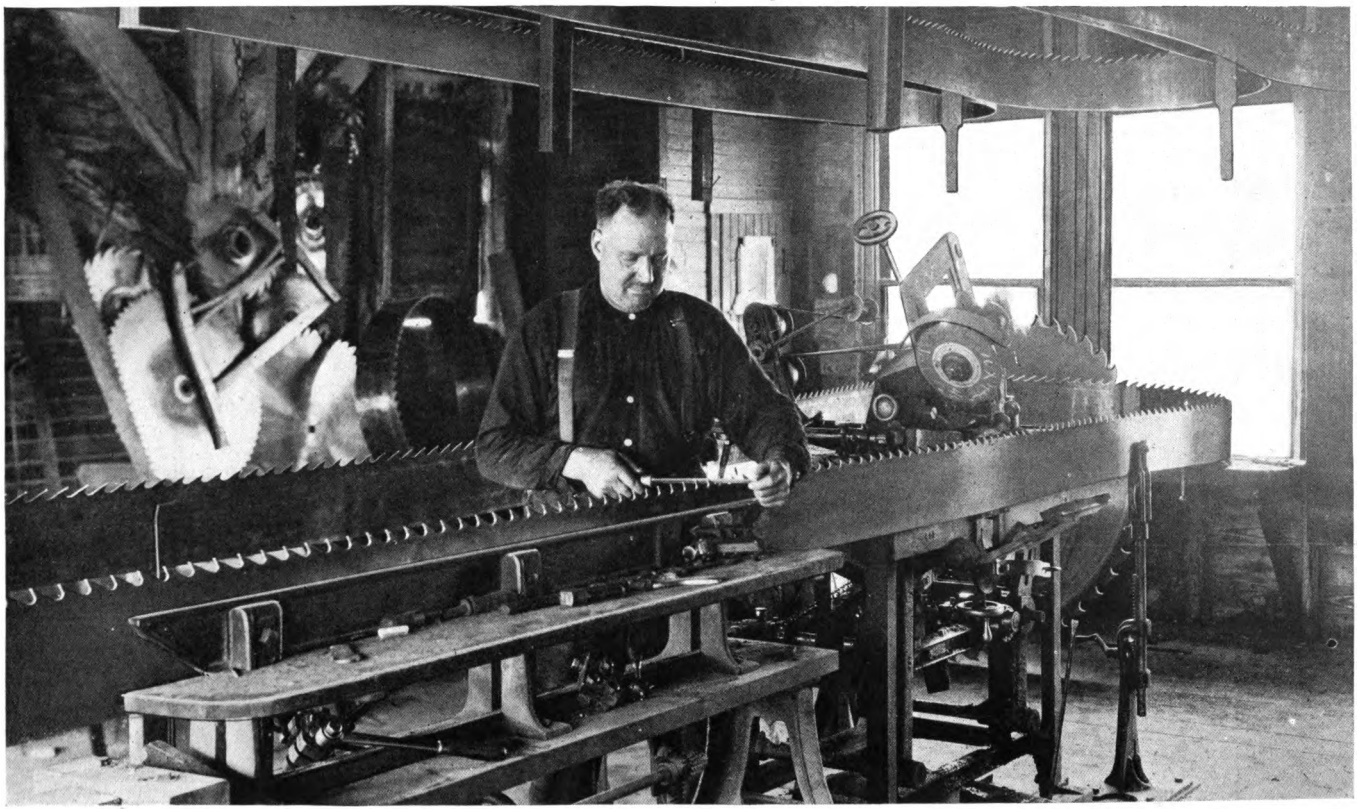
However, they did not build a band mill until 1898, at which time the company was incorporated. They saw on their mill fifteen to eighteen thousand feet of lumber a day, all Ohio and Indiana hardwood, specializing in quartered white oak, for which stock they have long enjoyed a very favorable reputation. Disston saws are exclusively used in this mill. Mr. Ira Walker, shown in the picture, is the filer.

What Peace Means

As it was the greatest war, so this is the greatest peace in the world's history. The civilized nations of five continents have anxiously awaited the final act of the world's greatest tragedy, not to take up their normal life where they left it five years ago, because that is impossible, but to begin anew. Many vital changes have occurred and each nation looks forward to a new era that augurs well for all mankind.

But as in everything else, each of us will benefit from this new era in the proportion that we put ourselves and our services into it. The signing of the peace was a signal for the start—a challenge to the citizens of all nations to do better and greater things than ever before. And the place to begin is at home—where we live and where we work.

The signing of the peace treaty will release great amounts of money for business circulation, and with the higher level of prices generally accepted as permanent by business leaders, great industrial, commercial and construction undertakings will undoubtedly be begun at once the country over. Leadership will have to be taken by those men who can see beyond the price tag; who are looked to by the more timid to lead the way; who are not afraid to build and buy when building and buying are necessary. Every man must decide for himself whether he will be among those to lead off, or wait and follow some one with more courage to face the future.—*Mill Supplies.*



Filing Room, J. W. Willis Lumber Co., Washington C. H., Ohio *(See Page 90)*

Lumbering in the Philippines

THE following article showing opportunities for the development of the lumber industry in the Philippine Islands was prepared especially for the *American Lumberman* by the special Philippine mission which is visiting this country and making its headquarters in Washington, D. C.:

That there are exceptional opportunities for the investment of American capital in the lumber industry in the Philippine Islands is the statement of various members of the Philippine mission, a body that was officially empowered by the Philippine Legislature to come to the United States and work for Philippine independence, and "to promote better understanding, greater confidence and closer economic relations between the United States and the Philippines."

The Government of the Philippine Islands is in fullest sympathy with the economic development of the country and is prepared to give great assistance to prospective investors in the vast resources of the islands. Correspondence is invited and the fullest information is gladly placed at the disposal of all inquirers.

Reliable information may be obtained on any of the staple industries of the Philippines or on any commercial or economic question by addressing any of the following bureaus of the Government: The Executive Bureau, the Bureau of Science, Bureau of Agriculture, Bureau of Forestry, Bureau of Internal Revenue or Bureau of Lands, all these at Manila, P. I. If the bureau addressed should not have charge of the particular subject-matter the correspondence will be referred to the proper authority.

Reliable information on any commercial or industrial questions may also be had by addressing the Philippine National Bank, Manila; the Manila Merchants' Association, Manila, or J. F. Boomer, commercial agent of the Bureau of Foreign and Domestic Commerce of the States, Manila.

While there are opportunities in the Islands for the investment of American capital in the production of hemp, sugar, cocoanut, rubber, rice and other tropical industries, lumber offers special opportunities, as the following data indicate:

AREA.—The virgin forests of the Philippine Islands cover approximately 40,000 square miles, about equal to the area of the State of Kentucky. This is about one-third of the total area of the archipelago. In addition there are estimated to be about 20,000 square miles of second growth forest which will yield large quantities of firewood and some small sized timber. Taken together, the virgin and second growth forests of the Philippines cover an area about equal to that of the State of New Mexico.

OWNERSHIP.—More than ninety-nine per cent of the timber belongs to the Philippine Government and is under the administrative control of the Bureau of Forestry. Less than one per cent of the timber is held under sure title of private ownership.

COMPOSITION.—About seventy per cent of all Philippine timber belongs to the *dipterocarp* family, which is generally found in stands which are almost pure from the lumberman's point of view. The largest individuals of this family reach 200 feet in height and some specimens have a diameter of six feet. This family is by far the most important, as it furnishes the main bulk of the timber cut in the Philippines. About a dozen botanically distinct species furnish probably eighty per cent of the entire cut. From the standpoint of the lumberman, however, this number can be reduced to three groups, namely, the lauans, apitongs and yacals.

YACALS.—This group comprises trees locally known as yacal, narig, mangachapuy and dalingdingan. The timbers are hard and durable and are more plentiful than the other very durable commercial woods of the islands.

APITONGS.—The apitong group comprises timbers known as apitong, panao, hagachac and guijo. The first three are marketed under the name of apitong.

Guijo is generally considered somewhat superior. Well seasoned timbers of this group weigh between forty and fifty pounds per cubic foot.

LAUANS.—It is in this group that the main wealth of the Philippine forests lies. It comprises timbers locally known as white lauan, red lauan, almon, balacbacan, bagtican, mayapis, tiaong and tanguile. For the sake of simplicity, they may be divided into two classes; namely, the white and red lauans. Export grades of the red lauans are used in Europe and America as substitutes for mahogany, and are frequently sold as such. While not so hard and durable as mahogany, lauan has a beautiful grain and permits of a very fine polish.

The main bulk of the forests produces timbers of comparatively few kinds and in some instances approaches pure stands of one or two grades. It is estimated that on an average seventy to eighty per cent of all the *dipterocarp* forests will yield timbers that belong to the groups described above.

LEGUMINOSAE.—Next in importance to the *dipterocarp* family are the *leguminosae*, or locust family, to which a number of the commercially important cabinet woods of the Philippines belong. Among the principal representatives of this family are narra, tindalo, ipio, supa, acle and banuyo. No finer hardwoods are found anywhere in the world.

STAND.—The average stand in the virgin forests of the Philippines may be roughly estimated to run 6000 board feet per acre and over. On some of the tracts now being worked under the long term license agreements (or concessions, as they are popularly called) the stands run between 15,000 and 35,000 board feet per acre. Stands of 45,000 to 60,000 board feet per acre are not infrequent, principally at elevations between 800 and 1200 above sea level.

Obtaining a Tract of Timber

The public forests of the Philippines are not sold, but are developed under a license system. Small operators usually work under ordinary yearly licenses for definite small areas. Exclusive licenses, or concessions as they are popularly called, are generally in the form of a twenty-year exclusive license to cut and extract timber and other forest products from a specified tract. The land itself is in no way affected by such a license; merely the timber and minor forest products are included.

When a lumberman seriously considers an investment in the Philippines he himself or an experienced representative should state to the director of forestry approximately the extent of the investment he contemplates. He will then be given information about several tracts which promise to answer his needs, and arrangements can be made for an experienced forester to accompany him over the tracts in question so that he can size up conditions for himself. All maps, estimates and other detailed information which may have been collected on the tract will, of course, be placed at his disposal, and he can count upon the heartiest governmental co-operation and assistance in making a success of his enterprise. It should be understood, however, that in no case does the director of forestry guarantee the correctness of the estimates or other data which he furnishes. These are given to the applicant for what they are worth, and in every case he is advised to take such steps as may be necessary to satisfy himself as to whether or not they are correct. If the lumberman then decides to apply for the concession he makes a formal application in writing to the director of forestry for an exclusive twenty-year privilege for the tract he has selected. His application is then forwarded by the director of forestry with recommendation to the Secretary of the Interior. He may then approve the issuance of an exclusive license, if he decides that such a course is in the public interest. For an area of more than 1000 hectares (approximately 2500 acres) proposals for bids to secure the desired privilege are published in the Official Gazette and other papers. At least six weeks intervene between the appearance of the first advertisement and the opening of the bids, but in order to give interested parties in the Philippines ample time to correspond with their principals in Europe or America this period is usually extended to about four months. The advertisement states the amount of capital which must be invested within a given time, the minimum cut during the several succeeding years, together with certain requirements regarding logging and milling equipment, etc.

Time, Logging and Cost Limitations

Formal bids are finally submitted and the license will be granted the bidder who

gives the best assurances of developing the tract most thoroughly and promptly. The right to reject any and all bids is expressly reserved. The areas thus granted as concessions are generally of sufficient extent to permit operations for a considerably longer time than the period for which they are granted, and thus the logger and millman in making his investment may expect to operate not merely for twenty years, the limit expressed in his license agreement, but almost for an indefinite period. In fixing the annual production there is taken into consideration so far as possible the amount of overmature timber on the stand and the amount of annual increment, with the object of rendering the investment a permanent one instead of merely permitting the operator to strip and abandon the area he holds.

In preparing regulations under which the operator is required to work first care is given to the future condition of the area in order that the land after logging may be potentially as valuable as before, and no consideration of immediate profit is allowed to interfere. Nevertheless, the logger in the Philippines will find that in comparison with similar conditions elsewhere he will have few restrictions to contend with, and in practically no case are these such as seriously to increase the cost of his operations. It is to permit such permanent use of the land that concessions are granted over such large areas, often consisting of 100 square miles or more. The Philippine Government sells its timber cheap—at half and less than half the stumpage prices asked for similar woods in neighboring tropical countries. It costs nothing to secure a concession; evidence of good faith is all that is required. It may be mentioned that the stumpage is collected as the timber is cut.

Sawmills and Shipping

At present there are about seventy sawmills of all sizes and descriptions operating in the islands, about twelve of which can be compared to the average modern sawmills in the United States. The largest sawmills are operated on timber concessions, while the others are operated under short term licenses. The total cut of the mills of the Philippine Islands is about 65 to 70 million board feet per year. Modern lumbering methods have become the vogue in many parts of the archipelago.

A company properly equipped and managed and operating in a suitable tract should be able to deliver many kinds of native lumber in Manila at a cost of about half the prevailing market prices. The commercial forests are found along the coasts where the timber can be skidded directly to the beach and loaded in suitable harbors, along navigable and floatable rivers where it is skidded directly to the water and floated or rafted down stream, or at a short distance inland where short logging railroads are advisable or necessary. For such timber as is close to the beach or large rivers logging is easy and cheap, requiring but little capital. In these forests there are already a large number of operators, most of whom cut only small quantities of timber.—*American Lumberman.*

Has a Wife, but No Home for Her

As an illustration of the urgent need of more homes in this city the following "want ad" recently appearing in the South Bend, Ind., *Tribune* is of interest:

"Pity the woes of a young married man! I have the best wife in the world but no place to keep her. I rented a house with the understanding that it might be sold and on our return from our honeymoon we find it has been sold. Our furniture is in the stores waiting to be delivered. 'At Home' cards were mailed, my mother-in-law is coming next week and what sort of a dub do you suppose she'll think her only daughter is tied to? and she has a good opinion of me now. Have a heart and if you know of a five- to seven-room house at $35 to $50 a month write Box 645 and we shall call you Blessed."

No doubt the humor in the young married man's ad will be enjoyed by those reading it. Yet it forcibly presents a condition that prevails in many cities other than South Bend. And while healthy activity in building is reported from many sections, yet it must necessarily be some time before the urgent need of houses will be met.

Thinking wisely before you speak is as important as thinking twice.

Be Sure the Name DISSTON

Is on Your Cylinder and Bilge Saws

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

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

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

SAWDUST

IRONY OR TACT?

"There's nobody," said a Washington lobbyist. "who can get rid of an importunate caller so quickly and at the same time so smoothly as the President. Once at a reception a man held up the long line of guests waiting to shake the President's hand while he recounted some tedious yarn or other. The President stood about four minutes of this. Then he gave a start! 'But, my dear sir, I am monopolizing you!' he said."—*The Argonaut.*

EXPERT ADVICE

The young man sidled into the jeweler's shop with a furtive air. He handed the jeweler a ring with the stammered statement that he wished it marked "with some names."

"What names do you wish?" inquired the jeweler in a sympathetic tone.

"From Henry to Clara," the young man blushingly whispered.

The jeweler looked from the ring to the young man, and said in a fatherly manner: "Take my advice, young man, and have it engraved simply, 'From Henry.' "—*Argonaut.*

A 'PHONEY KISS

"I was talking to my little granddaughter over the telephone the other day," said an old man recently to a few of his friends at a hotel, "and when I ended I said, 'Here, Dorothy, is a kiss for you.' She replied, 'Oh! pshaw, grandpa! Don't you know that a kiss over the telephone is like a straw hat?' I said, 'Why, no, sweetheart, how's that?' 'It's not felt, grandpa,' she said."—*Blighty* (London).

SECOND MATE

On the sea of matrimony
There is rank both small and great,
But the man who weds a widow
Always sails as second mate.

GOING HIM SEVERAL BETTER

The oldest good story is the one about the boy who left the farm and got a job in the city. He wrote a letter to his brother who elected to stick by the farm, telling of the joys of city life, in which he said:

"Thursday we auto'd out to the country club, where we golfed until dark. Then we motored to the beach, and Fridayed there."

The brother on the farm wrote back: "Yesterday we buggied to town and baseballed all afternoon. Then we went to Med's and pokered till morning. Today we muled out to the cornfield and gee-hawed until sundown. Then we suppered, and then we piped for a while. After that we staircased up to our room and bedsteaded until the clock fived."—*San Francisco Argonaut.*

KIND WORDS CAN NEVER LIE?

The nurse was writing a letter for a wounded soldier.

"There's something I'd like you to put in, miss," said the soldier, hesitatingly.

"Well, what is it?"

"You won't mind, now? Just put, 'The nurses in this hospital are all rather elderly persons.' "

"That isn't quite true," said the youthful nurse.

"It isn't, miss, but it'll ease my missus's mind wonderful."

The missus's mind was eased.

ENGLISH UNDEFINED

"You say this man 'beaned' you?"

"Yes, your honor."

"What do you mean by that?"

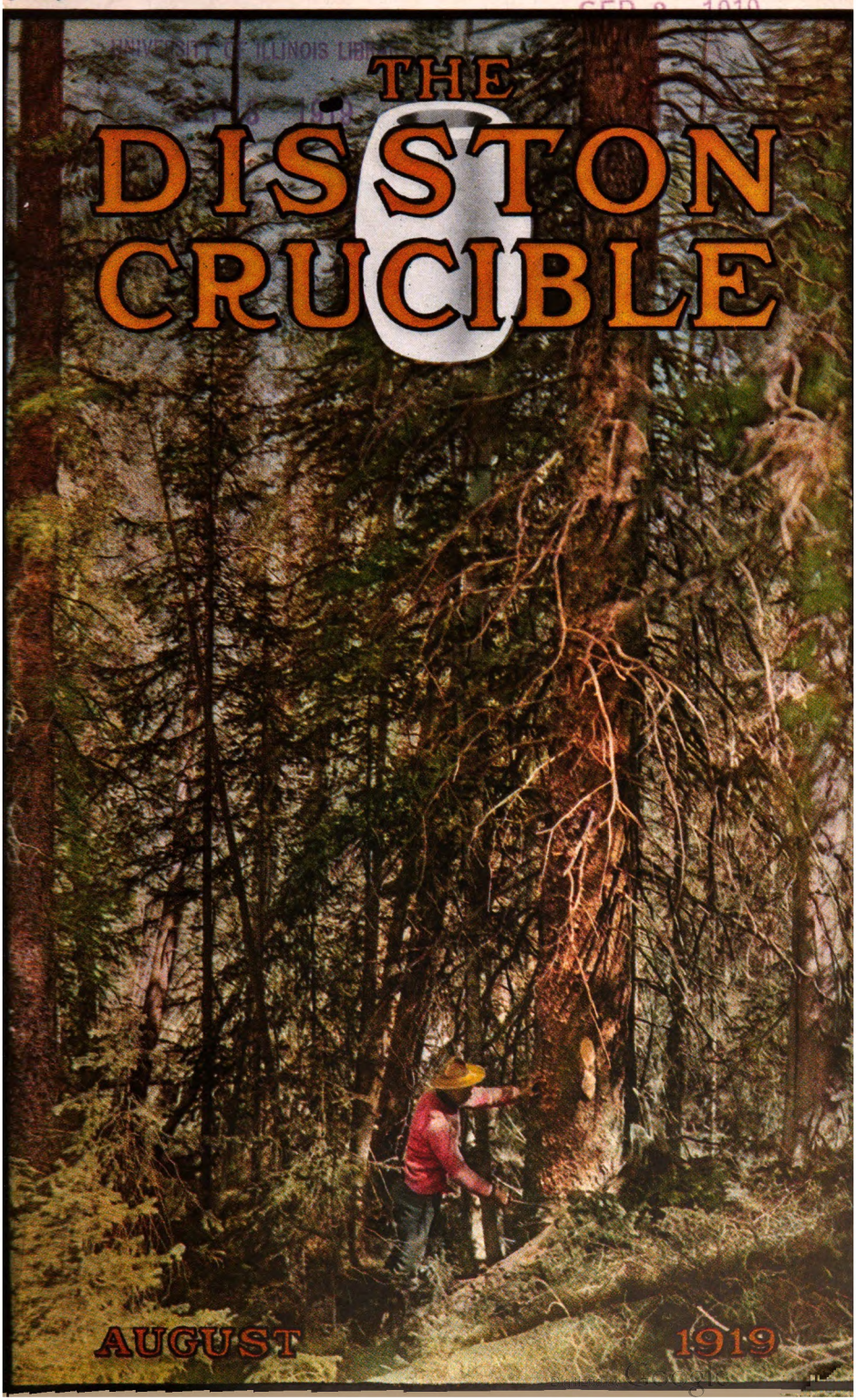
"He hit me on de koko, your honor; he tried to crack me nut, he slammed me on de belfry, he——"

"Will someone else please interpret for the plaintiff?"

"I will, your honor," said an obliging witness. "He means the accused bounced a rock on his ivory dome."

—*Birmingham Age-Herald.*

THE DISSTON CRUCIBLE



AUGUST 1919

DISSTON SAWS

The Millman's Best Friends

THE DISSTON CRUCIBLE

PRICE 10c PER COPY $1.00 YEARLY IN ADVANCE

TABLE OF CONTENTS

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

3851

War and Navy Departments

United States of America

This Certifies that

Henry Disston and Sons

have assured the War and Navy Departments that they will gladly reemploy everybody who formerly worked with them, and left to serve in the Army or Navy during the Great War.

Secretary of War

Secretary of the Navy

Representing the War and Navy Departments

p—6871

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VIII AUGUST, 1919 No. 7

EDITORIAL CHAT

America's Future

THERE is no limit to the greatness of the future before America, before our beloved land. But we can realize it only if we are Americans, if we are nationalists, with all the fervor of our hearts and all the wisdom of our brains. We can serve the world at all only if we serve America first and best. We must work along our own national lines in every field of achievement. We must feel in the very marrow of our being that our loyalty is due only to America, and that it is not diluted by loyalty for any other nation or all other nations on the face of the earth. Only thus shall we fit ourselves really to serve other nations, to refuse ourselves to wrong them, and to refuse to let them do wrong or suffer wrong.—Theodore Roosevelt, in the *Philadelphia North American*.

"JIM"

JIM came in and sat down with what he evidently meant me to think was an expression of deep and earnest thought, but I translated his appearance as a deep and vicious grouch and registered a perfect neutrality. "Do you know, Tom," he said, after a small pause, "there is a very serious defect, to my notion, in our social system, one that has been entirely overlooked by our Thought Directors, Culture Developers, Higher Educationals and 'Saw Drummers.' It is in our ordinary conversation, a rather confusing lack of directness, an avoidance, so to speak, of completeness, which I might term, for want of a better name, 'unfinished business.'

"After some quiet observation, I became convinced this peculiar impairment pervades our entire verbal structure and gets worse as time goes on its weary way. I concluded that even I by my personal effort might aid in correcting this ever growing and all prevailing tendency to lack of completion in matters verbal, and incidentally as occasion inspired perhaps extract considerable personal amusement from this experience. The idea certainly appeared to have possibilities that appealed to me. While I mused over it walking down Second avenue this morning, bing! my first opportunity arrived, knocked right on my door and I was home, you bet. A scholarly appearing, modestly dressed gentleman wearing glasses and kindly smile approached me and said politely, 'I beg your pardon, sir, but do you know where the Masonic Temple is?' I answered just as courteously, 'Yes, sir, I do,' and walked on. The man looked at me in surprised amazement. After taking a few steps, I turned back to the man, who still stood staring at me. With a very large and illuminating smile, I said, 'Do you wish to know where the Masonic Temple is?' He said, 'No, sir, I do not,' and quietly walked away.

"Now as a completer of small 'unfinished' verbal affairs of this sort I have decided that your friend Jim would not be a real success, and after this when someone asks me one of those suggestively incomplete questions I'll answer just as you would." With a laugh I said, "Try to forget it, Jim. Here is a card and a message that may help."

Giving him the card I further explained to him that the gentleman whose name was on the card had called that morning and was anxious to see him. Also, the said gentleman was in the market for a "big order" of our goods and proposed if all went well and no unforeseen difficulty intervened to transact the entire business with our Jim; notwithstanding the fact that he had never personally met this Jim man, he felt they were real old friends from hearing his partner, Mr. Sparkman, talk of and about this same Jim so much and so intimately that he felt that he would recognize him on sight. At mention of Sparkman's name a sort of glad light came to Jim's eyes. He immediately got busy and read the legend on the neat little business card. This was it:

J. W. BROWN
BROWN & SPARKMAN
Hardwood Manufacturers
Lecano, Mexico

"Oh boy! My old chum Bill Sparkman! Just lead me to this partner of his; where do I connect with him? Why it's almost as good as meeting old Bill himself." Jim's grouch had disappeared, the clouds had rolled away, the sun was shining. I told him the said partner of Mr. Sparkman hoped to meet him at the City Hotel at 3.30 this very afternoon. With a quick glance at his watch he chortled "at-aboy" and made his exit.

This is the way he told me about it next morning.

"When I asked the clerk about him, found the room number and the glad news that he occupied it that very minute and also that I was to 'come right up,' well, I made connection with the elevator and reaching the room announced my arrival with about three gentle raps on

the door, and when a mild voice said, 'Come in,' I pushed open the door and entered the room and closed the door before getting a real once-over of the owner of the voice. Say, Tom, when I got a full front view of that figure for an instant I just gasped and my vocal chords and glad hand were paralyzed. It was *him*, the man of the morning, who had shown a desire to discover if I knew where the Masonic Temple was located. He looked me straight in the eyes or as nearly so as possible with the kind of support he got from me, and said inquiringly, just as if my tongue-tied silence made his question necessary, 'What can I do for you, sir?' I made a fairly good recovery, to my own surprise, took off my hat, unloosed with a mighty effort the tie in my tongue, assumed my very best price raising smile, my 'all the time you wish' voice, and said, 'I, sir, am appointed by the Chamber of Commerce, the Commercial Club and the Greeters' Committee of the city as a special envoy, as it were, to make daily rounds of the principal hotels, discover visiting strangers, particularly those from distant parts, answer all natural questions they may ask, post them on all theatrical and social entertainments that may be of interest or amusement to visiting strangers sojourning with us, inform them where the best cuisine is to be obtained, if necessary guide their uncertain wanderings to points of interest our city has to display, call their attention to the new Masonic Temple and other specimens of architectural art.' I saw he was about to interrupt, so I hurried on, 'You understand these small duties occupy but a portion of my time, the rest of it I consume in full trying to explain, apologize and beg pardon of justly indignant strangers whom I have offended by a misconceived sense of humor, and a bonehead attempt to be funny in a fool way. My name is Jim Watson, and I'd hate to have Bill Sparkman's partner go back home without knowing something more than the fool side of his friend Jim.' "

"Well, say Tom," he continued, "I sure am glad to know that man and to know he is Bill's partner. Oh yes, he came through right—we are friends for life, and say, there is a 'peach of an order,' old boy."

Hundreds of Millions of Feet of Timber Burned in Idaho, Washington, Montana

Spokane, Wash., July 19.—Forest fires in northern Idaho, eastern Washington and western Montana continued today to eat their way into valuable Government, state and private timber, although in some instances it was believed the flames were under control.

Citizens of Newport, Washington, were fighting a fire that had burned over eighty acres about a mile from town. It was headed in an opposite direction and slight fears for the fate of the town were felt.

Howard Flint, supervisor of the Kaniksu Forest, at Newport, reported that six large fires were burning in that reserve, with a number of smaller ones. He said several million feet of state and private owned timber had been burned with a loss estimated at $15,000 or $20,000.

Hundreds of millions of feet of standing timber have been burned and at least three small towns in Montana were threatened with destruction.

Fire was burning in a tract of two hundred million feet of white pine timber on Steamboat Creek, in the Coeur d'Alene forest, northern Idaho.

At Port Hill, Idaho, on the Canadian line, where American fire fighters crossed the international boundary to check a blaze which threatened a valuable stand of timber, the Americans were aided by shifting of the wind, which turned the flames back on 10,000 acres already burned over.

Glenn A. Smith, assistant forester of District No. 1, with headquarters at Missoula, stated that the cost of fire fighting in June was $135,000 and in July, $200,000, with men hard to obtain.

—*By Associated Press.*

When you think a fellow is throwing a bluff look for the power behind the throne.—*Exchange.*

In putting in some new machinery don't be in too big a hurry to get started. A little extra time and pains before starting will insure better work and less interruption afterward.

The Peavy-Wilson Lumber Company Peason, La.

AFTER leaving the genial Ben Lewis, who is now building his new mill at Anacoco, La., we turned our "Dodge" into the woods and began our interesting trip through the virgin pine forest, following a blazed trail for fifteen miles.

A glance at the picture will give the reader some slight idea of these beautiful forests, where the trees are set out by Dame Nature like a park, no undergrowth, no vines, nothing but the carpet of pine needles to obstruct the passage of our auto. One can ride or drive anywhere through these woods, and if he has the guide of the blaze on the trees as we had, or a good sense of direction, no difficulty will be found in crossing them.

The Peavy-Wilson Lumber Company have forty thousand acres of this timber, which is as fine as any that stands in the State of Louisiana—all long leaf pine, never turpentined.

At last we arrived at the mill, which is built directly in the woods about ten miles from the K.C.S. R.R., the company having built their own branch to it.

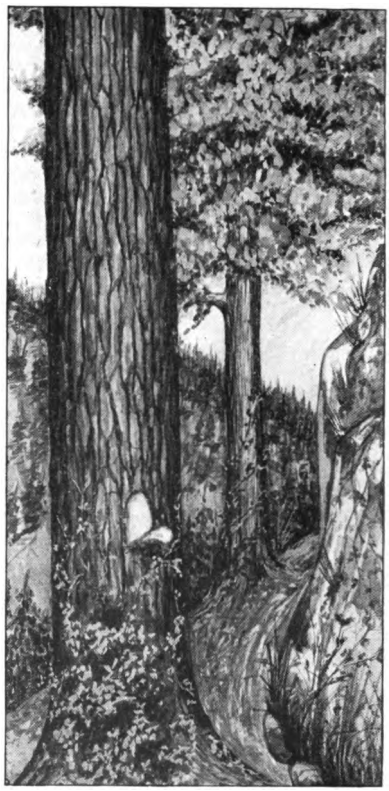
The photographs show the fine location, the exceptionally good "layout" of the plant, the substantial character of the dwellings, store, and of the mill itself, which is built to make a long run.

This mill started to cut in the fall of 1917. The equipment consists of two Double Cutting Band Saws and a "Dixie" Circular Carrying Saw—50" diameter.

With a daily cut of one hundred and seventy-five thousand feet of I.L. Yellow Pine every ten hours, this mill combines with the one at Kinder, La., in turning out ten million feet per month.

The Planing Mill at Peason has an output of four million feet per month.

Mr. A. J. Peavy, the president, is one



Blazed Trail

of the oldest and most experienced operators in the state.

Mr. R. J. Wilson is also a highly experienced sawmill man with many years of successful saw milling behind him and has been associated with Mr. Peavy in their operations at Kinder for many years.

Mr. D. L. Handley, the superintendent, has been connected with the Peavy-Byrnes Lumber Company for nine years and previously was connected with the Frost Johnson Lumber Company.

This mill is ably looked after by our friend, Bert Martin, the sawmill foreman, while the mill is kept running up to capacity through the splendid care given the saws by the filer, Mr. Harry Garrison.

The main offices are located at Shreveport, La.

It is not often that we have such clear, comprehensive sawmill pictures as reproduced on pages 104 and 105, and it gives us great pleasure to place these before our readers.

It is also interesting to know that Disston Saws are used exclusively in this mill.

"People Are Pretty Good People"

People are pretty good people,
Taking them all in all;
You can find a good spot in the worst of the lot
(Often it's very small);
But most of 'em go on trying,
Doing the best they can.
I haven't a rap for that hard-working chap,
The average human man.

People are pretty good people,
Trying hard to be kind,
And the wrong they do—except a few—
Is just because they're blind,
Blind and bothered and busy,
Harried by toil and strife—
For work and fret is the game they get
All of the years of life.

They do good deeds in silence,
Hiding their love away,
And few are told of the hearts of gold
Throbbing in mortal clay,
The hearts that always answer,
Hearing the rightful call—
People are pretty good people,
Taking them all in all!

—"Braley," in *Hardware World.*

Ants Dine on Furniture

Furniture as well as other wood products used in the tropics is subjected to the attack of insects known as termites. This attack is excessive in South America in the coastal regions north of Rio de Janeiro, and is so certain and so severe that, in the opinion of the Forest Products Laboratory, it is useless even to think of exporting wooden furniture to those regions unless the wood used is naturally resistant to termites or is treated with a poison to prevent the attack of these insects.

There are a number of species growing in Brazil and other tropical regions which are naturally immune to termite attack and which are used in those countries almost exclusively for the manufacture of furniture. None of the cabinet woods which grow in this country, however, possess such immunity.

Of course, in order to compete with the furniture now used in these regions the United States product must be equally durable. One way of making it so would be to import cabinet wood from the region in question, make it up into furniture here, and return it. A similar practice appears to have been very successful among European furniture manufacturers before the war, when much of the furniture sold in Brazil is said to have been manufactured in Europe from Brazilian woods.

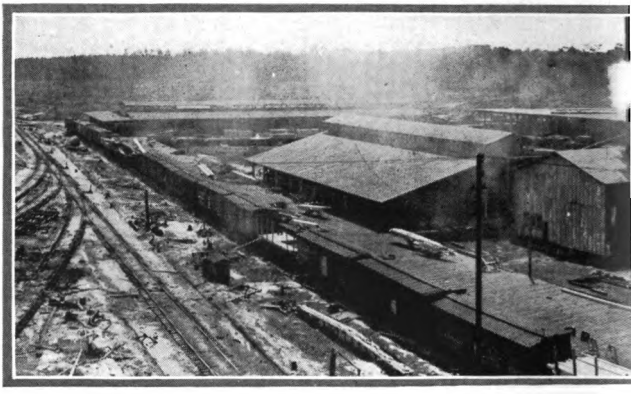
Another possibility that may be considered is the use of some of the cheaper domestic furniture woods for backs and cores, after thorough impregnation with a poison such as mercuric chlorid, and the use of Brazilian termite-proof woods in the form of veneer for facing.

