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CANADA LUMBERMAN

Wood-Workers', Manufacturers' and Millers' Gazette

VOLUME XXIII.
NUMBER 11.

TORONTO, CANADA, NOVEMBER, 1903

TERMS, \$1.00 PER YEAR
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THE BEST FOR MAIN DRIVES
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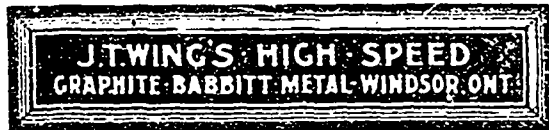
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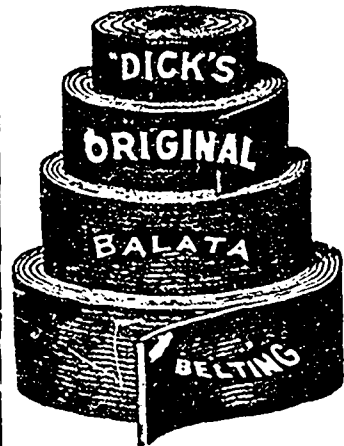
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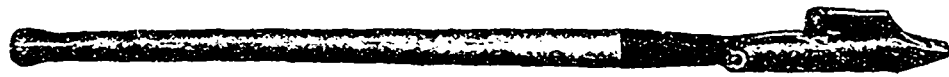
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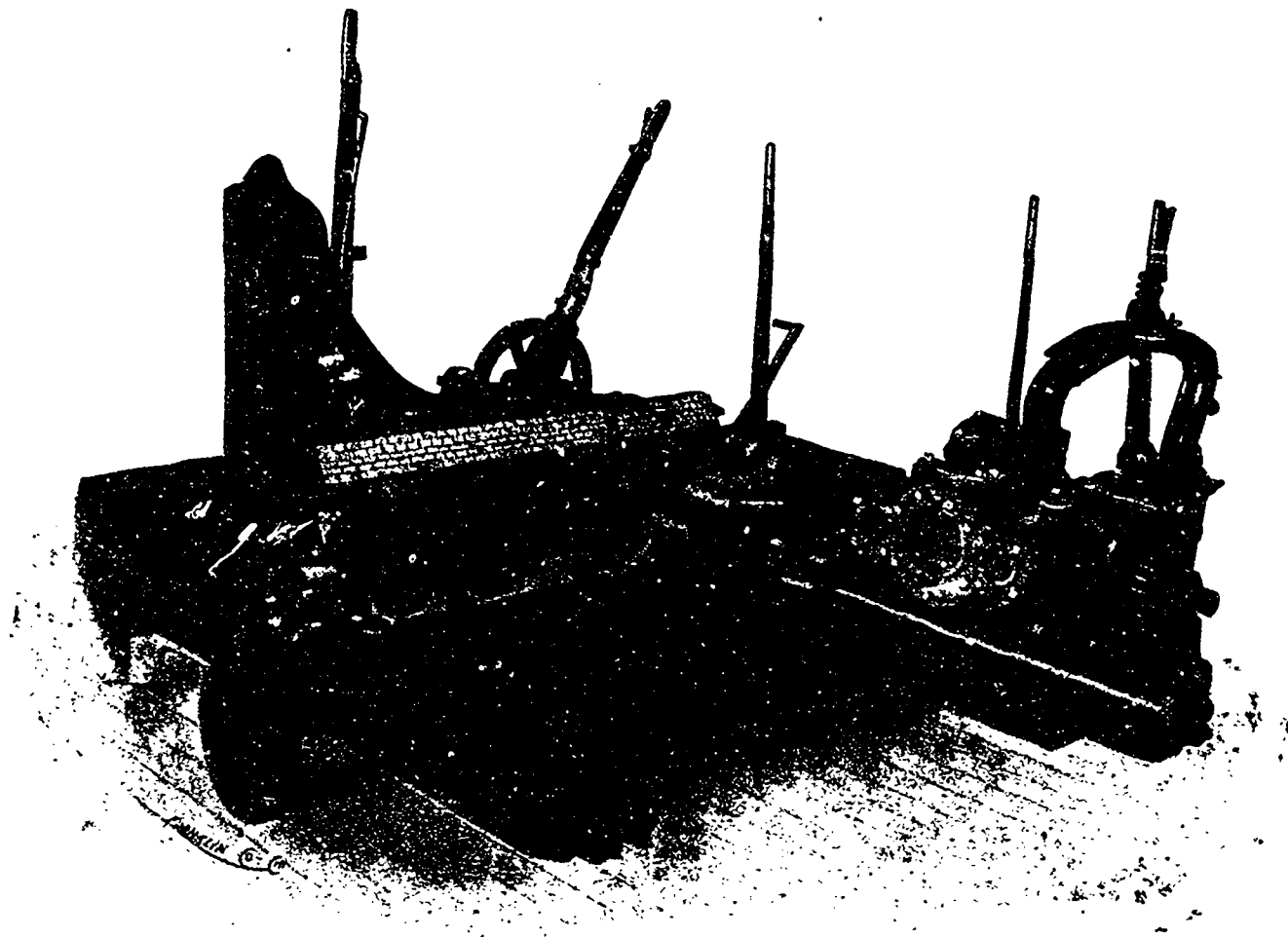
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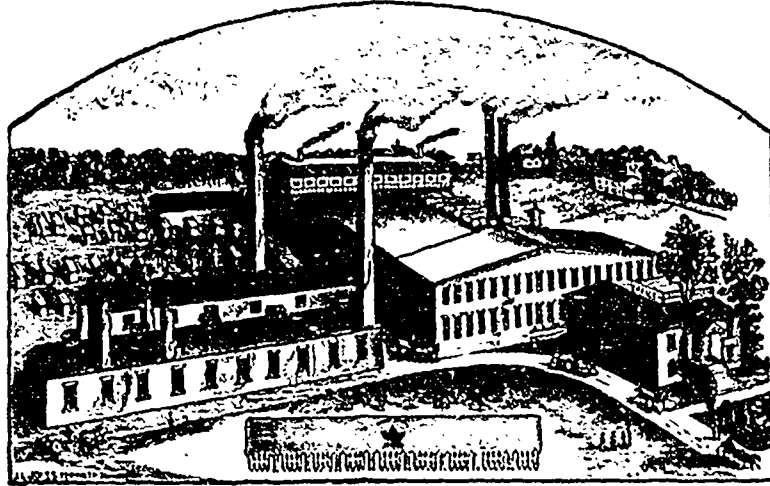
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This Saw Stands Without a Rival

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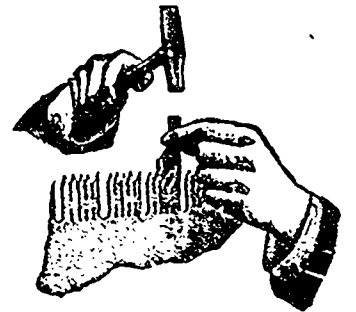
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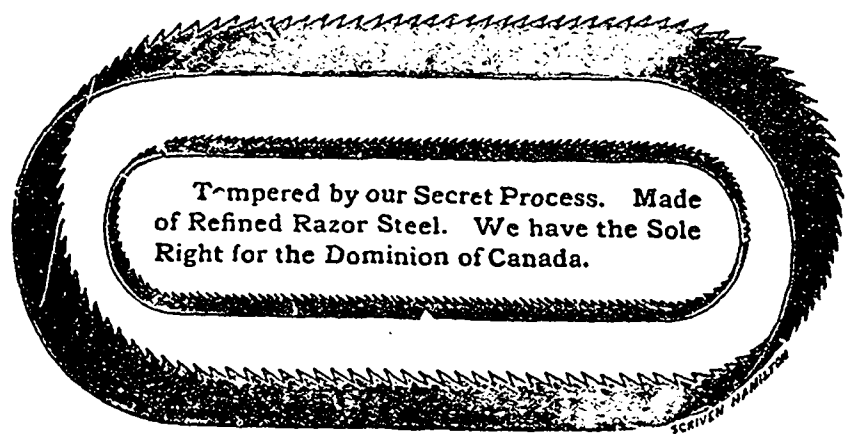
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- 4 1/2 x 5
- 5 x 7 1/2
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Adjustable Log Siding Machine

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This machine will slab opposite sides of a log in one operation at the rate of two thousand logs in 10 hours.



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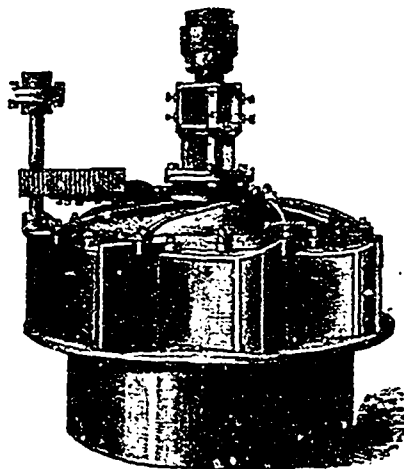
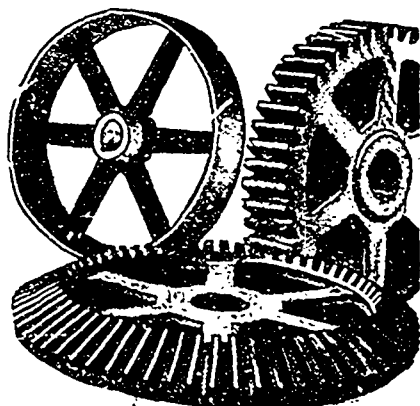
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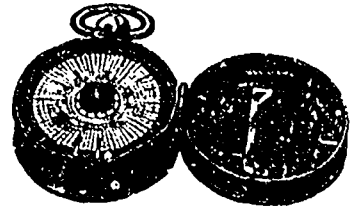
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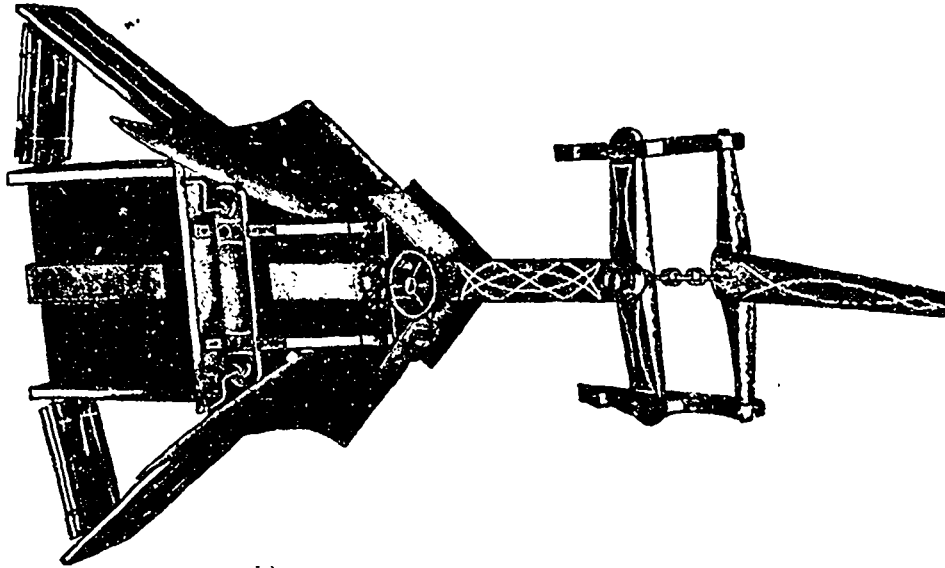
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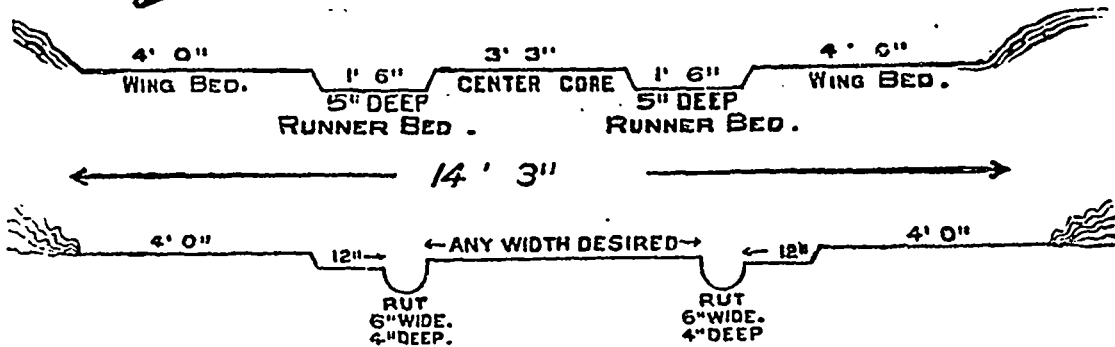


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For use in snow and ice roads. Saves sleighs and harness. Endorsed by all lumbermen who have used them. Cuts six inches wider than sleighs. Rolls snow clear of track. Cuts off knolls, fills up holes. Levels roads perfectly, prevents sleighs from slung. Cuts off dirt and manure, leaving it on bank. Ploughs up, rolls out and pushes clear 12 inches of loose snow each time machine passes over road.

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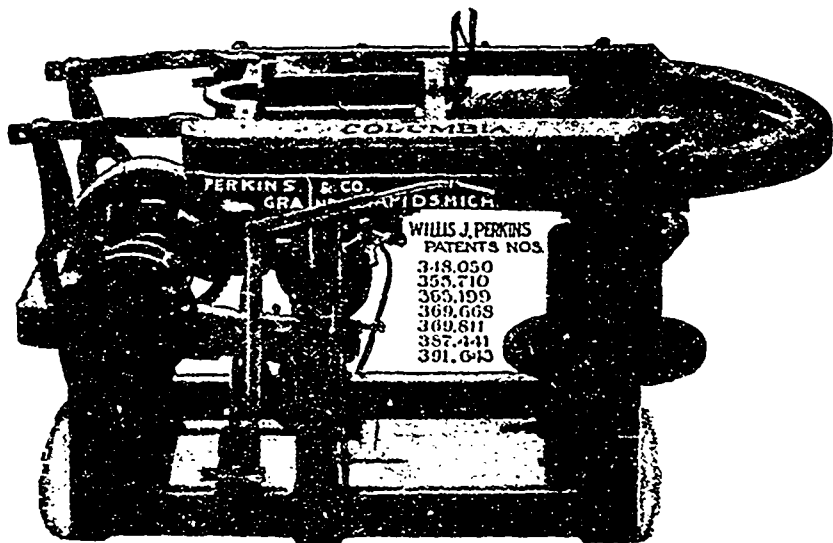
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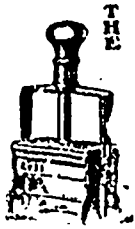
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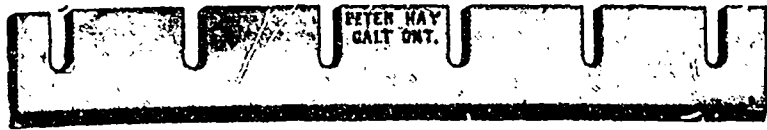
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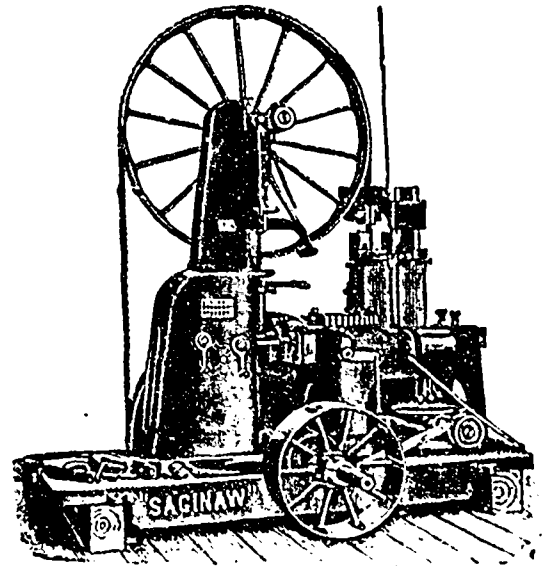
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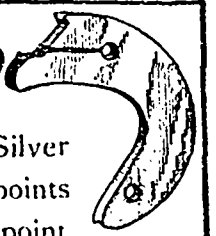
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The points of "SUPERIORITY" in Atkins Silver Steel Inserted Tooth Saws are as numerous as the points on a Porcupine's back and are as apparent. They point the way to better lumber, more satisfactory and economical production. Do you see the point?