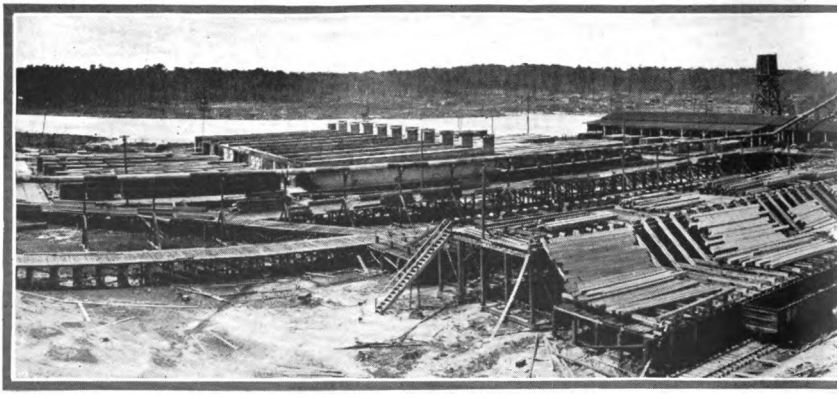
—*Scientific American.*

In the old days people used to sit around during idle hours and whittle, and swap knives, and argue about the relative speed of horses. Today when people get together they swap ideas and argue about the efficiency and quality of machines and methods, because we are passing from the age of the horse to that of mechanics and science.

PEAVY-WILSON LU

The Planing Mill Unit

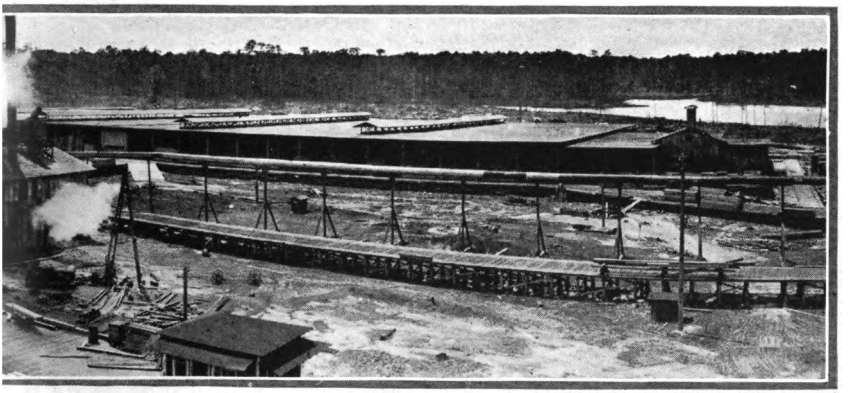


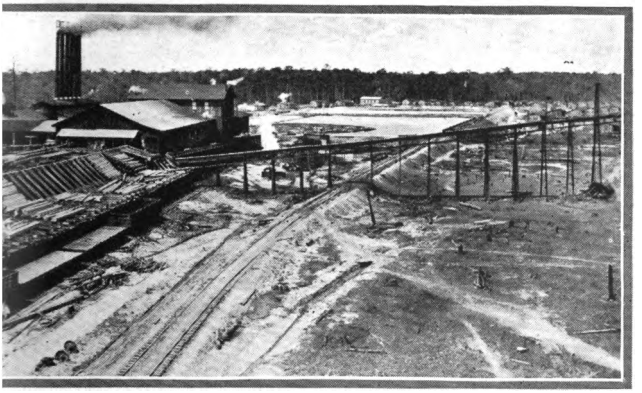


It is not often that we have such clear, comprehensive saw-mill pictures to shou

MBER CO., PEASON, LA.

The Home Unit





The Saw-Mill Unit

and it gives us great pleasure to place these before our readers. (*See page 102.*)

Evolution of Logging on the Pacific Coast Is Interestingly Described

THE improvements and changes in the system of logging which have taken place during the past twenty years, especially on the Pacific coast, have been marvelous. From bull-team to steam donkey; from line horse to haul-back; from skid-road to railroad; and from ground logging to high lead are all improvements with which every logger is familiar, even though the full significance of those advantages is not always appreciated. Not only out on the works but also in the cook-house and bunk-house has evolution made its mark. Economy has taken the place of waste and extravagance in the kitchen, and fresh meat and vegetables and rich pastry the place of pork and beans and molasses in the dining room. Many a logger in the woods today can remember, only a few years back, when he crawled head first into the muzzle loader bunk, with a layer of hay and some blankets in it and proceeded to make himself comfortable.

Even at that a man could get a fairly good night's rest on a bed of this kind if the game was not too plentiful. Chiefly, this game consisted of a little animal that inhabited almost every camp and generally made itself pretty much of a nuisance. It was commonly known as the "seam squirrel," but during the war the name of this animal underwent a change and it is better known now as "cootie." However, there is not much in a name and as far as the logging camp is concerned this species has become almost extinct. He is not a progressive animal and he could not stand the pressure of the bath houses, hot water and soap, wash rooms, drying rooms, electric lights, steam heat, steel framed bunks and other improvements which we find in the camps today.

There Must Be Safety With Speed

Modern logging methods are not complete without the equipment that insures speed and safety. In the great transformation which has taken place the average successful logger has only to be shown that a new system is an improvement over the one in use and he will immediately adopt it. Some few loggers have not as yet adopted the high lead, but cling to the old custom of ground logging. While in some localities the ground system may be advantageous, nevertheless there is ample proof of the advantage of the high lead. Few, if any, once giving the high lead a fair trial, have ever gone back to the old way.

Among other modern improvements, and it may be added, modern conveniences, which have made their advent into the logging game is the electric signal system. It is, without a doubt, one of the most essential articles in the operation of modern logging. With the old "jerk wire" system the whistle punk generally stood about three or four hundred feet away from the donkey; if he went any further his jerk-wire would not work satisfactorily. The rigging crew often worked twelve or fifteen hundred feet away and the signals had to be transmitted by lung power from the rigging crew to the whistle punk and from there to the engineer by "jerk-wire," providing the wire did not break. In the event of it breaking it is hard to say what might happen, but if the engineer heard one short blast of the whistle he would "open her up" and go ahead on the main line and keep going until his attention would be drawn to the whistle punk or some of the rigging crew came bounding through the woods frantically waving his arms for him to stop. Then if there was no damage done, the rigging crew would sit down and wait for the whistle punk to get his wire connected up again. But that is not the worst that could happen.

Loggers Must Take Chances

In yarding logs the engineer can seldom see the crew working around the rigging and his actions are governed entirely by the whistle signals. Men take chances in the woods; they depend on every member of the crew doing his part at the proper time and in working around the rigging men are often placed in such a position that a wrong signal or a wrong move may mean disaster. That is why the

electric signal system is popular with both operator and worker; besides being a time and money-saver, it saves lives and avoids accidents; gives better results and makes the work easier for the crew. Instead of the whistle punk having to look for trees to hang his wire on he simply carries the coil in one hand and the signal handle in the other, and he can follow the rigging crew, playing out the wire as he goes along; in this way he is in close touch with the work and can see and hear what is going on, which naturally insures speed and accuracy; increases the output and decreases the cost of logging.

"Safety first" is being continually advocated, but not always practiced. Accidents happen; men are hurt, crippled, or killed; machinery destroyed and money lost. But still they happen. Sometimes they seem unavoidable and sometimes they appear to happen through carelessness, but never are they intentional (unless through acts of sabotage, but that is another question). However, in every case something or some person is responsible for the occurrence and if every accident was thoroughly investigated and steps taken to eliminate whatever or whoever was responsible, the number of accidents would be greatly reduced. Often the blame falls in the wrong place and quite frequently the blame falls on the injured victim when he may be innocent.

This recalls to memory an accident which the writer witnessed a few years ago. That was before the high lead was in use, and at that time the chaser was a real workingman. He chased not only the fair sex when he was in the city, but logs and rigging when in the woods. He followed the rigging when it was going back into the woods to see that the chokers didn't become unhooked from the bull-hook and get lost, and he followed the log out to the landing to see that it did not get hung up, and to change the rigging at the bull-hook and to unhook chokers at the landing and send them back to the rigging crew, and if he didn't keep the line moving he would have the hook-tender on his trail.

Mistake in the Signal Given

In this case I recall the log hung up on a stump and the chaser motioned the whistle punk to signal the engineer to stop. After he had got some slack and changed the choker so as to pull the log from where it was caught the choker would not stay in place, so he had to hold it until the slack was taken out of the line and a strain put on it. He could not see the engineer from where he was and he yelled to the whistle punk to "go ahead slow;" the signal for this is three short blasts of the whistle, but at the first jerk the wire broke and the engineer got one blast, which means "full speed ahead," and he "opened her up." The choker being set back a few feet from the end of the log it was up-ended by the sudden pull and swung around, hitting the chaser and breaking his arm.

Fortunately the man was not killed or even knocked unconscious. Had he been he would not have heard the good advice that the hook-tender had to offer, as follows: "A man should never give a signal until he is well out of reach of everything and he had no business taking such a chance." That was indeed good advice. Every logger knows that he should not take chances, but I'll venture to say that with the old ground yarding system there never was a man who followed the game long enough to qualify for a hook-tender who had not, more than once, taken the same chance that this man had. The hook-tender was also wrong in saying that he had no business doing what he did. It was the chaser's business to get the log from behind the stump and get it out to the landing, and under the conditions he did the logical thing, but it was the signal system and not the man that was at fault.

Safety first does not always mean only to be cautious, but it means to be exact and accurate in our judgment; to be ingenious and skillful in devising and putting into use systems and machinery which will eliminate accidents. From its first advent into the industry the electric signal was deemed a success, but through a continuous persevering application of ingenuity it has developed into an article of primary importance and some credit is due the inventors and promoters who have made it valuable for getting out logs.

The gentle art of spending money requires neither a school of correspondence course nor an instructor.—*Exchange.*

The "Pennsylvania Desert" Once a Forest

Gifford Pinchot is the author of an interesting bulletin on Pennsylvania's forests. As forester for the United States Government in the Roosevelt administration Mr. Pinchot was a zealot in conservation. Six million acres in this state, he cites, are impossible of cultivation. They are too rough and stony and produce nothing. A million acres of this land is owned by the state. Fires are ruining both private and state-owned land, he claims, and the legislature, he holds, is largely to blame. There are some extremely interesting things in what he says about what he terms "the Pennsylvania desert."

* * *

"The Pennsylvania desert," he says, "is costing our people twice as much as it costs to run the state. The taxes every year are only half the burden forest destruction lays on the people. We use in Pennsylvania about 2,300,000,000 feet of lumber each year. We might grow nearly all of it at home, on what is now the 'Pennsylvania desert.' But we let the fires run instead. So we paid for freight on lumber brought into the state in 1914 the tidy sum of $12,800,000 and in 1918 certainly over $20,000,000 and probably $25,000,000. This freight bill grows every year. We certainly paid another $25,000,000 for the 1,700,000,000 feet of lumber imported apart from the freight. Then the state department of forestry estimates the loss of wages due to forest destruction and the closing or removal of wood working industries $20,000,000 more. Then there is the loss from floods, the loss of the business men of the state, the loss of population driven to other states to find employment in lumbering, the loss of fish and game, the loss of summer resort business and other losses, which combined we may very conservatively place at $15,000,000 a year. The direct damage from fire is the smallest of all—probably less than half a million—because outside of farmers' wood lots there is so little valuable timber left to burn. Taking it all together, we are well within the truth in estimating that the 'Pennsylvania desert' keeps out of the pockets of our people, and puts into their cost of living, not less than $80,000,000 every year, or twice as much as the yearly cost of our state government, and doubtless three times the cost of buying the 'Pennsylvania desert.' On the other side, Pennsylvania has specifically appropriated for forest fire protection, during the last six years, less than $30,000 per year for the entire forest area of the state, or less than a quarter of a cent per acre, in an ineffective effort to stop this gigantic loss. It has been like trying to put out a burning building with water in a spoon."

But how few people realize that the damage to the country does not end with the destruction of timber. Canada is beginning to look on the problem in a broad way, but only beginning. A big work lies ahead that requires the attention of every Canadian.—*Pulp and Paper.*

The Flag Is Still There

Above the heads of a hundred million people to whom it is the symbol of a fine national life and spirit, it waves today as if unconscious or scornful of the human insects that hate it or the larger creatures who misunderstand it or willfully misinterpret it for their own ends.

It has seen more excitement and has been through more perils than any other ensign. It has traveled with the sword east beyond the Rhine and west to the Chinese wall. It has always come back clean and unbeaten, to keep its place in the continent for which it sprang into life. In war it is entwined, if need be, with other banners of right; in peace it must fly alone. If any man wants it for his flag, there is room for him underneath its folds. It can cover only one nation, for only the men and women who come here to live in its shadow can understand it; and if any cannot or will not understand this emblem of liberty and justice, of wholesome ambition, then his place is elsewhere. The flag is bigger than any individual, cult or philosophy.—*New York Sun.*

If virtue is its own reward, why advertise it.

* * *

It is undesirable to be either counted out or taken in.

University of Minnesota Offers Course in Lumber Uses

Lumber dealers, manufacturers of timber products, contractors and carpenters, who have need of specific instruction in the proper selection of the material used in their industry, will find in the course, "Lumber and Its Uses," offered by the General Extension Division of the University of Minnesota, just what they have been looking for. The course is based upon R. S. Kellogg's text by the same name, and uses as supplementary material a large number of valuable pamphlets issued by lumber associations on grades, sizes, characteristics, etc., of the various woods. It also furnishes a valuable bibliography on such subjects as preservation and seasoning, strength tests, grading and scaling, as well as in the general field.

The kind and grade of wood selected for any use should be the one best adapted to that use, all things considered. The timber dealer must know the qualities of the material he handles well enough to select the best for his own use or that of his customers. If a cheaper timber properly preserved can replace a more costly kind, he should know it. Timber having been in use so long, it is falsely assumed that dealers know the material well. They do know it in a general way; but it is only in recent years that specific information regarding woods has been sought in laboratory and testing room and given to the public. The matters of wood structures, of tests of strength, durability, preservation and other questions are now being settled in a scientific manner. Results of such tests are included in the correspondence course given by the University of Minnesota.

Many persons are now interested in the use of wood in the manufacture of airplanes either as a matter of general interest or with the idea of becoming inspectors of these woods. It is, of course, impossible to train an inspector in such a short course as this; but much valuable information along this line can be obtained as a sound basis for future work. Only a true understanding of the qualities and peculiarities of wood structure can give an adequate idea of the difficulties encountered in this, or, indeed, in any form of wood manufacture.—*Am. Forestry.*

Treating Timbers to Preservative Baths

In order to preserve timbers and boards used in industrial building, a system of treating them on the site has been provided. In this system pressure is not used to force the creosote into the wood. Open tanks are employed in which a bath of oil is maintained at a temperature between 150 degrees and 200 degrees F. The timbers are immersed in the oil and then transferred to a second oil bath in which the temperature is not over 100 degrees F. The cooling action of the second bath acts by condensation of the heated air and moisture to assist in causing the atmospheric pressure and capillary attraction to drive the oil into the wood. The periods of immersion in each bath depend upon the thickness and the grain of the wood, the time varying from one hour to 15 minutes per inch of thickness. A second form of treatment consists in spraying the wood or applying the oil with a brush or mop. The process is particularly valuable in buildings in which a high degree of humidity is maintained. The roof timbers of such buildings if untreated are liable to decay in a period of a few years. Treated roof timbers have been found to be in good condition after nine years of service.—*Canadian Lumberman and Woodworker.*

The Oldest Tree on Earth

The oldest tree on earth, at least as far as anyone knows, is the Boo tree in the sacred city of Amarapoorah, Burmah. It was planted, the record says, in the year 288 B. C., and is, therefore, about 2200 years old. Its great age is proved by historic documents, says Sir James Emerson, who adds: "To it kings have dedicated their kingdoms in testimony of a belief that it is a branch of the identical fig tree under which Buddah reclined at Uoa, when he was undergoing his apotheosis." Its leaves are carried away by pilgrims as relics, but, as it is too sacred to be touched, even with a knife, they can only be gathered after they have fallen.—*New York Commercial Advertiser.*

"A lazy man is no more use than a dead man, and takes up more available room."—*Exchange.*

Many Mahogany Trees in Panama

Large Quantities of the Valuable Timber Available for Export for More Than 30 Miles on Each Side of the Canal

THE question as to whether the mahogany of Panama is the same tree as that known in other parts of the West Indies and of Central America has been a subject of discussion among timber men on the isthmus, as well as natural scientists, for some time. The latest information would seem to indicate that the Panama mahogany is a variety closely allied to that well known to the trade in the United States as Honduras mahogany.

Dr. O. F. Cook, of the United States Department of Agriculture, in his book on the plants of Porto Rico, states that the original, or the true, mahogany, the botanical name of which is Swietenia Mahogani, was found originally in Florida, the Bahamas, Cuba, Jamaica, and Trinidad. It seems probable that this West Indian tree gave the trade name to all of these trees whose timber is so similar as to be almost indistinguishable except by expert examination; but from a strictly botanical point of view, the West Indian tree differs from the one in Honduras, and the one in Honduras is now believed to be practically identical with those in Nicaragua, Costa Rica, and Panama.

Honduras Tree the Standard

As Honduras mahogany is regarded as a standard in the timber trade, and is accepted universally as the real article, notwithstanding the fact that it is not botanically the real mahogany, it may be said, therefore, that the Panama variety is of the same species as that in Honduras, and, therefore, a true mahogany in the trade sense of the word, although not identical with the Swietenia Mahogani of the West Indies.

The common native name for mahogany is caoba, a name stated to have originated in Haiti and to be of Indian derivation. It is used, however, by the Spanish natives of Central America, and it is the common term applied to the tree in Panama. The Central American mahogany is stated by Dr. Henry Pittier, probably the most eminent botanical authority of Central America, to belong to the family of the Meliacæ, and he gives two species of the trees as Guarea Caoba and Carapa Guiaensis. The French name for mahogany in Martinique and Haiti is acajou. Dr. Cook states that a Guarea is found in Porto Rico, where it is also called acajou, and is the same class as the mahogany.

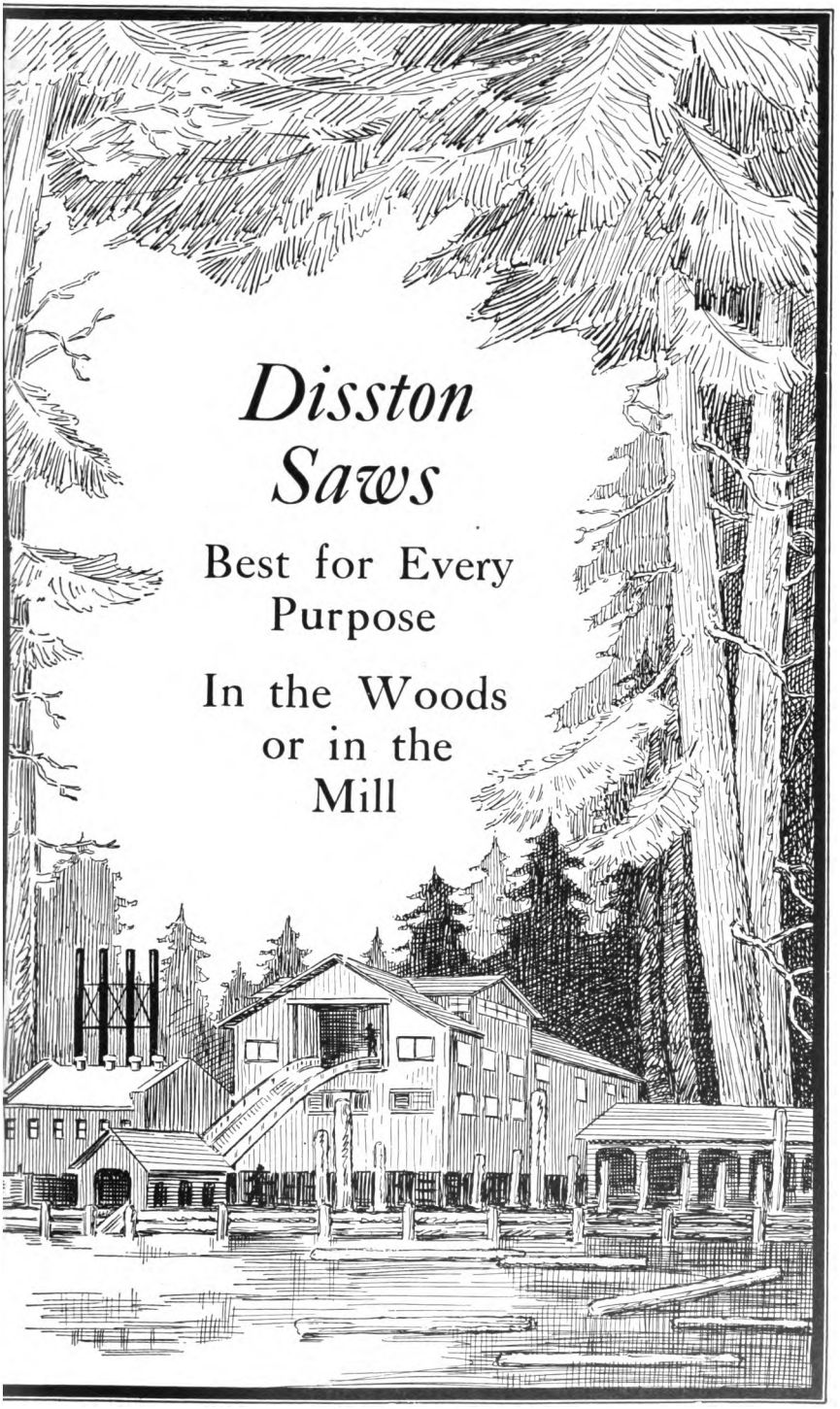
Nearly 200 Feet High

The mahogany of Panama is a tree sometimes reaching a height of nearly 200 feet and six feet thick. It often grows in clumps so that it is not uncommon to find it to the number of 10,000 large trees to the square mile. Such a forest of mahogany, however, is rare, although there are occasionally places of this sort. As a general rule, the mahogany occurs in scattered clumps, so that an average of two or three such big trees as those above mentioned per acre is the most that timber men would expect to find.

There has been a considerable amount of mahogany exported from Panama, but the resources of the country are not at all exhausted, and at a distance of more than 30 miles on each side of the canal there are large quantities still available. The getting out of the mahogany is comparatively easy, because of the large number of small rivers running from the mountains to the sea throughout the whole of the republic, enabling timber men to float the timber down these streams to the sea at the height of the rainy season. The scarcity of labor may be said to be the principal reason why the mahogany resources of Panama have not been more developed. There are old houses in Panama built of this wood, where the timber has stood the test of time for more than a century.

—*The Christian Science Monitor.*

No sane man would sow turnip seed and expect to reap melons; yet he sows seed of selfishness and injustice and expects to reap contentment.—*Exchange.*



SAWDUST

A CANNY SCOT

Sandy and John were sitting in a car when a pretty girl got in and smiled at the former. He raised his hat.

"Do you know her?" asked the Englishman.

"Oh, yes, very well," the Scot replied.

"Well, shall we go and sit over beside her, and then you can introduce me?" asked his companion.

"Wait a bit," returned the canny Scot. "She hasna paid her fare yet."—*Pittsburgh Chronicle-Telegraph.*

THE IRISH WIN

A parson entered an inn with a dog, and an Irishman asked what breed it was. The owner looked the questioner insolently up and down and then replied with a drawl: "It's a cross between an ape and an Irishman."

"Faith, thin we're both related to the beast," was the ready retort.—*Exchange.*

WOULD YOU?

He—"Margaret, there has been something trembling on my lips for months and months."

She—"Yes, so I see. Why don't you shave it off?"—*Exchange.*

LOST

Judge—"Madam, have you anything to say?"

Prisoner's Husband—"Lord, Judge! Now you've done it!"—*Life.*

"Nothing the matter with you at all," gruffly spoke the physician. "You are in perfect health. Why, your pulse is as steady as clock-work."

"But, doctor," whined the patient, "you have got your fingers on my wrist watch."—*Exchange.*

Husband—"It is a strange thing, but true, that the biggest fools have the most beautiful wives."

Wife—"Oh, you flatterer!"—*Judge.*

SHORTAGE OF LABOR

It seemed that when Rastus and Sam died they took different routes; so when the latter got to heaven he called Rastus on the 'phone.

"Rastus," he said, "how yo' like it down thar?"

"Oh, boy. Dis here am some place!" replied Rastus. "All we has ter do is to wear a red suit with horns, an' den shovel some coal on de fire. We don't work no more dan two hours out of de twenty-four down here. But tell me, Sam, how is it with you up yonder?"

"Mah goodness! We has to git up at fo' o'clock in de mawnin' an' gathah in de stahs; den we has to haul in de moon an' hang out de sun. Den we has ter roll de clouds aroun' all day long!"

"But, Sam, how comes it yo' has ter work so hard?"

"Well, to tell the truf, Ratus, we's kin o' short o' help up here."—*Exchange.*

SURE HE COULD

A shipper was interviewing applicants to obtain a driver for his motor truck, and among them an Irishman.

"Can you drive a truck?" asked the shipper.

"Can Oi drive a truck?" repeated the Irishman, scornfully.

"Well, run the truck into the shed."

Pat climbed onto the trembling vehicle. He looked around, spat on his hands, and grabbed the biggest lever, and pulled it for all it was worth. Zip! she went into the shed. Pat saw trouble ahead, and guessing what would happen, reversed the lever. Out she went—in again—out again.

Then the shipper yelled.

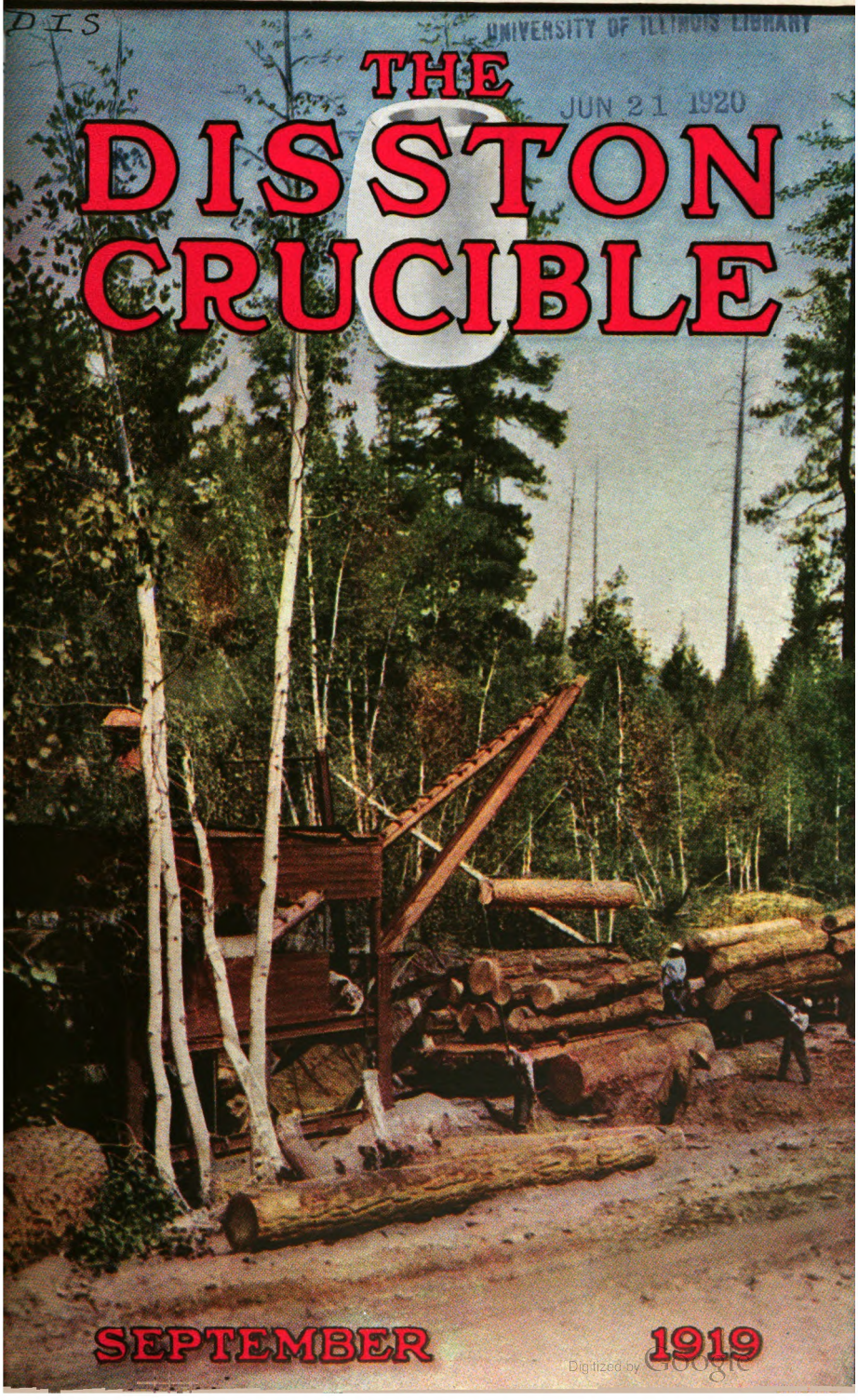
"I thought you said you could run a motor truck."

But Pat had his answer ready.

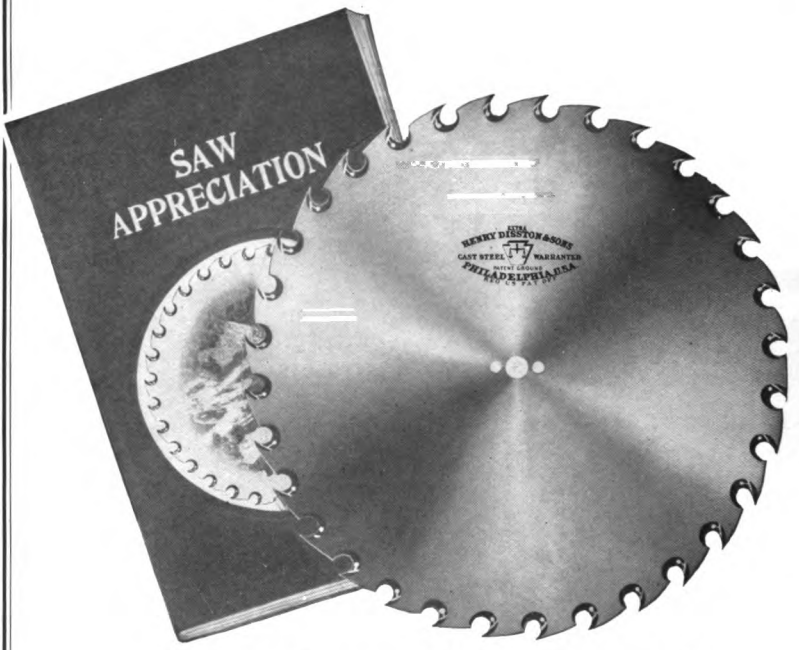
"Oi had it in three times. Why didn't you shut the door?"—*Exchange.*

Whenever you cry over spilt milk try to make it condensed.—*Exchange.*

THE DISSTON CRUCIBLE



SEPTEMBER 1919



The Superiority *of* DISSTON Inserted Tooth Saws

Has been proved conclusively by the splendid service they have been giving for many years.

This type of saw is growing steadily more popular among circular saw users because of its many advantages. Chief among these is its retention of the original diameter of the saw during its entire life. This means that it is not necessary to purchase a saw of a larger diameter than the timber requires.

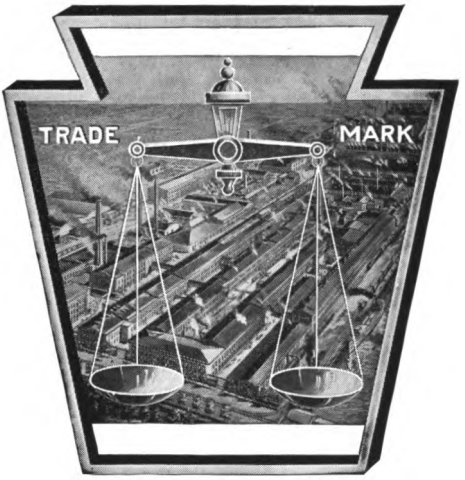
Our new booklet, "Saw Appreciation," gives all the facts, as well as many letters from satisfied users.

Whether you use Chisel Tooth Saws now or not you should send for this book

THE DISSTON CRUCIBLE

PRICE 10c PER COPY $1.00 YEARLY IN ADVANCE

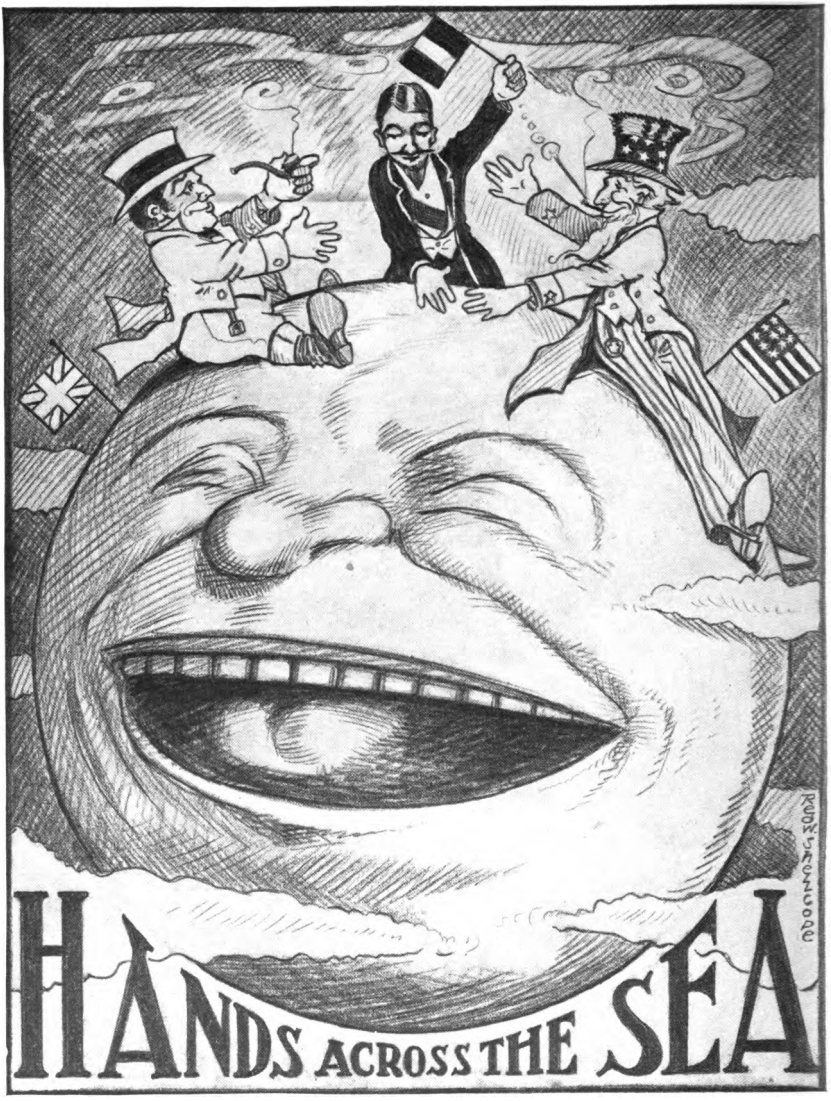
TABLE OF CONTENTS



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



THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VIII SEPTEMBER, 1919 No. 8

EDITORIAL CHAT

Produce More—The Need

A REALIZATION that the great problems of readjustment will not be solved by advancing wages, or by shortening the hours of a working day seems to be taking root.

To increase production per capita is to file the key, the key to our national and international problem.

We are confronted by the same obstacle that has reared itself before us for years past, only its proportions are greater.

For forty years past labor-saving devices have saved the day.

Now the shirking of the individual, the let-up of the man, the lay-down of the worker have at last overcome the saving of automatic machinery and we are against a stone wall. It is a shameful admission that our production per capita is on the wane.

No nation can become richer by producing less. Labor-saving devices at their best should mean more and better conveniences and essentials for the human family.

Increased wages and shorter hours are proving a pitifully poor team with which to pull down advancing costs. Everything that is done for labor that will increase production, directly or indirectly, is good for the country. Every move that reduces production per capita increases a danger that already threatens the foundations of government.

A national resolve, deep and abiding in the hearts of every true American, to increase his production would clear the clouds in a hurry.

Pledge yourself to produce more, then follow through.

—*From* "Hardware Age."

Quality Tells

"An Avenue of Fine Maple Trees" Leading to the Entrance of the Saw Works of Henry Disston & Sons –See Page 117

An Avenue of Fine Maple Trees

IT is strikingly fitting that the largest concern in the world manufacturing saws should have in mind, as many as twenty-three years ago, one of the most popular and important topics of the present day—REFORESTATION.

The accompanying picture shows a very fine avenue of hardy Norway Maples on both sides of the long approach to the fifty-acre factory of Henry Disston & Sons, Inc., Philadelphia.

One of Disston's long-time employees, when viewing this photograph, remarked: "Well do I remember the old walk and four times a day for many years I trod the path along with thousands of fellow-workers. It was of cinders, trodden down, and in the summer this long, wide, deep bed of cinders seemed to absorb the hot rays of the sun and throw them out greatly intensified as you walked along. The improvement is a lasting and beautiful memorial to the thoughtfulness of Samuel Disston, whom all the boys called 'Uncle,' for reaching the shade of the wide-spreading branches of the maple trees one enjoys the cool, delightful stroll along the smooth cement pavement to the entrance of the works."

It is peculiarly interesting and seemingly contrary that Disston, whose saws for years have been used in denuding many thousands upon thousands of acres of timber, should be planting, growing and preserving our beautiful shade trees.

The September Cover

To the logging operators of large tracts the scene on the cover of this issue will be quite familiar, but it is for the benefit of those who have not been in touch with modern methods that we reproduce a picture of the steam loader of the Marsh Lumber Company in operation on the logging railroad track at their landing in the Plumas National Forest, California. The suspended log illustrates how easily and quickly they are lifted from the ground and placed in position on cars. It also suggests an interesting comparison of the progress made in log-loading from the primitive method of rolling by manpower to the modern powerful steam loader. A forest officer is in foreground scaling log.

We need to strive for the general social betterment of the people as a whole, and yet to encourage individual liberty and set high reward on individual initiative up to the point where they become detrimental to the general welfare.

—THEODORE ROOSEVELT.

Sawmill Aided Allies' Victory

Twentieth U. S. Regiment's Task Seldom Referred To, But It Played Big Part in World War

By Dolly Wayne

A RETURNED war worker has been telling me a great many interesting stories about her experiences covering two years in France. She thinks the French never will get over their astonishment at the celerity of the Americans. A Frenchman, so my friend says, would take three weeks just to think over the advisability of doing something which an American would not only think about but also begin and finish in the same space of time.

With this comparison in mind I was not so much surprised as perhaps I should have been to hear of the wonderful work accomplished by the Twentieth Regiment of our expeditionary force. This regiment, consisting of some 20,000 men, and composed of lumbermen, foresters and engineers, operated a number of sawmills situated mostly in the Argonne forests.

The largest mill was capable of shipping an average of 5000 railroad ties a day. This mill was attacked several times by airplanes, as it was run at night as well as in the daytime, and the glow of the electric lights furnished an excellent target for the enemy. Although no particular damage had been done, the major in charge of the mill resolved to resort to a trick that would make the night work comparatively safe. With this end in mind he had electric wires run into the thick woods for about a third of a mile from the mill and a number of lights installed among the trees. Whenever an alarm of an air raid came the lights of the mill were extinguished and the lights on the trees beyond switched on. The Germans wasted many bombs in this way and caused damage to a number of trees, but no other harm resulted.

There were many side issues of the war just as important as the main one, that of fighting; but during the conflict these "by-products" were comparatively unknown to most of us in this country. This work of the sawmills was a most necessary one, yet I do not believe many of us ever gave a thought as to how all the firewood needed for the armies of the three countries was provided, or where the lumber came from to build the barracks in France, or how telephone poles were obtained.

At the time of the armistice the Twentieth Regiment had eighty-one mills in operation and twelve more under construction, and the amount of timber those mills ate up was astonishing. In regard to firewood alone it has been computed that about 10,000 men, colored troops belonging to this Twentieth Regiment, cut every day about 3000 cords of wood, supplying fuel for 1,000,000 men. One battalion was placed at the service of the French Government, and provided the French, free of cost, with lumber for barracks, railroad ties, poles and firewood; enough firewood, so the report runs, to warm a detachment of 500 French infantry for one hundred and fifty years!

On account of war speculation, the price of timber in France more than doubled, and it was mainly owing to the aid of a French officer, chairman of a committee having charge of buying or leasing private forests, that the United States was able to make arrangements that saved the country about a million dollars.

Do you wonder, after knowing all this, that France is almost denuded of her forests? It is not in the war zone alone that trees are needed, but all over France; for the country's trees, like her men, have fallen to save the nation. The American Forestry Association has promised to aid France in her reforestation, and to help Belgium and parts of Great Britain that are also in need of new trees.

I was rather surprised to hear tree seeds are needed more than trees themselves. Money will go further, too, if expended on seed; for a great number of trees may be counted upon as coming from even one pound of seed. France wishes seed of Douglas fir and eastern and western white pine. Larches and red

(*Concluded on Page 125*)

Famous Forest Fires

IN connection with the forest fires now raging in the Northwestern States, Henry A. Graves recalls some notable conflagrations of the past.

A bulletin from the National Geographic Society contains Mr. Graves' sketch, which follows:—

There have been a number of great fires which have attained historic importance. One of these occurred in New Brunswick, in the fall of 1825, on the Miramichi River, during a season of great drought.

Within nine hours that fire had burned over a strip of forest eighty miles long and twenty-five miles wide, destroying every living thing in its path. One hundred and sixty persons perished and nearly 1,000 head of stock. Five hundred and ninety buildings were burned and a number of towns were destroyed, including Newcastle, Chatham and Douglastown. It is related that even great quantities of fish in the river were killed by the heat of the fire.

Another historic fire was that which occurred in Wisconsin in the fall of 1871. A single fire swept over an area of more than 2,000 square miles. It destroyed the town of Peshtigo, and between 1,200 and 1,500 persons perished. That same year the damage by fire elsewhere in the country was enormous.

Still another fire, which is remembered by many persons, was that which destroyed the town of Hinckley, Minnesota, in the fall of 1894. As in other cases of great fires, there was a season of exceptional drought. Many fires were constantly starting during that fall, but there was no effective effort to extinguish them. Forest fires were so common that there was no special fear of possible danger until it was too late to meet the situation.

As often happens when there are many fires burning under these conditions and a high wind springs up, the different small fires were suddenly merged, and a great crown fire resulted which swept over the town of Hinckley and six other towns, entirely destroying them, killing 500 persons, and making over 2.000 more entirely destitute. The estimated loss in property by this fire was more than $25,000,000.

The most recent great disaster from forest fires occurred in the Pacific Northwest in 1910. That year was the dryest ever known in the West, particularly in northern Idaho and northwestern Montana.

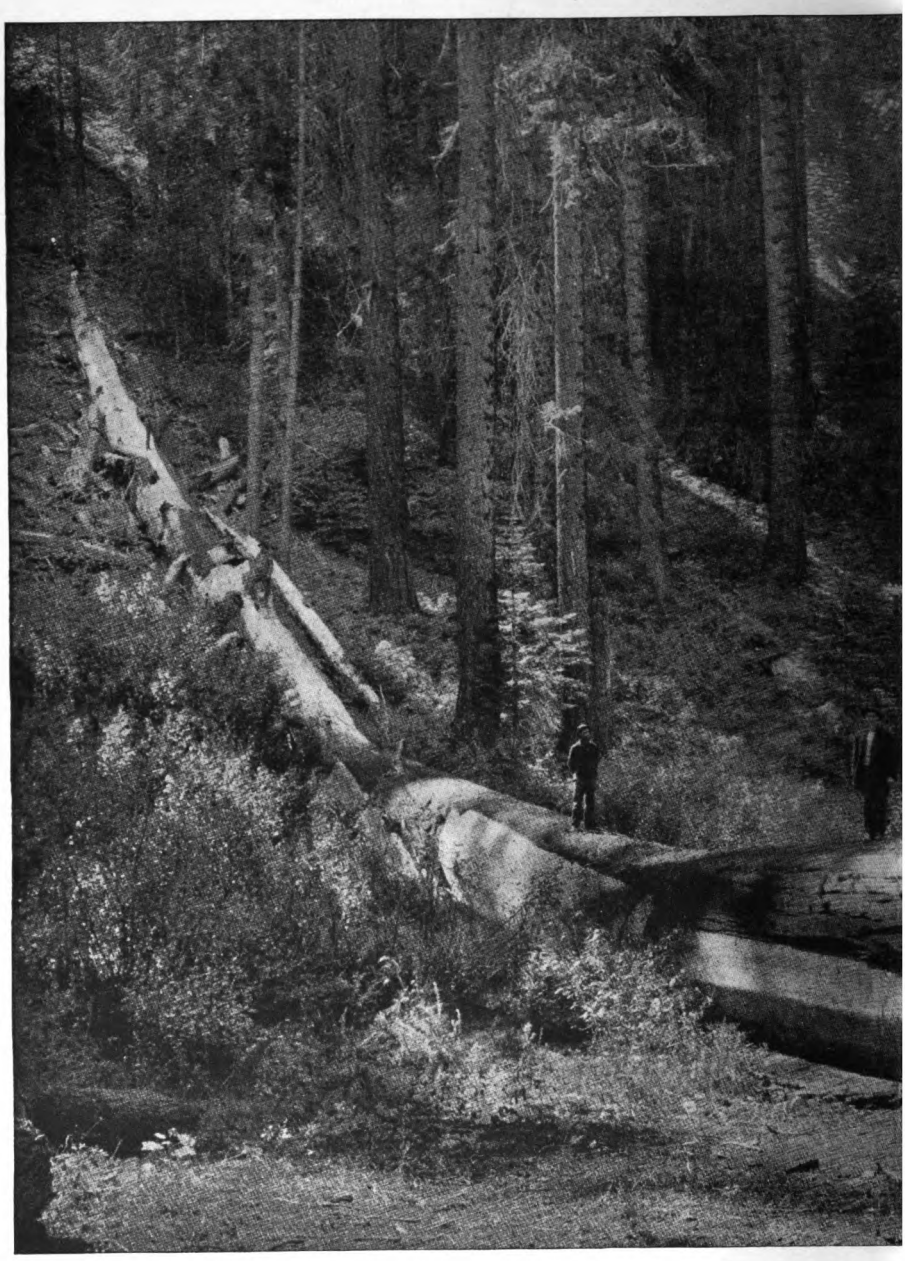
On July 23d a severe electric storm, practically without rain, passed over the northern Rocky Mountains, setting a large number of fires. The Coeur d'Alene Mountains in particular suffered from these fires. In three days the forest rangers put out nine fires set by lightning in the Coeur d'Alene National Forest. From one cause or another, many other fires were set. Heroic measures were taken to extinguish them.

At one time 1,800 men, besides two companies of soldiers, were fighting fires in the Coeur d'Alene forest alone, and large crews were fighting fires in other parts of the northwestern forests. The men fought stubbornly, working day and night building trenches around the fires and gradually confining them to a small area.

All fires seemed to be under control, when on August 20 a terrific hurricane sprung up, sweeping all the separate fires together, and making a gigantic wall of flame many miles long. Many of the fire-fighters were directly in the path of the fire. Twenty-nine fire fighters were killed, and if it had not been for the skill and the nerve of the forest rangers in charge of the crews a much larger number would have perished. As it was, about half of the number killed lost their lives because of their failure to obey the orders of the forest rangers in charge of the parties.—*From the Bulletin of The National Geographic Society.*

Lumber's Freight Bill

The annual freight bill of the lumber industry amounts to about $215,000,000, and lumber and forest products make up about 11 per cent of the total tonnage of American railroads or about 215,000,000 tons yearly, according to Interstate Commerce Commission statistics. This total is greater than the movement of all agricultural products and is exceeded only by the tonnage of general manufactures and mine products.



THE FAL

This picture is a reproduction of a photograph taken by Lindley Eddy in Se
Sequoia wood is almost indestructible by fire. Tl

FALLEN GIANT

In Sequoia National Park, middle eastern California. The trunk measures 288 feet. This tree may have been prostrate for many centuries.

September 17

The Birthday of Our Constitution

SEPTEMBER 17 is called the birthday of the Constitution of the United States, because on that day in the year 1787 the Federal Convention which drew up that great Charter of Human Liberty completed its work and adjourned.

Before its adoption, our Constitution was carefully considered and widely debated by all of the people. These discussions continued for more than a year and afforded an opportunity for the freest expression of opinion from every citizen and every social group in our country. John Fiske, the historian, records the following incident as typical:

"As the weeks went by and the issue seemed dubious, the workingmen of Boston held a meeting at the Green Dragon Tavern and passed resolutions in favor of the Constitution. When Adams had read the paper, he asked Paul Revere, 'How many mechanics were at the Green Dragon when these resolutions were passed?' 'More, sir, than the Green Dragon could hold.' 'And where were the rest, Mr. Revere?' 'In the streets, sir.' 'And how many were in the streets?' 'More, sir, than there are stars in the sky.' "

Because the people had thus deliberately accepted the Constitution, it could with literal truth begin:

"We, the people of the United States . . . do ordain and establish this Constitution for the United States of America."

The Declaration of Independence had pronounced the Thirteen American Colonies free from foreign control, but it did not make them a nation. The Articles of Confederation created an alliance between them, but left them thirteen different States under separate governments. It was the CONSTITUTION that made the American people one nation, with a fundamental law and a common purpose.

This purpose, as set forth in the Preamble to the Constitution, was,

" . . . to form a more perfect union, establish justice, insure domestic tranquillity, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity . . . "

In respect to the fundamental law the Constitution, in Article VI, says:

"This Constitution and the laws of the United States which shall be made in pursuance thereof . . . shall be the supreme law of the land and the judges in every State shall be bound thereby . . . "

Our Constitution has won the highest admiration from lovers of liberty in other lands. William E. Gladstone, the great English statesman, declared:

"The American Constitution is, so far as I can see, the most wonderful work ever struck off at a given time by the brain and purpose of man."

The framers of our Constitution clearly foresaw that, to meet the future needs of a great and growing nation, changes would from time to time be required. They provided, therefore, in the Constitution itself an orderly method by which it might be amended.

The Constitution of the United States, as we now have it, consists of a Preamble, seven Articles and eighteen Amendments. These Amendments, however, have not altered its fundamental conception of the relationship of government to freedom and human happiness, nor its basic provisions for establishing that just relation.

What, then, are the fundamental principles of the Constitution, and what are the vital rights that each of us enjoys under it?

The most fundamental of these principles is the Guarantee of Civil Liberty by the Limitation of the Powers of Government.

CHIEF JUSTICE MARSHALL, the first great interpreter of our Constitution, says:

"This Government is acknowledged by all to be one of enumerated powers. The principle that it can exercise only the powers granted to it . . . is now universally admitted."

Again and again in our history, as in the history of all nations, factions for the moment in power have wished to enact laws the desire for which grew out of the passions of the hour. But they have always had to face that great principle of our Constitution which limits the powers of Government and which they dared not transgress. And so we have remained a free people.

Recognizing these wise restraints, ABRAHAM LINCOLN urges us to:

> "Let reverence for the law . . . . become the political religion of the Nation."

Lest at any time those in power should willfully or ignorantly refuse to be governed by the limitations of authority laid down by the Constitution, a Supreme Court and lower Federal Courts were established with power to render ineffective all legislation in conflict with the Constitution. In respect to these courts, ALEXANDER HAMILTON, one of the authors of the Constitution, says:

> "By a limited Constitution, I understand one which contains certain specified exceptions to the legislative authority. Limitations of this kind can be preserved in practice in no other way than through courts of justice, whose duty it must be to declare all acts contrary to the manifest tenor of the Constitution void."

Of the Supreme Court, DANIEL WEBSTER declares:

> "The Constitution without it would be no Constitution, the Government, no Government."

The principles which the Constitution sought to preserve by limiting the powers of government are partly rights of the States to local self government and partly those individual rights which are referred to by the Declaration of Independence as "Life, Liberty, and the Pursuit of Happiness."

These limitations guarantee to all States local self-government on matters not expressly set apart to the Federal Government.

In respect to individual rights, our Constitution provides in the Fifth Amendment:

> "No person shall be deprived of life, liberty or property without due process of law; nor shall private property be taken for public use without just compensation."

Under this provision all American citizens enjoy equal rights. They differ unavoidably in natural aptitudes, in the amount of their fortunes, in their ability to acquire property, and in wisdom and intelligence in the management of affairs; but all citizens enjoy the protection of "due process of law."

What is "due process of law?" DANIEL WEBSTER describes it as:

> " . . . the law which hears before it condemns; which proceeds upon inquiry and renders judgment only after trial. The meaning is that every citizen shall hold his life, liberty, property and immunities under the protection of the general rules which govern society."

Adequate protection of life and liberty of the individual citizen is the first purpose and duty of government. Subject to the public interest, the individual must be free to live and labor where and as he will. This is the very essence of freedom under the law.

In this provision of the Constitution also lies protection of every individual in his right to possess and enjoy private property, whether its value is large or small, whether it is in savings or securities, in lands or merchandise. Such possession and enjoyment have always in America been considered as rights inherent in the nature of man. To protect all men equally in their right to own and freely use, subject only to the public interest, the fruits of their labor, their economy and their enterprise, is a primary function of Government; and this our Constitution recognizes and avows. The prosperity of the United States has been built on this bedrock foundation, which stimulates every citizen in our great country, by toil and thrift, to produce and acquire more, and thus to improve his condition.

Another great principle of our Constitution is that of Representative Government.

It is manifestly impossible for all of the people personally to take an active part in the administration of government. It, therefore, became necessary to devise a system by which every citizen would be afforded an opportunity to be represented in the government. In this way all

citizens have a part in the making of laws through representatives accountable to them for their actions.

But the people of the United States were already citizens of self-governing States when the Constitution was adopted. They had rights as citizens of those States and, if they were to be fully represented, it must be both as individuals and as citizens of the States. Out of this consideration grew the division of the Congress into a Senate and a House of Representatives.

This representative system establishes a direct and continuing personal relation between the people and their Government, by which the will of the majority can at all times be expressed in legislative action. By the constitutional provision for frequent elections, their representatives are from time to time made directly responsible to the people whose servants they are.

The third fundamental principle of our Constitution is the Division of the Powers of the Government.

This Division into Legislative, Executive and Judicial Powers is to the end that there shall be no one master with sole power to make, define and execute the laws, but that there shall be a system of checks and balances to prevent the usurpation of undue power by any branch of government, and thus insure to every citizen equal operation of just laws.

Under our Constitution laws are made by Congress, interpreted by the courts and enforced by the President; and each of these Departments of the Government, though closely inter-related, operates independently.

This provision of our Constitution for the Division of the Powers of the Government has been one of the bulwarks of our liberty. JAMES MADISON, one of the authors of the Constitution and afterwards President of the United States, says:

> "No political truth is of greater intrinsic value . . . The accumulation of all powers, legislative, executive and judiciary, in the same hands, whether of one, a few or many, and whether hereditary, self-appointed, or elective, may justly be pronounced the very definition of tyranny."

Such in brief are the ideals that our fathers embodied in our frame of government, and such are the benefits thereby secured. Even in this day of momentous social changes, the American people are thoroughly convinced that the underlying principles of our Constitution are the cornerstone of their liberties. They realize that these basic principles are not merely a plan chosen from among several equally available plans and suited to one age only, but that they are enduring principles of human justice, drawn from the moral nature of man as revealed in history.

Under our Constitution, we as a people have enjoyed a condition of progress and prosperity, of individual and national security and well-being, and of industrial development that is unparalleled in the history of nations.

Our Constitution is our great birthright. Jealousy to safeguard its fundamental structure, and thus to preserve for ourselves and posterity the advantages enjoyed under it, is the sacred duty and the high privilege of every citizen of the United States.

Well may we endorse the appeal of GEORGE WASHINGTON, the Father of His Country, when in his first Thanksgiving Proclamation he urged the people to petition

> "The great Lord and Ruler of Nations to render our National Government a blessing to all the people, by constantly being a government of wise, just and constitutional laws, discreetly and faithfully executed and obeyed."

Ultra-Modern Methods in Forest Fire Fighting

Portland, Ore., August 23.—That airplanes undoubtedly are by far the best means by which to discover forest fires is the opinion of those here who have had opportunity to study the workings of the six Curtiss machines now doing patrol duty in this State.

Observers in a plane, it is said by those who have had actual experience in soaring over the forests, with the naked eye can discern a tiny plume of smoke against the background of green in a very large radius, the range of vision of course

depending somewhat upon atmospheric conditions. In clear weather, one observer explained, he could easily detect a small fire at a distance of three miles on either side of the plane. A little larger volume of smoke would be visible plainly at a distance of six miles on either side. This at an elevation of about 2,000 feet, the height usually attained that a safe landing place may be made in case of accident to the plane. At 5,000 feet altitude an observer soaring over the Coast range could easily see the Pacific Ocean, some fifty miles distant.

Another feature that has been discovered by observers is that by making true road maps it will be possible to give the location of a fire with absolute certainty. Highways show in strong contrast to the country thru which they pass and every little bend could be numbered or otherwise marked for quick and sure identification. Rivers and streams, on the other hand, are not as easily seen from the plane because of being more or less hidden by the timber or brush. Nor are elevations as pronounced as one might suppose, but the roads show like chalk lines stretched over the surface.

Augmenting the planes operated by the army are patrol autos maintained by the various county forest fire protection organizations, and when a fire is reported, the auto loses no time speeding to the indicated location.

It was announced this week that Salem and Roseburg, Ore., will be abandoned as flying bases and that henceforth the headquarters will be at Eugene, more centrally located, and also that the speedier DeHavilands will replace the Curtiss training planes now in use. The speedier machines will make it possible to concentrate the entire squadron at one base, thus reducing the expense incident to the maintenance of the patrol.

But the airplane is not the only ultra-modern step in forest fire protection in Oregon. On top of Mount Hood, at an elevation of about 11,000 feet, the Federal Forest Service of this district has installed a wireless telephone system, in contact with another station 800 feet down the mountain side, which reports any incipient fire that may be discovered by the lookout tower at the summit of the great snowpeak. Wireless telegraphy from this height would be impractical because of the great expense connected with its operation, but the wireless telephone, as already tried out by C. M. Allen, telephone engineer of the Forest Service, has been found entirely satisfactory. Some apprehension was felt lest electrical currents in the air would interfere, but tests carried on recently have proved the new system entirely feasible. It is intended to erect a station on top of the new postoffice building in Portland, where the offices of the Forest Service are located, so that it may be possible for Elijah Coalman, lookout on Mount Hood, to converse directly with District Forester Cecil, a distance of about sixty miles.

The photograph showing the forest fire spotted by the airplane observer was taken by Ryle Teed, of the Forest Service, at an altitude of about 2,000 feet.—*American Lumberman.*

Saw Mill Aided Victory

(*Concluded from Page 118*)

pines are also wanted to try out in certain areas. Douglas fir seed costs only $3 a pound, and has 5000 seeds to a pound, but western larch, which costs $15 a pound, has about 100,000 seeds,

I have said that France has been astonished at our quickness in obtaining results. She may be slow in getting at things, as compared with us, but there is one thing which we might well copy from her: her sureness in getting ready for emergencies. If France had not begun more than one hundred years ago to protect her forests, she would not have been able to provide within the last few years the timber used in resisting the Huns. A great many things have helped to win the war, but let us not forget when enumerating them to include the French forests.

The way the United States has treated her trees is a crime that it will take many years of hard work and strict attention to atone for. We have been as wasteful of our timber as of many of our other possessions, not realizing the greatness of our inheritance. We have acted as if we believed that our forests would last forever, or as if we did not care what happened after we had gone.

—*Philadelphia Public Ledger.*

The Test of a Man

THE test of a man is the fight that he makes,
The force that he puts into his blows;
His ability to stand erect and take
The punishment the enemy bestows.
Anyone can smile when there is nothing to fear
And everything is smiling and gay;
But it takes a man to stand up and cheer
When everything is on the down way.

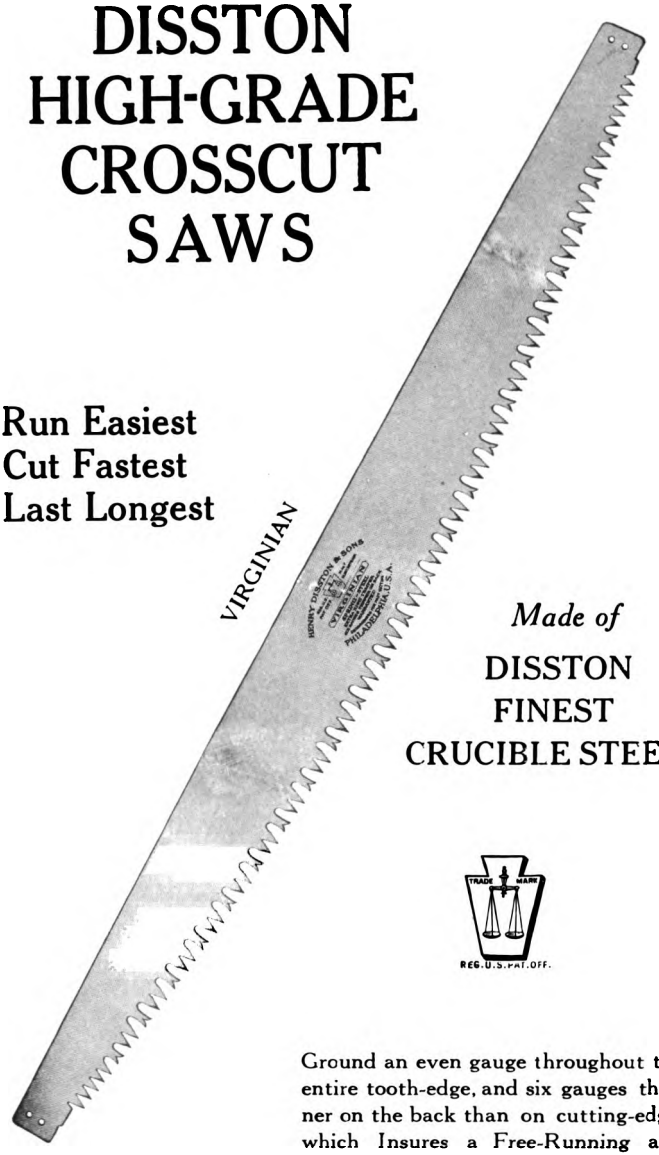
It isn't the winning you surely know,
Nor the number of battles won,
But how you stood and gave blow for blow,
Until the enemy run.
The fight isn't worth winning unless won on the square,
To use trickery and deceit is but fraud;
The man that is always honest and fair
Will get his share of the applause.

So it's the blows you give and the way that you fight
That determines if you are a man;
It's surely no glory to be in the limelight,
If your victory was only a sham.
The test of your mettle and the proof of your worth,
In addition to the blows you deal,
Is the blows you get on the hard old earth,
That shows if your stuff is real.

—FRANK M. JOHNSON in "Cannery Notes."

DISSTON HIGH-GRADE CROSSCUT SAWS

Run Easiest
Cut Fastest
Last Longest



Made of

DISSTON
FINEST
CRUCIBLE STEEL

TRADE MARK
REG. U.S. PAT. OFF.

Ground an even gauge throughout the entire tooth-edge, and six gauges thinner on the back than on cutting-edge, which Insures a Free-Running and Fast-Cutting Saw.

SAWDUST

SOME DIFFERENCE

The Hoosier Capital boasts of one Harry Porter who is well known for his repertoire of negro stories. He tells one to illustrate what a big difference it makes, in your personal safety, where you place the verbs in your sentences. Harry says that one dusky Rastus Ebenezer was telling a listening circle of chalk-eyed negroes what a wonder his new "gal" was. "Oh Lordy, how dat gal do love," he exclaimed. One listener, carried away by his eloquence, shouted, "Ah say she do!" At which Ebenezer, reaching for his razor and turning, said: "What yo' all say, niggah?" The little negro losing much of the ebony of his countenance hastily gulped, "Ah say, do she?"

—*Book of Smiles.*

SYSTEM

The visitor was being shown about by the head of the up-to-date business house, says *The New York Mail.*

"Who is that dapper youth at the glass-topped desk?" he asked.

"He keeps an index showing where the index cases are."

"Who is the young man with the gray gaiters and the efficient ears?"

"He keeps an index showing the length of time it takes to index the indexes."

"Who is the girl with the golden hair?"

"She decides under what index an index to the index of the filing cabinets shall be placed."

"And who is the gray-haired man at the disordered desk in the corner?"

"Oh, that's Old Joggs. He doesn't fit in very well with the rest of the office, but I have to keep him around. He's the only employee who can find important papers when I want them in a hurry."

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

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

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

—*The Lamb.*

BUMPTIOUS FAMILY

An old farmer who, by hard work and parsimonious habits, had got together a little fortune, decided that the time had at length arrived when he was justified in ordering a family carriage. He went to a carriage-builder's, and described in detail the kind of vehicle he wished to buy.

"Now, I suppose you want rubber tires?" said the carriage-builder.

"No, sir," replied the old farmer in tones of resentment. "My folk ain't that kind. When they're riding they want to know it."

—*Edinburgh Weekly Scotsman.*

TIT FOR TAT

The hallway was dark. The man felt his way along the wall toward his wife's room. A dim figure loomed up in front of him. Thinking it was the maid, he caught her to him and kissed her full on the lips. He waited. His wife's voice broke the silence!

"Oh, Henry," she breathed.

His name was John.—*Exchange.*

The indignant youth entered the office of the railway company and demanded to see the manager.

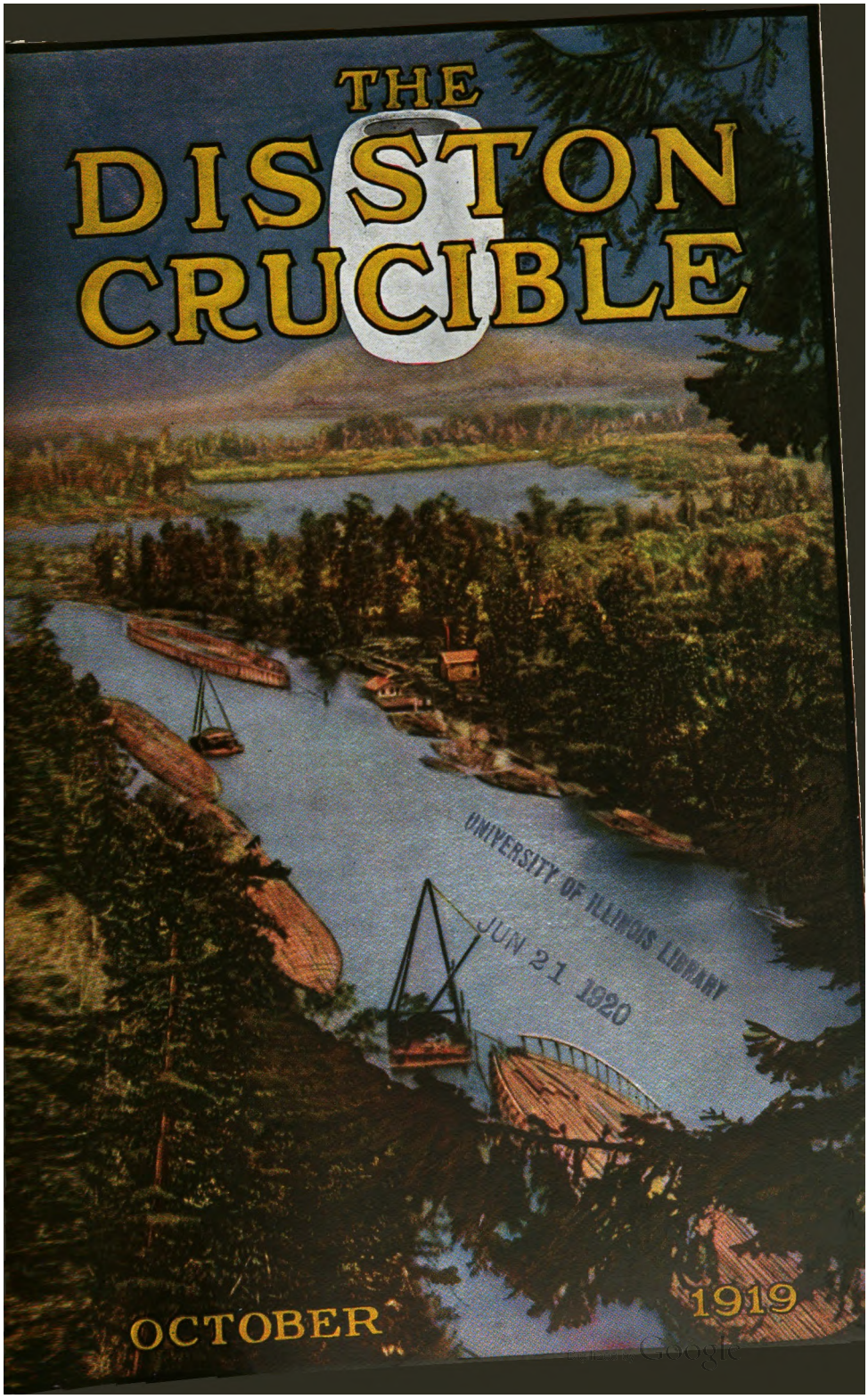
"Here, I say," he said angrily to that official, "I got a cinder in my eye from one of your engines and it cost me two dollars for a doctor to have it taken out and my eye dressed. What are you going to do about it?"