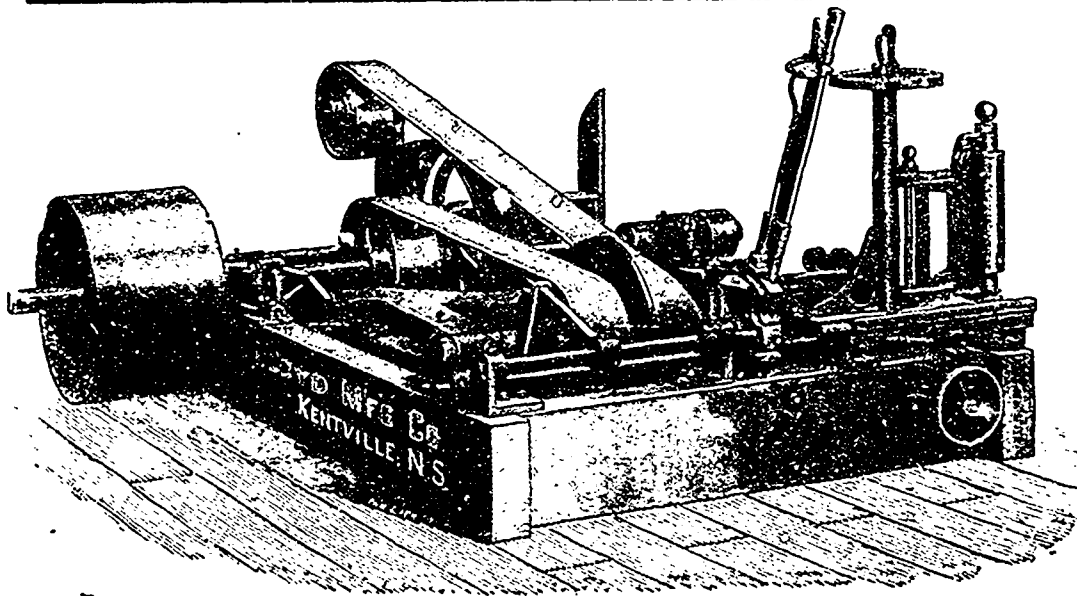
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EVERY BIT GROUND TO GAUGE
ACCURATELY
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MOST SKILLFUL WORKMANSHIP
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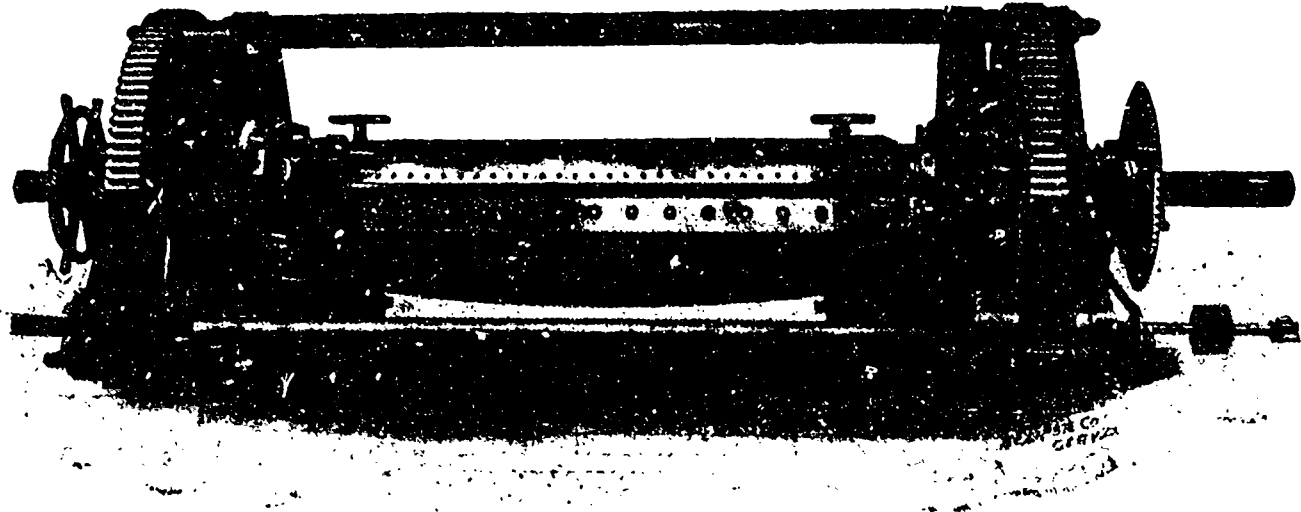
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The cost of operating and maintenance is reduced to a minimum.
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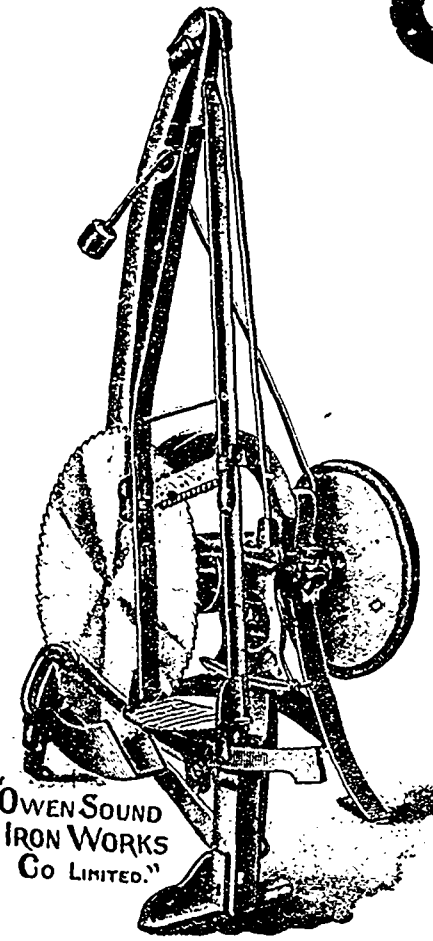
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Fitted with our Automatic Trip.

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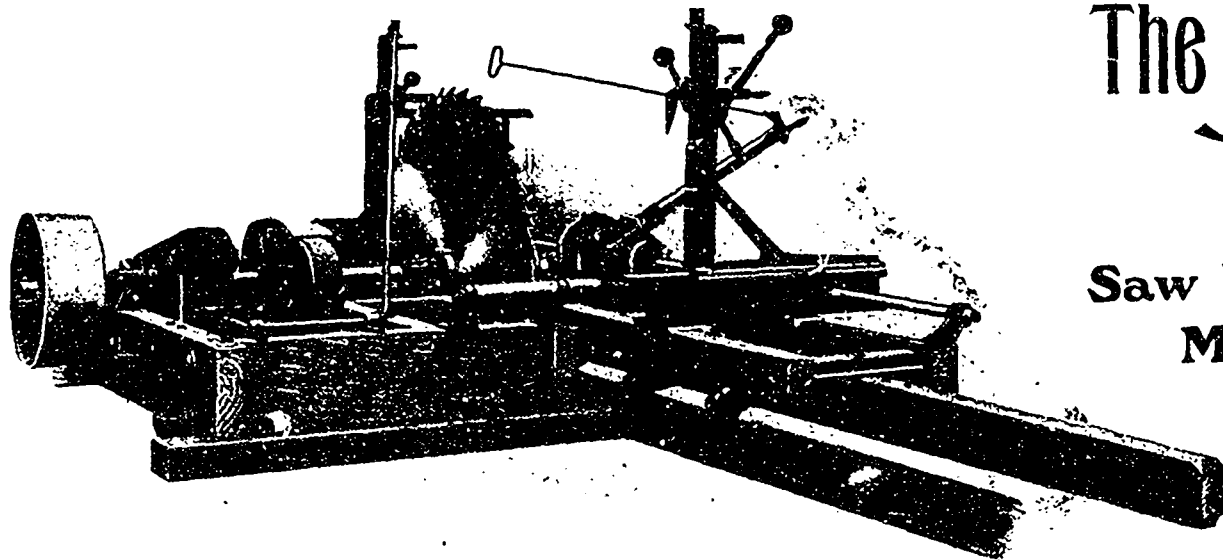


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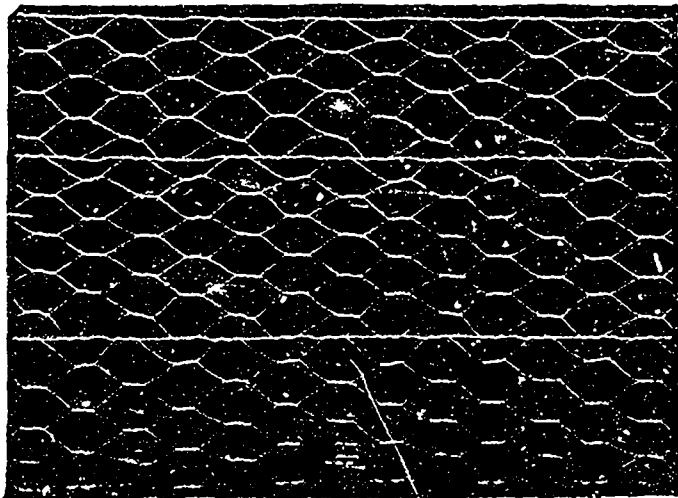
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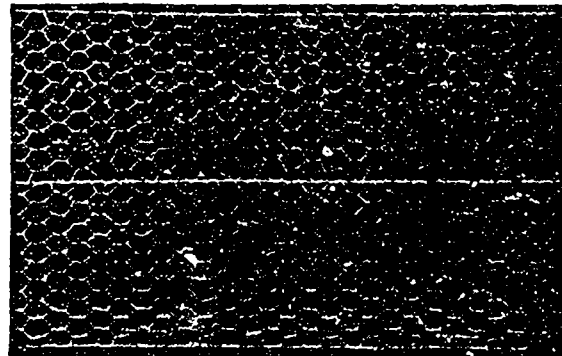
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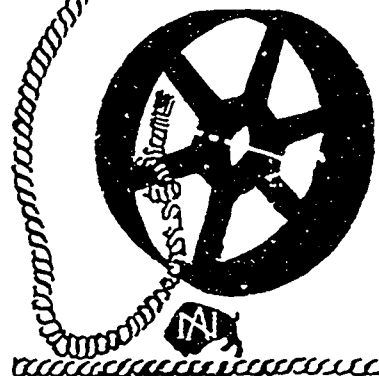
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THE CANADA LUMBERMAN

VOLUME XXIII
NUMBER 11

TORONTO, CANADA, NOVEMBER, 1903

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THE BURRILL LUMBER COMPANY.

The Burrill Lumber Company, of Burrill Siding, Que., have recently completed a new saw mill at Three Rivers, which is shown in the accompanying illustration. It is modern in every respect and capable of producing lumber at the minimum of cost.

The mill is situated on the east side of the St. Maurice river, in the parish of Cap Madeleine, and about one mile from the line of the Canadian Pacific Railway, to which a siding has been built. As shown in the picture, the land across the water is an island in the middle of the river, so that their booms and logs are well protected against freshets. Canal boats can come up alongside the mill, a fact, any boat not drawing over 10 feet of water. The company are in a position to ship by rail or boat.

The power equipment includes two five foot tubular boilers 12 feet long set upon Dutch ovens. These ovens have given the best satisfaction, the company having equipped six mills in a similar manner. They claim that there is no better furnace, when properly built, for burning sawdust and refuse. The engine is 18 inches in diameter with a 42 inch stroke, the resaw being driven by a separate engine 10x12 inch.

The mill is a circular, with steam feed and a No. 3 William Hamilton Manufacturing Company carriage, the capacity being from 35,000 to 50,000 feet per ten hours, according to quality of logs. There is a gang edger with one stationary and two moveable saws, moved by guides and with locked stops, a Duncan resawing machine for slabs to be butted, and four saw slashers. It is the intention to install a couple of shingle mills and a planing and finishing outfit for lumber, as well as a cutting-up rig for pulp wood.

The log supply for the mill is obtained from limits located along the St. Maurice and Shawinigan rivers. The head office of the company is at Burrill Siding, Mr. Vivian Burrill being manager and secretary.

The business of the Stewart Machinery Company at Winnipeg, Man., has been purchased by McGregor, Gourley & Company, of Gal.

J. J. McGill, A. V. Roy, Gustave Gravel and Magloire Huberdeau have organized the Corona Rubber Company, Limited, to manufacture all goods into the composition of which India rubber or gutta percha enters. The headquarters will be Montreal and the capital stock is \$100,000.

A WIRE ROPEWAY IN THE ANAIMALAI HILLS.

By HORACE H. GASS.

The utility of wire ropeways for transport is, perhaps, nowhere better exemplified than in countries possessing valuable products which are locked up for want of capital and enterprise to establish suitable lines for export over rough and inaccessible territory.

In India, for example, there are vast forests in mighty ranges of mountains, far removed from lines of railway and the road systems of the lowlands, containing valuable timber trees, many of which are little known at present, but which, with cheaper means of extraction, will in course of time, as the reliable woods become more difficult to obtain, find a ready sale in the



SAW MILL OF THE BURRILL LUMBER COMPANY AT BURRILL SIDING, QUE.

home markets for all purposes for which hardwoods are required.

The vast importance of these forests cannot be overstated, and the Government of India devotes close attention to their preservation, maintenance, and improvement, at the same time not overlooking their commercial possibilities.

The Anaimalais (elephant mountains) of Southern India are an important centre of supply—the forests in this region, though much overworked in the past, still containing a large supply of exploitable wood of valuable species, the principal of which is teak. The climate being unhealthy, this range of hills is almost uninhabited by man, but is infested with wild animals. It is a long distance from the railway, and, though roads lead to the foot in various directions, there is only an indifferent car-track, with a very steep gradient leading up to the west of the outer slopes, and covering a distance of about $3\frac{1}{2}$ miles. It is here connected with a two-foot tramway line, which runs into the heart of the forest. The line is

worked by trolleys, drawn by bullocks. It has rendered good service in enabling larger logs to be extracted with an increased output of timber.

The ghaut road has always been a serious obstacle to work on a large scale, as the forests can only be worked during the rainy season, which extends from about the middle of June until the end of January, partly because of malaria, but principally for want of water. Torrential downpours make the road almost impassable at times by the havoc they cause, and it is so steep that it is not safe to metal it, or the draught bullocks descending the hill would obtain no foothold.

THE OLD METHOD.

Under the system at first employed in working these forests, the huge logs were dragged by elephants from the felling compartments to the side of the tramway, and transported on trolleys to the end of the line, from whence they were sent down the ghaut by bullock-cart into a large town about fifty miles distant, to be disposed of by auction sales. All this was costly; the sales were uncertain, and the rates low. To improve them it appeared to be desirable to place the timber on the market in a more saleable form for small purchasers, and to reduce the costs of extraction. The former has been effected by the establishment of a sawmill in

the forests, worked by water power, with a Pelton wheel, the timber being sawn into marketable size, and the latter, by setting up a wire ropeway or timber-run from the crest of the hills overlooking the plains, in order to dispense with the use of the ghaut road—the most costly section of the journey. The wire ropeway passes off from the lower end of the tramway line, and its lower extremity is close to the main road. The sawn wood is thus conveyed from the saw mill by the tramway direct to the wire ropeway, and in this way reaches the foot of the mountain.

DESCRIPTION OF NEW ROPEWAY.

This wire ropeway has been constructed under the orders of the Madras Government by the Forest Department. The principle is a simple one. A loaded carriage travels down a main fixed rope by gravitation, hauling up an empty carriage on the same rope—the two carriages meet in the centre and are there transferred by an arrangement described below.

The descending carriage is controlled by an endless thin hauling rope adjusted below the main rope, passing twice round a brake drum, and kept in check by a powerful brake strap, and a large deeply grooved wheel at the foot. Fig. 1 shows the brake drum from the front.

The thin hauling rope is clipped on to the two carriages on the right hand side, looking in the direction in which each is travelling.

The ropeway between the terminals is 6,318 ft. long, and the length of line actually traversed by the carriages, 5,284 ft.

It became necessary to advance the starting platform sufficiently to bring the central or transfer platform on to a ridge within easy reach of the rope. The total fall from terminal to terminal is 1,031.58 ft.; that from the upper terminal to the starting platform, 109.50 ft.; from the starting platform to transfer staging, 488.70 ft.; from the transfer station to the lower terminal, 433.38 ft. The rope crosses two main valleys and a number of ravines, the ground being much broken up and rocky in parts.

The rope is supported in eight places up to the starting platform, and in twenty-three between it and the foot. The supports in the former consist of wooden grooved saddles resting on crossbars, and in the latter of hangers and cast iron saddles.

There are six main spans of 554, 1,675, 510, 600, 355, and 712 feet respectively. The fixed rope is $2\frac{3}{8}$ in. in circumference, with six strands and a hempen; each strand contains seven wires of best steel.

The thin, or hauling, wire rope is $\frac{7}{8}$ in. in circumference, with five strands and a hemp core, and each strand contains four wires. This rope can be seen in fig. 1. The brake drum is 4 ft. inside diameter.

The brake strap is adjusted to the upper half of the drum, and acted on by a handle at the side. The lower part of the drum is housed with hard-wood, and hollowed out to prevent the folds of the rope overlapping. The axles of the drums run easily in deep substantial bearings. The large grooved wheel at the foot is also 4 ft. in diameter, but calls for no special description.

The hanging supports consist of two curved wrought iron plates, 3 ft. long, forming a circular opening at the top 8 in. in diameter, and connected at the bottom by a grooved saddle, in which the rope rests, sloped at the ends to prevent injury to the rope.

The saddles are of cast iron, of similar make, and are used in a few places, resting upon wooden brackets and supports projecting from them conveniently near the line.

THE CARRIAGE.

The carriage consists of two curved wrought iron hangers, connected together by pieces of timber with grooved runners, 9 in. in diameter to the edges, with $1\frac{1}{2}$ in. grooves—the carriages were first used with two wheels, as shown in fig. 2, but experience has shown that it is best to use four wheels.

Four patent clips are attached to each carriage, two to the bottom side of each connecting block. It has been found more convenient to have them attached to the bottom than to

the sides. Each clip is provided with a clamping screw.

The nearer the wheels are brought together the more easily the carriages will travel. When they are placed some distance apart they do not travel in the same plane, and set up much friction on the rope.

The plant was designed and constructed by Messrs. Bullivant & Co., Ltd., of 72 Mark Lane, and the materials are of the best description, a fact that will be fully recognized when it is stated that until lately the longest span was 2,212 ft. horizontal distance, and that loads weighing about 1,400 lbs., exclusive of the weight of the carriage (about 400 lbs.), have been sent down in large numbers quite safely.

CONSTRUCTION OF THE LINE.

The first step towards the installation of the wire ropeway was the selection of the most convenient line, and laying it out and clearing it—a by no means easy matter, as it lay through heavy forest. The supports were then set up.

The anchorages were next prepared, and as there was no natural rock in the right place, large boulders, each weighing about 15 tons,

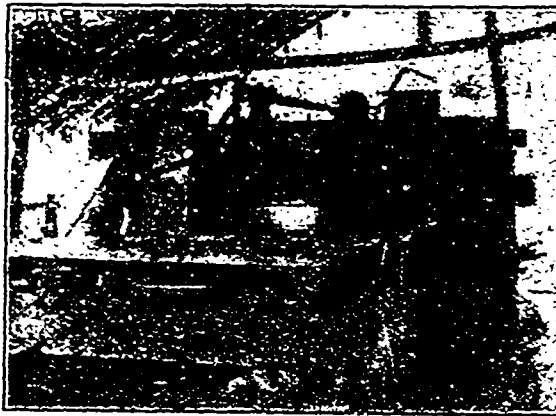


FIG. 1.—THE BRAKE DRUM.

were dragged by elephants, and dropped into position at each end of the line. Holes had then to be drilled in the boulders for the legs of the iron anchor bars—4 ft. in length and 3 in. thick. Two massive cables—24 in. long, for the upper anchorage, and 12 ft. for the lower, were then attached to the anchor bars, and the latter were firmly fixed in the rocks.

The unreeling of the rope followed, commencing, of course, from the bottom of the line. This was received from Messrs. Bullivant and Co. on a large iron reel or bobbin, the total weight of the rope and reel being about 4 tons. An axle was passed through a hole in the centre, and the reel was swung clear of the ground.

It was first intended to carry the rope up the hill on the shoulders of the coolies, placed at intervals of 30 feet, but the broken nature of the ground made this difficult to carry out, and eventually elephants were attached to the end of the rope to haul it up. The friction caused by the rope dragging along the ground was, however, so great that at the end of the journey no less than nine elephants were used in addition to a large body of coolies.

Sliced into the end of the rope was a massive thimble, or eyelet. This was attached to the chain, and the rope was fixed to its upper

anchorage. It was then raised on to the supports and connected on to the anchorage cable at the lower end, and hauled in by means of a small winch, provided with the necessary two and three sheave blocks and best flexible rope. Sufficient tension was obtained to give a dip in each span of about 1 in 40.

The unreeling of the hauling rope followed, and the two ends were joined. The rope is, of course, adjusted below the fixed rope, and is drawn reasonably tight. The up and down sides are arranged 18 in. apart, corresponding with the distance between the inner edges of the clips on the carriage, and kept in that position by means of fixed guide wheels, which lead the rope to the drum (shown in fig. 1) and large wheel at foot. It was a matter of some difficulty to overcome the friction set up on this rope, which of course checked the loads. The design of rollers had to be changed several times, the last and most successful being large grooved pulleys, about 18 in. in diameter, running easily on the bearings, and provided with wooden guides placed above them to lead the thin rope into the grooves.

The supports for the hangers and saddles vary in height from 8 ft. to 75 ft., and consist, as a rule, of two uprights and a stout 8 in. crossbar. In a few instances standing trees have been utilized as uprights.

The best positions for the supports have been ascertained by experience alone, various changes being necessary before a constant fall was secured. The very long span was necessitated by the configuration of the ground, and as the rope is about 200 feet above the ground in the middle of this span, it will not be possible to break it.

THE PLATFORMS.

There are four platforms. (1) The brake platform, 22 feet by 15 feet, is placed 30 feet to the rear of the starting platform. (2) The starting platform, 19 feet by 20 feet (fig. 2) is provided with tram rails, at the end of which is a weighing machine to ensure constant weight in the loads. (3) The central, or transfer platform is 40 feet by 8 feet, and 4 feet high, and placed at a distance of 10 feet from the line of the fixed rope. A trolley runs on this platform provided with a long wooden lever supported by a chain. A crossbar is attached to the end of this lever, corresponding in length with that of the carriage, and fitted with two upright iron plates to pass in between the wheels and the hangers of the carriage. The height of this platform is so arranged as to bring the lever when horizontal to nearly the level of the carriage. (4) The lower platform is 28 feet by 8 feet, and 5 feet high, and requires no explanation. The height is conveniently arranged with reference to that of the fixed rope.

METHODS OF WORKING.

The method of working the rope is as follows: The weight of the load has hitherto not been allowed to exceed that of about 22 cwt., or about 1,400 lbs. of timber, and, though it is possible to send down rough logs of that size, the work has been confined to the transport of railway sleepers and sawn scantling of different sizes.

Fig. 3 shows a loaded carriage passing a hanger, and that the construction of hangers, of supports, and carriage, enables this to be done with safety and ease.

Fig. 2 shows a load of seven railway sleepers attached to the carriage, and the next load ready in the trolley. In that picture the hauling rope is shown clipped up on both sides of

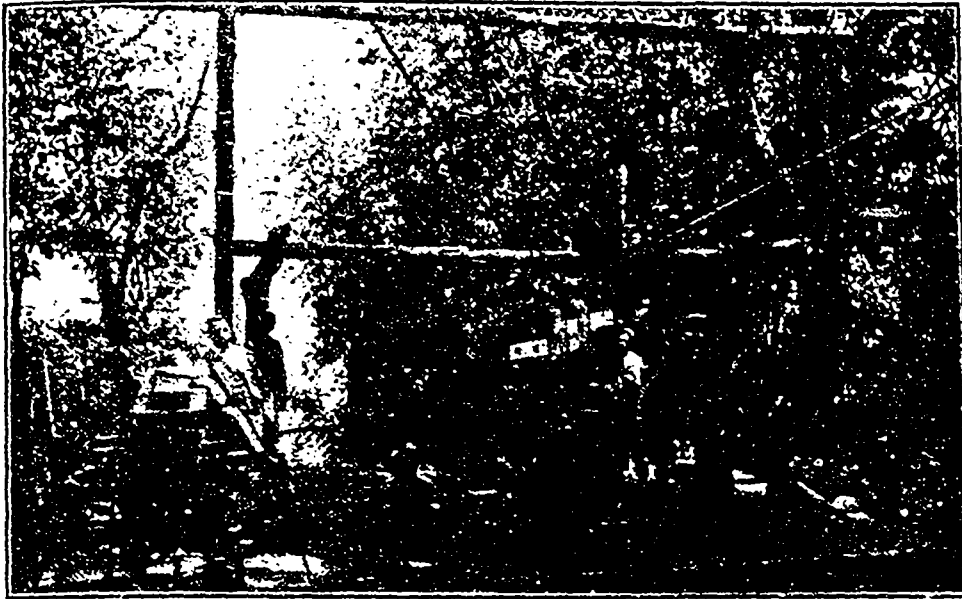


FIG. 2.—METHOD OF LOADING AND HAULING

the carriage, which anchors it firmly. As soon as it is ascertained that all is ready below, that is to say, that the previous load has been removed and the thin rope clipped on to the empty carriage ready for the ascent, the hauling rope is detached from the left hand side of the loaded carriage and lowered on to the rollers below, and the carriage is started, descending at a high speed, some twenty miles an hour, to the central station, and kept under control by the brake drum. The two carriages meet here, and are stopped at a distance of about ten feet or more, according to the length of the scantlings. The trolley and lever are then brought opposite to the empty carriage, and the crossbar engages it, the outer end of the lever is pressed down to raise the grooved wheels off the rope and then pushed forward for a few inches to clear the rope. The lever is then raised at the end, and the empty carriage with the hauling rope attached to it, falls downward slowly, till it is low enough to clear the loaded carriage. The latter is then advanced slowly and the trolley with the empty carriage comes forward on the rail a corresponding distance, and by means of a lever the carriage is raised and replaced in the rope.

The slow forward movement of the loaded carriage is obtained by means of a brake drum, which is now provided with gearing, and the drum is slowly revolved by hand. The carriages are again started, and the arrival of the empty carriage at the starting platform indicates that the load has reached the foot.

The supporting chains are provided with a hook and ring always placed on the outside, so that they can be released at once, and the load becomes detached. The hauling rope is then removed from the clips on the right-hand side, and the up rope is placed on those of the

opposite side of the carriage, the same procedure being followed at the starting platform, and the new load is immediately attached, after taking the precaution referred to above to prevent the carriage starting prematurely.

The line is kept clear of growth, and the starting platform is so arranged that the central platform is easily visible from it. Flag

signalling is found to be the quickest, easiest and safest method, and the brakeman is kept under control by a look-out man on the platform.

The method of transferring may appear to be somewhat primitive, involving the use of superfluous manual labor, but, after careful consideration, it is found to be the best means of working, and is preferable to an automatic

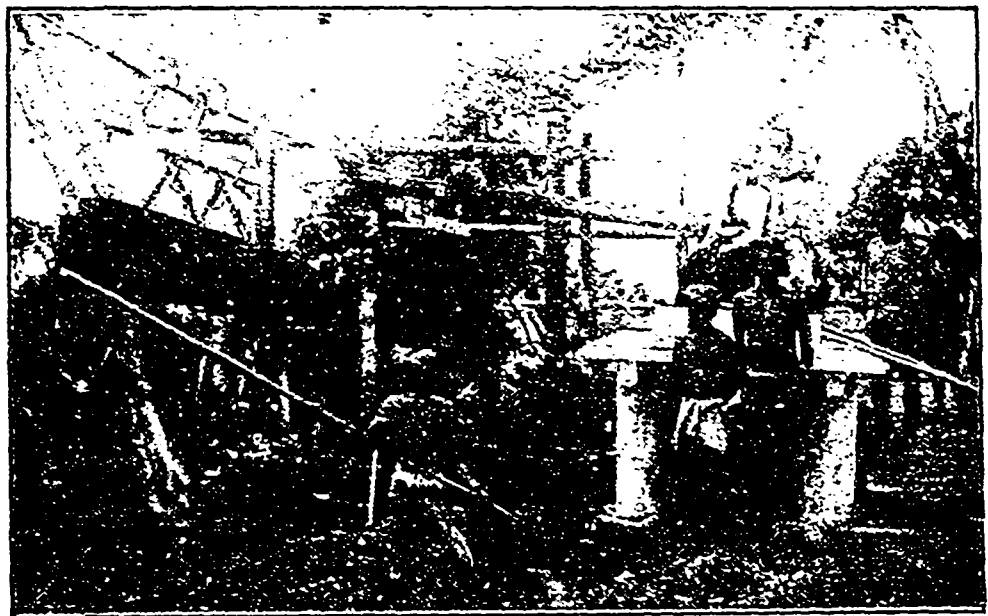


FIG. 3.—A LOADED CARRIAGE PASSING A HANGER.

arrangement, which would be certain to come to grief continually and cause both carriages to fall off the rope. The lever arrangement works well and expeditiously.

THE OUTPUT.

The loads can be run down at the rate of about two to the hour, and the saving is very considerable, so that if it were possible to work throughout the year with sufficient ma-

terial, this ropeway would show a handsome profit. Its output in work is far in excess of that of the sawmill, and it can be worked in all weathers.

The carriage of 20 cwt. of timber down the gaunt section of the road, inclusive of loading, unloading, and returning, would occupy about two days, against the half hour of the wire ropeway. Once at the foot of the hill, there is little difficulty in moving on the material, as bullock carts can always be obtained in the plains. It is the hill portion of the journey into the forest which the cartmen dread and will not undertake in the bad weather — Page's Magazine.

THINGS WE MAY LEARN.

That the horizontal type of the log band saw has advantages over its vertical rival is indisputable, the chief of these being: (1) The man required for setting the log up to the saw for each cut with the latter machine is entirely dispensed with in the case of the former; (2) the boards or slitches, when cut off by the horizontal saw, remain on the log after the cut, whereas when cutting large slitches from the log with the vertical band considerable labor is required to support the piece when the saw is finishing the cut; (3) the principle on which the horizontal saw is constructed insures more accurate work being accomplished than is possible with the vertical machine, owing to the increased liability of the log tilting from side to side in the case of the latter machine. As with many other things the best and most practicable principles in sawing machinery will ultimately assert themselves, independent of all criticism. So time alone will establish and demonstrate to us what are really the most rapid and superior systems of converting timber—at least so far as the vertical and horizon-

tal log band saws are concerned. I know that there are more machines of the vertical type in daily use than the other, yet I venture to predict that the several superior merits of the horizontal saw will yet be more realized and recognized even in America, which place may be termed the home of the vertical principle; and, as our friends have imitated and improved many European inventions in the past, they may yet profit by the adoption of our methods and sawing machinery. — Timber News.

THE Canada Lumberman

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THE CANADA LUMBERMAN is published in the interests of the lumber, wood-working and allied industries, being the only representative in Canada of these important interests. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special pains are taken to secure for publication in the WEEKLY LUMBERMAN the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations. Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, wood-working factories, pulp mills, etc., the CANADA LUMBERMAN is undoubtedly the cheapest and most profitable advertising medium. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which are inserted in a conspicuous position on front page of the Weekly Edition.

BRITISH VS. AMERICAN METHODS.

"We turn out thirty-five machines a day and sell in Great Britain ten thousand machines a year," remarked the representative of a large United States manufacturing concern the other day. When the writer began to catechise him with the object of learning what induced Britishers to pass by the home manufacturer in favor of the foreigner, he was told that it was not because of the advantage of cheapness, as the price asked for the machine made in the States was as high as that of the British made machine. The American manufacturers' advantage was said to principally lie in two things—freedom from everything in the form of red tape in his manner of doing business and greater perfection in shop methods in the direction of cheapening production. The American manufacturer has been driven by the high price of labor to devote much thought to means of accomplishing as much as possible by means of machinery, thereby reducing human instrumentality to a minimum. As a result it is claimed that cost of production has been so reduced as to far more than offset the advantage of cheaper labor enjoyed by the British manufacturer. The fact that in an American manufacturing establishment six weeks were spent on the drawings of a machine which sells at \$30, with the object of devising means whereby a flange might be placed on the end instead of on the side, thus enabling the parts to be put through without re-setting the planers, will serve to illustrate the care exercised in the drawing office. In this case no one will question the wisdom of the expenditure of \$150 to discover means of effecting a saving for all time in the manufacture of even a low priced machine, the production of which, however, runs into thousands.

CROWN TIMBER LAWS.

Two of our Provincial Governments are about to enact new laws to govern the disposal of Crown timber. Those proposed by the Hon. E. J. Davis, Commissioner of Crown Lands for Ontario, are of a revolutionary character, although for some time it has been evident that the conditions would sooner or later call for a change in the management of the timber lands.

The Commissioner points out that the timber lands that are suitable for agriculture must be cleared off and opened up for settlement. On such lands the present system of selling the timber by area will be continued, but a new policy will be adopted in respect to lands unsuitable for agriculture. It is proposed to sell the timber on these lands on the stump by public competition at so much per thousand feet, the trees to be cut to be above a certain diameter and to be selected by a Government official. When these trees are cut those of the younger growth will have a better opportunity to develop. In the Temagami reserve, set apart in 1901 and containing 1,400,000 acres, a portion of the timber has already matured, i.e., it has reached an age where it begins to deteriorate and get knotty. This will probably be the first timber to be disposed of under the new plan.

The proposed selling method will be modeled somewhat after that in vogue in Germany. It will involve more stringent regulations in regard to fire ranging and the burning of the debris, but any additional expense involved will be certain to be more than offset by the benefits to be derived in the direction of perpetuating the forest supply. It is also the intention that the Crown shall assume control of the areas which have been under license but have been abandoned after being denuded of the timber.

The Government of New Brunswick have not yet definitely decided upon their future policy in respect to the sale of timber lands, but have held several conferences with the lumbermen with the object of framing such regulations as will secure a return to the Government commensurate with the value of the timber and at the same time not interfere with the progress of the lumber industry. The Surveyor-General has decided upon one point, namely, to advance the stumpage dues to \$1.50 per thousand feet. It was proposed that the stumpage charge should be arranged on a sliding scale basis, the timber being undoubtedly worth more in some localities than in others, but this idea has apparently been abandoned as impracticable, and very wisely so. The question of tenure is one of very great importance, and strong arguments may be advanced in favor of long leases. The license would take greater care of the growing timber, would more carefully protect the timber from fire, and would exercise greater discretion in the cutting of trees, leaving the younger growth to become more valuable in after years. As against the granting of permanent or very long leases may be advanced the argument that it might interfere with the system of forest preservation which the Crown might desire to adopt.

AMBIGUITY OF LUMBER TERMS.

The tendency to-day in all branches of business is towards uniformity and standardization. The adoption of such methods as will facilitate the dealings of one with the other and limit the possibility of mistakes and misunderstanding is the object aimed at. In the lumber trade standardization is not unknown. The standard St. Petersburg deal is twelve feet long, eleven inches wide and one and one-half inches thick; the standard lath is four feet long and one and one-half inches wide; a log twelve feet long and 24 inches in diameter and containing 300 feet board measure is recognized as the standard. But when we consider the rules for grading lumber we must admit that such a thing as uniformity does not exist.

In this and the preceding issue will be found some expressions from lumbermen as to the meaning of certain lumber terms in common use. The disparity which is shown in the definitions given is sufficient to cause one to wonder that steps have not already been taken to remove the ambiguity which exists.

The opinions expressed would indicate that the term "mill run, culls out" means common and better, but in late years some manufacturers of hardwood lumber have adopted a grade of shipping culls and insisted on putting it into a specification of mill run, culls out, although the strict interpretation of the term would seem to exclude all culls whether shipping, mill or dead culls. This grade of shipping culls has been a bone of contention between sealer and buyer, the latter claiming that such a grade is not recognized by the trade at large and is but the creation of the manufacturer. Nevertheless, in the present condition of the hardwood lumber market, the buyer is bound to respect the ideas of the manufacturer, whether agreeable or otherwise.

There seems to be even less unanimity of opinion regarding the meaning of "mill run." In pine lumber it is taken to exclude mill culls, it being usually so specified in contracts, but with hardwoods there seems no recognized custom. Some lumbermen claim that a buyer would be compelled to take the entire product of the log even to dead culls or refuse; others that dead culls would be excluded; while others go so far as to exclude mill culls from the specification. When hardwood lumber was less valuable mill culls were only saleable by special agreement. That is not the case to-day—they are recognized as merchantable lumber, and doubtless the buyer would be expected to take them under a contract reading "mill run." In the absence of proper legalized rules the lumber manufacturer or dealer has been able to change his grade to suit the conditions.