But the manager was a wily man. "Nothing, my dear sir, nothing," he replied suavely. "We have no further use for the cinder and you are quite welcome to it. From a legal point of view the cinder was not yours and no doubt you could be proceeded against for removing our property. But we will take no steps in the matter, you may rest assured."—*The Yellow Strand.*

Another old phrase long grown stale
Is that saying, "As slow as a snail."
When we now wish to show
That a thing is dead slow,
We say, "It's as slow as the mail."

—*Life.*

THE DISSTON CRUCIBLE



OCTOBER 1919

THE DISSTON CRUCIBLE

PRICE 10c PER COPY $1.00 YEARLY IN ADVANCE

TABLE OF CONTENTS

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

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VIII | OCTOBER, 1919 | No. 9

EDITORIAL CHAT

The World's Call for Workers

From Editorial, Manufacturers' Record, August 7, 1919

FOR nearly five years the world was busy destroying the accumulations of centuries, and during that time it had to leave undone the things which ordinarily would have been done. Now every man on earth must in one way or another bear some of the burden of Germany's war upon civilization and hasten to do the things which need to be done.

For five years dwellings were left unbuilt and existing ones unpainted and unrepaired; food was consumed and destroyed more rapidly than it was produced as 40,000,000 to 50,000,000 men battled for existence or prepared for the great struggle; railroad building ceased, highway construction stopped, streets were unrepaired, hotels were not constructed to meet the world's increasing travel. The result is there is now an enormous vacuum of empty store shelves, of unbuilt dwellings and hotels and railroads, and of a food supply inadequate to feed up a world of hungry people.

There is only one way to overcome the situation. All the combined power of all the governments of earth cannot change the inescapable, unalterable facts. But men, individually and collectively, can meet the mighty problems we face by work, hard, driving work; by work of brain and brawn and machine power.

Production and more production to the limit of man's ability will insure world prosperity.

Underproduction will mean world poverty and suffering.

The responsibility of the soldier on the battlefield to do his utmost was not greater than is the responsibility of every worker now to bring forth the greatest results, whether on the farm, in the mine, in the factory, in the bank, in the pulpit, in the teacher's room or at the editorial desk.

Every ounce of increased output by work helps to create wealth and will help the world to carry and eventually pay its indebtedness. It will help to feed and clothe the world and will lessen the cry of hunger which has fed the fires of Bolshevism in Europe.

Quality Tells

"JIM"

WITH the usual greeting my friend Jim sat down comfortably, carelessly picked up an ad. card on which some irreverent ad. writer in doggerel verse made disrespectful references to Father Time in anything but a complimentary style. After reading it, Jim gave tongue thusly: "Do you know, Tom, to my notion Father Time is a very much maligned old man. That picture of the old gentleman with the wicked, ferocious looking agricultural implement which in the not so very long past Past was commonly used in harvesting grain, firmly grasped in his skinny, sinewy hands for presumably the avowed purpose of summarily mowing off the inoffensive heads of mankind in general has got to be a sort of accepted standard of his ordinary attitude to the human kind, yet if we stop to think we know that he is not forever swinging that deadly old scythe with such vengeful purpose; that at times his touch is gentle, kindly and tender, his every effort is to soothe and console, to draw, as it were, a curtain of invisibility over the raw places and cover with forgetfulness the scars and wounds that life scatters along its trail. If I had the time and you had the patience, now that I am on this subject, I could pass you out a whole lot of nice things on this line of thought; but you are just like Sam Bender where patience is concerned and I am a little shy on time today, so I'll just have to let you grope along on your unlighted way until you find your own torch or cultivate more patience.

"Speaking of Sam Bender, I met Sam yesterday and in the course of our conversational exchange, you would probably call it a 'gabfest,' I touched on an incident in Sam's career that, a few years ago, to have made the said verbal touch I would have first provided myself with a couple of highballs for courage and a safety-first hickory club for defense. I was very agreeably surprised to find, instead of getting a rise out of the old boy as I expected, he laughed and said, 'Oh, come off, Jim, that spot is all healed up and I can laugh at it same as you.' That's one of the reasons I was saying nice things to you about old Daddy Time and the fine way he has of glossing over painful experiences. About Sam? Well, you know Sam is or used to be somewhat impatient in his disposition at times. You might say that under provocation he is peevish. On this particular occasion he wanted me to take a drive with him to a saw mill about ten or twelve miles from the little railroad town we happened to be in, but for some reason I was unable to make the connection, so Sam decided to go alone after telling me a few things that were strictly personal. He started out just a little bit fretful and peeved. He wasn't familar with the road and very naturally took the worst one possible, but in spite of a bad road and a worse horse arrived at the mill a little while before lunch time, only to find the manager had gone to a woods camp about an hour before his arrival and learned he would not be back until possibly four o'clock. This news did not improve Sam's fretfulness to any great extent. After due consideration he concluded the only thing to do was to wait. During the hours that followed he indulged in some fierce but noiseless profanity, without, however, any apparent compensatory consolation. Four o'clock arrived on schedule, but did not bring the much looked for manager; half past four, five o'clock, and then appeared a 'lumberjack' with a message to the foreman that Mr. Manager would stay at the woods camp all night and would not be back before noon next day. At this point, Sam took out his pocket Bible, sat down, and read quietly a little while. After this he inquired, quite genially, the nearest and best way to get back to town. That foreman had evidently spent most of his leisure time making local road maps and proceeded to give Sam directions so explicit and comprehensible they would have been a credit to the traveling passenger agent of a connecting railroad line. Patient Sam! With a reproachful look at the fast disappearing sun he started his weary soul on its way to town. Darkness came

quickly, and with the darkness a nasty cold wind sprang up, bringing with it equally cold dashes of rain. The passive man in the buggy began to have visions of steam-heated hotels with brightly lighted dining-rooms, hot waffles, rare beefsteaks and well-filled order books. Not to prolong the agony, after several narrow escapes from an upset, his hat swept off and lost by the impact of overhanging branches, face scratched, temper completely wrecked and his vocabulary of profanity all used up, he reached a place where in the dim light he could see the road forked two well defined tracks, one to the right, the other to the left. Now, which should he take? The foreman had told him, but for the life of him he couldn't remember. He knew one would take him to town, the other—Heaven knows where. Just then, to his delight, he saw in the corner of the fence a small sign board on top of a post. Here was the joy to his dilemma, but owing to the darkness he couldn't read the welcome legend. There was but one thing to do. He climbed out of the buggy, led the now nervous and fractious beast to the fence and tied him fast, scrambled to the top rail of the fence, steadied himself with one hand on the post and began to strike matches with the other. The rather boisterous wind interfered considerably with his bright idea, but after using a lot of perseverance, an equal amount of swear words and the most of his matches, he succeeded in deciphering the sign. It read: 'Use Brown's Tonic for That Tired Feeling.' Sam climbed down off the fence, untied his steed, got into the buggy, took the whip from its socket, backed the outfit into the main road, again dropped the reins loosely on the horse's back, deliberately and savagely slashed the animal with the whip and yelled, 'giddap!' He arrived at the door of the horse's stable about a half hour later, with nothing really lost except a whole day's time, the buggy hire, his hat and that placid temper of his." Jim relighted his "cold stogie," looked at his watch, said, "Got a date. Good-by," and left.

Significant Signs

Some people say they do not believe in signs. Others rely on them. Mythology tells us of the consulting of the oracle by the ancient Greeks, so down to the present time some folks, before taking any important step, must consult and consider certain signs.

We have heard of the goose-bone prophets, the ground-hog coming out to look for his shadow, and many other prophets, seers and geomancers, whose prognostications are based on signs.

The particular sign these days is one in which many hundreds of thousands of mechanics and artisans have placed their faith and trust for a great number of years—the Sign of the Disston Saw.

On the Roosevelt Boulevard, in Northeast Philadelphia, standing high and majestic is an immense Handsaw Sign, directing autoists to the Disston Factory. This sign, fifty-two feet in length, is in true proportion and color to the standard D8, 26-inch Saw.

It is curious to know the many and various purposes to which saws are diverted. A more or less familiar sight here and there in small towns is that of our Circular Saw serving as a fire gong or alarm, the true steel upon being struck giving out a loud, revibrant sound of peculiar tone attracting special attention. Then again, those who have been on the farm have been called to dinner from the hot fields by the clanging of the Circular Saw, and with the advent of the automobile old Shingle Saws have found a place in some sections along the road as signs marking the good roads for the traveler. See illustration on next page.

Ashes as a By-Product

There is now being produced more than a thousand tons of potash a year from wood ashes, coming mainly from the hardwood saw mills of Michigan and Wisconsin. The demand for potash now is so great and the price is so attractive that it should encourage an effort to recover this by-product among the hardwood saw mills and wood-working institutions of the South country. The saw mill industry as a whole has never profited from by-products as much as it might have and now seems a good time to start more research work of this kind.—*Ex.*

Significant Signs—The one on the Roosevelt Boulevard See page 133

The Forests of Japan

Work of Afforestation Grows More Active

BY ADAM McCAY

Kobe (Japan), June 19.

No doubt it is because of the intense verdure of hill and plain that the forests of Japan are so poignantly lovely to an Australian. There is more majesty in many a forest which we could see after a few hours in the train from Sydney or Melbourne, but we do not see that amazing variety of vivid green, with its splashes of scarlet and red on the mountain slopes enclosing a plain which itself is patched with the brilliant emerald of the young rice or the bright purple of the clover.

* * * * * * * *

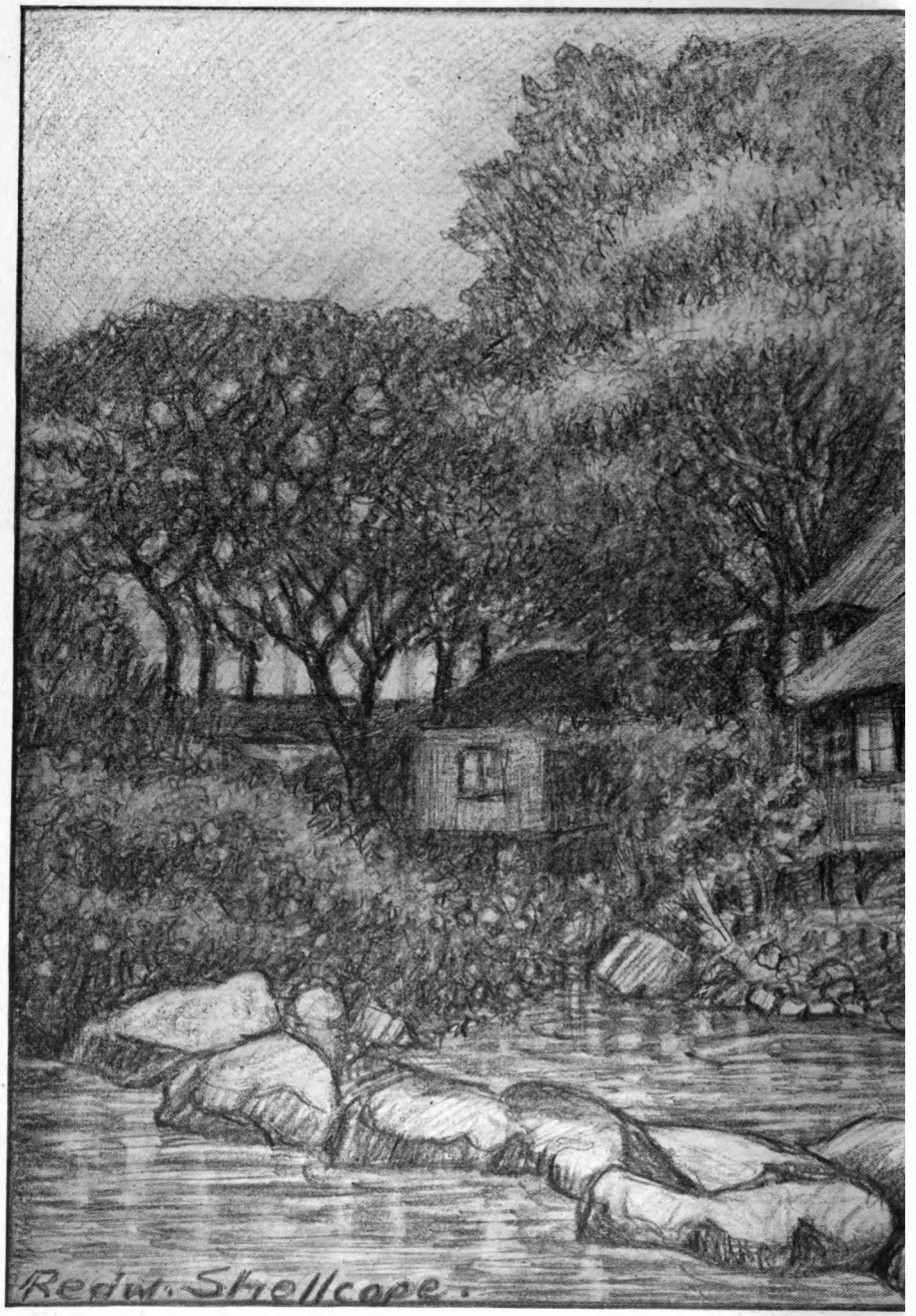
Beautiful Woods

These forests are not nearly as valuable as some of the European countries have made theirs, but they are always bright and beautiful. The almost incessant moisture of the air, the mist and rain which the sharp rising hills constantly attract, the never-failing streams of valley and plain, keep Japan a group of "Emerald Isles." Species of pine and fir, larch and maple, with great plantations of bamboo, and many a blossoming grove, are the recurring features of the landscape of mountain regions. Sometimes these are primal forest, sometimes the fruit of forestation old and new. The two trees which will make you hold your breath for their beauty are the lofty cryptomerias, massive and splendid in their dignity, pointing straight to the sky, and the maples in delicate tracery of green or bright play of leafy red.

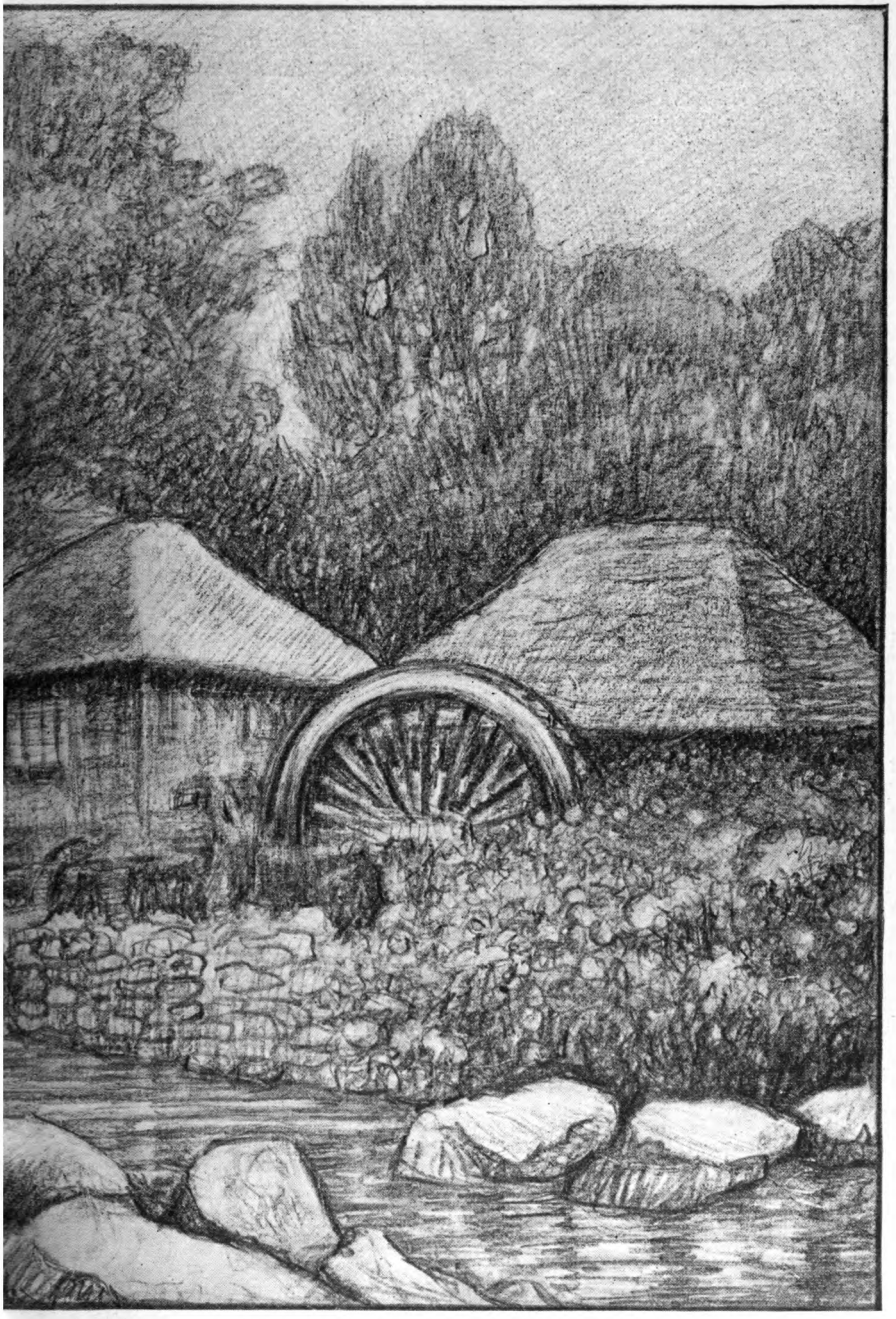
The king of trees in Japan is the cryptomeria, a magnificent pine whose native name is "sugi." It is either he or the gnarled giant among fir-trees who adds majesty to sacred places like Nikko, and magnificence to such roads as that at Hakone, approaching the appallingly ugly modern "Imperial Villa," erected on an imposing hill beside the adorable little lake. The grand avenues at Nikko grant their splendor to a total of twenty-four miles of road, and many visitors will think them more superb than all the architecture which takes its greatness from human energy alone. And they are said to owe their origin to a hard-up daimio, Matsudaira Masatsuna, who, early in the seventeenth century, found that he could not afford such splendid gifts of gold and of carven frieze as came from wealthier princes. So he planted trees, which are now about to complete their third century of life. You could see nothing finer in the tree planting of all the world. In the Nikko avenues are more than 18,000 cryptomerias, and each one of them is "a thing of beauty, a joy forever"—or until accident burns it down.

Unequaled Avenues

To walk along any great avenue of cryptomerias soon after sunrise or just at sunset is to gasp in the enjoyment of most wonderful light and shade. The big round trunks are seldom more than a few feet apart; one marvels sometimes how they make their size and maintain their uniform dignity. Having shot straight up for twenty or thirty feet, they push out their successive layers of horizontal boughs, and still higher up frame their tops into noble cones of dark green. Theirs is the deepest-tinted foliage in the Japanese forest, but, such are the shafts of light sent through them, they never become excessively sombre. And each silent giant is just enough unlike his brothers to destroy monotony without losing harmony . . . It is so hard to find words for the impression left on the mind by this great beauty —"cathedrals of Nature," was it Ruskin's phrase? There is all the hushed solemnity of a dim-lit nave, and all that deep pathos which touches the heart when it comes close to the powers of earth and sky; an age-old growth of brown and green, clouds marching in the heavens, the sun striking obliquely on the waving viridescence of whispering leaf, a little white cataract leaping, and murmuring as it leaps, a blue lake lapping a pebbled shore, and giving you its shining smile through all the open spaces . . . oh Moto-Hakone! (*Continued on page 138*)



MILL DRIVEN BY WATER
With typical maples growing beside the cottage, in which th



WHEEL IN OLD JAPAN
motive power for home industry is supplied by the wheel.

(*Continued from page 135*)

Round Mountain Elbows

Between Nagoya and Hamamatsu there is a road along which tourists rarely go, though it is an excellent road, built for army purposes. We had to choose it. For though the picturesque old main road—the Tokaido—was the shorter route, the too-frequent report was given, "Bridges down." And by the way, many of the bridges which were not down ought to have been pulled down, so unsafe were they for anything heavier than a coolie's cart. But being driven off the Tokaido, we crossed the Motosaka Pass. From a perfectly flat plain, almost at sea-level, we butted into an abrupt mountain range, which rose 1500 or 2000 feet in the well-known sharp ascent. Half-way up, on a narrow road, splendidly graded and curved, we plunged into a small forest of cryptomerias. There are similar forests on the Kwannon Pass coming from the west coast to Kyoto or climbing higher into the mountains from Odawara and Miyanoshita. As your car hoots its way round the road's elbows, where you must hoot all the time, you stare right and left into deep green shades among the pillared trunks of the grove. The sunlight never fails to strike here and there through the branches, and what a magnificent colonnade rises in that half-light from the lush undergrowth at the feet of the columns! There is the same effect in virgin forests in Gippsland, where our eucalypts, taller and more massive, rise from the glistening green of the tree ferns. Some of these forest patches in Japan seem to have grown and remained of themselves; others betray by their regularity that they have been planted, though often planting must have happened more than a generation ago.

Five hundred feet higher in the Motosaka Pass we looked down on the tree-tops of the forest through which we had passed, and there was a beautiful vista indeed: the wide plain spread below us, with silver streams, and the lower mountain slopes carpeted with rich green in every conceivable tint, while the sun and the clouds played a misty game of light and shadow over all.

Fine Forestry Work

On this same Motosaka Pass, as well as in the Utsunoya Pass, near Shizuoka, and the still higher pass going through the Nagao tunnel, near Miyanoshita, could be seen fine evidence of the amount of work which Japan is doing in reforestation. The newspapers and the publicists and the enthusiasts in the Agricultural Department declare that not enough is being yet done. Nevertheless, it is heartening, when many forces are bent solely on the destruction of the world's timber, to meet in the Japanese mountains so many tracts and so wide, whereon the young trees, fir or cryptomeria, are standing row on row, bravely shooting upwards. We passed many, many thousands of acres of new planted forest, sometimes with 6-inch, sometimes with 6-foot trees.

The cryptomeria is reckoned to be full grown at anything from 80 to 120 years old, so that it takes a far-sighted policy to look after such forestation. But in the past generation especially, Japan has shown such foresight; and much of the fine woodland scenery through which you may travel in the Shizuoka prefecture (to name the most easily accessible, and the one which I saw most closely) is a source of wealth deliberately replaced upon the hills.

When Japanese timber-getters tackle a forest, they make a clean job of patches of it. A typical mountainside will show tracts which have nothing left on them but the grass. The trees have been cut stark out of the still-luxuriant woods all round. But on most of these patches the future has not been left to chance, and the little trees which are to serve another generation are already bravely facing the wind. It is striking to observe, in so thickly wooded a region as the Kwannon Pass, a hill wholly denuded of its trees, yet already terraced to its very summit to receive the new green clothing.

Formosa's Camphors

Formosa is specially notable for its camphor forests, which have been made a monopoly in order to prevent their too speedy extinction, and here certain great and wealthy firms share with the Government the monopoly control: the "man in the street" in Japan talks rather unkindly of the advantages which some quite representative rulers of the people reaped, and will reap, from this rigorous arrangement, yet at the same time there

can be no doubt that supervision will prolong the camphor supply.

The cryptomeria provides a beautiful building timber, and some of the uprights for Japanese houses, left in their natural shape, but highly polished, are as handsome as you could wish any part of your house to be. All kinds of timbers are used for Japan's 300,000 odd bridges, at least half of which are wooden, steel or iron being extremely rare, except on the railway lines. Firewood and charcoal are got from firs and pines, and seeing the stack of fuel piled outside nearly every village house, one is amazed that the whole supply has not been burned up in cooking and in heating the houses. But a Japanese room is kept warm by means of a little bowl of charcoal, which suffices when all outside air is kept outside. In this country they make their own newspaper, the pulp coming mostly from the northern islands. The Japanese newspapers are printed on the home-made article, a bad sample of paper which cannot stand comparison with the American and European newspaper in use in Australia. Vast amounts of paper of inferior quality appear in Japan, made by all sorts of processes, some of it even by hand. Sometimes the operative does little more than shake the pulp at the bottom of a flat dish! In the minor uses of timber, great quantities go to make match-sticks, and other great quantities for lead-pencils—inferior Japanese pencils taking the place of those which the world used to buy from Bavaria. Boxes, toys, chess-boards, barrels, and railway sleepers are also exported from Japan in increasing quantity.

Bamboo's Value

You could compare Japan's use and preservation of her precious timber supplies with the forestry of Germany or France, and find the Asiatic country far behind perfection in policy or efficiency. But you must also remember that Japan is deliberately undertaking a full forestry system along with all the other efforts she is making in emulation of Europe, and you must appreciate that this effort is sure to yield increasing value.

Bamboo is put to an astonishing number of uses. It gives timber for all kind of work in the fields. It is used in the building of many of the frail houses which satisfy Japan, in the earthquake regions or elsewhere. It constructs a whole lot of furniture, and any kind of kitchen or laundry utensil which need not be put on the fire to boil. And the green roots and shoots of the young bamboo are favorite delicacies; boiled, they taste not unlike artichokes; sweetened, they are a Japanese candy. Bamboos grow fast, and no village fails to plant them.

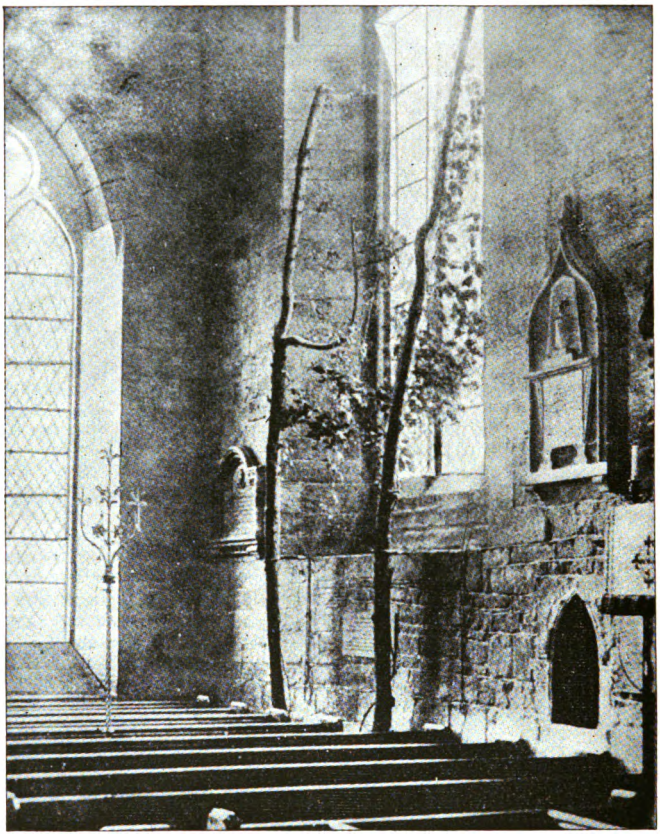
Moverover, the forest yields brushwood for the village peasant who can afford no other fuel, and, indeed, makes mighty good use of the brushwood; and cutting its grasses the farmer gets green manure for his fields. Altogether the Japanese woods give a value far beyond the annual total of £10,000,000 or £11,000,000 conceded to them by the year-books.—*The Sun*, Sydney, Aus.

The October Cover

At points along the Columbia River, Washington, can be seen interesting activities in logging raft constructing. Many logs, mostly of large proportions, containing millions of feet of lumber, are so securely bound together by numerous gigantic chains that no trouble is experienced in keeping them intact while being towed down the river across the bar into the Pacific Ocean, and thence to ports as far distant as Southern California.

These ponderous chains sometimes are ingeniously linked with immense springs, which allows for expansion due to the swelling of the logs as they become watersoaked, to avoid snapping under the intense pressure.

The scene on the cover of this issue portrays some of the finished rafts, while others are in course of construction.



Trees Grow in Church

Surely the last thing one would expect to see in a church is a growing tree. Yet this strange sight is seen in the parish church of Ross, in Herefordshire, England. In the right transept, against the east wall, are two sturdy elm boles, about twelve feet high, which spring out of the ground at the base of the wall. The story goes that they grew mysteriously out of the grave of the "Man of Ross," a local resident of the eighteenth century, immortalized in a well-known poem of Pope. One of the directions in which his bounty flowed was in the beautifying of the town and neighborhood with trees and shrubs; and the appearance of trees on his grave was hailed by his grateful townsmen as highly appropriate. The probability is they were originally twigs that found their way into the interior by some interstices in the masonry. For many years they flourished tall and comely against the window, a source of pride and satisfaction to the citizens and numerous visitors. They are now gradually dying, being almost bare and leafless.

A TALE OF A SAW

A YOUNG soldier of an Engineer Regiment stationed in Northern France was endeavoring to saw a heavy, water-soaked plank and as he had only a very light saw he was somewhat disturbed.

"This is the worst kind of timber I ever handled in my life," he muttered. "Seems as if the Huns had been treating this with some kind of gum just to make us Yanks curse."

"If we were only back in the saw mill, Joe," said another, "this wood would be dust in three minutes."

"I wonder when people will wake up over here?" the first soldier exclaimed. "Remember those Disston Saws we used to work with? They'd make an eight-foot log feel like a pencil and help a fellow to feel satisfied with his job."

The two soldiers, thinking of home and the saw mill, continued their work in a half-hearted manner, for unless one has the right kind of tools he can never accomplish results that are worth the energy.

There was much work to be done, not only in sawing but in digging, for on the battlefields of France a man's life was not worth much unless he was well concealed in a deep trench or dug-out.

These dug-outs were sometimes thirty feet deep and had to be made very carefully and accurately, for unless the air had a good circulation it was extremely dangerous after gas attacks, as most of the gas was heavier than air and always lingered in the trenches or low compartments of the earth.

Fanning the gas out was one good process, but a small fire with good circulation soon cleared any dug-out of the poisonous fumes.

Afternoon found the two engineers still at work, and although the front line trenches were only half a mile away the soldiers had little fear, as there was a large woods between them and the enemy.

Suddenly a huge aeroplane was heard. It was right above their heads before they could realize it. This made it hardly worth while for them to try to run for cover, as evidently they had already been seen.

One of them made a dart for the nearby forest, but before the other one, Joe Henley, could reach the half-constructed dug-out, a bomb had exploded and he fell on his back, wounded in the shoulder.

He waited for some time, believing his comrade would return; but as darkness crept upon him, he realized that he must find his company. He dragged himself along in the darkness in the direction in which he believed he had left his comrades.

Suddenly he felt a big arm around his neck and before he had time to realize the situation he was pinned to the ground by two men.

Neither of his captors spoke, but the American realized he had been taken prisoner.

Joe was hungry, and he ran his right hand through his left hand pockets, as his left shoulder and arm were wounded. There he found three biscuits that had been given him by the American Red Cross worker the morning before.

This nourishment was all he had for two days, for although a German doctor dressed his wounds, his captors must have forgotten that Americans eat.

In the evening of the second day, as his shoulder was much improved, a German interviewer asked him (in English) what work he did at home.

"Saw mill," he replied, and two hours later he found himself in a large field where at least three hundred other prisoners were cutting all sorts of planks and timbers under instructions of a German officer who spoke perfect English.

As there was no other course but to follow instructions and work, the American boy went to the task with that dread

and anxiety that only a soldier who has been a prisoner can understand.

Several weeks passed, but work only added to the weakness of the soldier, and finally, by starvation and over exertion, Joe was physically a wreck.

In the course of a few days, after negotiation with the American Red Cross, the German authorities had the American lad exchanged, and on October 15, 1918, Joe Henley was back in America in a Red Cross Hospital gradually gaining strength which had been dragged out of him by German brutality.

Seeing the good work done by the welfare workers around him and realizing the breadth of the field for service, as soon as he had fully recovered, he volunteered for service with the Red Cross. The armistice had been signed and his discharge was forthcoming.

It was not long before Joe Henley had managed to find a chance for useful service in a large lumber company employing many hundreds of men who resided in a small town surrounding the saw mills.

The local Red Cross Chapter, under the guidance of the discharged soldier, soon grew and the wives and children of the employes in the lumber camp were enthusiastic in their part of the work now being carried on in all parts of the country. They have begun preparations for the Third Red Cross Roll Call to take place November second to the eleventh, the anniversary of the armistice. The American Red Cross is planning that the roll call shall be heard over all the nation. Besides the annual membership dues, there will be asked sufficient funds to continue the humane enterprises now being concentrated in Home Service, Community Nursing, First-Aid, and Junior Red Cross Work.

Thus the story of Joe Henley expresses the sincerity of the Red Cross Chapters all over the nation, which, having done their part to "make the world safe for Democracy," now stand ready to perpetuate the glorious work of an institution which has proved itself an organization of welfare and human uplift during the world's greatest conflict.