Another question which arises in this connection is what percentage of better shall be included in an order for common and better. If the seller chose he might put in 99 per cent. of common and one per cent. of better and yet argue with reason that his grading was in conformity with the specification. Indeed, it has frequently happened that the better end of the log has been taken out for deals, leaving a very small percentage of No. 1 and 2 cuts, and the buyer purchasing the lumber as common

and better has really not received that to which he was entitled.

Let us look at the explicit manner in which the rules of the National Hardwood Lumbermen's Association, now adopted quite generally in the United States, are framed. The word "culls" has wisely been eliminated from the rules and the terms No. 2 common and No. 3 common substituted therefor. Then the inspection reads: "Log run means the full run of the log with No. 3 common out. Common and better means the full run of the log with No. 2 and No. 3 common out. Common and better must contain at least 50 per cent. of firsts and seconds." Thus it will be seen that the possibility of misunderstanding is reduced to the minimum. A buyer placing his order with a United States manufacturer for common and better knows that he will receive at least 50 per cent. of firsts and seconds.

The lack of proper inspection rules is doing more injury to the Canadian lumber trade than may generally be supposed. Even Canadian dealers are placing orders for hardwood lumber with United States firms on account of the greater satisfaction found in doing business there, due to the better inspection methods. It is earnestly hoped that at an early date the lumber trade will get together and decide upon a reorganization of the inspection rules and the adoption as far as possible of standard grades.

EDITORIAL NOTES.

The unfortunate circumstances at the Soo, bad as they were, are being multiplied by persons and journals unfriendly to Canada. They seemingly would like to convey the impression that the entire future of Canada is wrapped up in and dependent upon the industries established by Mr. Clergue. The failure of an American to carry to success certain enterprises burdened by over-capitalization through the scheming of American financiers does not affect either the credit of Canada or the other less pretentious but more stable industries; nor does it prove that we cannot compete with other countries in the manufacture of pulp. The fact is that the pulp mills were about the only revenue producing concern of all the industries, and they were expected to make profit enough to pay interest on all the capital. As a separate proposition they would doubtless have made money.

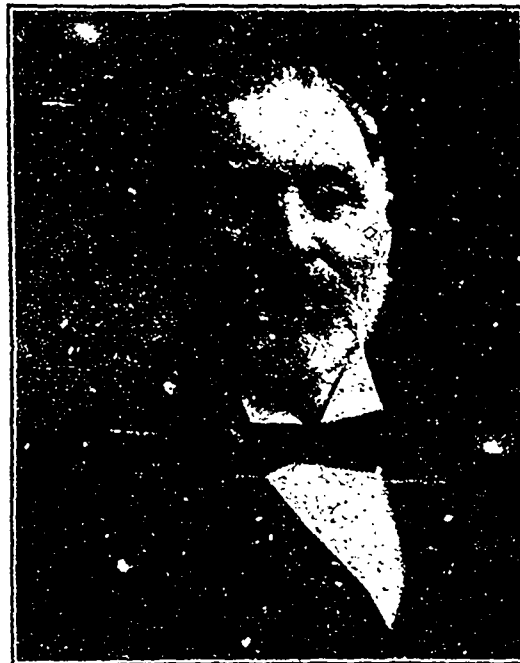
Apropos of our remarks in our weekly edition on the grading of Canadian timber for export, we have been shown a communication forwarded to the Lumbermen's Association of Ontario by representatives of the British Timber Trades Federation. This communication defines clearly the defects in the manufacture and grading of Canadian lumber. It states that there is a great disparity between the quality of Canadian lumber shipped to England and the Swedish or Russian product. An illustration is given showing the result of one shipment of first quality Canadian pine made to England this year. This shipment contained 306 pieces of certain sizes more than were specified, while there was a shortage of 315 pieces in the other sizes. The custom of

shipping deals of odd sizes is also referred to, and it is pointed out that a customer ordering a 9-inch deal probably does not want a 9¼-inch deal, and that the half inch would be entirely waste. It is suggested that the policy of shipping red pine deals unassorted be discontinued, and that they be graded firsts, seconds and thirds. Stress is laid on the deterioration in the grading of pine deals. It may be said that any change in this respect is not confined to the British deal trade, as during the past few years, when lumber has been readily saleable, the grading generally has been lowered. When lumber becomes more difficult to sell it is quite likely that the standard of the grades will be raised accordingly.

THE LATE HENRY CARGILL, M.P.

*It is not in mortals to command success;
We will do more—deserve it*

Suddenly at Ottawa on October 1st, death claimed as its victim Mr. Henry Cargill, Conservative member for East Bruce in the Dom-



THE LATE HENRY CARGILL, M.P.

inion Parliament. He participated in a discussion early in the afternoon, and shortly afterwards complained of illness. Medical attendance was promptly obtained, but within a few hours he passed away.

In his death Canada has lost one of her most enterprising and broad-minded citizens, and it may be truly said that he died in harness. As a lumberman and farmer he attained remarkable success—a success which will stand as an object lesson to the young men of Canada, won as it was by the application of energy, pluck and liberality. For all his enterprises were designed not only that he might profit thereby himself, but that they might be of benefit to the community in which he lived. He was a man of most amiable disposition, and was held in high system by all his acquaintances.

Mr. Cargill was a son of the late David Cargill, who in 1824 came to Canada from County Antrim, Ireland, and settled in Halton county, Ontario. The subject of this sketch was born in Nassagaweya in 1838. He was educated at

local schools and at Queen's University, Kingston, and the devotion of a very large proportion of his time to business and politics failed to extinguish in him a love of books and of rational conversation.

Mr. Cargill was brought up to the lumbering business in his native place while it afforded opportunities for carrying on that industry, but nearly a quarter of a century ago he bought up the greater part of what is known as the "Greenock swamp," in the county of Bruce. It was originally a flooded area of some 30,000 acres, partly traversed but not drained by the Mud River, a tributary of the Saugeen. When the great land sale of 1854 laid the foundation of settlement in Bruce this area was left unalotted for want of applicants, and it was subsequently sold for what it would fetch under competition, the auctioneer of the occasion being the late J. C. Miller, of Parry Sound, then a clerk in the Crown Lands Department. As the lots were purchased by many different persons, while concentrated management alone would make successful exploitation possible, the swamp lay dormant for years, until in 1879 and subsequent years Mr. Cargill, seeing its potentiality, by degrees acquired the complete ownership of about two-thirds of the whole area. He erected a sawmill and other woodworking plant farther down the river, where the village of Cargill soon grew up on the Grand Trunk Railway; made roads and cut drainage canals through the swamp; carefully culled the timber for manufacturing purposes; and sold for farming purposes the lots thus redeemed from submergence.

For many years, in association with his son, and under the name of Henry Cargill & Son, he conducted saw and flour mills at Cargill, it being his aim to so manage his timber property as to perpetuate the supply.

Partly by the profits of business, but partly also by the steady appreciation of his continuously developing estate, he became a very wealthy man, but no one thought of envying him the possession of a patrimony so clearly the result of his own wisely-directed enterprise and so liberally and sensibly administered.

One of Mr. Cargill's recreations was stock-farming. Like many other men of quiet disposition and exceptional intelligence, he was very fond of thoroughbred horses and cattle, and if the demands of public life had left him the necessary leisure he would probably have risen to eminence among Ontario stock breeders.

As the unrenewable supply of timber on his swamp lands approached exhaustion he endeavored to develop other industries to keep up, if not increase, the prosperity of the little community of which he was the founder and the village where he continued to live and which is known by his name.

Mr. Cargill was a Presbyterian in religion and a Conservative in politics. In 1887 he was elected to the House of Commons for East Bruce, a constituency he continued to represent up to the time of his death. In 1864 he married Miss Margaret Davidson, who, together with one son, Mr. Wellington Cargill, and two daughters, survive him.

The United States Bureau of Forestry has begun the collection of information as to the suitability of balsam fir for pulp making.

VIEWES AND INTERVIEWS

In British Columbia the life of a pile is not more than two years, so great is the destruction caused by the toredo. Pile hammers may be seen almost at any time at work in the harbors replacing the destroyed timbers. This is not a difficult undertaking in the case of wharves, piers, etc., but to insert new piles under buildings which have been built out into a harbor is another proposition. One of the largest saw mills in the province is so constructed as to be affected by the work of the toredo, and I am told that the manager proposes to overcome the difficulty by surrounding the piles and other timber work with sawdust. It is known that the acid in red cedar sawdust is destructive of the toredo, and it is expected that it will prove sufficiently so to prevent any injurious results to the timber. The experiment is being watched with interest.

* * *

John McDonald is well known to the lumber fraternity, having been for some time with the Robert Thompson Company, of Hamilton. Latterly, as many of our readers are aware, he has been associated with Meaney & Company, of Toronto. Mr. McDonald is a student of lumber conditions and can make some interesting comparisons. As touching the advance in the value of lumber, he instanced the fact that only five years ago he had purchased first and second elm lumber for the price that is being paid to-day for mill culls. This represents a wonderful appreciation in lumber values. For some years previous to that time mill culls were almost unsaleable, while to-day they are worth from \$8 to \$12 at the mill. The inspection rules adopted by the Lumber Section of the Toronto Board of Trade in 1890 read: "Culls include all widths, lengths and sizes, except such stock as will not work one-half without waste. Other than the above are classed as mill culls and have no value in this market." The day when mill culls have no value is hardly likely to return.

* * *

A prominent Toronto wholesaler, while commenting upon the quantity of United States lumber imported into Canada, made some pertinent remarks as to the cause of such importation. In his opinion it is due in part to the unsatisfactory conditions existing in the Canadian trade in respect to inspection, there being no uniform rules for guidance. "We are buying cypress, oak and Southern pine in place of Canadian lumber," he said, "for the reason that there is more satisfaction in handling this stock. If, for instance, we order a car-load of first and second clear finish, we know exactly what we will get. Many of our customers buy the stock without inspecting it, having become accustomed to rely upon the inspection. In this country the mill man may hold one view, the dealer another and perhaps the customer another, so that disputes are constantly arising as to grades." In refusing to get together and adopt standard inspection rules the lumbermen of Canada are standing in their own light and doing much to encourage the importation of

foreign lumber. They are crying out against such importation, but neglect to take one of the essential steps to limit the competition.

* * *

How best to handle the cargo lumber trade of the Pacific Coast was a problem which until recently seemed difficult to solve. Various schemes were submitted, only to be turned down as unworkable. One or two of a rational character and apparently possessing more merit than the others, were given a trial, but in practise they did not work out satisfactorily. To Mr. R. H. Alexander, of the British Columbia Mills, Timber & Trading Company, of Vancouver, is due the honor of devising a scheme which has been accepted by the trade generally, and which has been in operation for the past year or two. This honor is no mean glory, for be it known that many brainy men of California, Washington and British Columbia had racked their mental powers in the hope of hitting upon some plan which would meet the conditions. Mr. Alexander's plan was criticized, for no undertaking of such magnitude and involving so many diversified interests could fail to possess some points of weakness, but it has proved by long odds the most practical of any scheme thus far submitted; and now a plan modelled after it is being inaugurated to handle the shingle output of British Columbia. The able services of Mr. Alexander have been recognized by the Lumbermen's Association by the presentation to him of a gold watch, said by one who has seen it to be a perfect gem.

* * *

A story is told about a Renfrew lumberman, who has been dead some years. He was well-to-do, but anyone who judged him by his clothes would be much disappointed. He was getting on in years and wealth and the infirmities of age began to tell upon him. He was advised to see a famous specialist in Montreal and visited the metropolis for the purpose. The specialist's custom was to charge his patients according to their means and he invariably enquired what they did for a living. When the examination of the old lumberman was over the specialist asked him what he did for a living.

"I work around a sawmill," was the answer.

Then the specialist asked a very moderate fee and at once his patient pulled from one of his pockets a big roll of bills, all of large denomination. While the doctor changed one of the bills to take out his fee he could not repress his curiosity or astonishment.

"You say you work around a mill?" he asked.

"Yes," came the laconic answer.

"What do you do?"

"Oh! I own the mill," and getting his change he bade the specialist good-day and went back to Renfrew.

C. Hiebert has sold his lumber yard at Carstairs, N.W.T., to Hunter & DeFehr, and that at Didsbury, Man., to Kirkpatrick & Company.

A test was recently made of the tensile strength of a woven belt manufactured for driving machinery. The belt was 5 inches wide, ¼-inch thick. It stood a pull of 11,200 pounds, or a gross ton per inch of width.

DEFINITION OF LUMBER TERMS.

The following letters regarding the meaning of the terms "Mill Run" and "Mill Run, Culls Out," have been received since our last issue went to press:

John H. Eyer, wholesale lumber merchant, Toronto: "I should judge from the three questions asked that all would terminate in one, namely, the designation of mill run, mill culls out, which is practically common and better. Where a contract reads 'mill run' as stated, I should take it that the mill culls would be out and the better in."

J. T. Schell, Alexandria, Ont.: "As there is no law covering the matter, the culling of lumber is a matter of custom and judgment. Hardwood mill men of experience know the grading fairly well, and hardwood buyers and dealers also know the grades or their experience will soon teach them. Firsts and seconds are understood to be according to either the American or Canadian classification. Common and culls sometimes are confusing terms to the mill man or buyer of limited experience. "Dead culls" in hardwoods have no value and are not considered as part of any deal under any classification. In answer to questions 1 and 2 I would say: "Mill run culls out" means all the firsts, seconds and common as produced by the mill, but does not include any culls. I would suggest a better term to be "common and better," the product of the mill, instead of "mill run culls out," as the latter term gives room for more difference of opinion with reference to the word "culls." (3) "Mill run" means the product of the log "dead culls out." "Dead culls" having no place in hardwood culling the term "culls" refers to all merchantable lumber under the grade of common. I would not undertake in a letter to define the difference between a "common board" and a "cull board." Parties buying and selling upon customary terms of the trade must conform to the customs of the trade. Neither party to a dispute may insist upon their opinions, arbitrarily, and expect to settle their differences. While laws may be framed defining culling, they must necessarily be subject to interpretation when grades such as "common" and "culls" are used. Knowledge, experience and custom will rule in cases of customary terms, and even the judicial decision would in such cases be dependent upon expert evidence. The opinions above given are the results of my experiences as mill man and buyer for the past 25 years, and are after all simply an opinion not covered by any arbitrary or legal enactment.

SUIT TO RECOVER VALUE OF SHINGLES.

In the County Court at Ottawa argument was heard recently in a dispute between Hurdman & Elmit, of that city, and Fee & Son, of St. Hyacinthe, Que., arising from the sale of a car of shingles. The latter sued for \$147, the price of the shingles. Some time ago Hurdman & Elmitt ordered the shingles for a customer named McDonald, and when the shingles were delivered McDonald refused them, contending that they were defective. The chief objection was the imperfect way the bundles were bound together. The binding nearly all gave way during the unloading, and it was held that it would cost fifteen cents a thousand to put the bundles in proper condition. Mr. Hurdman unloaded the shipment expecting an adjustment of the price from the shipper. The shingles were subsequently burned in a fire which swept across the district last spring.

Fee & Son claimed the full price of the shipment on the ground that the purchaser accepted the shingles by unloading them. McDonald, for whom the car was ordered, is not in the country, and his evidence, though important, was not procurable. Judgment was reserved.

The Shelvin-Clarke Company are building a large saw mill at Fort Frances, Ont. The mill will be one of the largest in Western Canada and will give employment to about 600 men. The ratepayers of the town voted unanimously in favor of fixing the rate of taxation on the property of the company at a flat rate of \$35,000 for ten years. J. A. Matthews is manager of the company.

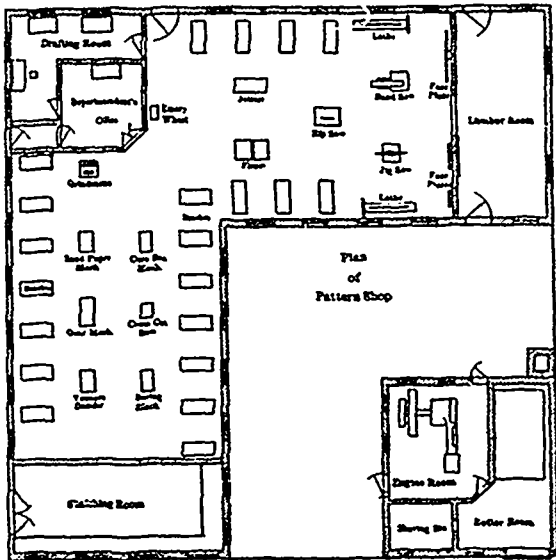
A MODEL PATTERN SHOP.

In a paper read before the Milwaukee meeting of the American Foundrymen's Association, Joseph Leon Gobeille, discussing the arrangement of the best modern pattern shop, said:

The building is important; the plant and the placing of the tools more important, and, most important of all, the system of work and management. As it is not easy to describe a building in words, a drawing has been prepared which approaches almost perfectly to all requirements. It must be light throughout—no dark centers, as in a square room. It admits of supervision in its entirety from the foreman's table, and is not too wide to permit of doubling up men on a big pattern—a matter of some moment on a hurry job. The shop should be a single-story detached building, or, if storage is needed, have the shop on the top floor, plenty of light, good heating by hot-water system, sanitary arrangements and fixtures of the same quality as you would order for your own home. Pure water, ice and the best castile soap should be provided free, and a room set aside and furnished with bandages and other things needed in "first aid" emergency.

A 4-inch standpipe should be erected, with a y, to which is connected coils of 2-inch hose for use in case of an incipient blaze. Of course, no fire will be allowed anywhere in the shop; your glue pots will be heated by steam and your artificial light must be electric.

Your lumber room is constantly replenished with air-dried, ready-to-use lumber. This lumber should be stood on end, i. e., the planks racked vertically, turning each end for end every ten days. Now that lumber is so large an item of expense, careful grading will be necessary. White pine is still preferable, even at the price, but maple, poplar and whitewood



A MODEL PATTERN SHOP.

can be substituted in places, especially for segments and framing.

You will note that the lumber room is at one end of the first wing, the varnishing room in the same position on the other wing, and the tools are placed so as to permit of consecutive operation from start to finish, thereby saving time in retracing steps and re-handling material.

A combination rip and cross-cut saw comes first; next in line, a 24-inch joiner to get one side of the plank true and out of wind; then

the planer, to reduce to the required thickness—notice that the band and jig saws are next in line; then the segment machine and various lathes.

In placing machines pay particular attention to "clearance." A cross-cut saw must admit of one foot being sawn off from either end of a 16-foot plank without collision with another tool, operation or workman. A jointer or rip saw must allow for working up to 16 feet long and 24 inches wide under similar conditions. A large cast-iron surface plate is very handy for starting frames, housings or any large work which must be absolutely level.

I believe the hand or bench trimmer is a detriment to rapid work, and I have had as many as fifty in operation, only to be finally abandoned. A better device is the power face-plate with plain angle gage. I cannot name the best tools, of course, but some of the best advertised saws, lathes, etc. are unsatisfactory.

There is no good pattern-making glue pot on the market. I have designed a twin steam pot which is all right if connected with a sewer to draw away the product of condensation; it is operated by live steam and admits of one pot being used on a job or on the bench without the cooling of the other, an important trifle.

A segment machine is a great time-saver. A boy at \$1.25 per day will "lay up" and glue 100 courses of six segments each for a day's work—about what eight journeymen would do on chute-boards at 35 cents an hour. No such machine is, however, on the market.

Of course, if you make only a few gears you will need a gear cutter. There is none on the market; we had to make ours, which is the only one I know of that actually turns out either involute or epicycloidic gears without skilled labor to handle it. Any bright boy can run it. It is thought to be worth 50 cents an inch of "diameter plus face" to make teeth in hard wood for ordinary spur gearing by skilled handwork at 40 cents per hour; this is honest and perhaps exceptional output. This machine will cut gear teeth for 2 cents an inch.

A core-box machine is a money-saver. There is one on the market which is pretty near perfection.

There is no larger joiner on sale than 24-inch. I have found that 40-inch is a low limit, and some day shall cut our patterns to make a 60-inch. In large turned work—especially when laid up on a segment machine—a big joiner will surface courses for a fraction of the cost when done on the lathe the usual way. If your foreman has the practice of doweling his segments—a commendable habit—then you need a dowel machine. A good one costs only about \$50.

For many years it was a problem to get out large turned work. Anything heavy over 10 feet diameter would chatter. I show a photograph of a big face-plate hung from oak timbers 12x12, which are built into the end wall of the building; this works perfectly and handles anything up to 22 feet diameter.

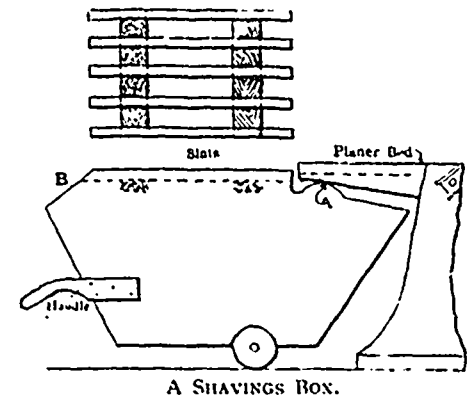
There is nothing so good as the wooden fillet, but leather and lead are cheaper. A flexible shaft suspended above your housing table, with, say, five sizes of round rose cutters, will work the finest fillets in a pattern you ever

saw, and do it out of the solid. The same rig makes a good sandpapering machine for curves and corners.

Three grindstones are absolutely necessary: one medium, one fine-grain—flat and in perfect condition for planes, chisels, etc.—one medium-grain for gouges and curved blades. A planer bit grinder, automatic saw set, brazing kit and an air-brush varnisher will about complete your inventory of necessary tools.—American Machinist.

A SHAVINGS BOX.

With a cheap shaving box, as shown in the sketch, heaps of shavings around a wood planer and scattered all over the shop, can be



avoided, says a correspondent of the American Machinist. It answers two purposes: to catch the shavings and as a table for lumber. It is mounted on wheels so placed that the handle end is heaviest; this keeps the other end up to the planer bed at A, and it is free to move up or down with the bed. The slats are made of hardwood $\frac{5}{8}$ -inch thick and $1\frac{1}{2}$ inches wide, spaced to allow shavings to drop through and leaving an opening at B for shavings scraped along with the lumber. When sweeping up the shops the slats can be removed and the sweepings can be put in the box and carted away.

SEASONING HARDWOODS.

It is claimed for a seasoning process recently introduced by an English company, that hardwoods green from the saw may be made fit for conversion into joinery in a week. The London Timber Trades Journal says of the process: The wood is treated in a specially constructed stove with superheated steam at atmospheric pressure for a time varying from 10 to 40 hours, according to the kind and thickness of the timber seasoned—softwoods with an open tissue taking from 10 to 18 hours, while harder and closer woods take from 18 to 40 hours. The process is extremely simple and inexpensive; no skilled labor is required; exhaust steam may be used (being superheated), and the cost, including filling and emptying the stove, does not, it is said, exceed 4 cents per cubic foot, and is often as low as 2 cents, whereas the cost of natural seasoning is never below 9 cents, and is frequently as high as 12 cents. The timber may be used for making into joinery immediately it leaves the stoves, without any fear of shrinkage, warping or twisting, and can be planed quite as freely as when naturally seasoned.

BIRD'S-EYE AND PLAIN MAPLE.

The following article appeared in a recent number of the Railroad Gazette, written by E. C. Hargrave. It contains a number of things of interest to readers of THE LUMBERMAN.

Bird's-eye maple is found growing with other kinds of maple. The best bird's-eye or that in which the eyes are closest together and most distinctly marked, is generally found growing where the ordinary or common maple is of poor quality, that is, containing a large number of knots.

It is now the practice in lumbering maple for the bird's-eye maple to be first selected and shipped to veneer cutting mills. This sorting out or selecting of bird's-eye is done by men skilled in the business, who go through the standing timber and mark the bird's-eye maple trees. It is claimed by some good judges that they can tell a bird's-eye maple tree at a distance of 100 yards, some even claim to do it at a greater distance, but the writer thinks a number of trees would be missed at so great a distance.

A bird's-eye maple tree is told by a difference in the habit of the tree. It tapers more rapidly and the trunk is not relatively as long as that of the ordinary kind. It is also told sometimes by the looks of the bark; the bird's-eye maple pits or marks being distinctly seen on the outside of the bark. If there is still doubt as to whether the tree is bird's-eye maple, a blow with an axe will remove some of the bark and after that is done there can be no question, as the surface of the tree after the bark is removed, clearly shows the bird's-eye marks.

It will be noticed that the eye of the bird's-eye maple cannot be any kind of a knot, for the reason that the knot always bends the grain of the timber towards the surface, while bird's-eye always depresses the grain towards the center of the tree.

After the bird's-eye maple trees are selected they are cut down and sawed in logs and shipped to the veneer factories where they are to be used. It is also customary, where maple logs are got out, for the buyers of bird's-eye maple logs to look over the rollways or piles of logs and select the bird's-eye maple logs. When the logs are piled in huge piles or rollways only the ends of the logs can be seen, and these clearly show whether they are bird's-eye or not.

Aside from the logs shipped to the veneer mills there are a few for various reasons that reach the saw mills and other factories. It may be that because there are too few bird's-eye maple logs in the timber to pay to separate them or it may be that the eyes are too scattering, or that they are only on one side of the

log, that is, they appear in too small a section to pay to cut it into veneers. It is strange, and no reason can be given for it, but sometimes the eyes will only appear on one side of the tree, may be only one-half or one-third the way around it. If such a tree is cut into veneers, only one-third or one-half of the veneer will show bird's-eye marks.

Many maple logs are used for the manufacture of toothpicks and for articles such as butter dishes, baskets, etc. In making these the log is first cut into veneers. The best and straightest grained is then put through machines that plane it into round strips the size necessary for toothpicks, and the poorer grades are cut into such forms and sizes as will make the desired dishes or baskets. All logs are not suitable for this work.

In what is known as a cross-grained log or tree, the grain travels in a spiral, diagonally up and around the tree. If such a tree could be seen with the bark off, it would look as though the tree had been grasped by the top and twisted. When such a log is cut into lumber or veneer the grain runs diagonally across the piece and it will easily split, making it unfit for veneer that is to be bent, or for toothpicks. Another type of log or tree is not suitable for toothpicks. This may be a tree containing a good quality of timber, with a straight grain, and in every other way suitable to cut into veneers, but the log is hollow, and there is no way to hold it so as to turn off the sheets of veneer.

Timber in which the grain runs irregularly or in waves, out and in, is poor material for veneer, for if a piece of veneer is cut from such a log, and but slightly bent, breaks will appear all over the surface. Practically all kinds, qualities or shapes of logs can be handled and cut up in the saw mills.

Considerable skill and care is necessary to properly saw the logs that come to a saw mill, and it is strange to see how few mills handle the logs to the best advantage so that the lumber obtained from them will be of the greatest value. All hard maple, whether bird's-eye, curly or with ordinary grain, grows with the center of the log or tree of a reddish or brownish color, and the outside almost clear white. The reddish or brownish part of the timber is the oldest part where the sap has stopped circulating, and is known as the body timber. The white is where the sap still circulates, and in the trade is always designated as 'the sap.' The proportion of white or dark timber in the log varies greatly.

The difference in the color of the timber plays an important part in the value of the timber sawed therefrom, and therefore in the sawing of all maple logs. A piece of bird's-eye maple, or ordinary maple lumber that is cut from the

sap wood, is worth from 50 per cent. to 100 per cent. more than if sawed, all or in part, from the heart of the log. The value of the lumber coming from a maple log will decrease as follows:

The most valuable of all, white bird's-eye.

Brown or partly brown bird's-eye.

Plain grained white maple.

Maple squares, i. e., 4-in. x 4-in., 5-in. x 5-in., etc.

Clear thick maple, 2-in., 3-in. x 4-in. thick or over.

Clear thin maple.

Common grades and culls.

"Squares are pieces of lumber 4-in. x 4-in., 5-in. x 5-in. or 6-in. x 6-in., sawed out of the good part of the log. It is difficult to obtain a large square free from defects and also very difficult to dry and cure, without checking so badly as to materially lower its grade and value.

"If we saw up an ordinary maple log the surface of which showed no knots, we will find that the lumber on the outside of the log is free from knots, but as we get into the heart of the log knots will appear and will grow more numerous and larger the nearer we approach the center. The heart is always very defective and of comparatively small value. In sawing such a log, the sawyer after taking off a light slab, then a 1 inch sap piece, would then estimate to the best of his judgment, how thick a board or plank could be sawed that would be all white and show none of the darker timber. He must exercise great care, because if he saws off too thick a piece or it cuts into the darker timber, so that part of the board or plank is dark, it spoils the piece of white lumber, and reduces the value. Again, should he saw a thinner piece than could be easily obtained, he leaves more white maple than is necessary on the log to be cut off with the next piece of lumber which is of a much lower value. After cutting off as much white maple as is prudent, he then estimates how thick a piece can be sawed off without reaching into the knots or defects, and thus lower the grade of the thick piece. Here again judgment is required, if he cuts off too thin a piece and leaves part of the good lumber on the log, it will afterwards become part of a poorer piece of lumber, and if he cuts it too thick it reaches into the defects so as to spoil its quality.

As before suggested it is very difficult to dry squares so that they will not check to an extent that will lower their grade, if not entirely destroy their usefulness for the purposes intended. For this reason very few mills will attempt to get out lumber of these dimensions. Lumber over 2 inches thick is very difficult to cure without checking and increases in difficulty very rapidly as it gets thicker.

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PERSONAL.

Hon. J. K. Ward, lumberman, of Montreal, has been appointed a member of the Council of Public Instruction of that city.

Mr. Walter Wilson, head of the firm of Walter Wilson & Sons, manufacturers of saws, St. John, N. B., died last month.

Mr. A. E. Alexander, the well-known lumberman, of Campbellton, N. B., is spending the winter in California for the benefit of his health.

Mr. Jonas Howe, the well known lumber cruiser, has returned to St. John, N.B., from British Columbia, where he spent several weeks in the inspection of timber lands on which New Brunswick capitalists hold an option.

Mr. J. F. Birchard, travelling representative in Canada for Messrs. J. T. Wing & Company, of Detroit, is receiving the congratulations of his many friends, having recently taken unto himself a wife from among the fair daughters of Toronto.

A beautiful wedding was celebrated in Toronto last month, when Miss Alice Irene Kemp, daughter of Mr. A. E. Kemp, M. P., was married to Mr. W. Scott Waldie, son of Mr. John Waldie, of the Victoria Harbor Lumber Company.

Mr. John F. McRae, for several years mill foreman for the Rat Portage Lumber Company, Rat Portage, Ont., has been appointed manager of the mill of that company at Vancouver, B.C. Before his departure for the west the employees of the mill at Rat Portage presented Mr. McRae with a gold watch, chain and locket,

engraved with the words "J. F. McRae, from the employees of the R. P. L. Company's saw mill No. 1, Rat Portage."

Mr. Dalton Ulyot, a prominent retired lumberman and one of the most respected residents of Peterborough, died in that town on October 24th, in his eightieth year. About thirty-five years ago he commenced a large milling and lumbering business at Fenelon Falls, and also conducted a saw-mill business at Harwood, Rice Lake, subsequently becoming one of the largest shareholders in the North Shore Lumber Company.

An extremely pretty and fashionable wedding was solemnized in St. Andrew's church, Ottawa, on September 31, the contracting parties being Miss Isbester, daughter of the late James Isbester, and Mr. James Gordon MacLaren, eldest son of Mr. David MacLaren. Among the guests were a number of the leading lumbermen of the Ottawa valley. A reception was held at the home of the bride's mother, after which Mr. and Mrs. MacLaren left on a honeymoon trip.

Mr. H. Percy Jew, of Gloucester, England, arrived in Canada last month. Mr. Jew has been in the lum-

ber business in England for a number of years and was connected with Price, Walker & Company. It is his intention to spend the coming winter in the camps selecting timber for the English market, and at the same time he hopes to gather considerable information regarding lumber and lumbering methods in Canada.

Mr. H. H. Spicer, of Woods & Spicer, Limited, shingle manufacturers, Vancouver, B. C., honored THE CANADA LUMBERMAN by a visit when in Toronto last month. He spoke hopefully of the arrangement which has just been made for the regulation of the hingle output of British Columbia, stating that almost every mill, large and small, had agreed to the proposed plan. Mr. Spicer called upon some of the many dealers in the east who handle their shingles, and intended visiting Boston and other Eastern States points before his return to the coast.

The Lumberman's Diet

Clark's Corned Beef and Clark's Pork and Beans are the best produced in Canada and equal to the finest imported. Get quotations from your jobber.

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STEAM BOILER INSPECTION IN BRITISH COLUMBIA.

In accordance with the provisions of the Steam Boilers' Inspection Act of British Columbia, all steam boilers in that province must be regularly inspected, and engineers operating same must first pass an examination as to qualification. The first annual report of Mr. John Peck, Chief Inspector of Boilers and Machinery, covers the calendar year of 1902 and gives much information regarding the condition of boilers. The number of boilers inspected during the year was 860. Three hundred and twenty-one new boilers were inspected and put into operation and 57 boilers were taken out of service. The inspectors found 2,102 defects, 156 of which were dangerous. The defects are summarized as follows:—

NATURE OF DEFECTS.

	Whole No.	Dangerous.
Boilers without safety-valves	1	1
Boilers with safety valves inoperative	4	4
Boilers with safety valves overloaded	5	2
Boilers with safety valves defective in construction	69	16
Boilers without pressure gauges	1	1
Pressure gauges inoperative	44	2
Pressure gauges defective	158	2
Cases of insufficient staying or bracing	84	20
Cases of defective stays	3	
Cases of broken rivets	23	
Cases of defective riveting	38	5
Cases of broken stays or braces	8	
Cases of loose stays or braces	72	5
Boilers damaged by low water	5	3
Defective settings	70	7
Boilers with fractured plates	43	6
Boilers with laminated plates	17	4
Boilers with burned plates	73	5
Boilers with blistered plates	2	
Cases of sediment on fire sheets	44	2
Cases of internal corrosion	78	
Cases of scale or incrustation	214	22
Cases of internal grooving	5	
Cases of external corrosion	96	5
Cases of defective tubes	59	
Cases of defective feed water arrangement	121	
Cases of broken feed valves	1	
Serious leakage around tube ends	18	4
Serious leakage in rivet joints	88	2
Defective blow-off pipes or cocks	148	4
Defective water gauges	48	13
Broken blow-off pipes	3	3
Water columns without blow-outs	6	3
Cases of broken test cocks	11	
Connections to water columns without valves	7	7
Neutral sheets not stayed	55	
Neutral sheets improperly stayed	69	
Furnaces out of shape	2	
Boilers without fusible plugs	127	
Boilers low at front end	27	
Cases of serious leakage of fittings	40	
No. of hand-hole doors having bolts and dogs burned off	4	4
Leakage at hanger lugs	1	
Cases of battery of boilers having no check valves	1	1
Defects in engine frames (broken frame)	2	
Defects in engine cylinders (broken flanges)	1	1
Boilers without hand-holes	1	
Boilers without stop valves	22	
Cases of defective steam pipes	4	
Unclassified defects	79	2
	2,102	156

Concerning boilers in saw mills Mr. Thomas H. Goldie, Inspector for District A, says:

"Boiler No. 414 'A' is a 43"x14' return tubular boiler employed in a small saw mill for the purpose of supplying steam for main engine. A further duty was added to the already overtaxed boiler, that of furnishing a dry kiln with steam. This addition, however, brought things to a standstill, and the perplexed owner, who thought it a financial impossibility to purchase another boiler, set to devising some means of increasing the boiler capacity. An idea occurred to him that if he connected the bottom of the boiler to one end of the kiln, which was about four feet below the level of the lowest portion of the boiler, and the other end of kiln to steam dome, he would produce a steady circulation through both boiler and kiln. When everything was connected up the new scheme was tried with apparent success; but the owner evidently did not reckon on the water in the boiler following the natural law of gravitation, and the boiler began to empty its contents into the kiln and out through the drain cocks,

and before they were aware of it the boiler was empty with a fairly good fire under it. The fireman having discovered that steam was away down and that no water appeared in the glass, at once put on the injector, but luckily there was just enough steam to give it a start and no more. The fire door was opened to supply more fuel, and it was then noticed that the sheet over the fire was red hot. I was sent for and arrived next day. On examining the boiler, I found upper row of tubes sagged down; circumferential seams over fire had pulled down about 3/8 inch past original position; the rivet heads were curled up at caulking edge; two of the sheets were bulged and cracked, and the boiler was rendered useless, besides running close chances of an explosion. The changes were effected without notifying the Inspector, who would not have allowed such nonsensical ideas to be carried out, and would thereby have saved the owners at least \$1,000. This was the result of ignorance of common law."