A Cane of 60 Woods

Honolulu, Hawaii.—During his visit in Honolulu, Josephus Daniels, Secretary of the Navy, was the recipient of a walking cane made of sixty different varieties of woods which grow in the Hawaiian Islands, the gift of a veteran seafaring man.—*Christian Science Monitor.*

How Fires Are Started

Forest fires are started from numerous causes. A forest fire is the hardest conflagration to check because of the inflammable pine trees, that are usually full of pitch. The green pine needles burn like tinder.

Fires are caused, many times, through carelessness of campers who neglect to extinguish their camp-fires.

Backfiring from automobiles is known to have caused forest fires.

Lighted matches and cigarettes thrown carelessly into the dry leaves cause many fires.

Sparks from the iron tires of wagon wheels, caused by striking a flint rock, have been known to set fire to the forests.

One instance is known where a broken bottle acted as a sun-glass and started a fire in the Idaho forests.

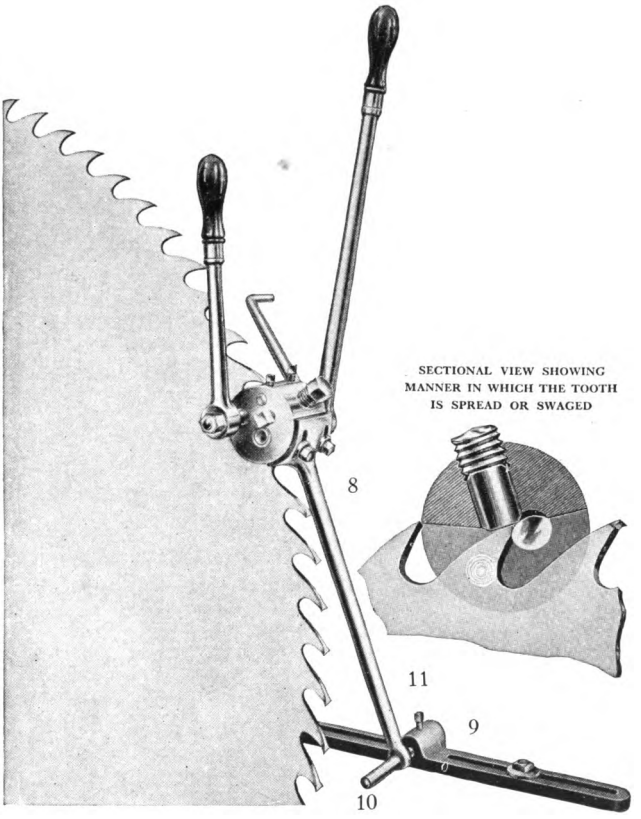
Fires set through malice and revenge are not infrequent. A few culprits for this offense are now languishing in the penitentiary.

Not in many years has it been so dry in the Idaho forests as this summer. There has not been rain in the Featherville range for 150 days. The fires are still raging in many places in Montana and Idaho.

Damage to the telephone service has been great. These damages have been repaired as speedily as possible, and the telephone has rendered invaluable service in fighting the flames and warning people of impending danger. The loss in timber has been enormous. An area of nearly 1,000 square miles has been burned over. —*The Mountain States Monitor.*

DISSTON ECCENTRIC SWAGE

FOR CIRCULAR SAWS



No. 0—Eccentric Swage, adapted for circular saws from 6 to 12 gauge in thickness

No. 8—Bracket No. 9—Bench Rest No. 10—Bench Rest Stud
No. 11—Bench Rest Set Screw

The Disston Eccentric Swages for Circular or Band Saws are well-constructed, of high-grade material and in design are powerful, efficient and durable.

They are time-savers, do the work with the greatest ease and soon earn their cost.

SEND FOR DESCRIPTIVE CIRCULAR

SAWDUST

A QUESTION IN ANATOMY

That you cannot believe everything that you read in newspapers was aptly illustrated by Little Johnny's perusal of the column labeled "News About Our Townsfolks." He startled his mother by exclaiming suddenly: "Ma, what part of a lady is her honeymoon?" Grabbing for a foothold his mother countered, "I don't know, why?" "Well, the paper says Mrs. Doitup Brown fell down and hurt herself on her honeymoon."—*Book of Smiles.*

AMBIGUOUS

"I've got a letter from my son out West."

"What is Tom doing now?"

"That's what I can't make out. He says he is engaged in the destruction of weeds. Now, that may mean he's smoking a good many cigars or that he is trying to induce some widow to make a second venture, or it may mean that he is doing farm-work."—*Ex.*

THIS WOULD HAVE PLEASED THEODORE ROOSEVELT

A not wholly unimportant citizen and the father of ten children came home the other night and sat at the table with his considerable family.

"John," said the lady opposite, "this high-chair is getting awfully rickety," whereupon he said:

"Here's $10, my dear, go buy a new one—a good, substantial one, something that will last."—*Buffalo News.*

KNOWS HOW IT FEELS

A humane society had secured a down-town show-window and filled it with attractive pictures of wild animals in their native haunts. A placard in the middle of the exhibit read:

"We were skinned to provide woman with fashionable furs."

A man paused before the window, and his harassed expression for a moment gave place to one of sympathy. "I know just how you feel, old tops," he muttered. "So was I."—*McClary's Wireless.*

WHAT IS THE INFERENCE?

Professor's Wife (reading the paper over his shoulder)—"'One Wife Too Many'—I suppose he was a bigamist."

Absent-minded Prof.—"Not necessarily, my dear."—*Penn State Froth.*

STAVED UP

A negro mammy had a family of boys so well behaved that one day her mistress asked:

"Sally, how did you raise your boys so well?"

"Ah'll tell you, missus," answered Sally. "Ah raise' dem boys with a barrel stave, and ah raise' 'em frequent."

—*Everybody's.*

O little Ben Zene, come blow your horn!
You plow my meadow and hoe my corn,
Till the hired men that I used to keep
Look over the fence at my tractor and weep.

—*Ex.*

REAL LITERATURE

He was very black, and in his khaki he looked like coffee and chocolate ice cream. After eating a hearty meal in the American Red Cross canteen at —— he sat down with a book, near the counter. The kind-hearted directress looked once or twice in his direction, and was surprised to see big tears rolling down his cheeks.

"Why, now this will never do!" she said kindly. "Is there anything I can do to help you?"

He dug his knuckles into his eyes and replied:

"I sholy am ashamed to make a baby outen myself, ma'am. This yer book done make me so homesick!"

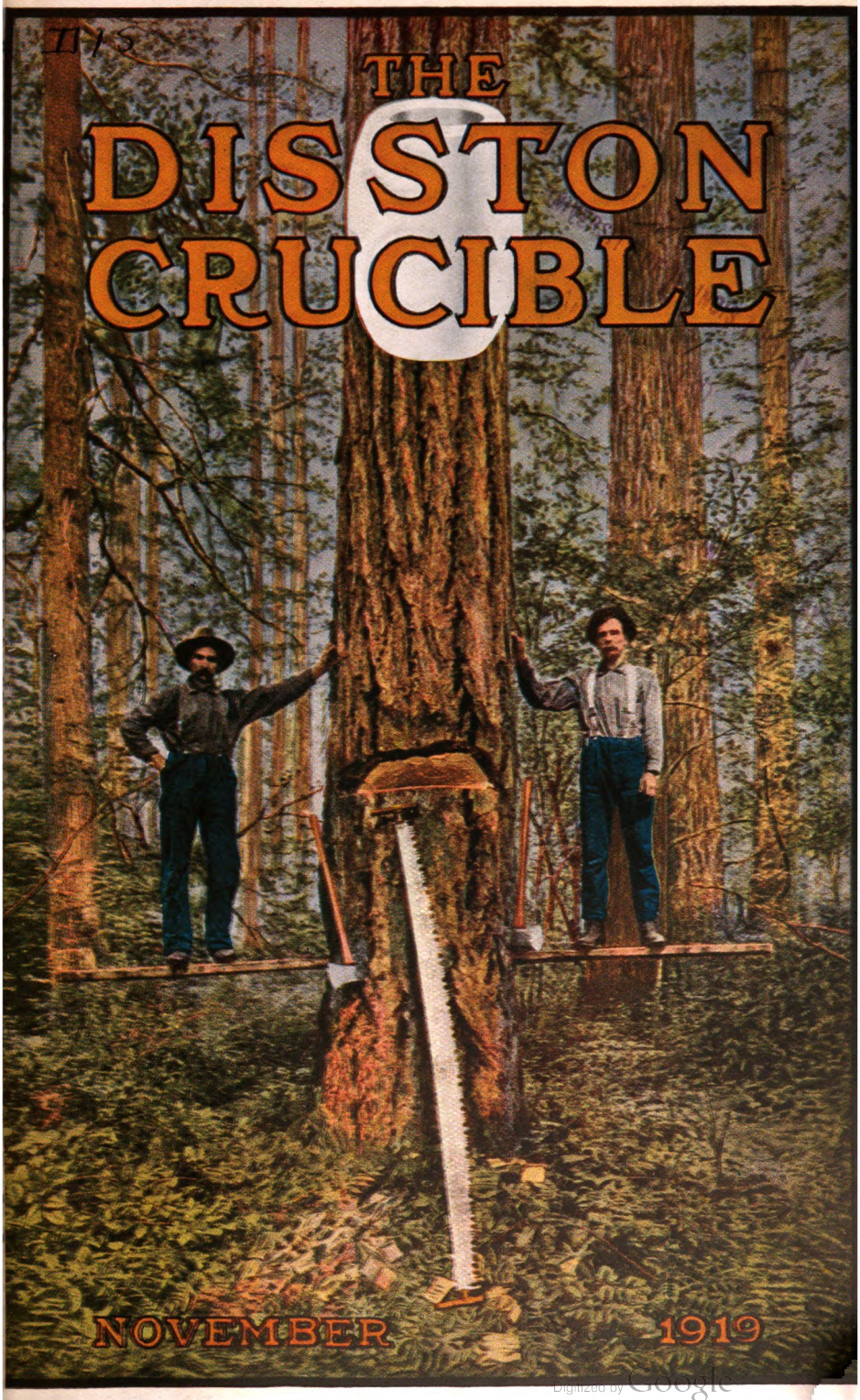
She picked up the book he had been reading. It was the canteen cook-book, and it was open at the section on How to Fry Chicken.—*Saturday Evening Post.*

THE REAL TROUBLE

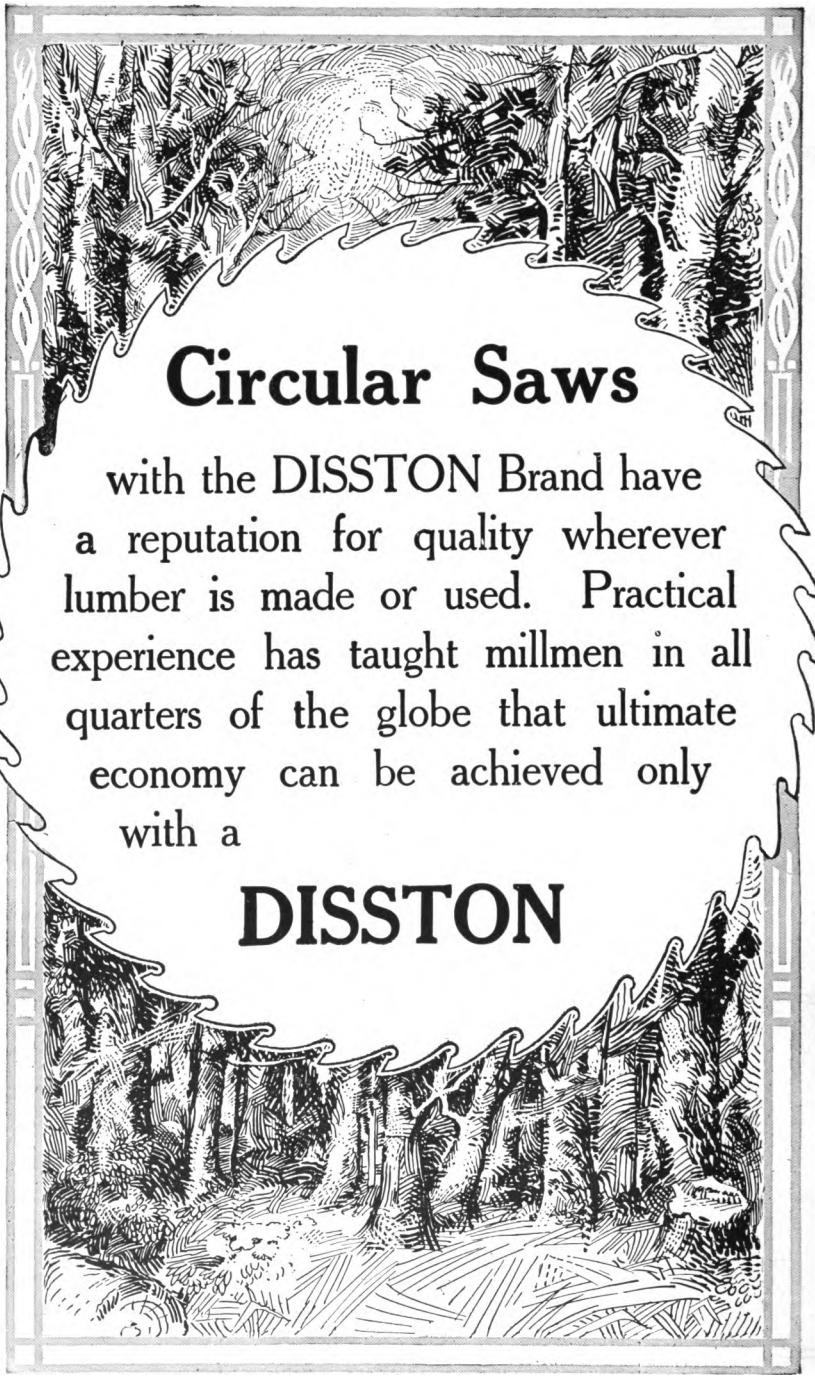
"Doesn't peeling onions make you weep?"

"No, but paying twenty cents a pound for them does."—*Boston "Transcript."*

THE DISSTON CRUCIBLE



NOVEMBER 1919



THE DISSTON CRUCIBLE

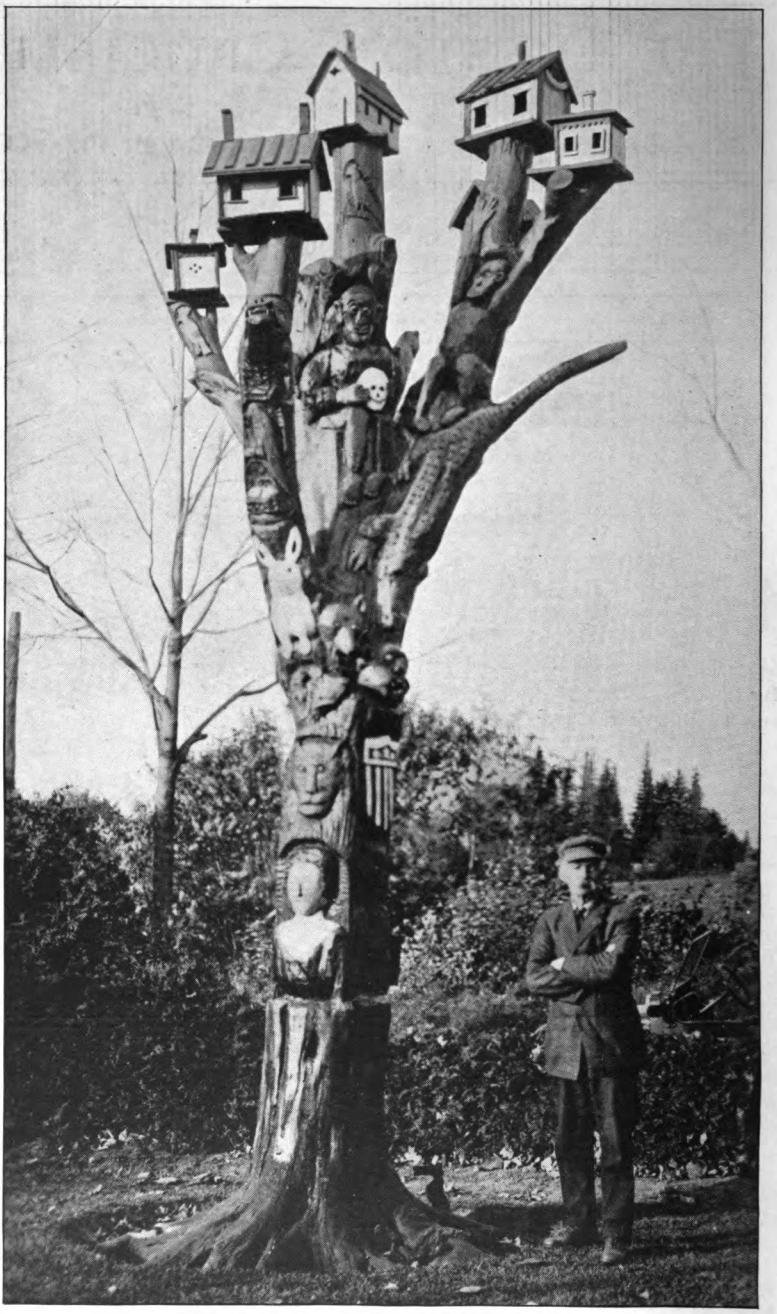
PRICE 10c PER COPY **$1.00 YEARLY IN ADVANCE**

TABLE OF CONTENTS

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



ODD TOTEM TREE. (*See page 158.*)

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VIII NOVEMBER, 1919 No. 10

EDITORIAL CHAT

Just Between Ourselves

HOW deligthful it would be if, when we received a new conception of duty or opportunity, some vision of bettered conditions, we could drive at once for the ultimate goal with no stops on the way! How much more we could accomplish when we were filled with the first freshness of inspiration or idealism! But that is not life's way. It always is a hard thing to overthrow customs or habits, and we must make haste slowly, else we soon come to grief.

There has been found, as yet, no substitute for time, no quick process of educating public opinion. It may be that if the opposite were the case we might not find conditions so delightful in the end. For not only do great movements need the impress of time, but we ourselves are very seldom wise when we act on first impressions and commit ourselves to certain lines of action before we carefully inform ourselves.

Many of the laws that no one thinks of enforcing, much of the legislation which, enforced, works hardships to many instead of the universal benefits that were claimed for it, comes of just this weakness of human nature—the obtruding of one's own views to the obscuring of all else and rushing ahead full speed, regardless of warnings.

We might learn a lesson here from nature if we would. It takes centuries to perfect a giant oak—the mushroom grows in a night. Much as we would like to at times, we cannot divert the course of natural laws or change the social or economic order in a minute. Countless wrecks beside the path of life testify to this truth, which is an eternal one.

Patience is a virtue greatly needed today; not the unreasoning variety which ignores all need for change, but the kind which takes into consideration all hindrances and opportunities, and weighs wisely the effort.

—*Philadelphia Evening Bulletin.*

"JIM"

SAY, Jim," I said as our friend Jim sat down and put his feet up where he liked to have them, "I understand you got a pretty nice order from 'Get There Smith,' the Lumber Broker. Do you mind telling me about it?" He gave me a glance that was dimly suspicious, but my face seemed to assure him there was no ulterior motive in my curiosity. He settled himself more comfortably and replied, "Well, Tom, I don't intend to make that little episode a subject for 'Pitiless Publicity;' in fact, I rather meant to regard it as a matter of 'Executive Secrecy,' but I reckon I can tell it to you without violating any of the recognized rules that regulate such affairs. You know I never have had very much use, in a general way, for 'Get There,' and most of my acquaintances and his regard his existence with that same passive toleration and indifference. His wife's attitude, however, according to his own admission, made unconfidentially to a Life Insurance Agent, is not so passive. She declares she would rather work for nothing, being his widow, than to draw down a big salary, being his wife. Being in the building one day recently and passing his office door, I dropped in to say 'Hello.' To my great surprise he acted as if he were real glad to see me, and expressed himself in words to that effect, most hospitably placed a chair for me and intimated I could have two if I so desired—adding to my increasing wonder by imparting the information that he was going to place an order with me that would, at least, make me 'sit up and take notice.' 'Now, Jim,' said he, 'produce that Order Book, take on an air of industry, a sharp pencil, and put down the following: 8 Band Saws, 60 feet long, 16″ wide, Single Cut; 8 Band Saws, 52 feet long, 14″ wide, Double Cut; 22 Chisel Bit Edger Saws, 36″ diam., 6 gauge; 30 Trimmer Saws, 32″ diam.; 36 Slasher Saws, 42″ diam.

" 'The rest of the necessary specifications you can get from Allis Chalmers Co. Now make me,' he continued, 'an approximate figure for that bunch, just so I can have a general idea of the amount of my saw bill—Stop a minute, I forgot! Just put down: 6 B S—34 feet long, 10 inches wide for the Band Resaw.'

"I immediately registered 'lightning calculator' for the next several minutes, and announced the result—not approximately, but as accurately as my not too mathematical mind could function—at the same time gazing anxiously around the place trying to locate his 'first aid kit.' There wasn't the least occasion for alarm. He took the figures without a shiver, merely scratched them down on a pad and proceeded: 'How soon can you give us delivery? Delivery is going to be an essential element in this transaction.' Now, Tom, you can imagine possibly your friend Jim by this time began to take a real business interest in his conversation, instead of the mere human interest I had displayed at the beginning. After due deliberation and deductive mental speculation, in which, owing to War conditions the factor of possible factory uncertainties were involved, I arrived at a satisfactory date for factory delivery, impressing on him at the same time my utter inability to guarantee the very efficient mismanagement of Uncle Sam's Railroad System to reach a given terminal on any obtainable schedule. Patriotism, or perhaps his recognition of the inevitable, prompted him to concede my qualifications on this point, and we reached very quickly a mutually satisfactory agreement. Then, at considerable length, and great attention to detail, he proceeded to explain how he had succeeded after months of secret effort, colossal business acumen, and exceptional organizing ability in closing a deal with the financial aid of a strong Eastern Syndicate, by which was secured a billion feet of the finest timber that ever 'stood out doors' in the Pacific Northwest. The deal was closed, the papers all signed, the contract placed for the Saw Mill. 'And behold in me,' he tapped his chest as he finished, and stood upright, 'the General Manager of the North American Saw

Mill and Timber Company,' and believe me, Tom, he looked the part. I at once began to see where a lot of us had reason to change our minds about old 'Get There Smith.' I handed him a bunch of impromptu congratulations, incidentally referring in complimentary terms to his singularly appropriate nickname, that would have made a 'hit' at a Chamber of Commerce meeting, or a Rotary Club Banquet, and we parted like 'two old pals.'

"This was on Saturday. I came back to town on Monday night, and on Tuesday morning my first call was on Johnny Albers, of the Allis Chalmers Co., to get those additional specifications. I explained to John the object of my early call. Then John did some explaining to me. 'Jim,' he said, 'forget those specifications. Your man Smith, I may say my man Smith, too, has relinquished all thought of saw mills, timber lands and syndicates—all those things have faded into insignificance and are of very trifling importance in his present scheme of life. He is now wrestling with a problem of so grave a nature as to entirely eliminate such trivial matters from his mind. He became convinced last Sunday that he was a perfectly poached egg, and almost instantly discovered a conspiracy of vile treachery had been concocted in his own home to prevent him from obtaining a suitable portion of nicely browned toast on which an egg of his high character and attainments could be properly seated. He accused his patient, long-suffering wife of being the chief conspirator in the heinous plot. He grew so violently indignant over the discovery, it was only fear of 'splashing' himself that prevented him doing her physical damage. It seems she has known, for a long time, that he was crazy, but had, until Sunday, refrained from reporting to the authorities. They came in answer to her telephone and took him to the insane asylum at Steilacoom. He made no resistance on being assured his perfectly poached condition would not be disturbed, and the requisite toast would be provided at his destination.'

"Now," said Jim, "in conclusion, you know all there is to know about that order, and I don't want—Goodbye! There's a man I must see," and he rushed out after his man. T. H. C.

The Disston Exhibit at Foundrymen's Convention

An exhibition of metal-cutting saws and files, which attracted a great deal of attention, was conducted by Henry Disston & Sons, Inc., during the Convention of the American Foundrymen's Association at the Philadelphia Commercial Museum, September 29 to October 3.

This convention was the largest gathering of men identified with the castings industry the world has known. More than two hundred (200) firms had space in the Exhibit Hall, and the attendance reached a total of more than 3000 members and guests.

The Disston Exhibit, occupying booths 89 and 91, was an outstanding feature of an exceptionally well-arranged exhibition of every class of equipment and supplies used in foundry, machine shop, and mill.

As shown in the illustration, Disston exhibited metal-cutting saws of every type—Hack Saws, Metal Slitting Saws, Screw Slotting Saws, Circular Milling Saws, and Inserted Tooth Saws for every purpose, also Disston Files of the types generally used by the metal-working industry.

The part that attracted the most attention, however, was the Disston Sectional Interlocked Inserted Tooth Circular Milling Saw, which was in operation cutting steel bars throughout the Convention on a Higley Milling Saw Machine manufactured by the Higley Machine Company, S. Norwalk, Conn., and marketed exclusively by VanDyke-Churchill Company, of New York City, and their various branches.

This saw is a patented Disston design and is meeting with wide approval because of its unusual efficiency in cutting steel of irregular shapes — hard steel rails, gates and risers from steel castings, etc. Wherever used, this saw has been found to increase the output. It retains the sharp cutting edges of the teeth longer than any other type; it runs with less friction and, therefore, can be operated with considerably less power. It requires little attention—"holds up longer in use"—and can, therefore, be operated at less expense than any solid or other inserted tooth type. See illustration on pages 152-3.

Port Gamble on Hoods Canal

BY T. H. C.

APROPOS of the title "Hoods Canal," I want to say for the enlightenment of the geographically unlearned that Hoods Canal is not an artificial waterway, as the name seems to imply. Hood did not dig it, he only discovered it and thought so well of it that with a truly commendable English modesty, named it after himself. God Almighty was the architect. Hood just took advantage of the situation to assume a proprietary interest. Why Port Gamble? you will ask perhaps. Well, from this rather insignificant little port the forest lumber products of the State of Washington have found their way to every country on the habitable globe where they make a barn door or build a board fence (they also ship to San Francisco and Southern California), and because here is established one of the plants of the Puget Mill Company, and the Puget Mill Company is one of the pioneer institutions of the Puget Sound Country and the State of Washington, dating back to the earliest days of industrial history in the Northwest. To call the Puget Mill Company an institution is not an exaggeration, it fully deserves such an appellation. In comparison some of our well-known so-called State institutions would be in the kindergarten class.

About ten years have been marked off Time's Calendar since I last visited in Port Gamble, and ten years in this age of progress and improvement is quite some lapse of time. Progress and Port Gamble appear to have traveled together a great part of that period in a sort of hand in hand contact. The company is exhibiting an optimistic confidence in the future solution—successful solution—of the present railway problem by installing a system of barges to carry cars loaded with lumber to Seattle, there to be transferred (the cars I mean) to Uncle Sam's rails, or Plumb's or Cummings', or whoever it is that eventually is going to claim ownership of the lines. You will understand this embarking in rail shipments on the scale contemplated involves the erection of acres of sheds, planing mills and dry kilns, stacker systems, etc. As evidence of the aforesaid confidence they have "done gone and done it."

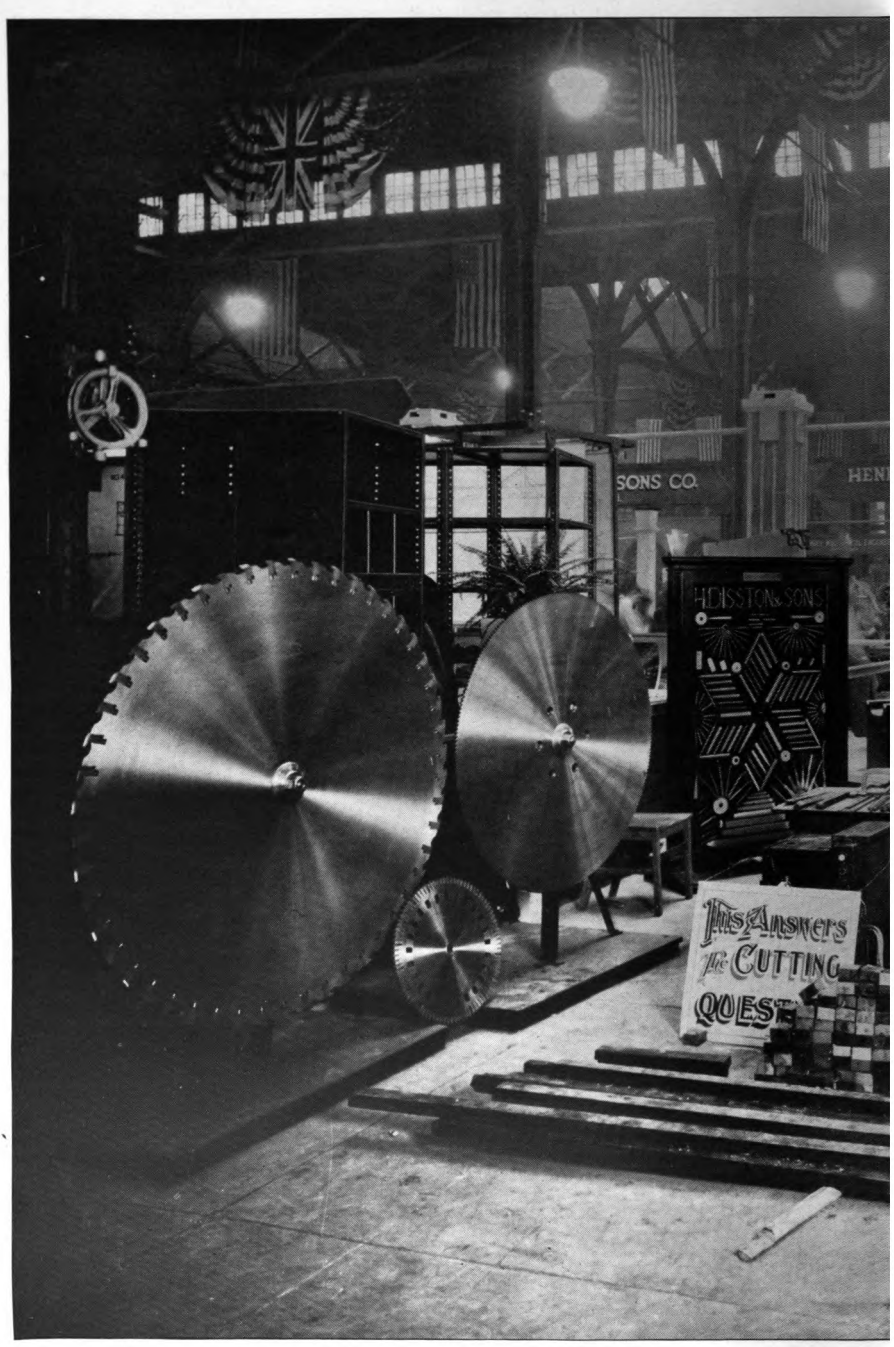
Naturally, I missed many of the old familiar landmarks, some of which were picturesque and old fashioned and indicated an abiding faith and trust in an all-protecting Providence to temper and direct his sometimes unruly wind storms. I don't mean to insinuate any lack of that commendable trust, but I noticed the present management is keeping its "powder dry," so to speak, by the construction of refuse burners, brick smokestacks and things like that, less picturesque perhaps but very up-to-date. There were many features carved in my memory that were conspicuous by their absence, and I began to have a sort of sense of "goneness." I suppose one might call it "the feeling of ten years after" and let it go at that. When I shook hands a few minutes later with Mr. J. H. Crombie, the store manager, that ten years' interval did a very creditable "fade-away." So far as I could see he looked just the same, he acted just the same, he had the same kindly smile, the same glad hand and cordial welcome in his eyes and his voice as of old. His form is just as erect and he does not look a day older than when I first met him twenty years ago. His next birthday will place seventy-six years to his credit—to his credit is right. Thirty-eight of them have been spent in the service of the Puget Mill Company. Staying with his job seems by this time to have become a sort of habit with John. He very modestly attributes his youthful vigor and good health to a clear conscience and good food. For recreation he likes to play billiards. Incidentally he plays a "bum" game, but that doesn't interfere with his health or the clarity of his conscience. (P. S. He beat me a couple of games 50 points up.)