"Another return tubular boiler was ordered to have blow-off changed from back head to bottom of shell, so that all dirt and sediment could be thoroughly cleaned out. The owners promised to have this done right away, but they carelessly neglected it altogether until my next visit, when I found fire sheet had bulged down 3/4". After the hand-hole plates were taken off, the bottom of the boiler was found covered with a coat of heavy scale about 3/8" thick. The plate was cut out and patched. The original plate was 3/8" thick, but when a hole was drilled through crown of bulge it measured 1-16" thick, the material having thinned out this much, due to stretching while over heated. If the change asked for had been made at the time, this expense would also have been avoided."

Mr. George O. Madigan, Inspector for District C, reports as follows:

"In one of the saw mills that was burned there was an old low pressure marine type of boiler 60" diameter, single riveted, 1/4" iron plate, patched in every conceivable place, both inside and outside, that had been carrying 100 pounds and upwards. At the time of inspection the owners were informed that the pressure would be materially reduced, after allowing a reasonable time to get a boiler to replace it. Shortly after this the mill burned down, and after rebuilding a new boiler was installed, and when I went to inspect this I found the old boiler set up alongside of the new one, with a Dutch oven in front of it. I asked the owner he intended to use the boiler again, and he said he certainly did, as it had stood a good test while the mill was burning. He said he had watched the gauge until the hand had made a complete revolution to 200 pounds, and he did not know how much further it would have gone if the pin had not stopped it; and he considered, if it could stand 200 pounds at that time, it surely would pass for 100 pounds. He felt quite hurt when I told him, after examining the boiler, that 40 pounds would be the most that would be allowed, even after damage done by fire had been repaired, as everything had been strained and would have to be tightened up."

"At another saw mill the boiler had head of dome, at flange, cracked two-thirds of the circumference and was pitted badly from lying on the damp ground exposed to the weather; the hand-hole in front head was eaten away almost large enough for a small boy to get into it, and was in bad shape generally. This was allowed to run for sixty days to enable them to replace it, after which it was condemned. It had been sold, with the understanding that it would carry 50 pounds, and the purchaser had gone to the expense of moving it and putting it in a good setting, firmly believing that the boiler was in good condition, and if there had been no inspection would probably have had a serious accident."

No wonder that a nigger sometimes breaks down, when he is steam fed and has no choice in the bill of fare.—Puget Sound Lumberman.

Smith Bros., Limited, are applying for incorporation, to conduct a general lumbering business, with headquarters at Central Blissville, Sunbury county, N. B. The promoters are George McKean, of St. John, and L. B. Smith, P. J. Smith and R. B. Smith, of Central Blissvale.

THE TROIS PISTOLES PULP AND LUMBER COMPANY.

The new saw mill of the above company is situated at Trois Pistoles, Temiscouata District, Quebec. The company was organized a year or more ago under the laws of Quebec, with a capital of \$150,000. Its officers are: E. W. Tobin, M. P., president; Christopher J. Gagner, vice-president; E. J. Murphy, secretary and treasurer; Pierre Angers, manager; and these, with Fred S. Morse and Fred J. Farley, of Springfield, Mass., constitute the board of directors. The company has 84,000 acres of virgin timber. The Trois Pistoles river courses through the tract, furnishing numerous important water-powers, two distinct waterfalls being 80 feet and 72 feet respectively, the latter fall being located just below the new mill. The plant is located on the banks of the river, about one and a half miles south of the tracks of the Intercolonial railroad, which latter is now preparing to build a spur track from its main line direct to the company's piling grounds in the rear of the mill, which, it is hoped, will be completed by early spring.

The mill is a large two-storey structure of wood, very heavily framed, and equipped with a band mill, eight up-to-date shingle machines and the usual equipment of live rolls, edgers, slashers and trimmers which go with an up-to-date lumber mill. They have also installed what is claimed to be quite a novelty in the form of a band bolt saw, in place of the usual circular saw ordinarily used for this purpose. It is said to be the first one of its kind installed in any mill in Quebec, it not in the country. The lower floor of the main mill is used exclusively for the shafting, with the section located under the shingle machines set apart for the use of the shingle packers. The second floor is equipped with the heavy machines.

The power plant is located in a brick building with corrugated iron roof and high stack, fitted with spark chamber and spark arrester as a protection against the possibility of fire. There are two Holyoke boilers of 250 horse-power each, and a 400 horse-power engine. A large steam fire pump and a Westinghouse electric motor complete the equipment of this plant. At present all refuse is carried from the mill to the boilers by a conveyor system, but later on a refuse burner is to be set up on the shores of the river in which all surplus refuse will be reduced to ashes. The plant is lighted throughout by electricity. The plant was started up on September 15, but there are yet several machines to be placed before it will be able to run on full time in every department. The product of the mill is to be handled exclusively by Fred S. Morse, of Springfield, and will be shipped chiefly to the trade in New England and New York State.

THE "STANDARD" KILN.

The Standard Dry Kiln Company, of Indianapolis, Ind., have issued an interesting booklet entitled "Standard Users and Why." It explains the many strong points of the "Standard" moist air dry kiln and gives an extensive list of the firms who have adopted their drying system. Among these we notice such well-known firms as the British Columbia Mills, Timber & Trading Co. and the Pacific Coast Lumber Company, Vancouver, B.C.; Victoria Lumber & Manufacturing Company, Chemainus, B.C.; J. A. Sayward, Victoria, B.C.; W. C. Edwards & Company and Davidson & Thackray, Ottawa; J. P. Smith & Sons and J. C. Scott & Company, Toronto; Schultz Bros. & Company, Bramford, Ont.; Wilson Bros., Collingwood, Ont.; The Meaford Manufacturing Company, Meaford, Ont.; J. W. Kilgour & Bros., Beauharnois, Que., and others. Many letters of praise from pleased users are reproduced in the booklet.

A USEFUL PAPER.

Messrs. J. & R. Miller, of Mount Elgin, Ont., in remitting their subscription to the LUMBERMAN and advising us that they are retiring from the lumber business, write: "We have taken the LUMBERMAN for many years and believe it to be one of, if not the best works published in the lumber interests. If we again go into the milling business, we will be happy to renew our subscription. Wishing you and your paper many years of continued prosperity."

THROUGH MICHIGAN.

[BY OUR TRAVELLING REPRESENTATIVE.]

The United States customs officials at Detroit had hardly finished examining my "grips" before I was in conversation with a lumberman. He wanted to know all about the Canadian market. How was the cut coming up? Was there much pine left in the country? What was the chance for showing in some yellow pine? Were prices going up or down, etc.? I hope I answered them all right, for this first interview seemed to be an awfully serious one made by a very serious man. But I soon found out that there was a certain feeling of uncertainty in the lumber market, with an independent air of expectancy as to a probable drop that did not exist at any other point that I had touched in recent days.

It got so that I could distinguish these undecided lumbermen by their abstraction. If I met one of them looking at the sidewalk or into vacancy, checking off mental items on his fingers, I only required two guesses to tell what was working on him. He either had troubles of his own at home, or he was a lumberman in the throes of expectation. For choice I accepted the latter explanation, for this is the time of year and thus the longitude and latitude for uncertainty in lumbering circles.

McClure, Zimmer & Company, the well-known hardwood lumber wholesalers, of Detroit, are known all over. They do a large export trade to Ontario, shipping ash, basswood, birch, butternut, cherry, mahogany, oak, walnut, etc., to furniture, wagon and piano factories. They make a specialty of oak and hickory poles, rims and spokes, oak bending plank, railway ties, etc. This young and enterprising firm are bound to get more and more of the Canadian trade, because they have the goods ready to deliver at a moment's notice. They know a good thing when they see it. That's why they are Hoo-Hoo.

I had the pleasure of meeting Mr. Arthur S. Nester in his elegant offices up in the Majestic Building. With his brother, Mr. T. Nester, they do a large business in pine, hemlock, cedar and hardwood lands. They do not operate limits, being content to sell the forest and let others do the lumbering. I am indebted to Arthur for much information concerning the northern peninsula of Michigan. He knows every mile of the territory.

Mr. C. A. Spalding, the well-known Detroit lumber dealer, told me he was going in for the Canada trade. He already does quite a business with Ontario retailers.

In the Union Trust Building I had the honor of meeting two well-known wholesale lumber dealers, Mr. Frank C. Bury and Mr. Mason A. Noble. Both these gentlemen are intent upon putting southern yellow pine into Canada, and as there is a large and growing demand for this class of lumber, they will no doubt soon get a big share of the business. Mr. Bury is a jolly good fellow and a nice man to do business with.

I drifted into Port Huron, and found it as pretty a place as is to be found along the lakes, although there is very little doing in lumber circles: the various wood-working and machinery industries are running full time. Canada looks a regular lumber country as viewed from Port Huron. On the Sarnia side miles of immense piles of lumber loom up to the view of the American.

At Port Huron, the Engine and Thresher Company make a line of portable sawmills and saw-mill machinery, whilst the Port Huron Manufacturing Company, under the able management of Mr. E. W. Wilson, is manufacturing saws.

It is ninety miles from Port Huron to Saginaw, and at the latter place I met many well known on the Canadian side as dealers and operators, such as A. D. Eddy and C. K. Eddy companies, who expect to start active operations again at no distant date. Morley Bros., A. F. Bartlett & Co., United Supply Company, Mitts & Merrill, and other machinery dealers do quite a brisk trade with the lumbermen. This trade is, however, getting more and more towards Canada.

I found Sag'naw the same as of yore—wide awake and progressive—hardly as "wide open" as before, but still full of life. The city is too much spread out for one to grasp an idea of its real size, and being on a flat stretch, the streets are long and expansive, stretch-

ing far out into the country. Everyone talks lumber in Saginaw on the least provocation, and all go back with a yearning sigh to the good old days when the hum of the saw-mill was heard in the land. Now it is all a memory—a sweet memory of the past. Saginaw may even forget that it was once all swamp and pine forest not many years hence.

It is always a pleasure to meet the "boys" at Saginaw. Lumbermen are nothing if not jovial, and the Michigan men have nearly all a cheerful air about them. To be sure I "run into" an occasional one who was "too busy" to give even an ordinary greeting, but this sort are as scarce as hen's teeth and well known to the trade.

I had the great privilege of shaking hands with Michigan's Governor, General A. T. Bliss, the millionaire lumberman. He is a genial soul, and from a few minutes' conversation I had with him on the lumber trade, I found him a very agreeable gentleman. As he shook hands he noticed my black cat button, "Ah, I see you are Hoo-Hoo? I am not one yet, but a couple of my relatives are." I had a good notion to ask Governor Bliss how he viewed the expected migration next spring of 500 Michigan families to the Canadian North-west. But I thought that would be treading on dangerous ground and contented myself with some facts re the expected exodus. It is expected that fully five hundred families, numbering over two thousand souls, principally of French-Canadian origin, will leave the Saginaw valley in the spring to settle in Canada. These people have not prospered, although they are hard-working, frugal and industrious. The cause is that they prospered in the prosperous lumber days and when the mills closed down they were thrown into all kinds of menial labour.

Out at Mershon Station is the saw-mill and piling grounds of Mershon, Schutte, Parker & Company and the W. B. Mershon Company. The latter, under the able management of Mr. E. C. Mershon, has attained world-wide fame for their band re-saws. This line is their forte, and the name Mershon is a guarantee of the best and latest in resawing machinery. Mr. E. C. Mershon is not only an expert draughtsman, but an engineer of great ability. His master mind thinks out and puts into being the very latest improvements which have kept his re-saws to the fore-front. And, despite his busy life, he is a pleasant gentleman to meet. I accepted his invitation to dine with him at the Lumberman's Club House, and he there showed me where two companies had copied his machine. In the first case they had put in the cut of one machine, and described it by the description of an entirely different machine! In the other case it was really laughable. A machine made by the Mershons had a stand made too low for it, so two blocks of wood were put under it, and photographed that way. This machine was copied from one of these photos, and the two blocks were reproduced in metal on the imitation!

At the Club House the clerks and stenographers or the companies take their mid-day meal—the ladies being provided with a separate room. Everything is neat and clean, and the cafe is a great convenience to the staff.

Over at the big Mershon re-saw works I looked at the sales book. It just indicated 999 band saws sold. I remarked, "Why, that's Hoo-Hoo, isn't it?" The genial manager smiled and said, "It surely must be!" The tendency in the lumber business in Michigan is rather conservative just now. Mr. Chas. H. Cowles, one of the very best authorities on the continent, and who is the able editor of the Saginaw Courier-Herald, said: "Logging operations in Michigan will be on a smaller scale this winter than usual, owing to trade conditions, the cost of logging being a big factor in the calculations."

Booth & Boyd are still running full blast. The two Messrs. Boyds are certainly wide-awake. I had the pleasure of an exhilarating automobile ride with one of them, which has since set me wishing I owned one of the "red devils" myself. It was my second ride this season and the best.

The logs in Spanish River owned by the Michigan firms when sorted out at the booms totalled an output of over two hundred million feet. Mr. G. Wall, of Saginaw, had charge of the boom.

I met President Roys, of the Saginaw Lumber & Salt Company. They are operating five logging

camps in the Georgian Bay district. He said they would get a moderate stock of logs in this winter, but not so large as last season. Their mill at Sandwich is running steadily and the entire output was contracted for early in the season.

Mr. J. D. Draper, lumber inspector, had just returned from Canada, where he had been looking over some limits.

There is still an occasional snap in timber lands in northern Michigan. It seems peculiar that a tract of land, which had been looked over a hundred times and set down as sold, has recently been "discovered" by H. P. Lundberg, of Manton, Mich. The tract covers 320 acres, part of it with an excellent quality of pine. As it was government land he at once filed a claim for himself and wife, paying therefor \$800. A few days after he was offered \$5,000 for land and timber.

Thos. Jackson & Company, of West Saginaw, are getting considerable lumber from Spanish River and Cutler, Ont. They use up large quantities of Canada white pine in their sash and door factory. Their new factory is a model of neatness.

The Palmerston Woodenware Company will get a million feet of logs from Ogenaw county next season.

The coming winter, I was told, is the last season when there will be any lumbering to speak of on the Dead River, a stream which in its day has floated down millions upon millions of feet of some of the best pine that has ever been cut in Michigan. As a lumbering waterway it is now on the decline and next season will witness the end of any operations on a large scale.

Crawford & Sons, cedar operators at Cedar River, Menominee county, have had great difficulty in getting men to go to the camps. They have secured nearly 200 Italians and Hungarians from Chicago, having failed to secure enough men at the Soo. There are no more hardy Canadian lumber-jacks to be had even at a fabulous wage.

Although A. F. Bartlett & Co.'s large works at Saginaw were partially wiped out by fire, I hear they will shortly rebuild. They have a high place among the manufacturers of engines, boilers and saw mill machinery. Their well-known saw mill hogs and edging grinders are to be found all over the country from the Atlantic to the Pacific.

The Gordon Hollow Blast Grate Company, at Greenville, Mich., not only make blast grates, but edgers and trimmers, being one of the largest manufacturing concerns in the world. The Gordon Company have made Greenville famous.

There are three or four large companies still doing big business at Bay City and West Bay City, which, by the way, are two separate and distinct cities, divided by the Saginaw river. E. B. Foss & Co. and the Eddy Company, at the former place, have immense stocks and do a rushing business. Mr. Foss, I found, to be as genial as ever. The lapse of time does not seem to leave an impression upon him and he looks as young and debonair as ever.

Over at West Bay City the Bradley, Miller & Co.'s mill and yards showed great activity. They handle a great output in the course of a year.

I had the pleasure of meeting Mr. W. D. Young, of Young & Co., one of the largest maple flooring manufacturers in the state. He reports business as active as ever, with large sales.

Handy Brothers and the Wolverine Lumber Company seem to be thriving and are likely to push out into Canada this coming year for some of their pine stock.

From Bay City I went south again to Grand Rapids, the great centre of the furniture trade. Grand Rapids is called the "Furniture City," although 'tis whispered outside of the city that more furniture is made in Chicago. Of the truth of this I would not like to certify. Furniture is written large all over Grand Rapids and the buzz of the saw is heard on every side.

Mr. Chas. McQuewan, a wholesale dealer in hardwood and mahogany veneers, showed me some grand specimens of Tennessee oak and Mexican mahogany, used largely in furniture and piano work.

The Quigley Lumber Company make a specialty of all kinds of hardwoods and do an extensive trade. The Engel Lumber Company are also specialists in the hardwood line as well as large manufacturers of hemlock lumber. This latter company have mills at Hard-

grove, Sharon, Hewitt Lake and Earl Siding, all in Michigan.