Mr. Crombie introduced me to the master mechanic, Mr. Harry R. Foreman, who is in charge of the entire operating and mechanical construction both here and at Port Ludlow. His position is

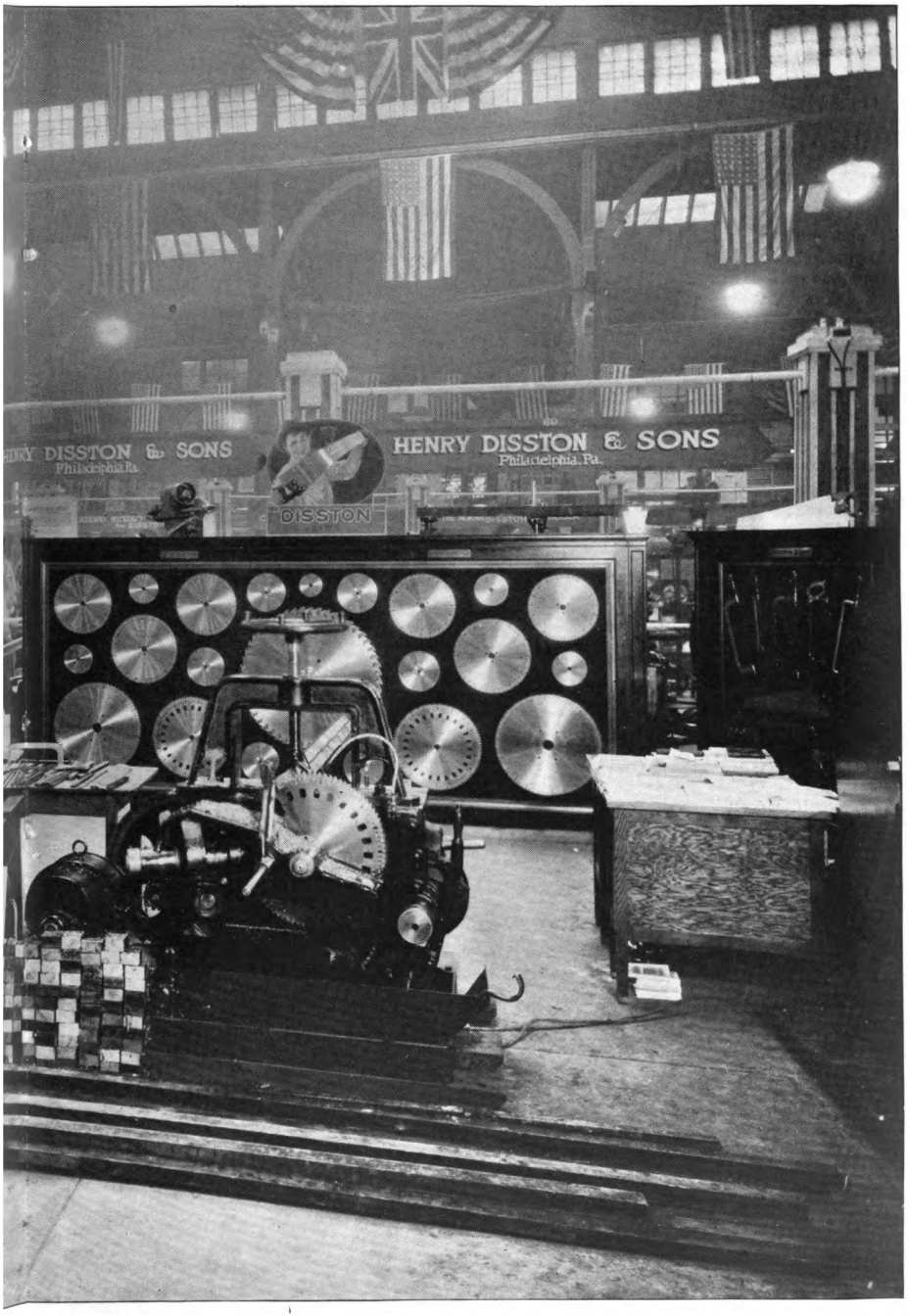
ample voucher for his efficiency, ability and general mechanical knowledge. He informed me at once that he did not come from East Machias, not even from the State of Maine. This statement may need some illumination. I am told in the early days there was a very strong New England flavor in the atmosphere in and about the mill plant owing to the fact that the mill managers and a large constituent element of its working crew were born, raised or fostered in the good old State of Maine and gained their knowledge and experience on the spruce clad hills or turbulent rivers and streams that carried this same spruce to the saw mills and they very naturally brought many of their State of Maine habits and customs to the new home. Whether New England rum was one of them or not, at this late and super-dry date, I have not been able to ascertain with any accuracy, but strongly suspect that many a cask made its watery way around the Horn on a sailing vessel bound for Port Gamble on Puget Sound. Be that as it may, the atmosphere I speak of was there and rumor soon spread to the surrounding country that regardless of race, color, credentials or previous condition of servitude if a man could claim even a sojourning knowledge of the good old Home State a job was assured. The more closely and intimately he could substantiate his connection, relationship and right to class with the old Home State three thousand miles away the higher his standing socially and industrially in the new community. No particular portion of the State but what was entitled to recognition, yet when all was said the real "Peruvian Doughnuts," the chosen of the Lord, were the ones who hailed from East Machias. They had the "open sesame" to the company payroll and would surely have to prove themselves "Hias Cultus" to get into the discard. This tradition of early days to some extent still survives through local circulation in industrial lumber circles. This will throw some light on the rather cryptic statement of Mr. Foreman and his motive in making it. I explained to Mr. Foreman I was on a sort of "rubber-neck" expedition for the Disston "Crucible" and if my disclosures were of a nature to permit publication they would probably be printed for the benefit and interest of its world wide readers and some more to the same effect. I think he seemed pleased when he discovered my intention was not to take any Dimensions of the mills, tabulate the board measure of their production, ask technical questions on quality, quantity or grading rules, that I didn't care a continental cuss on account of the Crucible or individually for a sight of the blue prints of the plant or the capacity of the dry kilns, my present purpose being to get the names and a line, if possible, on the general culpability and responsibility of some of the men who "make the wheels go round." He expressed his willingness and readiness to give me all the aid in his power to further the philanthropic purpose of the Crucible, and to adhere as closely to facts as a man who had been so long and so intimately connected with the saw mill business could be reasonably expected to. On second thought, however, I realized it would be somewhat of an imposition to waste Mr. Foreman's time on my mission of curiosity, and suggested that he turn me loose and let me "ramble;" this, I suspect, he was rather glad to do—at least he did not object, particularly, so I wandered around the plant like a privileged character, and saw many things and found my half forgotten way to the filing rooms—one usually goes there if he wants to put his finger on the pulse of a saw mill. In this department I discovered a sort of dynasty, the Thompson Family having occupied the Throne, so to speak, since the beginning of the Realm. Mr. Jim Thompson reigned very satisfactorily and successfully for a period of fifty-four years, and was gathered to his fathers. His son, the present occupant, served as Crown Prince, and in his present capacity of Sovereign for twenty-five of his accumulated years, he has a son, the "Heir apparent," to continue the Regal stuff, about nine years old, who, in all probability, may attain the Royal seat some day, if the boy doesn't get in bad, and become a life insurance agent, or something.

Unfortunately for me, I did not have the pleasure of meeting Mr. E. T. Sanborn, the General Superintendent, at Gamble, and Ludlow. He is, at the present time, on a trip in the East. Never having met this gentleman, it

(*Continued on page 157*)



VIEW OF DISSTON EXHIBIT AT FOUNDRYMEN'S C



S CONVENTION, Philadelphia, September 29th to October 3rd, 1919

A. E. F. FOREST UNITS ALL OUT OF FRANCE

Lieutenant-Colonel R. E. Benedict, of the 20th Engineers, section forestry officer for base section No. 2, France, arrived at Camp Lewis for discharge the latter part of August. He was virtually the last of the officers of the A. E. F. forest forces to leave the operations there. He went overseas as first battalion commander of the 10th Engineers (Forest) in September, 1917, and reached New York on his return on July 31, 1919.

Colonel Benedict saw the work which the forestry units did following the signing of the armistice. The white troops remained on the job until about May 10, when they left 3000 colored troops to complete the salvaging of the burned timber in the Landes region. These colored troops completed their work and sailed from France early in July.

The end of the work by the American forestry units consisted of turning over to the French what forest products were left. This task was accomplished by Major W. R. La Lande, of Silverton, Ore., and his assistant, Captain Elam, of San Francisco; Captain Higley, formerly engineer officer of the sixth battalion, 20th Engineers, and Lieutenant Stewart, of the seventh battalion. The work involved scaling and measurement of lumber dumps and scaling of the logs salvaged from burned timber, approximately 50,000,000 feet in the Landes region alone. Major La Lande had charge of this work not only in the Landes district but all over France.

"The 20th Engineers," said Colonel Benedict, "after the signing of the armistice, especially those in base section No. 2, were assigned to what was probably the most distasteful and difficult job of the entire A. E. F. With the war over and the troops filled with the desire to get home, the 20th Engineers, under bad weather conditions, built 11 saw mills, camps for 3000 men, stables for 300 horses, 6 miles of main line railroad, 30 miles of narrow gauge line, and cut 200,000 trees—about 40,000,000 feet. Of the trees one-third were manufactured into lumber and the remainder into 700,000 logs and pit props, all of which except 30,000 were peeled.

"Most of this construction work was done by the fourth and sixth battalions, of which Majors S. C. Phills and R. A. Kellogg were commanding officers. These district commanders and their officers and men are entitled to the greatest credit for the work accomplished under such miserable conditions. This is particularly true of Captain John Sommersett, of Chehalis, commanding officer of the Ponteux burn, who bore the brunt of the work in that notorious camp for nearly six months.

"Besides the forestry work the troops of the 20th Engineers and other troops were given the work of repairing the roads damaged by American traffic in the department of the Landes. This work involved re-surfacing 15 miles of road and patching and delivery of rock for 100 miles.

"In this work the experience of the companies belonging to the 41st, 42d and 43d road battalions, assigned to the 20th Engineers, came in to good advantage. The men did the job in great style.

"The timber in this district was just a swamp and from the day the armistice was signed until April 15 there was not a day when the rain did not pour down. To make matters worse the camps were all isolated and the life was tedious and monotonous. The work was accomplished by no less than two-thirds of the entire 20th Engineer regiment, or 10,000 men, who all went through base No. 2. The troops were sent home in the order in which they left for France.

"During the summer of 1918, which was the worst fire season that ever occurred in the Landes, the Frenchmen were all in the army, so the 20th Engineers were called on frequently to assist in extinguishing fires, and there is no question but that the forestry troops saved enormous quantities of timber."

In recognition of this assistance in fighting fire and in salvaging the burned timber by the 20th Engineers the section

forestry officer, Lieutenant-Colonel Benedict, was decorated by the French Republic with the Chevalier's Cross of the Legion of Honor in May, 1919.

Colonel Benedict is high in his praise of the men of the 20th Engineers, and is naturally proud of their record; especially is he proud of their health record after the armistice, which shows that despite the miserable conditions of work, the rate of admissions of the 20th Engineers to hospital was but one-fourth that of the entire base.

Speaking of pre-armistice times, the colonel stated that after the equipment arrived there was no real difficulty in producing lumber, and that by March, 1918, it was seen that the big problem was the transportation of the supplies of lumber needed by the A. E. F.

The French railways, owing to lack of them, could not possibly move the entire production of the mills. The appointment of Major La Lande as transportation officer for the Landes district was resultant of excellent transportation and Colonel Benedict says that Major La Lande in his work used the greatest resourcefulness and ingenuity in getting cars and in moving lumber by motor trucks.

Colonel Benedict has not decided what he will do upon discharge, but he is going to take a well-earned rest for awhile. His friends are delighted to see him home again and proud of the record he made in France.—*The Timberman.*

Selling Lumber by Airplane

It is presumed that within a short time it will be quite the thing for lumber salesmen to cover their territory by airplane. To E. L. Bruce, of the E. L. Bruce Co., Little Rock, Ark., manufacturer of hardwood flooring and lumber, belongs the honor of having been the first lumberman of record to make a business trip by way of the air. Only a few weeks ago an Illinois farmer who wanted to do some shopping in Chicago drove in the 100 miles or more of distance in the morning, stabled his flying "hoss" in Ashburn field, came downtown, transacted his business and left for home in the afternoon. Mr. Bruce had some important business to transact in Shreveport, La., a week or two ago and having missed a train, he requisitioned a government airplane from the airplane field located next to his company's plant and made the distance of 210 miles to Shreveport in time to keep his appointment. In another department of the lumber field, the fire patrol of the northwestern forests is now done by airplane service and is proving most satisfactory in detecting and checking forest fires.

—*Lumber World Review.*

Per Capita Consumption of Lumber

The per capita consumption of lumber is greatest in the newer states, such as Montana, according to R. C. Bryant, Industrial Examiner for the U. S. forest service, in a recent bulletin. Montana had a per capita consumption in 1915 of 1,234 board feet, whereas those states having a large percentage of urban population show a lower rate of consumption. For instance, in 1915, the consumption in New York State was 206 board feet and in Pennsylvania 293 board feet. It is quite probable that the unusual building activity this year, especially in dwellings, will raise the per capita consumption for 1919 even in the older states.

Wood is being used more intensively than formerly; there is less wood consumed as fuel in the country at large, and much was considered scrap that is now used in the manufacture of small articles and of pulp. The increased use of plywood also utilizes much of the small lumber in the making of large pieces. Thus nowadays consumption tends toward the use of all or most of the wood, not the use of some of the best of it.

November Cover

There was a time when it was the regular practice to cut the timber anywhere from six to ten feet above the ground. This, as we all know, is very wasteful, and the present practice is to cut as close to the ground as the loggers can work.

The scene on front cover is that of felling large Douglas Spruce in the Cascade Forest Reserve, Oregon.

THEODORE ROOSEVELT

Editorial Christian Science Monitor,

Wednesday of Roosevelt Memorial Week, October 22-27, 1919

"IT is no easy task to perpetuate in stone or metal the essentials of the life of a great man. Though it has been often undertaken, those who have brought such a matter to successful achievement are not many. Monuments have a way of seeming inadequate; memorials in so-called 'enduring material' too often endure to their own discredit rather than to the perpetuation of an honorable memory. All the more are difficulties of this kind appreciable when they present themselves in relation to a career so many-sided as that of Theodore Roosevelt, and there is something gratifying in the thought that the commemorative activities, of which the Roosevelt Week only marks the beginning, while having as objects the erection of a suitable monument in the national capital and the development of a park that may some day include and preserve the Roosevelt family residence at Sagamore Hill, look to a greater purpose in the establishment and endowment of a society that shall promote the development and application of the policies and ideals of Theodore Roosevelt for the benefit of the American people.

"Apparently the means to achieve all that the promoters of this movement propose will not be lacking. Modern methods of the 'drive,' coupled with a great popular feeling that was only waiting to be stirred in this connection, can hardly fail to place at the disposal of the Memorial National Committee a vast sum of money, of which merely the possession in such circumstances imposes no ordinary obligation. It would be a mistake for large amounts so gathered to be lavished upon a mere monument, even granting that the name to be commemorated is to take its place as the third in rank of the Nation's greatest presidents. Great as was this great American, splendid as was his record as a citizen, there are those who, properly enough, would object to what they might consider undue preferment; and any striving for structural effect or placement at Washington that might appear to make a greater claim for public attention than any which popular sentiment should readily admit might prove to be a sad perversion of a laudable intent. So far as the other purposes of the committee are concerned, the Oyster Bay proposal has notable precedents, which have been productive of good results. Thousands who have counted themselves friends of Colonel Roosevelt, without ever having met him or heard his voice, will value the opportunity, as the years go by, to know him better through visiting that Sagamore Hill estate where he lived so happily, and withal so simply, the family life that made him so truly akin to the masses of his fellow-countrymen.

"Naturally the purpose that will require the greatest time for its achievement is the third. To establish and endow an incorporated society, of course, need involve no long delay, but to promote the development of the Roosevelt policies and ideals for the benefit of the American people is a task for years. Obviously the plan has great possibilities, but equally clear is the fact that their realization will depend upon the wisdom and ability of the succeeding generations of managers who will be designated to carry on the work. Even the Roosevelt family, it appears, has had some misgiving lest a foundation for a specific Rooseveltian purpose might be, in the processes of time, perverted to uses other than those that could be fairly associated with the Roosevelt name. One of the good purposes of Roosevelt Week, then, will perhaps be a clearer definition of the policies and ideals which the Roosevelt Memorial Association, now being formed, is to perpetuate.

"What, then, does Theodore Roosevelt stand for? Merely to frame the question is to be reminded of activities so unremitting and so varied as to be almost innumerable. One thinks of Roosevelt as a political reformer, a public official, a leader of fierce political battles, the head of a great Nation; as a lover of sports, a good horseman, a ranchman and comrade of cowboys, glorying in the wide

sweep of plains and mountains and the turn of a clean, crisp story beside a camp-fire under the stars. One recalls him as a student and reader, as a writer of many books, as a university man; as a leader of thought and the associate of leaders, as the fond head of a family; as traveler, friend of kings and princes, explorer, naturalist, fearless fighter, popular hero. The very multiplicity of these activities is baffling. Under no one heading is it easy to find the key to his influence and his worth. What they set forth as distinctive, however, is to be read in general terms rather than specific. Not the Roosevelt delight in killing big game, for instance, is to be cherished and inculcated in rising generations of Americans, but rather the Roosevelt love of the great outdoors, of friendly competition to develop skill and self-mastery, of broad sympathies and comradeship, of fearlessness, of protracted effort to achieve. In the same way, not every Roosevelt dictum, either as to politics or as to morals, may be worthy of perpetuation and dissemination by an enduring society; but the Roosevelt loyalty to God and country and friend, the Roosevelt readiness to contest for right as he saw the right, his sturdiness in venturing forth against the forces of wrong, his abhorrence of waste, and sloth, and fruitlessness of all sorts—these are the main purports of his career, and they cannot be too well taught or too long persisted in.

"Enthusiasm, varied and wholesome interests, unflagging activity in following out those interests: these things made Roosevelt what he was. And it is for his general mode of life rather than for specific leadership that he stands before the world as an example worthy of following."

Port Gamble on Hoods Canal

(*Continued from page 151*)

would be rather presumptuous for me to get personal, so I'll be content with the statement that I am sure he "starts from scratch in his class" (sounds sporty—effect of seeing "checkers" in the movies).

Mr. R. W. Condon—to a host of friends, Dick—is the Sales Manager. Now, owing to long years of discipline, inspection of expense accounts, etc., by this sort of commercial autocrat, I have an awesome respect for the Title that precludes any attempt on my part to "jolly" Mr. Condon, or try to hand him any printed bouquets. I will say, however, that he is just such a Sales Manager as a big broad-minded company like the Puget Mill Company would naturally choose for that position. He has a habit very similar to Mr. Crombie. He has been in the service of the company since he left school, and he is now fifty-one years old, so his habit began to form in early life, at an impressionable age, and is now firmly established.

We come now to the "Big Chief" in the Gamble and Ludlow Mills, Mr. E. G. Ames, "The Manager." With him as my subject, I must be very circumspect and diplomatic in the choice of biographical matter,—not that I have the same fear of his title that I have of the Sales Manager. It is out of respect for a solemn warning of the dire consequences to the Crucible scribe, given me by Mr. Ames, should I indulge in any "Flower Strewing" where he was personally concerned, and any camouflage of such intent would not excuse it, so I will, out of respect for this sensitive modesty and dislike of Floral display, confine myself to statistically remarking that The Manager has the habit in common with so many of the subordinate employees of the company. He has been with them for forty years of his active young life, and he informs me he expects to "putter around" with them for the next twenty. This is about as much as I dare say about Mr. Ames, under the circumstances.

The Puget Mill Company has been in the business since 1853. They, however, could not be classed as an Institution in '53, and probably were not ambitious for such distinction; just when they decided—if they so decided—to become one, I have no record. They have religiously and persistently used Disston Saws for the entire period, with incidentally an occasional "try-out" of some other make, which apparently only served to confirm their faith in Henry Disston & Sons' saws as the only real remedy for Saw Mill Evils.

T. H. C.

"Obedience and resignation are our personal offerings upon the altar of duty."
—*Hosea Ballou.*

Reforestation in West Virginia

Elkins, W. Va., Oct. 20.—The United States Government is now at work in several sections of this state trying to conserve the timber for future use, not only with fire stations, watchmen and fire wardens to prevent the damage and loss by destructive forest fires, but by purchasing thousands of acres of timber lands that have been cut-over by the big lumber companies. These lands are being purchased by the forestry department at from $3 to $10 per acre. About 30,000 acres have been purchased in Randolph and adjoining counties in this way, much of it from the Otter Creek Lumber Co., the Raine Andrews Lumber Co., and of the Dobbin Lumber Co., in Tucker County.

A nursery has been established at Gladwin with three government experts in charge, planting Norway spruce in beds, and then replanting in cut-over areas when the plants are three years old. These treelets grow at the rate of twenty inches to two feet per year and in ten or fifteen years will be big enough for pulp wood. It costs about $15 per acre to reforest the land, and the new station expects to reforest or replant about 1000 acres per year when they get to going good.

Being government property the land is not assessed or taxable and, of course, withdraws a lot of land from taxation. However, when the timber is sold from these lands the county gets thirty-five per cent of the proceeds to reimburse for this lack of taxation. When the young timber is large enough for use, the government sells it to the pulp wood and lumber manufacturers, and agents go through the woods and mark the trees that are to be cut and no others are allowed to be cut, until large enough, so as to conserve the smaller timber.

The government is getting ready now to sell some pulp wood from lands cut over years ago. Another valuable matter in this connection is the increase in the water supply in the streams in the sections where the government is conserving the timber, as it holds it from drying up so soon and keeps the moisture in the grounds and in the streams. A big difference can be observed in the timber sections controlled by the government. It has been found that the Norway spruce is best adapted to this section. The forestry station at Gladwin will be watched with much interest, as it is near the line between Tucker and Randolph near Jenningston.—*The Southern Lumberman.*

Thinking

The Almighty gave you that gray stuff under your scalp for a purpose. You are supposed to think with it. You are supposed to think usefully with it—not to vitiate it with idle dreams. The most useful thing you can think about is your business and the business of those you are supposed to serve—those whom you must serve if you hope to escape the scrap heap.

Not by main strength will you win, but by thought. And so we beseech you to learn to think. Pick out something that you ought to think about. Analyze it; dissect it; pick it to pieces. Walk around it; climb up over it; pry it up and see what is underneath it. Map it and diagram it in your mind and on paper. Think it to death.

Don't be discouraged if you seem to run against a dead wall and no thoroughfares. Think ahead and, by and by, you'll find to your surprise, delight and everlasting profit, that you can think your way over, under or through anything that you choose to tackle and that thinking is one of the big, rich joys of life.—*From Gleeson Murphy in the "Chair Man."*

Odd Totem Tree

(*See Frontispiece*)

It is not an Alaskan totem pole. Rather it is a sort of totem tree patiently carved by a Civil War veteran of Union Springs, N. Y. It contains an alligator, a rabbit, an owl, a grinning skull, a monkey, a U. S. shield, a lion head, and many other figures of animals, birds and portraits—in all 34 figures. The tree is 18 feet high and 6 feet in circumference. At the top the sculptor built a number of fancy little bird houses for his feathered friends. These figures are part of the tree, not carved and placed on it.

SAWDUST

A FALSE ALARM

"You ought to have seen Mr. Marshall when he called upon Dolly the other night," remarked Johnny to his sister's young man, who was taking tea with the family. "I tell you he looked fine a-sitting there alongside of her with his arm—"

"Johnny!" gasped his sister, her face the color of a boiled lobster.

"Well, so he did," persisted Johnny. "He had his arm—"

"John!" screamed his mother frantically.

"John," said his father sternly, "leave the room!"

And Johnny left, crying as he went.

"I was only going to say that he had his army clothes on!"—*London Opinion.*

ONE CONSOLATION

Youths sowing their wild oats nowadays can't mix in so much rye.

—*Boston Transcript.*

HE COULDN'T COUGH

The King—"I must have gold, you imbecile! Cough up!"

Prime Minister—"But, your Majesty, the coffers are empty."

—*Michigan Gargoyle.*

AUTHORITY

"Take this rubber plant into the garden."

"Mistress said I was to put it on the balcony, sir."

"Do as I tell you. You will put it in the garden first. Afterward you can put it on the balcony."—*Boston Transcript.*

HAND-STIRRUPS

"See any fancy ridin' while you was east?" asked Three-Finger Sam.

"I sure did," answered Cactus Joe. "But everything's topsyturvy. People in the cars have to hang on with their wrists in straps."

"Jes' think of that. Usin' the stirrups for their hands instead of their feet!"

—*Washington Star.*

MONKEY-TALK

Professor Garner reports that the female ape says "Moohoo," and the male ape replies "Wahoo." Evolution doesn't appear to have carried us very far. A chap on the moonlit beach last night said, "Who is oo?" and the girl replied, "I's oo's."—*San Francisco Chronicle.*

WIFIE WON

The race for the last word was getting hot. Hubby and wife were running neck and neck.

"You did!"

"I didn't!"

"You did!"

"I did not!"

The pace was slowing.

"Well," flashed hubby, "one of us two is a very capable liar. But there is one thing which prevents me saying which one."

"Modesty, I presume," retorted wifie.

—*Pittsburgh Sun.*

SYSTEM

London, Oct. 23.—On his discharge from the army an old soldier, according to the Times, wrote to his former colonel:

"Sir:—After what I have suffered you can tell the army to go to h——!"

In due course of time he received the following reply:

"Sir:—Any suggestions or inquiries as to movements of troops must be entered on Army Form 123-XYZ, a copy of which I enclose."

WHAT THEY SAID

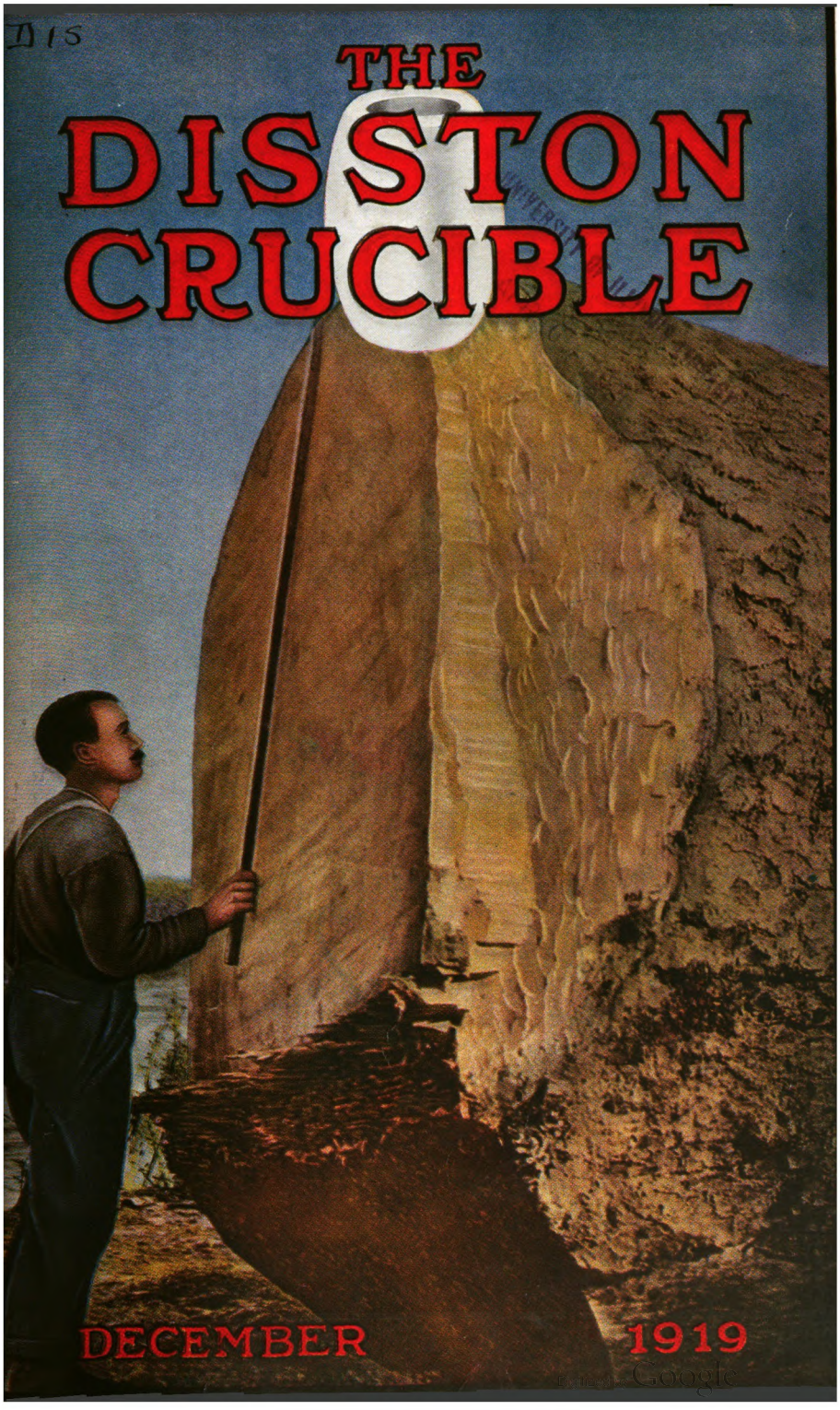
The following conversation ensued between two colored troopers in an outpost while Jerry was putting over a barrage.

"Sam, Ah don't like the hum them shells has; they talks to me."

"You neveh see me turning white, niggah. What they say?"

"They say, Y—o—u ain't going back to A—la—BAM!"—*The American Legion Weekly.*

THE DISSTON CRUCIBLE

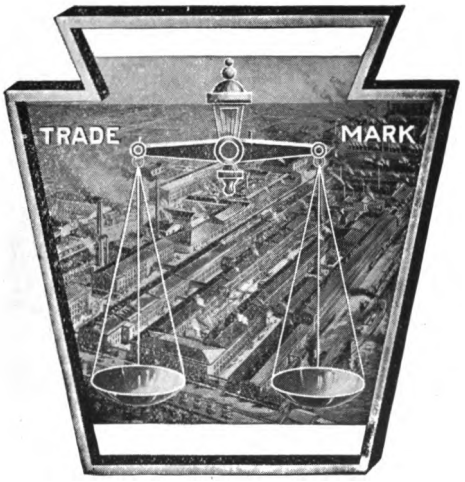


DECEMBER 1919

THE DISSTON CRUCIBLE

PRICE 10c PER COPY $1.00 YEARLY IN ADVANCE

TABLE OF CONTENTS



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

Merry Christmas

May the spirit of "Peace on earth, good will toward men" pervade each and every one of us

THE
DISSTON
CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VIII | DECEMBER, 1919 | No. 11

To Our Workers

WE take this opportunity to express to you our grateful acknowledgment of your loyalty during the very strenuous times of the past few years, and to impress upon you the fact that it is our desire and purpose to conduct these Works not solely in the interest of the owners, but to manifest and continue that same recognition of the workers as expressed to the men in the message of March 28, 1878, by our forebears, **Hamilton Disston, Albert H. Disston, Horace C. Disston,** from which we quote:

"We are aware that while inventive talent may design and intelligence direct, it is in the skill, industry and honest labor of the workmen success must be sought, and that by their exertions the world-wide reputation of the Keystone Works, outstripping all competitors, has been maintained and upon their efforts, directed by intelligence and prudence on our part, depend future prosperity and success.

"Relying upon our knowledge of the business, stimulated by past success, and ambitious for the future, confiding in your skill, and trusting in your pride in the Works which you have assisted to establish, we are convinced that the well-earned character of our manufactures will be maintained and their usefulness extended."

Fully imbued with this wholesome spirit of true appreciation, we, of the third generation of Disston, give hearty assurance that the wise policy of the founder, Henry Disston, continued by his sons, our fathers, shall be carried on in fullest measure, so that at the expiration of our turn we shall pass along to your and our future generations a still larger and more successful business—a living, throbbing monument to the industrial supremacy of all connected with Disston Works.

And now, on this, the coming Seventy-ninth Christmas in the history of our business, we extend to you our sincere wishes for A Merry Christmas.

Frank Disston

President.

As a matter of general interest, the above message is reprinted from Disston "Bits," our factory journal, for it reveals the actual spirit and true recognition of loyal co-operation whereby a product of high merit was attained, which in turn gained ever-increasing demand, necessitating constant additions to the Plant until now, as for some years past, the Disston Saw Works is the largest in the world.

Quality Tells

"JIM"

THE man and myself had a small altercation before I discovered I had made a rather stupid mistake in his identity. I quickly apologized for the blunder and did my best to allay his natural resentment. What made it difficult was the fact that he knew personally the party for whom I mistook him. He, however, finally accepted my apology and went away, apparently satisfied, but not, I am sure, the least bit gratified. Jim had sat silently during the scene and I turned to him, slightly crestfallen perhaps, and said, "I was sure that he was the other fellow—he certainly looks exactly like him, but I can't blame him for resenting the mistake—it wasn't very flattering."

"Tom," said Jim, assuming his wise manner and admonitory air (I may say here that Jim just loves to do this to me, and never neglects an opportunity), "you don't need to explain yourself to me. In that man's case, as soon as you saw him, you jumped to a conclusion. Now, 'jumping at or to a conclusion' is a figure of speech usually applied to a decision or conviction arrived at by impulse, without logical reasoning, argument or deliberative judgment, and is ordinarily prompted, consciously or unconsciously, by the desire to have such result established, whether the matter is political, economical, scientific, or a mere question of individual identification, and is very rarely correct. Frequently, when such a conclusion is acted on with the same haste in which it is conceived, it leads to a period of regretful reflection and self-reproach; in addition, in the particular instance I have in mind, the nursing and alleviation of numerous lacerations, abrasions and troublesome bruises, of a physical nature, all of which was the direct consequence of one of the beforementioned 'jumped-at conclusions.'

"If you can spare the time, sit down and I will relate the incident. It may be of use to you some time in the future." I obediently sat down as requested. Jim changed his manner and voice to his narrative style, and proceeded: "Some years ago, how many doesn't matter, as stories shouldn't be dated anyhow, a certain distributor of Nursery Stock, in common parlance a 'Tree Peddler,' made his appearance amongst the Jersey Farmers in the vicinity of Trenton—incidentally, Trenton, geographically, officially and possibly for some other reasons, is the capital of the State of New Jersey and blessed, or otherwise, with both State House and Court House—in spite of these facts, this 'Tree Peddler' made his headquarters in the classic precincts of Trenton and conducted his predatory excursions about the adjacent rural environment from that convenient point in the scenery. He was 'smooth' and he was industrious, and the picture of Ripened Fruits he exhibited to the delighted gaze of the Farmers, that were grown on the arborial ancestors of the offspring he had for sale, made the ordinary Jersey product look like wild crab apples. Our enterprising and artistic adventurer circulated on 'high pressure,' showed his pictures freely, kissed the babies, 'jollied' the parents, became quite popular, took his orders, delivered the goods, and collected the Farmers' money.

"In due time the Tree Buyers unanimously discovered they had been the victims of what might be called a beautifully Picturesque Swindle, but could see no way to redress their grievance, as the erstwhile artist of a Peddler had disappeared from their midst. One pugnacious and vindictive agriculturist, who had been 'stung' to the limit, announced his determination to search for and find that Peddler, and 'lick about three hundred dollars wirth outen his Dern Hide.' In pursuit of his plan for revenge he made several trips to Trenton, but, like the Trees he had bought, his search was fruitless. He was persistent, however, and one lucky day, in his wanderings, in a quiet street in the rear of the Court House he discovered the much-wanted Swindler, and without preface or preliminary he proceeded to take that 'three hundred dollars wirth outen his

Dern Hide.' After collecting the full amount, he took an extra punch or two as legal interest. Then, by way of receipt on account, addressed him thusly: 'Listen. Mister, an' ya better pin this in yer hat so you won't fergit—when I meet ya agin, it don't matter how long 'tis, nor whar it is, I'm gonna repeat that lickin', so ya better run when ya see me comin'.' With this parting bit of advice, the gratified granger wended his way to his home in the country and resumed the duties of his regular occupation.

"Now, we will assume an interval of seven years has elapsed, during which period our fistic farmer has sold his Jersey Farm and moved to Iowa, where he had acquire a large section of rich soil for agricult ral purposes, within convenient driving distance of the county seat, with lots of fruit trees and just a nominal mortgage. Driving leisurely to town one day, he saw approaching from the opposite direction, a buggy with a solitary occupant, who seemed himself to be in a hurry but unable to convince his steed of any necessity for haste. Owing to the slow approach, the Farmer had ample opportunity to observe the stranger and ponder on a curious familiarity in his appearance. Like a flash it came to him—there in that buggy behind that slow plodding old horse was the Swindler, the Tree Peddler he had promised something. He quickly turned his rig across the road, so the stranger was obliged to stop, which he did, and angrily demanded, 'What do you think you're trying to do?' The farmer got out of his vehicle, took off his coat and vest, laid them on the seat, turned to the stranger and commanded, 'Lite outen that buggy. I promised you a lickin' seven years ago, and right here is whar ya git it.' The stranger looked at him, amazed for an instant, then without a word he divested himself of coat and vest, laid them on the seat, placed his hat on top of them, and stepped out of the buggy. What happended to the Farmer in the next few minutes will always be confused to him. The first thing he remembers after the stranger got out of the buggy is—he was sitting in the middle of the dusty road and saying feebly, 'Please don't hit me no more.' A partial inventory of his quickly acquired injuries disclosed two badly cut lips, some loose front teeth, a nose very much tilted to one side and bleeding freely, two eyes whose puffed lids were rapidly closing, and left ear that felt to his touch like an overgrown cauliflower. Still sitting in the dust, he gazed wonderingly at the unmarked stranger and said almost admiringly, 'Mister, you fight a heap better'n ya did seven years ago.'

" 'Why, what do you know about my fighting seven years ago?' asked the stranger.

" 'Didn't I lick you seven years ago, back o' the Court House in Trenton?' was the query.

" 'Not on your life! I never was in Trenton; in fact, I've been in Alaska for the last ten years, and only came out about a month ago.'

" 'Well, why in thunder didn't you explain or hev me explain?' asked the much puzzled farmer.

"The stranger replied with a grin, 'I didn't want an explanation. I discovered a mile back that I had driven about six miles on the wrong road and was just wishing someone would come along and get "sassy".' He then cleared the road, got in his buggy and went away.

"That's the whole case," finished Jim, as he went away. T. H. C.

Urges More Personal Touch Between Worker and Employer

A plea for a more personal touch between the employer and employe was made at the Congress of Welfare Experts, held in Dayton recently, by David Goodwillie, president of the Goodwillie Lumber Co., of Chicago, and member of the board of governors of the National Lumber Association.

"We have gotten beyond the stage where we can live as individuals," said Mr. Goodwillie. "We have got to live in what is called the brotherhood of man. The employe is just as essential to the employer as the employer is to the employe. We have gotten rid of most of our troubles that come from the foreign element, but this is still a serious problem for the manufacturers today. We must Americanize our employes, and by making good Americans of them, we will have solved much of the troubles that confront us."

—*Lumber*, November 3, 1919.

The R. B. McKim Company, Inc. Boston, Mass. Celebrates 47th Anniversary

SATURDAY, November 8th, 1919, was a memorable day in the history of the R. B. McKim Company, Inc., of Boston, Mass. It was the forty-seventh anniversary of the firm, which was creditably celebrated with a business session, banquet and entertainment.

The salesmen assembled in the morning to hear an address by Mr. J. J. Teeple, of Philadelphia. After luncheon at the City Club, at which thirty active and progressive salesmen were present, Mr. E. F. Cooper, of Henry Disston & Sons, was accorded the honor of the floor. He spoke with characteristic earnestness, eulogizing the spirit and work of the McKim organization, and was roundly applauded at the conclusion of his remarks.

From five to six-thirty o'clock P. M., a reception to employees and guests was held at the American House by members of the firm, followed by a banquet.

Pietro Verdi Mordeglio entertained with selections on the piano-accordion. E. E. Morrison and Paul R. MacFarlane presented an original sketch. A two-man minstrel show by Scott and Bayrd provided fun, and there was unison singing. Dancing followed.

Mr. C. D. Woodman, president of the company, was toastmaster.

Original, humorous poems, written by Miss Sophie Meltzer, were used in presenting the souvenirs, and they were quite appropriate to the various lines of goods the recipients represented, as is evidenced by the couplet applying to Mr. Cooper:

"Everywhere we see the sign—'The Saw
Most Carpenters Use,'
After they've tried every other kind, no
wonder it's Disston's they choose."

The Boston House

The history of the Boston House dates back to the great Boston fire, November 9, 1872. Directly after the fire Mr. H. O. Stratton (formerly of the firm of Stratton, Corey & Company) opened headquarters in Boston for Disston products. Mr. Stratton was New England Distributor for saws, files, machine knives, etc., and was recognized by the factory as a Branch House.

Mr. R. B. McKim associated with Mr. Stratton as a salesman in 1886, and on the demise of the latter bought the business, and in 1909 he organized it as the R. B. McKim Company, Inc., continuing as President until his death, November 1, 1914.

In November, 1916, they purchased the business of Abner Taylor, at Bangor, Maine. Mr. Taylor represented Disston in the northern part of Maine. To purchase this business seemed a logical step for them to take, inasmuch as they had been serving a large number of customers throughout the State.

As Disston's representative, and a number of other well-known national manufacturers, they have been supplying the demands of wood and metal workers throughout New England. Forty-seven years' experience has given them very complete records of customers' individual requirements.

Their arrangements with the manufacturers make it possible for New England buyers to deal with one local institution for many lines, rather than buying direct. This service insures the same prices which would be obtained from the manufacturers, with the advantage of Boston or Bangor delivery from stock on hand.

They maintain a repair shop at Boston, fully equipped for repairing all kinds of saws. The men in charge are graduates of the Disston Saw Works, know their business, and customers can be assured their saws will receive attention equal to the best.

The Bangor House

The Bangor Branch was established in the year 1867, consisting of a mill supply business under the partnership of Messrs. Gibson, Kimball and Sanford. The first location of this firm was at 84 Exchange Street, where the partners engaged in the manufacture of saws and maintained a mill supply house under the name of the Dirigo Saw Works.

Sometime during the winter of 1871, or the early part of 1872, Mr. Gibson withdrew from the partnership and the Dirigo Saw Works was continued by Messrs. Kimball and Sanford until 1874. In this year, fire broke out which destroyed the Works. After settling up their affairs, Mr. Sanford withdrew in favor of Mr. R. W. Kimball, who now conducted the business in his own name until his death in the year 1885.

At the time that Mr. R. W. Kimball took over the affairs of the Dirigo Saw Works, he established an agency in Bangor for a certain make of saws, but afterward changed to Disston Saws, continuing with them till the time of his death.

Mr. Abner Taylor became associated with Messrs. Kimball & Sanford during the summer of 1871 as salesman. He remained in their employ until the fire and returned to the employ of Mr. R. W. Kimball during 1875, where he remained two years.

In 1877, Mr. Abner Taylor left the employ of Mr. Kimball and took up his residence in Boston, Mass. During his stay in Boston he traveled in the South, New England and New York State as salesman for Welch & Griffiths at the large salary of $10 a week, and later took a position with the Union Stone Company, remaining with them until Mr. Kimball's death in 1885.

Mr. Taylor then returned to Bangor and bought out the mill supply business with which he was connected up to 1877. The business was then located at 84 Exchange Street, and afterward moved to 144 Exchange Street, but in 1898 he removed to 120-122 Exchange Street.

As soon as Mr. Taylor came into control of the business, he arranged with Henry Disston & Sons to maintain a Branch House for Disston Goods in Bangor, Maine, and from 1885 until now the House of Disston has been very ably represented throughout the State of Maine from the Bangor House.

The Disston "Crucible" extends its hearty congratulations to each and every one connected with the McKim organization on the fine reputation and excellent results they have achieved, which, undoubtedly, will continue in ever increasing proportion through the existing spirit of good will and active co-operation, backed by practical knowledge, intelligent management and reliability of product.

See interior view banquet hall, pages 168-169.

Lumber in Boxes

The manufacture of boxes and crates consumes 10 per cent of the annual lumber output of the United States, white pine and yellow pine supplying 50 per cent of the box material. Virginia is the leading box-making state, with an annual consumption of more than 400 million feet of lumber for this purpose. In Maryland alone, according to a recent report of the Maryland State Board of Forestry, the box industry demand for wood is 170,501,000 feet annually, sixteen kinds of wood being used. Southern yellow pine furnishes 91 per cent of this box material.—*Lumber*, Nov., 1919.

The December Cover

On the front cover of this number of the "Crucible" we present to our readers a view of the measurement being taken of a giant tree in a British Columbia forest. We have no data of the dimensions of this particular tree, but to the uninformed it will be interesting to learn that there are many trees in the great forests of the West and Northwest measuring twenty feet in diameter and two hundred seventy-five feet in height.

The General Sherman tree (an illustration of which appeared in the July, 1918, issue of the "Crucible"), considered the largest and oldest living thing in the world, has a diameter of 36 feet, 5 inches, and raises its branches to the majestic height of 279 feet, 9 inches.

Timber More Valuable Than Gold

"Since it is certain and demonstrable that all arts and artisans whatsoever must fail and cease if there were no timber and wood in a nation (for he that shall take his pen and begin to set down what art, mystery, or trade, belonging any way to human life, could be maintain'd and exercis'd without wood, will quickly find that I speak no paradox), I say when this shall be well-consider'd, it will appear that we had better be without gold than without timber."—*Extract from Evelyn's "Sylva,"* 1664.

Government Consumption of Lumber During the War

A total consumption of nearly six and a half billion feet of lumber by the Government during the war is shown in recent figures compiled by R. C. Bryant, industrial examiner of the United States Forest Service. Of this amount of lumber purchased directly by the various Government departments, the army consumption was nearly five and a half billion feet; the navy more than 120,000,000 feet, and during 1918, the consumption of lumber for boat construction by the Emergency Fleet Corporation was nearly eight hundred million feet.

Of the army consumption, airplane construction took about 181,000,000 feet, more than half of which was spruce. In this connection the total amount purchased was probably twice these figures, as the yield of cants in airplane lumber is about 50 per cent and the figures given represent the amount actually shipped to airplane factories up to January 3, 1919. Gunstocks and hand guards took nearly a hundred million feet, almost exclusively of black walnut. Boxes and crates required about two billion feet, 75 per cent of which was Southern pine, and structures for cantonments, hospitals, warehouses, etc., used about three billion feet, of which 76 per cent was Southern yellow pine and 10 per cent Douglas fir.

About 355,000,000 feet of the lumber used by the Emergency Fleet Corporation was Southern yellow pine and about 425,000,000 Douglas fir, with small quantities of oak, locust for treenails, and other hardwoods.

In addition to this material secured in the United States, the Government purchased large quantities of standing timber in France and also secured some sawed material from other European countries.

The figures given are only approximate as to the total amount of lumber used, as they represent only raw material and direct purchases. For instance, large quantities of lumber were purchased indirectly in the form of boxes and crates and much was bought in the form of manufactured articles.—*Pioneer Western Lumberman.*

Do the thing you think best, and abide by it like a soldier. E. P.

The Logging Engineer's Prayer

O Lord, grant that as I make this survey called Life I may find pleasant camping places; that the cool waters of congenial companionship may flow past my tent door; that the woods of hardship wherein we must all walk be not too heavily clad with the underbrush of hard luck; that the nettle called remorse grows not too abundantly there; that there be springs of friendship and shade of rest trees wherewith to refresh myself; that cooling breezes may blow sometimes across my forehead and drive away the remembrance of wrong deeds done and righteous deeds left undone; that as I lay out the logging road of my life the curves thereof be tangent to Thy will and the spirals be true; that there be a down grade from my will to Thine, and the super-elevation be correct so that as I swing around the curve I may not leave the track that leads to Heaven.

O Lord, grant that when the appraisal of my life is computed it may not exceed Thy original estimate; and, Lord, when I take an observation to obtain my true bearing, grant that my transit be in perfect adjustment, so that I shall not deviate even so much as one second from the sight which Thou has set at the end of that long tangent which leads through the portals of gold into the district where Thou art Chief Forester. I pray that when my road is built there shall be no trails left unblazed and no dangerous rocks or trees above the cuts to endanger the safety of any travelers over this route.

Lord, in Thine infinite tenderness, mercy and love, so encompassing that even I am included in Thy promise, listen to my prayer; and grant, finally, that when I turn over my field notes to the Chief and sign my last report He will say "well done!" Amen.—*From the Bureau of Forestry News Letter, Manila, P. I.*

"An honest reputation is within the reach of all men; they obtain it by social virtues and by doing their duty. This kind of reputation, it is true, is neither brilliant nor startling, but it is often the most useful for happiness."—*Duclos.*

Timber Resources of the Northwest

If all the timber were cut into lumber and loaded on freight cars it would take 114,000,000 cars and 77,700,000 cars respectively to haul away the Douglas fir of Oregon and Washington, allowing the usual 30,000 feet of lumber to a car. Washington and Oregon contain one-third of all the standing timber in the United States. One-fourth of all standing timber in the country is Douglas fir and 80 per cent of the Douglas fir is in these two states.

The lumbering industry, including logging, sawmill operations and manufactured wood products, is the largest single industry in Oregon and Washington and gives employment to nearly 60 per cent of the working population in the two states.

In Montana, a conservative government estimate places the standing timber at 65 billion feet, a large part in government forest reserves. At the present rate of cutting—300 million feet a year—it would take over 200 years to fell this enormous stand and as reforestation has already begun and methods of fighting forest fires are improving, there will be billions of feet of timber left in Montana at the end of the next hundred years. —*American Forestry*, October 1919.

Full Speed Ahead

It is a mistake to nurse forebodings. In both business and personal affairs there always are and will be perplexities, chances to be taken, and setbacks, but nothing is gained or accomplished by sitting still and dreading them.

Nothing is more certain than that one who does not go ahead gets nowhere. Going ahead at full speed often leaves perplexities far behind, hurdles all chances of loss and overrides difficulties.

The troublesome and uncertain conditions confronting all of us today will not change quickly, for readjustments must be gradual and in some directions very slow. Meanwhile, the people in our own and other countries must be fed, clothed, aroused, transported, educated, amused. Wherever you are, whatever you do, "Full speed ahead!"—*The Three Partners.*

The Saw of All Saws—Disston

"Of all the Saws I ever Saw, I never Saw a Saw Saw like that Saw Sawed." Will Thompson, Filer for the Puget Mill Company, believes he filed the mate to this famous Blade. He said to me the other day in a "gabfest," "Do you know, I am inclined to think sometimes that there is a lot of 'Bunk' about this crystallization of Band Saws; at any rate, I can cite an instance, if the theory is correct, that will have to be classed under the head of 'Exception to all Rules.' I'll tell you about it. You remember two or three years ago when the Company shut the Mill down for several months? I went to work for Balcom at the Canal Lumber Company. One of the saws in use was a Disston that originally was fourteen inches wide, but was reduced to about thirteen and bore the marks of strenuous treatment with a sharp hammer, but it had the 'shop braze' only, and not a sign of a crack anywhere. During my stay we wore it down to eleven inches and laid it aside for new saws, still crackless and only the shop braze in it.

"After I came back here, we ran into that 'Saw Famine.' You remember, owing to war and embargoes and priorities and things, we couldn't get saws. Well, an idea struck me—that may seem strange to you, but it's true. I suggested to Mr. Ames that he get this eleven-inch saw from Mr. Balcom, and I could cut out three feet to make it fit our wheels, and we could get some wear out of it. You know, when new, our saws are only twelve inches wide.

"Mr. Ames got action at once, paid Mr. Balcom twenty-five dollars for the old saw and shipped it over. 'Now, come out here, and I'll show you something.'" He led me to a "Bunch" of Old Bands, rolled one out and said, "Put your rule on that." I did so. It measured just eight inches from point of teeth to back. Will looked at me sort of quizzically, "That's the saw," he said, "and it hasn't got a crack or a dropped corner. How about crystallization?" Before I could reply his helper said, with a grin, "It's a Disston Saw," so I said, "That's all." T. H. C.

BUSHWORK AND MILLING IN MAORILAND

By John T. Worsley, S. C., in Forest Club Annual

LAST year I was privileged to go to Southland, at the far southern end of New Zealand, to install a Lidgerwood Cableway Skidder. It is some 8,000 miles or more to this antipodean world that the colonials quaintly call "The Dear Old Maoriland."

Beneath the Southern Cross I was made welcome, and spent some months among the "Bushmen," as lumberjacks are there called, learning their ways that are strange to us, and telling them of ours, that are as strange to them. Naturally, I studied their methods of logging and milling most fully, as those were the things more interesting to a "lumberjack" from the United States. Everything was new and full of interest, from Auckland to Tuatapere below Invercargill. Most of my conversation was punctuated by question marks, I admit, but I learned many interesting things to tell and write about that this one article could not begin to cover.

The problems they have to meet are, in general, much like our own, but in detail often vary widely, and so I'll do the best I can to paint a picture of the facts as I saw and was told them, of this land of spouting geysers, boiling springs and kauri trees—of snowy Southern Alps and matted forests of rimu and totara.

New Zealand is a land of virgin soil and great resources, with but a million and a quarter of people where ten to twenty millions would not be crowded. It has a climate not excelled and seldom equaled by any country in the world. Around Auckland and to the north frost is practically unknown, while the climate in the other parts—except, of course, on the higher tablelands and the mountains—compares favorably with the coast regions of California, Oregon and Washington.

Where I was, in Southland, at almost the farthest tip of the South Island, eighty miles or more west of Invercargill, the weather was real old "Puget Sound" for rain and snow. I wasn't at all homesick on account of the weather, as I very fortunately provided myself with a coast lumberjack's outfit before leaving Seattle, and it was the envy of Port Craig bushmen.

Truly my "stag shirt," "tin pants" and my high-top "caulked" boots had them all wishing they could raid Filson's store on First Avenue for similar outfits. The "caulk" especially won their approval after they had seen me walking boldly over logs that their hob-nailed shoes refused to stick on. But gloves! Gloves for a bushman! That was a joke that lasted long among them. To see the Yankee logging with gloves on was good for many a laugh till the Lidgerwood had been running long enough to start the slivers and jaggers on the wire cables, when the laugh was on them. Soon they were convinced that gloves, after all, were "bloody" fine things to wear. Even those hands with skin as thick as bull's hide could not resist such proof.

The country is roughly divided into two divisions, the North Island and the South Island. Stewart Island, which lies south of the latter, is generally classed with it.

The North Island in shape is a rough square with a long handle or narrow peninsula extending up from the northeast corner. The center of the island is a plateau surmounted by volcanic cones. Along the northern part of this highland is the great Rotorna Thermol region, where boiling springs, spouting geysers, and earthquake convulsions attest to the ever-active volcanic forces below.

Here on the blue lakes, the green lakes and the quaint Maori villages of Chinemutu and Whakarewarewa, where boiling springs gurgle and steam in the yards surrounding the "Whares" or houses of these people, who do their cooking and washing therein. It would take an article, and a long one, to alone describe even a part of the strange sights of this wonderland, and so I must pass on to the more prosaic theme of logging, as space will not permit dwelling on these bright natives and their strange land. I might say, though, that the Maoris are a

very smart race, usually well educated and industrious. Having their own members of Parliament to represent them at Wellington, where their oratory is surpassed by none, their rights are fully protected.

It is on the northern part and on the peninsula and islands around it that the famous Kauri timber grows. These trees are among the noblest of the pine species, growing tall and straight in a more open woodland than the mixed bush of rinne, rata and totara. The latter timber grows on both islands, but does not compare with the kauri in either size or usefulness. Kauri trees attain a height of 150 feet and more, their trunks straight and round without a limb for 75 to 100 feet. New Zealanders claim they are the oldest growing species in the world. They run 8 to 10 feet and better in diameter, while one old tree at Mercury Bay is 35 feet through. Considering that it takes 500 years for a Kauri to attain a diameter of 5 feet, what must be the age of this old patriarch of the bush?

A few years ago while digging for Kauri gum near Auckland, a forest of these trees was discovered buried 5 to 50 feet beneath the surface. The trees were well preserved and lying in all directions, with no evidence as to the reason of the catastrophe that caused their downfall. Some of them were nearly as large as the giant mentioned above, and here they lay buried in this mass of slowly accumulating and rotting swamp vegetation, with a forest growing thereon. The many centuries merge into the ages as one contemplates the hoary monarchs lying there, and wonders if the "Garden of Eden" had been planted when these budding trees basked in the sunshine of spring.

The Nikau palms and tree ferns growing in the bush, and the cabbage trees scattered over the plains, give the country a tropical appearance. These latter are called the national trees of New Zealand, as they are found nowhere else. In the mixed bush lianes, supplejack, tree ferns and rubus vine, make a mat of jungle too thick and impenetrable to man without a bill-hook or slasher to hew the way through.

An interesting sight is this same rubus vine, rooted at the foot of a tree and stretching, cable like, straight through the air to the end of the branches, 70 feet or more above. One cannot help wondering how it got there, as there is no support between, till one is told how it climbs the trunk and out along a limb to the end, fastening itself there and then lets go its hold and swings out clear, spreading itself among the branches above.

The South Island is about 500 miles long and 150 wide with a range of mountains running down the west side like a backbone. Across the north end this range spreads out in rugged hills, while down south the country is broken by east and west ranges. All of these ranges and valleys are covered by mixed bush of rinne, rata and totara. Southland, and the West Coast region northwest of and across the mountains from Christchurch, are the great lumber regions of the south. The towns on Invercargill, for the first, and Greymouth, for the latter, are headquarters for men and supplies.

The timber is composed of species of pine, cedar, beech and ironwood. The ironwood, used to a limited degree, is fine for firewood, but as its name implies, is hard to work. The pine or remu grows from 75 to 125 feet or so in height, the timber in Southland generally being shorter than on the West Coast, the usable part of the tree being from 60 to 80 feet in the former and up to 100 feet in the latter. It stands from 5,000 to 40,000 feet to the acre. The tops are usually limby and bushy, the branches growing close and irregular so that the merchantable part ceases where they commence. The bole or trunk is seldom straight; usually bowed, crooked and leaning so it is hard to get one long enough for a head spar tree. On the first set it was necessary to splice two together, and then we had a spar only 92 feet high.

Mixed Bush Logging

Back in the early days ox teams were used, as they were here, with their skid roads and wagons and other developments. Even yet they are used, I was told, in small operations in the Kauri as well as mixed bushwork. But as we outgrew it, so did they, and the age of steam-hauling finds them with a system quite different from ours; an outgrowth of local conditions that on the whole

meets their needs quite satisfactorily to them.

Conditions there are different from ours in that no company is allowed to hold more than 800 acres in a block. They must work this out before obtaining a claim to another tract, and as they have no guarantee that the surrounding blocks will not be filed on in the meantime, they cannot risk the building of a large up-to-date mill that would be too expensive to move to their new tract.

So the usual mill cuts from 6,000 to 10,000 feet per day and can be moved wherever necessary to secure the logs. This means many little outfits scattered widely, and while not conducive to installing large mills and up-to-the-minute outfits such as we have, it tends to keep the resources out of the hands of monopolies, and in the hands of the many. The big drawback is that such a system stands in the road to the development and use of machinery that will emancipate human labor and free it for broader usefulness.

In exceptional cases the Government allows companies to hold larger tracts of bushland so that some few mills are large enough to cut 15,000 to 30,000 feet. Butler Bros., on the West Coast, through logging several tracts at once, are able to keep an American mill cutting some 25,000 feet, while around Auckland the Kauri Timber Company and others have holdings on the islands that small outfits would not be able to handle due to lack of means for towing, etc. So where the timber is hard to get at and expensive to handle, larger companies are given a guarantee of holdings. Sometimes the large outfits operate several small mills at different places.

Under the above conditions it is easily seen that logging methods have had no chance to develop as they have with us, and so most operations have but one or two haulers, as they call donkeys there, to supply a mill. These haulers are from 8 to 10 horsepower, take steam from a horizontal boiler, have one or two drums with positive clutch instead of frictions, and reverse gear. They haul up to 20 chains, or about 1,300 feet.

The single drum hauler is used much in Southland and needs from one to three horses to pull out the line to the logs. The reverse gear is used to unwind the drum when line is being returned to the woods, or to slack off the line when load hits a stump or otherwise gets stuck. The absence of friction drums makes this gear a necessity. Three or four drags in the morning and a like number in the afternoon usually supply the smaller mills, while for the larger ones two or more haulers are used, depending on the ground and capacity of mill.

The two-drum haulers are being more widely used as the ground becomes too rough or steep for horses to work on. The extra drum is used for a haulback, otherwise the operations are the same. The hauling line is usually ⅞ in diameter.

A woods crew consists of a couple of sets of fallers or bushmen, or more, according to the needs of the operation. A set of bushmen who fell the trees and saw them into logs as well, consists of two men. These are the real "Bushmen" of New Zealand and Australia, and in the harder timber most of their felling is done by chopping. They are the greatest axemen in the world now, since the day of the chopper has passed here. They use only the single-bitted or poll axe, and their saws are the old "every tooth a drag" kind, so one can scarcely blame them for sticking to the axe.

A hauler crew consists of an engineer and fireman, who generally supplies his own wood when it is not hauled out from the mill, a shoeman and a swamper—sometimes where more horses are needed, a helper or two. The "shoeman" is the same as a hook-tender, and is in charge of the crew. He usually does the hard work and mauling around in the mud, when he can't get the helper to do it. The swamper clears out the trail for the horses to go out on and the logs to come in. The helper handles the signal cord, drives horse, helps with the shoe and any other necessary odd jobs, such as packing, setting blocks, etc., as the shoeman directs.

[*Continued in January issue*]

"Lost wealth may be replaced by industry, lost knowledge by study, lost health by temperance or medicine; but lost time is gone forever."

—*Samuel Smiles.*

Santa Claus' Best Gift-
DISSTON SAWS

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

SAWDUST

A MODERN DRAMA

The Hero: "Where is the che-i-ld, Oswald?

The Villain: "I have him in my custody."

The Hero: "And the papers, what have you done with them?"

The Villain: "I have them at the blacksmith shop."

The Hero: "You are having them forged, then? Curses!"

The Villain: "No, I am having them filed." —*Nebraska Awgwan.*

ODIOUS COMPARISON

Schmidt sued Jones for slander, alleging that Jones had called him a hippopotamus some six months before. Of this time item Jones' attorney made capital, saying scornfully:

"Why, you haven't got any case, Mr. Schmidt. If your feelings were so badly hurt, why didn't you take action six months ago?"

"Yeh, I know," answered Schmidt easily, "but I neffer saw a hippopotamus until two veeks pasdt already."

SHE GUESSED

"Robson, do you know why you are like a donkey?" the jester queried.

"Like a donkey?" echoed Robson, opening his eyes wide. "I don't."

"Because your better half is stubbornness itself."

The jest pleased Robson immensely, for he at once saw the opportunity for a glorious dig at his wife. So when he got home he said:

"Dear, do you know why I am like a donkey?"

He waited a moment, expecting his wife to give it up. But she didn't. She looked at him somewhat pityingly as she answered:

"I suppose it's because you were born so."—*London Tit-Bits.*

"He's a great reader."

"Of what?"

"Gas meters."

—*Woodworkers' Record.*

WAS HE JUSTIFIED?

"O'Shea," said the captain sternly, "I saw you running from a Boche this morning as if the devil were after you; you had thrown away your rifle and—"

O'Shea: "Yes, sor, Oi know it, sor, but ye see Oi had just slipped a live hand grenade in his pocket and—"

"I see," said the captain.

—*Ontario Post.*

HE OWNS UP

"Where are you going, son?"

"Going to call on a party down the street."

"I don't like the use of that word 'party.' If you are going to see a gentleman, say so."

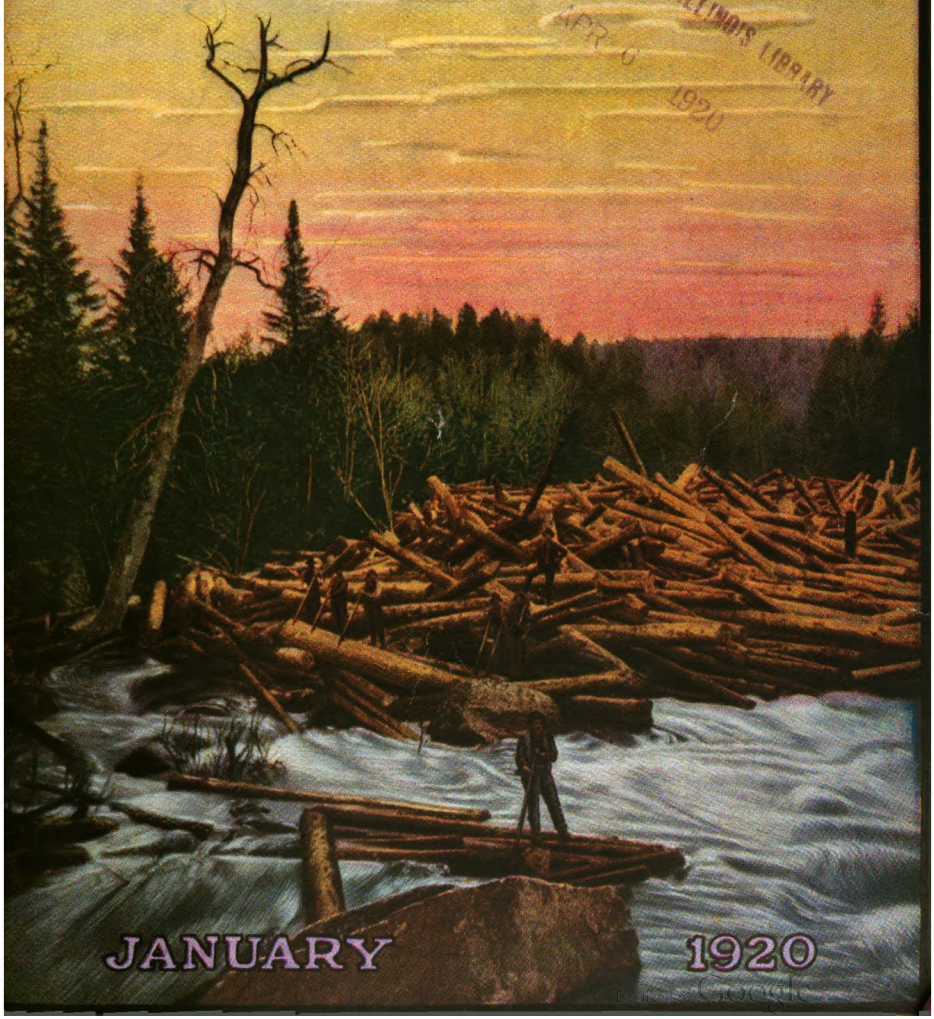
'Well, dad, I'm going to see a girl."

—*Winchester Record.*

UNHAND ME, VILLAIN!

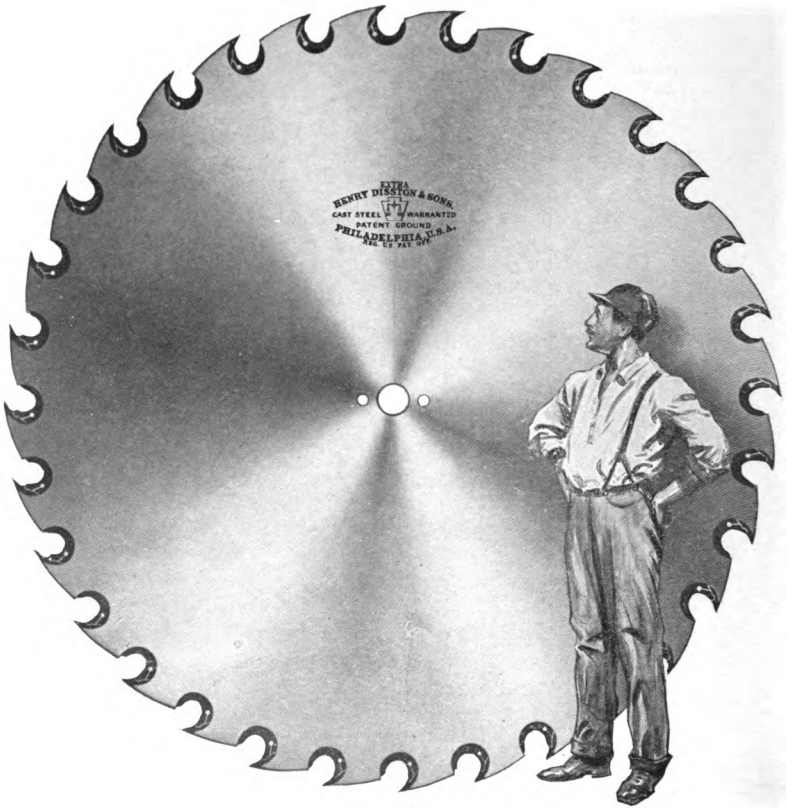
"You will leave me then." Her voice broke slightly with tense emotion, and her beautiful face was sad as Eurydice's on her wedding morn. "Yes, I must go," he answered, turning his face from her piteous appeal that he might remain adamant. "I have placed my affairs in order —you will want for nothing." "Want for nothing," she repeated, gazing at him despairingly. "Nothing, when the light and joy will be gone from my life; when I will sit day after day in lonely vigil, waiting and hoping against hope for your return; and our child—oh, Jack, how can you go?" "Daddy, daddy," a child's voice cried as a fair-haired babe ran to his side, "don't go away." The man faltered; his face was torn with conflicting emotions. "Enough," he said roughly, "have done with those tears. I have said I must go." He pushed the woman and child from him, seized his bags and staggered through the door. The woman held the child close to her. Sobs shook her frail body. She was left alone to face the world, the little mercy of men and the scant pity of women. "Is daddy gone?" whimpered the lad. "Yes, my poor baby; he has gone to the links, and I am a golf widow."—*Empeco Paper News.*

THE DISSTON CRUCIBLE



JANUARY 1920

The Brand that Stands the Test of Time



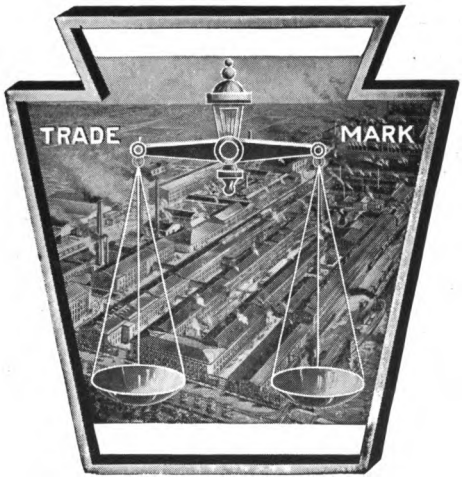
It has stood for all that is BEST in Saws for the past Eighty Years and will maintain that reputation in the years to come.