I had quite a talk with Mr. T. Stewart White, the affable president of the White & Friant Lumber Company. Mr. White is one of the pioneer Michigan lumbermen, and knows all there is to know of the conditions of the lumber market. He is credited with being the leading spirit in having the two dollar import duty put upon Canadian lumber, and thus tried to help the Canucks keep a good thing to themselves.

In the carving and moulding line, the Waddell Manufacturing Company, of Grand Rapids, are unsurpassed in that city. They make some beautiful carved newel posts and embossed and turned work.

The leading manufacturers of bank, office and saloon fixtures is the firm of Nachtgall & Veit, who are designers of special furniture and patterns.

In the machinery line this city ranks high. Among the more progressive firms are Perkins & Company, with their famous Columbia heading and shingle machines. The Friction Set Works, Fox Machine Company, Crescent Machine Works, Tidy & Marshall, Wilmarth & Morman, American Machinery Company, Waggoner Watchman Clock Company and the Gillette Roller Bearing Manufacturing Company are all leading concerns in their line who are pushing out for the Canadian trade. Nearly \$129,000,000 worth of goods manufactured in the United States entered Canada during the fiscal year ending June 30th, 1903.

A rapid run on the "third rail electric line" brought me up to Muskegon, on the shore of Lake Michigan. Here is situated the large mills of Mann, Watson & Company and the Rodgers Iron Manufacturing Company, who make an adjustable log siding machine and a combination gang edger. In conversation with Mr. W. F. Chrystal, the obliging secretary of the Rodgers Iron Manufacturing Company, he showed me hundreds of testimonials received from users of their machines in all parts of the United States and Canada. Crawford & Son, at Cedar River, Mich., report that they can saw over one thousand ties in ten hours with the Rodgers machine, and do excellent work, without any trouble whatever. The Atlantic Shook & Lumber Company say that the Rodgers adjustable log siding machine is far beyond their expectations. This company run 36-inch saws and have no trouble in slabbing logs up to 20 inches in diameter. They say it is the best in the world. Geo. Gordon & Co., of Cache Bay, Ontario, have one of the Rodgers combination gang edgers and they say it is not only fully up to expectations, but for sawing small cants it is the most economical and latest machine on the market.

Barcus Brothers, of Muskegon, are manufacturers of circular saws, and do a large lumbering trade.

The Alaska Refrigerator Company at Muskegon Heights use up great quantities of lumber in a year. While I was there a cargo of 250,000 feet of ash lumber was brought in from Houghton, Mich.

In conversation with a well-known lumberman he said: "Yes, we are importing Canadian pine, and we are also importing California pine. But we are also exporting Michigan hardwood lumber to California and other states. There have been heavy shipments of hardwood flooring from the upper peninsula to San Francisco, and being of slow growth it is valued as the best the country can produce." He also told me that many of the pine lumber dealers, since the pine petered out, have gone into hardwoods exclusively. The hardwood lumber and flooring plants at Wells, Cadillac and West Bay City are reputed to be the largest in the world.

Going down the shore of Lake Michigan I came to Benton Harbor. Here are a number of wide-awake lumbermen, including the Peters Lumber & Shingle Co., D. W. Nowien & Co., W. P. Robbins and the J. B. Graves Co. The Peters Company have over three hundred of the Gillette roller-bearing trucks in their mills and yards. They appear to be particularly adapted for moving lumber.

Passing through St. Joseph, Mich., on my way to Chicago, I called on the Compound Door Company, large and progressive manufacturers of doors and patent lumber, under the able management of Mr. E. D. McConnell.

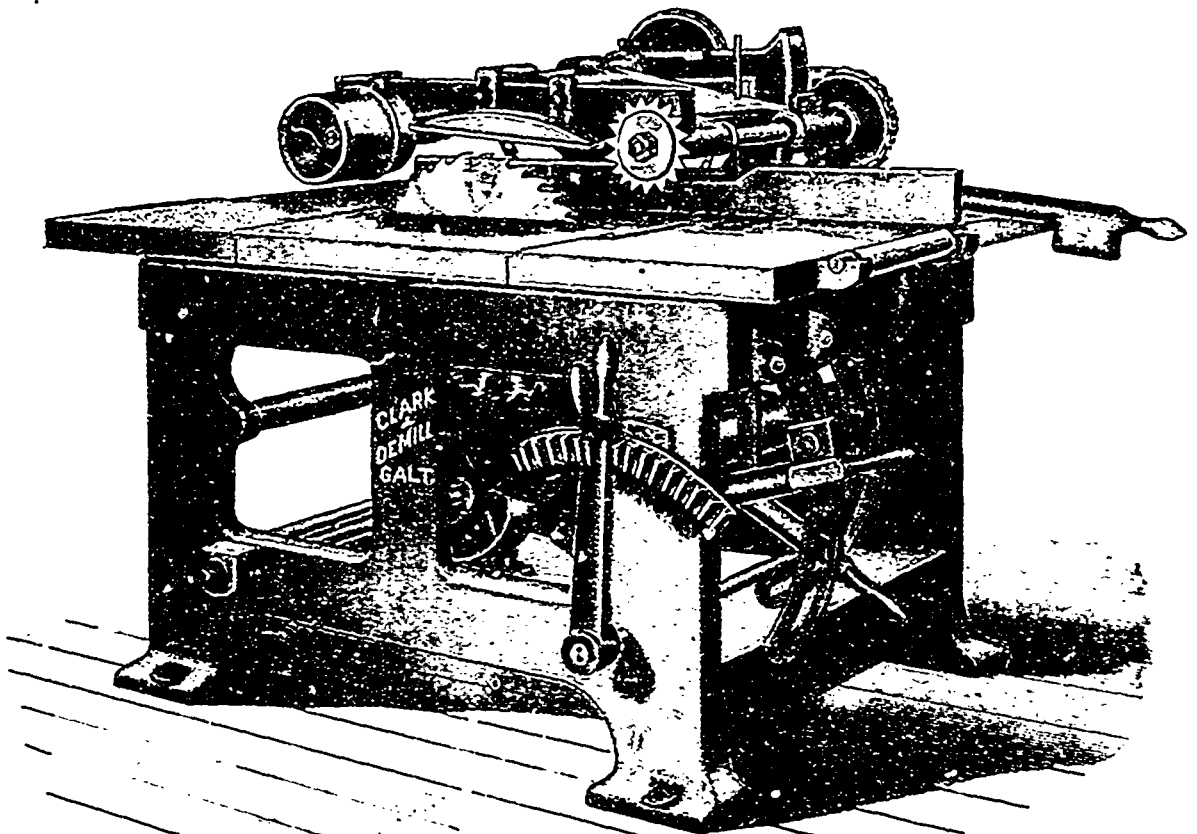
J. R. H.

A PROGRESSIVE INDUSTRY.

At Galt, Ont., there are some fine manufacturing plants, turning out machinery second to none in the world. Among those who are progressive and up-to-date is the firm of Clark & Demill, manufacturers of improved wood-working machinery. A visit to the extensive works of this company by our representative was taken for the express purpose of viewing the new machines recently put upon the market and destined to revolutionize the old-time methods in planing mills and other wood-working establishments.

The illustration we give represents a No. 24 variable self-feed rip saw with feeding gear and delivery roll. As their object is to lead in new and improved machinery, Clark & Demill have designed and built this machine to meet the requirements of furniture, organ, piano, buggy and chair factories, planing mills, and any place where there is a lot of ripping to be done; it will save its cost over an inferior machine in a short time.

The frame is of the most substantial construction, with ample length and width to form a rigid support for the table and working parts. The table is made of iron, planed true, and is well braced on under side, both length and cross ways, and has four anti-friction



CLARK & DEMILL'S NO. 24 VARIABLE SELF-FEED RIP SAW.

rollers, two before and two after the saw, for carrying the lumber. Size of table is 5' long and 3' 4" wide, and will drop for 6" cut. The saw spindle is very heavy, running in self-oiling bearings, namely, 1 15-16" x 8". Where saws go on the spindle is turned down to 1 1/2". It is also provided with multiple collars, permitting a number of saws to be placed at any desired distance from each other. Will rip 15" wide with the first saw and 23" wide with last saw, and is adjustable by sixteenths.

The variable feed can be instantly changed by the operator from nothing to 200 feet per minute, simply by moving the lever on side of machine and regulating the feed just as desired, so that the cut of the saw can work up to its full capacity, either on the thinnest or the thickest material, on hard or soft wood, without stopping the saw or even the feed of the lumber being sawed, and has feed shaft with toothed steel disc for feeding and plain delivery roller with splitter for discharging material. Feed is driven with chain and sprocket. It can also be lifted out of the way and saw used as hand rip. The device for raising and lowering the heavy iron table, as well as the device for moving and locking the fence, are pronounced by mill men to be simply perfect.

The main table has a sliding section which can be instantly withdrawn to allow for use of more than one saw. No screwing of the table up and down, but by one movement of the handles shown, the table or the self-feeding attachment can be raised or lowered to their full capacity.

Spindle pulley 8" diameter by 8" face. Tight and loose pulleys 12" x 8 1/2", and should run 300 revolutions per minute. Speed of spindle, 2,000 revolutions per minute. Bearings and loose pulley are self-oiling. Weight of machine 2,400 pounds.

Besides this rip-saw, Clark & Demill make an improved power mortising machine, as well as a regular line of wood-working machinery. We would advise all those contemplating purchasing to send and get a copy of the illustrated catalogue giving all the latest devices known and now used in the leading wood-working factories of the world.

Cut gears are used on all machinery turned out by this firm. Their mortising machines are especially adapted to those who are doing sash, door and blind work. One of the largest factories of this kind say the Clark & Demill machines are the best in the world.

THE B.C. SHINGLE PRODUCTION.

ENETER, ONT., OCTOBER 20, 1903.

EDITOR CANADA LUMBERMAN:

DEAR SIR,—In looking over the October number of THE LUMBERMAN I notice an editorial note in reference to the over-production of B.C. shingles. In that article the sympathy seems to be with the manufacturer. He certainly should be entitled to all the blame for the present condition of the trade. There is another side to the question, namely, the side of the

retailer, which is of as much importance financially as that of the manufacturer. The manufacturer waits upon the retail dealer and puts the matter before him as follows: "Now, B.C. shingles are going to advance; you had better place your orders early. We are satisfied that it will save you money to do so." The retailer in many cases places his order for from five to ten car loads, and in this way the trade is more than supplied. The manufacturer finds difficulty in disposing of his cut, and as a result drops the price in order to dispose of his stock. Now, this is where the retailer is squeezed; he is loaded up at high prices. The drop at the mills compels him to sell for whatever price he can get, and it is a well-known fact that in many cases he cannot realize what the shingles cost him, thereby suffering a greater loss than the manufacturer.

The B.C. shingle business is the most unsatisfactory part of the retail trade, and unless there can be a more satisfactory arrangement with the mills, retailers will be forced to carry much lighter stocks.

There is another complaint the retailer wishes to bring before the public in connection with the lumber trade. During the last three or four years prices have steadily advanced, and perhaps a little more than was necessary, but we do not object so much to the price as we do to the lowering of the grades, for every retailer has found to his sorrow that the grades have been lowered from five to ten per cent., causing loss to the retailer and annoyance to the consumer. We are willing to pay a legitimate price, but demand a standard grading.

Yours truly,
J. W. TAYLOR.

NO EVIDENCE OF A LUMBER COMBINE.

The Commissioner appointed by the Dominion Government to investigate certain charges as to the existence of a lumber combine in Manitoba and the Territories, held another brief session before Judge Richards, at Winnipeg, recently. The counsel present were Messrs. H. M. Howell, K.C.; E. A. M. Aikins, K.C., and Stanley Hough, representing the Western Retail Lumber Dealers' Association; and Mr. A. J. Andrews, representing the complainants. Mr. Andrews made a statement on behalf of persons claiming to have a grievance, announcing that his clients, who represented various business interests, did not feel that they should be called on to bear the expense of proving the existence of a lumber combine, whose operations prejudicially affect the prices of lumber and prevented certain parties from doing business. They claimed the expense should be borne by the government. In the meantime he had no evidence to submit.

On his lordship taking his seat and declaring the commission ready to proceed, Mr. Andrews rose and said in effect: "It is claimed by the parties I represent that there exists an organization known as the Western Retail Lumber Dealers' Association, composed of manufacturers, or wholesalers, and retailers, the first named being honorary, and the last named the active members. This association only permits a certain number of active members in towns, according to the amount of lumber sold. No other person can engage in business without applying for membership, according to the by-laws of the association. These by-laws, I understand, have been repealed, but were in force at the time the commission was appointed. Under the by-laws the wholesalers refused to sell to dealers not members of the association."

Mr. Aikins pointed out that the by-laws were not in effect.

Mr. Andrews said he did not know they were, but they were nevertheless observed. He claimed that the monopoly of combine in lumber was as binding to-day in the western country, Winnipeg excepted, as it ever was. The manufacturers were permitted to sell lumber to railway and elevator companies but not

to individual non-members, consequently the people were being compelled to pay tribute to certain gentlemen who arbitrarily fix prices without consideration to the cost of production. Any person selling under their tariff was promptly crowded out of business. He called attention to the resolutions of the Calgary and Winnipeg city councils asking for a commission and also a ruling as to the language of the commission issued by the government, which says: "We have reason to believe a combination exists."

Mr. Andrews further said: "My clients are wholesale dealers, manufacturers and others. They do not feel it their special duty to present the evidence to prove the existence of this combine, but are prepared to give evidence if called upon to do so, and I have, therefore, at this moment, no evidence to offer. My clients claim that the burden should be borne by the government, the same as a criminal prosecution after the case has been sent up for trial."

Mr. Howell—"We'll send this case up for trial. Mr. Andrews comes here and vilifies people and will not go on to prove his charges unless he is paid for it by the government. The by-laws he refers to are not in force, and Mr. Andrews knows it. They were even not in effect when this commission was appointed; at least, I am so instructed."

His lordship—"This commission is here to receive statements regarding charges to be proven."

Mr. Howell—"Are we to prove negatives?"

His lordship—"No."

Mr. Andrews—"If I have vilified any persons I am prepared to prove my statements. I have letters now in my hand which will prove what I have said. His lordship may have them if he desires. My clients, however, feel that they have no right to bear the expense of having this evidence produced before the commission."

Mr. Aikins—"There is no charge against the association. Mr. Andrews says he has no evidence, therefore we have nothing to answer. It does not appear that we are called upon to say anything."

His lordship—"At an adjourned sitting other people may have some evidence to offer."

I have received letters stating that evidence can be secured in other places in the country. I have had no particulars as to the nature of this evidence, and at present I do not know if I shall be warranted in putting the government to the expense of going to these towns. It was intimated at the outset that no meetings would be held elsewhere until it was ascertained what evidence there was to offer here, but I shall now notify these persons asking them if they are prepared to adduce any evidence bearing on the matter under investigation, and if they have to arrange to submit it before the commission."

Mr. Aikins—"There is no specific charge against the association. I would suggest that when any charges are made against the association their solicitor be notified so that he can answer them."

His Lordship—"The commission issued to me expresses the belief that a combination exists, but mentions no parties, though from what Mr. Andrews has said it might appear that the association are the parties whom the complainants had in view when asking for an investigation."

Mr. Andrews—"Your lordship might report to Ottawa the views of my clients."

Mr. Richards—"I do not intend to report anything in detail. I shall simply report that there was no evidence to offer."

Mr. Howell—"It must be proven that there is a combination and that the association is that combine. The first principle has not been shown. Surely your lordship does not intend to go around to hunt up evidence until the existence of a combine has been proven."

His Lordship—"Your remark as to hunting up evidence is not applicable. I do not intend to hold any more sittings until it is shown that there is some evidence to submit or at least until it be shown reasonably that a prima facie case can be established. I therefore make an enlargement for two weeks which should give ample time for all parties concerned to arrange their evidence."

Fire fighting apparatus is worse than useless unless kept in shape for instant use. Better have nothing than pumps that fail just when you need them, and water tanks and barrels that contain no water.

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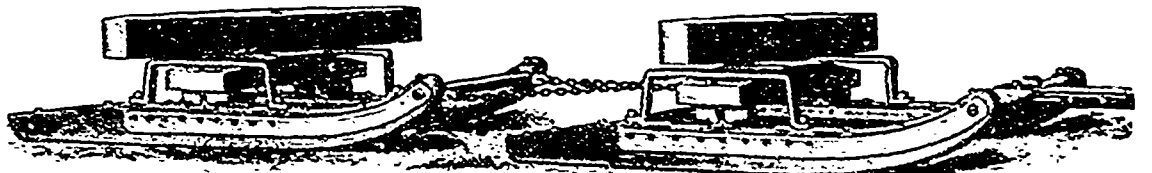
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WOOD PULP ~ DEPARTMENT

DRYING WOOD PULP.