HENRY DISSTON & SONS, Inc.
Keystone Saw, Tool, Steel and File Works
PHILADELPHIA, U. S. A.

THE DISSTON CRUCIBLE

PRICE 10c PER COPY **$1.00 YEARLY IN ADVANCE**

TABLE OF CONTENTS



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

THE DISSTON CRUCIBLE
A MAGAZINE FOR THE MILLMAN

VOL. VIII JANUARY, 1920 No. 12

EDITORIAL CHAT

STAND FAST!

SLOWLY but surely this country is recovering from the effects of the recent war, by which the affairs of the whole world were upset.

Only those directly involved in the readjustment know the numerous and intricate questions which must be solved, for exceedingly broad is the scope of events and widely diversified the plans suggested for settlement.

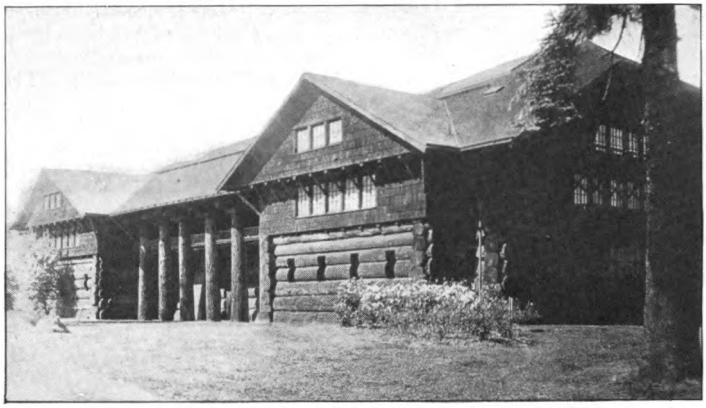
One word, one act, changes the course of Nations, but Time and Time only will provide a remedy for the trouble and in the end, by the exercise of deliberate, practical judgment, the world undoubtedly will be the better by the revolution.

With every real American standing steadfast and loyal to their true and time-tried standard —"A government of the people, by the people and for the people"—with proper recognition of the rights of humanity everywhere, there must inevitably come a time when American principles will triumph and prevail in all parts of the world.

Assuring you of our earnest desire to co-operate in every way possible for betterment, we extend to you on this, the beginning of the New Year, a hearty and sincere

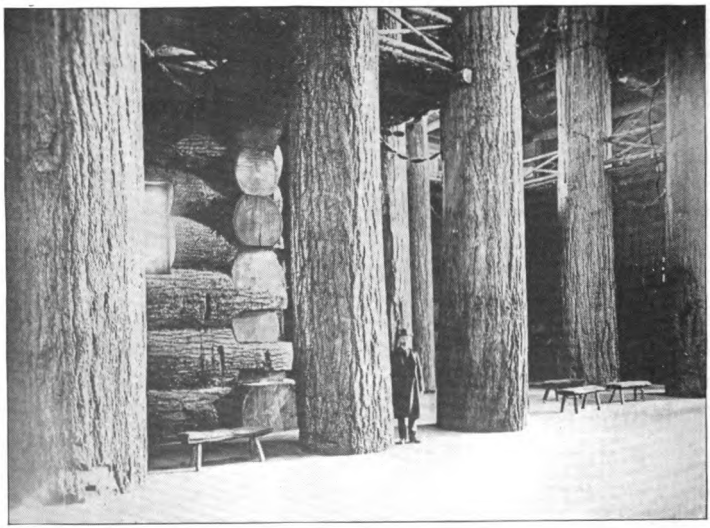
GREETING

Quality Tells



Log Cabin Monument

The Portland, Oregon, Chamber of Commerce have constructed a novel monument to the vast timber resources of that State. This comprises the building of the largest log cabin in the world, which contains more than 1,000,000 feet of lumber. At the present cost of building material it can easily be appreciated that this is a very expensive monument, more so than one of stone or granite. It is fitting that Portland, the center of the vast timber tracts of Oregon, should erect the monument. One-fifth of the standing timber of this country is within Oregon's boundary, which, according to census reports, stands fourth in timber production. If Oregon's merchantable timber, including a total of 403,213,109,000 feet, was sawed into lumber, it would take 430 years' work for 30 sawmills, each sawing



100,000 feet of lumber every day of the year, and 336,011 trains of 60 cars each, or 20,160,655 cars, making a continuous train of Oregon lumber reaching nearly seven times around the world at the equator.

The value of the standing timber is not less than $680,000,000, and when manufactured it is calculated that it will bring a wealth into the State for circulation of at least, $6,822,500,000. In fact, the vast timber resources of the State are today paying the bulk of the taxes, and 80 per cent of the wages paid are from lumber manufacturers.

The Varnish Tree Grows In China

Varnish is produced in China from a tree commonly spoken of as the varnish tree, but known botanically as Rhus vernicifera, which is found in abundance in the mountains of Hupeh, Kweichew and Szechwan.

The varnish is taken from the tree after it is about six inches in diameter by tapping at intervals of from five to seven years, until the tree is 50 or 60 years of age. A good sized tree will yield from five to seven pounds of varnish.

The natural color of the crude varnish as applied is black. It is considered the most indestructible varnish known. One peculiarity is that it hardens only in a moist atmosphere.—*Canada Lumberman.*

January Cover

We present to our readers on the front cover of this issue a scene of a typical log jam.

Such scenes are not unusual to the lumbermen who work in the interior woodlands of the great Northwest, where it is at times found convenient and inexpensive to float logs from a clearing down stream to an impounding dam adjacent to mills, or to head waters where they are constructed into huge rafts, to be towed to distant markets.

Sometimes a slight obstruction will cause a jam which will require days of arduous and perilous labor to relieve. Much daring and agility is displayed by the lumbermen on such occasions, as it is necessary for them to step from log to log as they float in the waters to direct their course into the current of the stream.

Conductivity, Odor and Taste of Wood

Heavy woods conduct heat more rapidly than light woods, oak conducting about twice as much heat as spruce under the same conditions, according to an expert at the Forest Products Laboratory. Therefore for lining refrigerators and fireless cookers as light wood as practicable should be used. One of the principal properties that makes wood desirable for the household is its comparatively low heat conductivity and its use for handles, furniture, refrigerators, floors and walls is governed largely by the fact that heat passes through it slowly. In the case of handles, the difference to the touch between wood and metal is a matter of common experience. Wood conducts from two to three times as much heat with the grain as across it, other conditions being equal, and broadly speaking, conductivity of heat through stone and concrete is from ten to thirty times as great as through wood across the grain.

As a conductor of sound, wood along the fiber is a fairly good medium, ranking with brick and stone, but across the fiber sound will travel only about one-third as well as with the fiber.

Most of our native woods are without pronounced odor or taste, but woods of the laurel family, of which sassafras and California laurel or myrtle are representatives, have a distinct spicy odor and taste.

Port Orford cedar of the Pacific Coast has a very spicy, resinous odor; other cedars have a more aromatic odor, especially the pencil cedar or juniper. Hemlock has a slightly sour odor, while cypress is somewhat rancid. Except in cedars and junipers these odors are scarcely strong enough to taint food unless it is brought into direct contact with the wood as in butter tubs or boxes. For wooden pie plates, butter dishes, bowls, buckets, candy pails, kegs and barrels, only woods are used which are without taste.—*Pioneer Western Lumberman.*

"JIM"

DO you know, Tom (Jim was seated in his regular place), I have never given much thought to the subject, but when I thought of it at all I was rather inclined to believe a real keen, vivid imagination was in most instances rather a detriment, especially so if a man's business calling was of a nature that required him at times to make plain, unvarnished statements of facts, unaided and unembellished by the aforesaid faculty. I have known imagination at such times, so far as commercial values are concerned, to cease entirely as an asset, and become a decided liability. You see, Tom, a man must have a good memory to be reliable when he dallies with facts, but one with a lively imagination is not necessarily handicapped by an elusive memory—speaking of memory most of us get credit for a lot of originality which properly belongs to good memory. Facts forgotten or half remembered; facts not fully matured, even unborn facts, may be readily furnished from his reserve stock, and to the fellow with the imagination, their easy accessibility has a tendency to make a prodigal of him, and endows his statements of facts with a quality known commercially as "Diminishing Values," which ordinarily is not desirable.

I am beginning to think, however, that my angle of vision is somewhat restricted and my viewpoint, so to speak, one-sided. To a man with a clear, unobstructed sight, there may be apparent many compensating features that my prejudiced eyes failed to observe. I'll tell you just how I got started on this trail. A few nights ago I attended a large meeting of lumbermen, who had gathered for the purpose of discussing present conditions in their industry. They were confronting a serious problem and one difficult to solve, for the reason there were no precedents to guide them, no past experience to refer to. The situation was so utterly unfamiliar it was almost unbelievable, a market that appeared boundless, a demand that fairly shouted, "Set your own price, only give us the lumber," with but one lurking shadow in the background that murmured softly, "Car Shortage." This noise, however, was not very loud at present, and was given scant attention. The all-pervading question was the constant, continued advance in selling prices. This was the perplexing phase of the situation, that part that was disturbing their slumbers and giving them bad dreams, and they met to devise, if possible, some method or means by which they might curb this upward tendency and confine the disquieting influence to a point where the "excess profit tax" would be less conspicuous, and the nervous strain relaxed—a very worthy object. A number of speeches were made and some of them were good. In the course of proceedings the chairman called a name and requested the gentleman to state for the benefit of the assemblage his views on the subject under discussion. Well, Tom, he got on his feet and at first glance I felt sorry for him; he evidently thought he had something to say and wanted to say it, but was so consciously and painfully embarrassed, his nervous agitation seemed to collide with his articulation, and instead of a flow of language, he had a flood of perspiration, as if his eloquence had "struck in" and could only liquefy and escape through the pores of his skin. After a few minutes of floundering, stuttering incoherence and face mopping, to everyone's relief he sat down, in a burst of hand clapping and applause. It was funny.

I won't tell you anything more about the meeting, except to say the general sentiment was that, owing to the gathering's ignorance and unfamiliarity with such unique conditions, the best course to follow under the circumstances would be to "Stand Pat" and "Let 'er Rip." I only referred to the meeting anyway just to give you a "once over" of that burst of perspitory eloquence.

Today I listened to that man telling some of his friends just what happened at the meeting. They were unable, it appears, to attend, and he had no suspicion that I had been present, so he told us what he said, and how he said it. Why,

it was real eloquence, and when expressed through the regular channel, minus the sweat, sounded like an honest to goodness speech. The way that fellow reveled in his imagination and how he seemed to enjoy the revel was a revelation to me, and I couldn't help but contrast the condition of a poor devil in like circumstances who lacked in his make-up that same fertile, vivid imagination we are talking about. It also gave me a clearer perspective on the possibility of the compensating feature, bringing to my mind an incident long forgotten, that convinced me that my past opinion was formed hastily and one-sidedly.

I knew an Irishman years ago, who worked for a gentleman with whom I had some acquaintance—as a sort of general factotum, acting as coachman, gardener, and man-of-all-work. He was alert, skillful and very capable in every respect, when he was sober, but he was at times possessed of an appetite that naught would appease only Man size Booze, so that occasionally he would acquire a package that the hay-mow alone could accommodate. His boss discovered this failing of Mike's a time or two, and kept silent. On the third discovered offense, however, he waited until Mike's condition permitted his mind to function normally, at least "near" normally, and then proceeded to hand Michael a line of language on the evil of his present conduct and the stern necessity f r a sudden and immediate change in his bibulous habits that had hair-raising, skin-blistering qualities in its substance. Mike in recounting the occurrence to me next day, when he reached the Peroration, as it were, of the boss's speech, he continued "Cripes me boy oi wuz mad. Sez oi to him. Do yez think it's a Chinaman yez ar talkin' to. Thu like of you, to tell me whin to take a dhrink er not to take wan! Oi'l tek a dhrink whin oi damn plase. Lave thu stable afore oi brake me knuckles on yer face er do somthin' oi'll be sorry fer mebbe!" As he finished he wore a grin of triumph that would have graced the face of a victorious ring champion. I had some knowledge of the boss's character and knew he was quite an athlete, and at his club was considered the best amateur boxer on the roll. I also knew that Mike

(*Continued on page 188*)

Drag Saws for Motor-Driven Machines

The more extended employment of the gasoline motor-driven drag saw machine, portable type, has materially increased the demand for a good saw.

This type of machine has found its niche, and while the greatest benefit is to the farmer, who finds an untiring worker to build up his pile of firewood, a number are employed to make bolts at shingle mills, stave mills, spoke mills, and various mills where it is desired to cut logs into short bolts, much of which work was formerly done by hand.

Naturally the operator fares best who has a machine equipped with a saw which can be depended on to do the work in a proper manner, and as usual this problem is solved by Henry Disston & Son, Inc., who have made a special study of supplying one for this particular purpose, first class in every respect.

The Disston Steel Works has been requisitioned to supply a steel especially adapted to this purpose and they have come to the front with a tough, strong edge and set-holding material, which, combined with the Disston temper, produces a saw which is demanded in such large quantities that facilities, great as they are, frequently are taxed to the utmost to keep an equitable supply going forward to the users.

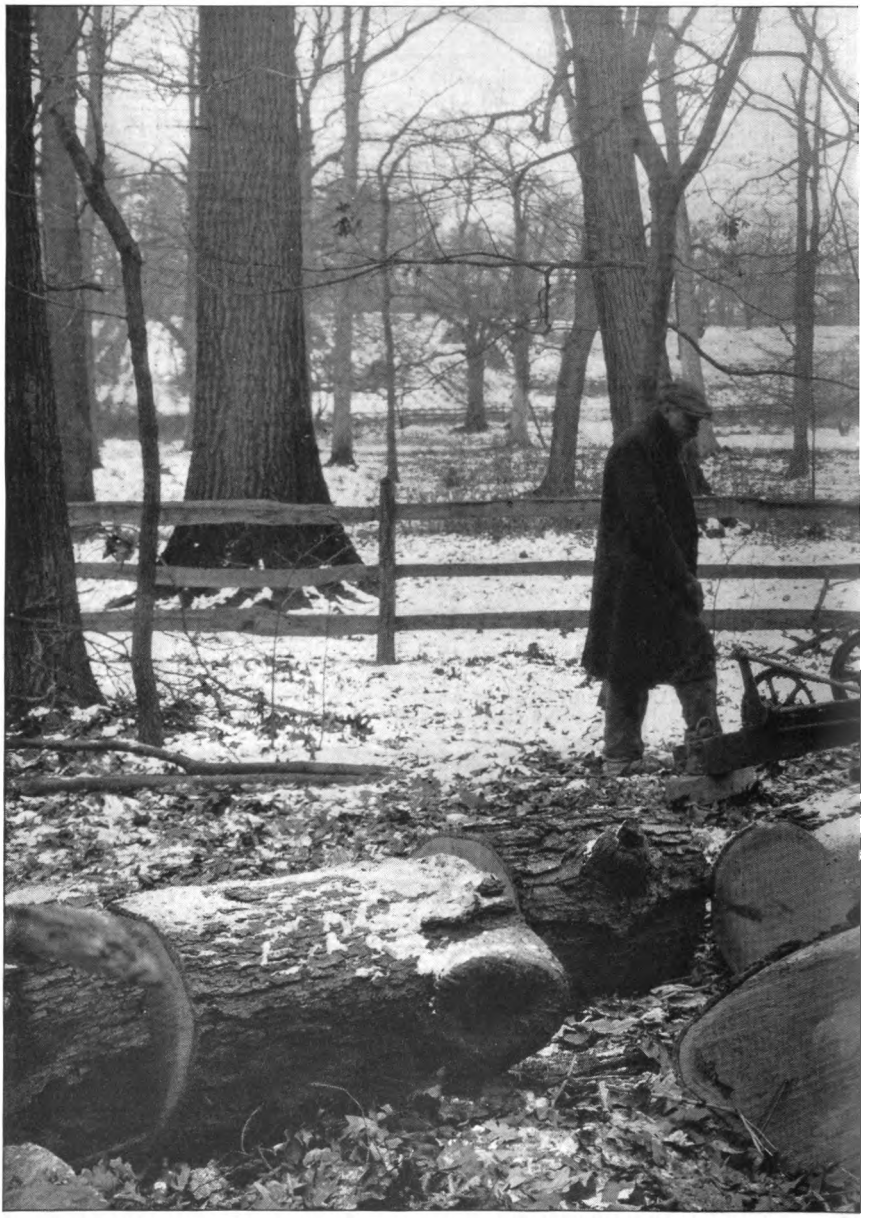
The shape of the tooth, the shape and character of the rakers, all have been made the subject of a close study, and those who employ machines of this type will do well to see that they are equipped with Disston Drag Saws, which are supplied in all required lengths, widths, thicknesses and styles of teeth.

These machines are of little use unless the saws cut fast, hold the set and cutting edges, and in these points Disston Drag Saws excel.

When you buy a Drag Saw for your motor-driven machine, insist on getting a Disston. Send for Drag-Saw booklet.

See illustration on next page.

"Thrift has led to a mode of living and a view of life conducive to success. It is in time translated into character."—*James J. Hill.*



The motor-driven Drag Saw cuts its way through the log time a

fter time, all day long, vigorously and tirelessly. See page 183.

BUSHWORK AND MILLING IN MAORILAND

By John T. Worsley, S. C., in Forest Club Annual

[CONTINUED FROM DECEMBER ISSUE]

THE shoe is a unique device developed there to keep the logs from hanging up on stumps and rocks, or from digging their ends into the soft ground at the foot of knolls. Like the cone in the swamps of the South the shoe was the solver of the same problem in New Zealand.

It is made of heavy boiler plate, up to four feet or so wide and two and a half to three feet long. It turns up like a runner at the front end while through a hole at the center the line passes to fasten on the logs. The ends riding on the shoe are prevented from digging or hanging up. The theory is good and the practice fair, for sometimes the logs roll over and land the shoe on top where it isn't needed, which provokes the shoeman to use somewhat lurid language. For real old, everyday and most of the time brilliant swearing, I will back an angry New Zealander against any American or Canadian that ever drew breath. Cussing by prose or poetry the only superior they acknowledge is an Australian. Nor can I blame a shoeman very much for talking wrathfully to the landscape when he finds an eight horsepower hauler stuck with a load in the mud, and the shoe on top.

The roads are usually swamped to follow up the gullies and branches, blocks being used to swing the logs into them, and at the turns. As soon as the logs are on the landing it is up to the train crew to load them, as well as to haul them to the mill. No elaborate landings are made. A big log or two against the track and perhaps skids for the logs to come up on, though sometimes "Jacks" are used.

In loading, the logs are parbuckled onto the trucks. From one to four logs make a load. From one to three or four loads are hauled at a time over the three-foot six-inch gauge track. This is standard for the country, government roads and all. Sometimes narrow gauge is used in logging. Many of the logging trams have wooden rails, and locomotives of twelve to twenty tons. A thirty-pound steel rail is considered heavy there, and this is not surprising when one realizes that main line wagons (railway cars) have a capacity of only six to twelve tons evenly distributed. The train crew consists of the engineer and fireman, and they do the loading with the locomotive.

Kauri Logging

Just as coast timber requires different methods of handling from other timber in this country, so the larger kauri timber there in the rough country forced the development of a technique all its own.

Logging in the kauri district developed through the ox-team stage and the steam hauler, on the leveler ground, about the same as in other parts of the country, transportation to the mills being by skidroad, steam and horse-tram, or towing on the rivers or the gulf. The work requires more oxen on larger haulers, due to the larger timber, but there the difference ends.

It is in the rough mountains in the country north of Auckland that the greatest "drives" take place. A "kauri drive" is like no other on earth. It stands unique by itself. A drive to us suggests a creek or river and water enough to float the logs. There it means releasing a great flood of water from a dam at the head of a usually dry gulch. This in a few minutes sweeps logs and all before it to the level ground below or into the lake or sea, where they are loaded on the train or towed to the mills.

The country being so steep and rough and all cut up with gulches, animal and steam logging is impossible. Then, too, if some cableway method were used the trees are so scattered too much time would be taken up changing rigging, they claim. So the trees are felled in such a manner that the logs can be jacked and rolled into the bottom of the gulch. These "Jacks" are of local design, light enough to be easily handled by one man, yet powerful enough to roll a big log almost anywhere. Men become very expert in the use of them, just as our river drivers do with the peavie. The shank is made of wood, 18 inches to 20 inches long, 8 inches wide and three inches thick. The bottom

end is shod with a steel band and has two or three brads inserted in it to prevent slipping. In a slot down the center of the shank a bar, with teeth on one side, travels. These teeth are engaged by a pinion wheel, the power of which is multiplied by other pinions worked by a double-handled crank. The turning of the crank shoves out this bar, the head of which is bent and sharpened so as to engage the log. Jacks are one of the handiest tools the bushmen of New Zealand have, and are often used to load logs in place of the engine.

The bottom of the gulch being cleared of stumps and all the logs along the ridges having been cut and jacked into it, there remains only the impounding of a sufficient supply of water in a dam built at the head to be ready for the drive. This usually takes place in the winter months, which are June, July and August, as only then is there a sufficient rainfall to supply the water necessary to sweep it clean. When the flood lets loose one can faintly imagine, but not adequately describe, the cracking, roaring, tumbling mass of logs smashing down the gulch.

It is truly a wasteful method, as much timber is damaged and broken, but it is the only one able to meet the conditions so far. The drawback is the impossibility of impounding water enough at the head of all the gulches to log the country clean, and so some companies are talking of trying the cableway to pull the logs down from the gulches where driving is not feasible.

It will interest Americans to know that while most of the haulers there are of local and English make, some Washington and Lidgerwood donkeys are in use and giving good satisfaction. This will be readily understood by comparison of design and horsepower. It was said in admiration by the bush crew of Port Craig, that the Lidgerwood rig would pull St. Peter out the Golden Gate, and so as logging shows become more difficult they turn more and more to America for machines of greater power and capacity to meet the demand in bush and mill.

Saw Milling

Turning now to mills, one is at first inclined to think of them more as toys, till a study is made of the conditions met with, when one is led to admit that they are the logical product of New Zealand policy. Where no guarantee is given of more than 800 acres in one limit it would be poor policy, to say the least, to install an expensive mill that might have to be moved when the one limit was cut out. Still a person is inclined to smile when a "record" cut of 10,000 to 11,000 feet is talked of for days or months after it is made. The New Zealander never having seen one of our up-to-date mills cut logs at the rate of 100,000 to 1,000,000 feet per day, is apt to resent this smile of tolerance and put it down to Yankee blow or "Skite" as they call it.

One thing an American must remember in going down below the equator is not to show too much of the mirth that is bound to rise when he sees their way of doing things, which may be thirty years behind the times. If he would win their kindly regard and overcome the natural resentment they hold against the Yankees who in the past there have been full of blow, and much inclined to disparage all things not American, he must put a bridle on his tongue and admit, at least occasionally, that they have done well. Like the man from Missouri, they want to be shown and the American who talks a lot and falls down on the doing had better leave the country, as his usefulness is ended.

Most of the mills use circular saws, though where large kauri logs are being sawed an upright rip saw is used. Fixed in a suitable frame it moves up and down as the log advances, slowly cutting it in halves. These halves are cut again into pieces small enough to be pushed by the sawyer, who works them into timbers, planks and boards by means of a circular saw.

The logs are pulled up or rolled onto the deck skids of the mill, where one at a time they are rolled onto a flat movable platform that travels past the circular or rip saw, as above described, which cuts them into pieces or "cants." This platform carriage is split through the center and through this slot the saw runs. The log is rolled by hand till it centers over the slot, where it is held by wooden blocks wedged under each side. As it is being split in two, wooden wedges are inserted between the halves to prevent

them closing together and pinching the saw. Then one half is rolled out of the way while the other is split into cants. These cants are slid down an inclined skidway to the head sawyer. Here they are placed on two carriers like saw horses that have four small wheels on each, that travel on a set of rails leading to the saw.

In front of the saw is a roller on which the cants go past the gauge that regulates the thickness of the board or plank being sawed. This gauge is moved by hand by the sawyer, who must walk up to make the change for each change of thickness in lumber, then return to end of cant, against which he puts his chest to shove it through the saw. In some few of the mills this roller is a live one, which, of course, makes the work easier on the sawyer, as it helps him push the cant against the saw. The assistant sawyer, or helper, stands behind the saw and helps by pulling. When a board is sawed off he shoves the cant back to the sawyer, who "breasts" it through, again and again, until it is cut up. They then place a new cant on the carrier and repeat as before. When they cut 10,000 to 11,000 feet with a mill like that they have a right to feel "chesty" and to "skite."

There is the cant sawyer and helper, the head sawyer and helper, a tailingout man, slabman and cutoff man, edgeman, three or four helpers and yardmen, engineer and fireman, blacksmith and helper, millwright and foreman. These compose the crew of an ordinary mill. No doubt it looks tiny and crude, which it is, but all things considered it meets their needs very well indeed.

At Port Craig an American mill is being installed by the Marlborough Timber Co., of 75,000 feet per day, but if it cuts half of that they will be satisfied, as the timber there is much harder to handle and saw, which will, they expect, slow up the speed of cutting about half. On the West coast Butler Brothers' mill is American made, while some Auckland mills are being enlarged and are using some of our machinery.

Speaking of costs of logging and milling reminds me that they vary about as much as they do here, but in spite of cruder methods and, consequently, higher costs, good money is made by the operators there. Lumber sells by the hundred board feet instead of the thousand as with us. Quotations run about $7.00 to $10.00 per hundred feet for any fair class of lumber. Their market is at home and in Australia. They import some fir lumber and timber from here for special purposes and building.

In conclusion, I desire to say that while I realize it would take an abler pen to do justice to "That dear old Maori Land," and its scenes and people, yet if I have helped entertain the readers for a short time, and aroused even a passing interest in that land of flaming sunrises and weird wonders of the giant moa and oldest patriarchs of the forest, I am content and feel well repaid for my efforts.

Having enjoyed and profited by my three months in the short course in forestry, I bid you adieu in the Maori salutation of good luck—"Kia Ora."

JOHN T. WORSLEY.

The Profits of Pine Planting

Thirty years ago the authorities at the Tokai Government Plantation, Cape Colony, planted 125 acres with pines. It is now announced that the standing timber on that area was sold for £60,000, or at the rate of £480 per acre. Excluding the cost of formation and interest charges thereon, this result works out at £16 per acre per annum. Taking interest charges into consideration, and assuming that the rate of interest paid was not more than 5 per cent, the return per acre would be something like £14 per annum. Is there any other crop which year in year out yields the farmer a return such as this? —*Jarrah Journal.*

"JIM"

(*Continued from page 183*)

had this same knowledge. I was amazed at his outburst and the lack of any indications on Mike's person of the inevitable consequences of such a speech. I said, "Why, Mike, what did he do when you talked to him like that?" "Och shure," said Mike, "he didn't hear me. This wuz afther he wint back to thu house."

Now, Tom, since hearing the orator and recalling this little speech, I'm rather strong for imagination.

French Forestry Methods

Lieutenant-Colonel W. B. Greeley delivered a very interesting lecture before the Portland branch of the American Forestry Association recently on "French Forests."

Mr. Greeley stated that stumpage in France is worth probably $20 per thousand feet. The per capita consumption of lumber is low, probably not in excess of 150 feet. The buildings are built almost entirely of stone. Everywhere he visited in France the appearance of the country indicated the lack of a good, serviceable building material such as lumber, as we are accustomed to see it in the United States.

"The government takes a very deep interest in preserving its forest area," said Mr. Greeley. "If the private owner of a forest fails to maintain his forest the State will undertake the work and charge for its service. When a private owner desires to convert his timber holdings into a farm, for instance, he must first file a notice of his intention with the forest department, which may make objection to such conversion on several grounds, such as the necessity for prevention of erosion, preventing shifting sands or public health and public defense. The economic needs of the country can not be urged as against the private owner's right to the conversion of his property to new uses. There is a very determined fight being urged in the French Chamber of Deputies to confer on the forestry service the right to declare that the needs of the country are paramount, from economic reasons, and require that the private owner shall maintain his timber-growing lands. Individualism in France is more pronounced than in the United States."

Mr. Greeley gave a very interesting account of the administration of a 12,000 acre forest in the Vosges mountains in which piling up to 110 feet was cut by the 20th Engineers. In the Launes district maritime pine, planted to restrain the shifting sands, yields turpentine at 25 years; at 60 years the trees are cut into lumber.

Timber taxes vary in their application. In some cases the timber is excepted for 30 years. In other cases three-quarters of the approximate tax is exempted. The tax on the income derived from private forests is based on the classified yield. The tax amounts to about 3 per cent of the gross return.

Fire protective associations are encouraged. Two-thirds of the forests of France are in private hands. France imports about 30 per cent of her lumber requirements. She exports mine pit props to England. Her supplies of lumber come principally from the Baltic region and from Switzerland.

"In France every part of a tree is used, even down to the needles," said Mr. Greeley. "The stumps are even sold. The growth on some French forests is very rapid; from 700 to 1400 feet an acre a year has been noted."

The French foresters are desirous that the present tax law be amended to make the entire collectible tax on a timbered area payable when the timber is cut.—*The Lumberman.*

Navy Carrier Pigeons for Forest Fire Fighting

The carrier pigeons and equipment of the Navy Department will be available for the Department of Agriculture next season for conveying messages from forest fire fighters "at the front" to headquarters, says a recent communication from the Department of Agriculture. The test of the birds for this use was carried out on a limited scale this season, but it encouraged the Forest Service officials to believe that they can be employed profitably on a larger scale. To establish a successful carrier pigeon system, it will be necessary to lay plans during the coming winter, to have the posts properly located and get the birds acclimated and begin their training. Flights of 600 miles in a single day have been made, while a distance of 140 to 200 miles means a two or three-hour flight for the average bird. The distances which would be covered in forest service work are considerably less than this, in most instances the flights from fire-fighting areas to headquarters being less than fifty miles. The value of the birds in mountainous regions where travel is difficult would be especially great.—*Pioneer Western Lumberman.*

"Technical education is the exaltation of manual labor, the bringing of manual labor up to the highest excellence to which it is susceptible."—*Ex.*

Work

This is the gospel of labor—
Ring it ye bells of the kirk!
The Lord of love came down from above
To live with the men who work.
This is the rose He planted,
Here in the thorn-cursed soil;
Heaven is blessed with perfect rest;
But the blessing of earth is toil.

Let me but do my work from day to day,
In field or forest, at the desk or loom,
In roaring market place, or tranquil room;
When vagrant wishes beckon me astray,
Let me but find it in my heart to say
"This is my work; my blessing, and not my doom;
Of all who live, I am the one by whom
This work can best be done, in the right way."
Then shall I see it not too great, nor small
To suit my spirit and so prove my powers;
Then shall I cheerfully greet the laboring hours
And cheerfully turn, when the long shadows fall
At eventide, to play, and love and rest,
Because I know for me my life is best.

—*Henry Vandyke.*

Labor is the divine law of our existence.
Blessed is the man that has found his work.

—*Carlyle.*

SAWDUST

ADAM'S ADVANTAGE

Whatever troubles Adam missed,
This must have made him sore,
When he and Mother Eve fell out
He couldn't slam the door.
—*Birmingham Age-Herald.*

Whatever troubles Adam had,
And he had some, I 'spose,
He never sat behind a hat
At moving picture shows.
—*Houston Post.*

Whatever troubles Adam had
He always had a chance,
For sure he never had to fear
That Eve would wear the pants.
—*New Orleans Item.*

Whatever troubles Adam had
He didn't have to shiver
Out upon a mountain road
Patching tires for a Flivver.
—*La Jolla, Calif., Journal.*

Whatever troubles Adam had
I'll bet one made him fleet-O—
Not having any clothes, you see,
He had to dodge the spry mosquito.
—*Ex.*

A BOVINE HOARDER

"It doesn't seem right," said the man with worn-out shoes.

"What doesn't seem right?"

"That a mere cow can afford to wear all that leather."—*Washington Star.*

A WELCOME WORD

Heck—"I suppose you always let your wife have the last word."

Peck—"Yes, and I'm tickled to death when she gets to it."—*Boston Transcript.*

Isaac Bloomstein had a toothache. A friend recommended a certain dentist, so Isaac went to his office; but on the door he read: "First visit, $5.00. Subsequent visits, $2.00." This was pretty tough for Isaac. Then, after a moment's very hard thought he opened the door and walked in with a chirrupy—

"Good-morning, doctor! I'm here again."

HOSPITALITY

"Will you allow me to sleep in the ten-acre lot back of the house?" pleaded the tramp who had been refused shelter in the barn.

"Certainly," responded the kind-hearted woman, "and here are a couple of matches, in case you should feel chilled before morning,"

HOW IT'S DONE IN BOSTON

Girl (as she entered parlor)—"It's so long since you called on me that I was beginning to think you were forgetting me."

Young Man—"I am for getting you; that's why I've called. Can I have you?"—*Boston Transcript.*

Mother was teaching little Barbara to recite a hymn. "Now say this after me, dearie," she began: "Satan trembles when he sees the weakest saint upon his knees."

The child repeated it slowly. Then asked:

"But why does the weakest saint sit on Satan's knees, mummie?"

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: "He, my son, is a convert!"—*Ex.*

SHAKESPEARE UP TO DATE

An American lady at Stratford-on-Avon showed even more than the usual American fervor for everything Shakespearean she came across. She had not recovered when she reached the railway station, for she remarked to a friend as they walked on the platform:

"To think that it was from this very platform the immortal bard would depart whenever he journeyed to town!"—*Tit-Bits.*