Now that the question of the preservation of wood pulp has been pretty well thrashed out, a few words on the various methods of storing it may not be out of place. Every method of preservation has its advantages and disadvantages, and consequently also its adherents and opponents, and one method of storage may, owing to local circumstances, suit one mill better than others. The two methods of storage, however, which are best suited for medium sized and small mills are either wet storage in pits or drying the pulp. The great advantage of wet storage in pits is that the pulp is always, so to speak, fresh and of good colour, and the fibres always remain supple, a point of no small value in working it up. Mr. Braun, of Rochsburg, has, since 1888, obtained splendid results from storage in pits, pulp which has been so stored for upwards of five years appearing as fresh as if it had only been ground the day before. In pit storage, however, it is almost impossible to prevent impurities such as sand etc., from getting into the pulp, as well as loss of material; moreover, a medium sized mill will require quite a considerable number of pits. Mills which run a pulp-making plant in addition to the paper-making machinery, and which turn out more pulp at a time than they can consume, will find pit storage the best method of keeping their superfluous material, as it can always be worked up in the hollander direct. Where, on the contrary, special stress is not laid upon having the fibres absolutely fresh, it is more advantageous to dry the pulp. Many pulp makers believe that drying pulp requires expensive apparatus, and prefer to store the bales of pulp piled up in stacks. In order, however, to keep the stuff from spoiling, sheds or other light structures must be provided which will allow of sufficient circulation of air, but at the same time keep out light and dust. Light structures of this kind will be quite sufficient to keep pulp air-dry, the only thing else required being some means of suspending the pulp in sheet form. A press is not absolutely necessary; pulp containing 33 per cent. of dry material can be kept hung up quite easily; nevertheless the usual wooden rails and paste-board clips should be used for suspending the wet pulp, as they give a better grip of the soft wet sheets, and are not so likely to tear them. The wooden rails between which the wet sheets of pulp are held give a good grip along the whole upper edge of the sheets (which are of considerable weight owing to the large amount of water they contain), and facilitate the handling and suspension of the sheets generally. The uneven contraction of the sheets produced by this method of suspension is of no consequence in this case. The sheets of pulp thus air-dried may be subsequently piled up in large stacks, and if stored in places from which light

and moisture can be excluded will keep for years without losing their quality. Sheets of pulp thus dried dissolve more easily than sheets which have been squeezed dry in a hydraulic or screw press, a circumstance which is frequently of advantage. Dried pulp should preferably be put through the edge runner first before going to the hollander, this being the safest way to avoid spotting. On the other hand, where a pulp maker desires to use the dried pulp direct when water is scarce, so as to cover loss in production and to enable the stuff to be delivered wet, the best course is to soften the sheets beforehand in suitable vessels so that they can be readily folded together. They are then doubled up or broken up sufficiently small to go through the beater engine boxes and ground up by the grindstones. The dried pulp may be fed to presses working fresh pulp, and if the dried material be added gradually the resultant product cannot be distinguished from fresh stuff. The dried pulp may also when sufficiently soft be fed into the refiner; this, however, makes rather more work than the first method. Mills which use clean well water in place of clarified river water may also keep their pulp in a wet state by rolling it up in thick rolls. A mill in the Rhenish provinces has kept pulp in this way for over two years without the least signs of deterioration; the rolls were just piled up, and not too well ventilated either. A point worthy of notice, in conclusion, is that pulp should be ground and washed with as much water as possible, so as to thoroughly remove vegetable albumen.—*Holzstoff Zeitung.*

PROPOSED COMBINE OF PULP MILLS.

The low selling price of mechanical wood pulp is agitating the minds of Scandinavian manufacturers, who are endeavoring to form a combine so as to reduce the output. In respect to the project the *Words' Paper Trade Review*, of London, Eng., says:—The Scandinavians in order to protect their own interests now favour the idea of combination, and British buyers who have had the market in their favour for some time, will watch with considerable interest the outcome of the various proposals before the Scandinavian trade. During the eight months (January-August) of the present year the imports of wood pulp into Great Britain were as under:—

Chemical—Dry	..	119,462 tons	£936,321
" Wet	..	14,851 "	56,941
Mechanical—Dry	..	4,838 "	24,330
" Wet	..	207,657 "	469,561

Compared with the corresponding period of last year, the above figures show an increase of 6,706 tons and £6,146 in chemical dry, an increase of 6,158 tons and £11,189 in chemical wet, an increase of 310 tons and a decrease of £4,172 in mechanical dry, and an increase of

4,928 tons and a decrease of £30,587 in mechanical wet. The shrinkage in the value of mechanical is very evident.

The question of combination in Scandinavia is no new thing, but owing to want of loyal support previous efforts have ended in failure. It is essential to the British papermaker, in order to meet foreign competition, to obtain his wood pulp supplies at moderately low prices, and it is highly desirable that there should be an absence of serious fluctuation. The competition among Scandinavian mills appears to have kept prices down to some extent, as notwithstanding standard quotations on the market at the present time of 38s. 6d. to 40s. for prompt [delivery c.i.f. British ports, there are mills only too ready to accept such offers as 36s. 6d. to 37s. The Scandinavians in advocating combination recognize over-production, and the idea is to sell their pulp through a central office, to obtain statistics bearing upon production, sales, stock, etc., and to adopt any defensive policy in the interests of the industry.

British papermakers do not take kindly to combination, fearing an aggressive attitude. The present time, we learn, is considered by the Scandinavians as being favorable for mills to come to some agreement, and Canadian competition as a factor is entirely scouted. Many manufacturers in Norway and Sweden point to the failure of the Acadia Pulp Company as showing the unstable footing upon which many of the wood pulp undertakings in Canada have been started up. The withdrawal from the Canadian field of Messrs. Lloyd, Limited, is also looked upon as confirming the views held in Scandinavia that Canada does not possess any advantage over those enjoyed by Norway and Sweden in the exportation of wood pulp to the British market. In fact, it is believed that the Canadians are not in a position to successfully compete with Norwegian and Swedish mills. Following the Acadia failure, particulars have come to hand this week of the collapse of the many enterprises in Ontario with which the name of Mr. F. H. Clergue is prominently identified. It would be rash to attribute the present difficulties to the Sault Ste. Marie pulp works, although it appears the latter have not been by any means profitable.

Another disappointing Canadian wood pulp venture is that started at Shawinigan Falls, Quebec, by the Belgo-Canadian Pulp Company. The working of the mill supports the belief of many manufacturers in Scandinavia that a too low estimate of cost of production is given in prospectuses of Canadian wood pulp mills brought under the notice of the investing public. Covering a period of six months, the Belgo-Canadian Pulp Company is stated to have sustained a loss of 1,250,000 francs, and the directors have urged the shareholders in the future to engage in the manufacture of paper as well as pulp. The manufacture of wood pulp in Canada, notwithstanding the difficulties met with by several undertakings, is being gradually increased, and exports show considerable development. The following figures relate to the shipments from Canada for a period of eleven months ended May last,

together with those for the corresponding eleven months of the previous year :

	July-May, 1901-02.	July-May, 1902-03.
United States.....	\$1,002,307	\$1,561,049
Great Britain.....	728,977	1,015,228
Other countries.....	57,118	220,202
	\$1,788,702	\$2,796,479

The total value shows an increase of over 50 per cent., the principal market being the United States, followed by Great Britain. The principal Canadian wood pulp mill exporting to Great Britain is that controlled by the Chicoutimi Pulp Company, and as many important contracts are held, it seems that it is practically left to this concern for the time being to prove that Canadian wood pulp can successfully compete with the Scandinavian product.

PULP NOTES.

The Canada Paper Company are now rebuilding their chemical pulp mill at Windsor Mills, Que.

W. J. Hill, of Toronto, has secured from the Nepigon Pulp & Paper Company a contract for the construction of a power dam and pulp mill at Nepigon. The amount of the contract is said to be nearly \$400,000.

A party of gentlemen recently arrived at Kamloops,

B. C., under the direction of H. L. Gibbs, of Traverse City, Mich., to look into the possibilities for the establishment of large saw and pulp mills. They had two cruisers out all summer on the Western Pulp & Lumber Company's limits up the North Thompson river and branches and are said to be favorably impressed.

W. A. Bauer, of Vancouver, has completed the survey of 75,000 acres of spruce and larch timber lands on Princess Royal Island and is said to be preparing plans for a large pulp mill to be built by J. J. Palmer, of Toronto, and British capitalists. The entire plant is estimated to cost \$1,800,000. It is claimed that the company will be able to ship pulp to Puget Sound and California and as far east as Winnipeg.

John Gray, superintendent of the woods department of the Sturgeon Falls Pulp Company, states that the company have commenced the manufacture of pulp and paper. The plant is designed to turn out 100 tons of pulp per day, although it will be a few months yet before this capacity is reached. It is the intention to manufacture all the pulp into paper at Sturgeon Falls. Mr. Gray considers that the prospects for the Sturgeon Falls Company are exceptionally bright, as the pulp delivered to the mill for less than \$2.50 a cord. Wood is cut about 80 miles up the Sturgeon river, which is an excellent stream for floating down the logs.

Messrs. H. L. Frank and John Forman, of Montreal, and Hon. A. E. Spriggs, ex-Lieutenant Governor of Montana, recently returned from a trip of inspection up the Jacques Cartier river in connection with their proposed pulp enterprise. They own 17,000 acres of black spruce, and in addition have leased 187 square miles of timber limits from the Government. They intend to build a pulp plant at the mouth of the Jacques

Cartier river. They will have the best of water power there, and can easily float the logs down the river to the mill. It is estimated that 8,000 horse power is obtainable at the mouth of the old canal, which joins the Jacques Cartier and St. Lawrence rivers.

Mr. S. Wertheim, of Wertheim & Company, extensive pulp importers, Hamburg, Germany, says concerning the pulp market: "The present prices are so low that they cannot practically go lower; besides, you know that low prices always create a larger consumption. In fact, papermakers commence to realize this, and the market is already somewhat finer. Of course it is impossible to say and difficult to predict when the crisis will be over, this depending upon the paper production coming up to the pulp production. To judge, however, from experience in former similar periods I should venture to say that it will not take more than one or two years before we can expect normal and satisfactory prices again."

A party of seven prospectors, in charge of Noel Humphrey, of Vancouver, recently returned to that city from the north. They had been up to China Hat making a survey of the timber limits in that locality and were acting for a company which proposes building a pulp mill on what is known as Swanson Bay. According to Mr. Humphreys, who is the chief engineer of the company, the mill is to be constructed next spring and will have a capacity of 170 tons a day. Power will be obtained from a fall of water from the mountain side, a gravitation of 150 feet having been secured for the purpose. It is intended to manufacture paper as well as pulp. Another pulp mill is to be erected in the spring at Bella Coola, a company having been formed in Seattle for the purpose.

CHAS. H. VOGEL
A. M. Can. Soc. C. E.

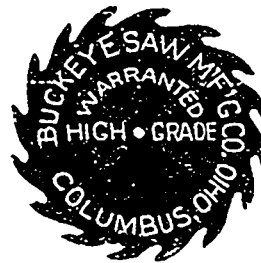
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Sherbrooke, Quebec

THE NEWS

—Hawson & Baker have sold their saw mill at Morrissey, B.C., to G. H. Gilpin.

—The Rosenroll Lumber Company has been incorporated at Rosenroll, N.W.T.

—Smith & Lebrau, saw millers, Ferguson, B.C., have dissolved, Mr. Lebeau continuing.

—Buckman Bros. have installed an electric plant for lighting their saw mills at Whitney, Ont.

—The Manitoba Lumber Company, Limited, has been incorporated, with headquarters at Carman.

—Roberge & Frere have registered business as saw millers at St. Adelph de Champlain, Que.

W. Juehlfs has retired from the lumber firm of Weins, Jacob & Company, Gretna, Man.

—The business of Stephen Lambe, lumber dealer, Seaforth, Ont., has been purchased by N. Clough & Sons.

—The Standard Lumber Company, Limited, has been incorporated by the British Columbia government.

—The Chandler-Jones Lumber Company, of Ogdensburg, are building a saw and shingle mill at Ompel, Ont.

—Bell & Company are building a saw mill on False Creek, Vancouver, B.C., to be in operation by the early spring.

—The late James Robertson, president of the James Robertson Company, Montreal, left an estate valued at \$369,764.82.

J. A. Rosseau and Hercule Arcand have registered proprietors of the saw mill business of H. Arcand & Cie, Champlain, Que.

—The engine house in connection with the sawmill of the Cascade Lumber Company at Vancouver, B.C., was burned last month.

—The annual meeting of the O'Neill Lumber Company was held at St. Martins, N. B., recently, when the old board of directors were re-elected.

—The stockholders of the Red Deer Lumber Company are organizing a company for the erection of a large casket factory in Winnipeg.

—George White has recently returned from Arrowhead, B.C., to Parry Sound, where he will build a sash and door factory and planing mill.

—The Bonny River Lumber Company, of Bonny River, N. B., are operating two rotaries and a lath machine pending the reconstruction of their mill.

—John R. McConnell, of Marysville, N. B., is said to have leased the O. Robinson mill at Lower St. Marys and will carry on sawing operations next season.

—J. T. Morrin and Alfred Cossette have registered as proprietors of the business of J. T. Morrin & Cie., lumber manufacturers and dealers, Valleyfield, Que.

—Large dry kilns and a blower system will be installed in the new factory of the Collingwood Furniture Company at Collingwood, Ont., now under construction.

—The San Juan Boom Company has been incorporated to construct and maintain booms and logging improvements on the Gordon river, Vancouver Island, B.C.

—The Peter Hay Company, Limited, has taken over the business of Peter Hay, manufacturer of machine knives, Galt, Ont. The new concern is capitalized at \$100,000.

—The Savanne Lumber Company are said to have decided to remove their mill from Savanne, Ont., to another location, the timber in that vicinity having become exhausted.

—The lumbermen operating on the St. Frances river, in Quebec, purpose making improvements to facilitate the floating of logs. A number of dams will be constructed.

—Keenan Bros., of Owen Sound, Ont., have purchased a saw mill near Holland Centre and are removing part of the machinery to Owen Sound and the balance to their Eugenia river mill.

—The Canadian Timber & Saw Mills, Limited, an English corporation, have been granted a license to carry on business in British Columbia, with headquarters at Trout Lake and a capital of \$150,000.

—The Lumbermen's Supply Company has been incorporated at Toronto, with a capital of \$50,000. The provisional directors are P. J. Loughrin, J. S. King, C. A. Johnson, William Anderson, and Charles Moore.

—The Arthabaska Chair Company has been incorporated at Victoriaville, Que., with a capital of \$12,000, to manufacture chairs, furniture, etc. The directors include J. E. Alein, H. Walsh and N. Rosseau.

—The King Edward Oil Company, Limited, has recently been organized at London, Ont., with a capital of \$100,000. The directors are J. R. Dowell, G. S. Robb, James Houlden, James Hutcheon and Samuel Howard.

—"Hoo-Hoo Day" at the World's Fair, St. Louis, will be September 9, 1904. Work on the "House of Hoo-Hoo" will begin soon. It is designed to build a club house at the World's Fair for the comfort of the members when they visit the Exposition.

—The business of the McEachren Heating and Ventilating Company, Galt, Ont., has been purchased by U. S. Sheldon. Mr. Sheldon has been business manager of the company for a number of years and under his direction the industry should continue to grow.

—The new mill of the Rat Portage Lumber Company at Winnipeg, Man., will be completed so as to commence sawing operations early next spring. The mill pond will be 400x150 feet and about 10 feet deep. Water for the pond will be pumped from the Red river.

—Several lumber manufacturers in the province of Quebec are said to be considering the advisability of operating their mills throughout the whole year. The Lawton Company have constructed the necessary steam pond and will try the experiment this winter. Their mill is located at Ste. Agathe des Monts.

—The logging camp of G. H. Finlay on the Squam-

ish river, B.C., is being operated by the E. K. Wood Lumber Company, of Puget Sound. Finlay & Company recently failed. The new concern will spend about \$10,000 in improving the retaining boom at the mouth of the Squamish river.

—C. Flynn, millwright, who has charge of the sawmill now under construction at Trout Lake, B.C., states that the mill will have a capacity of 120,000 feet a day and will be modern in every particular. The main building will be 160x34 feet, with a planing mill attached 60x70 feet. Adjoining the planing mill will be a four-room dry kiln, having a capacity of 60,000 feet of lumber. The boiler room will be 40x30 feet, and there will be shingle and lath mills. It is also the intention to install an electric light plant to light the mill and the streets of the town.

—One of the reports of surveying parties, summing up the country lying back from the north shore of Lake Superior and Lake Huron, north of the height of land, says: It is largely covered with extensive forests of spruce, jackpine and poplar. The value of this class of timber is, as everyone knows, increasing every day, and the market for it is widening; and rich indeed is the country which has boundless resources in these varieties of woods. In the district of Nipissing, north of the Canadian Pacific Railway line, there is estimated to be at least 20,000,000 cords of pulp wood; in the district of Algoma, 100,000,000 cords; in the district of Thunder Bay, 150,000,000 cords, and in the district of Rainy River, 18,000,000 cords; a grand total of 288,000,000 cords.

PUBLICATIONS.

The Rossendale Belting Company, 59 to 63 Front street east, Toronto, has just issued a new Canadian catalogue and price list of their "Rossendale" belting, a copy of which may be obtained for the asking. It gives, among other things, a number of practical reasons for using the M. A. Y. brand of special patent edged solid woven belting and a table showing the indicated horse-power transmitted by this belting.

The American Blower Company, of Detroit, Mich., have issued three very attractive catalogues, designated as follows: No. 118, Second Edition, "The A. B. C. System of Mechanical Draft forced and induced by Blowers and Exhaust Fans"; No. 145, Second Edition, "The A. B. C. Fan System of Heating and Ventilation as Applied to Manufacturing Establishments"; No. 155, "The A. B. C. Steel Plate Fans for Heating, Ventilating and Drying Plants, forced and induced Drying Apparatus, etc." All persons interested in these subjects should write for a copy.

A novel exhibit at the St. Louis World's Fair will be a representation of life in the lumber camps, the plan of Frank Howard, of Munising, Mich., who has arranged for its production on the "Midway" at the Exposition. There will be a logging camp, manned by a crew of the typical lumberjack, in full operation, and at stated times the men will be seen at play, among these sports being the lumberjack's favorite pastime of log-rolling. The arrangement of actual life in the pines has taken the designer several years to perfect, and the exhibition promises not only to be novel, but very interesting as well.

CRAIG MINE CRYSTAL CORUNDUM WHEELS

Our Pure Crystal Corundum Saw Gummars have no equal for their rapid, cool, cutting properties.



Read the following from Bulletin 180 of the United States Geological Survey, which says:

"Often a distinction is made between emery and corundum, many persons not recognizing emery as a variety of corundum.

Emery is a mechanical admixture of corundum and magnetite or hematite. It is, of course, the presence of corundum in the emery that gives to it its abrasive qualities and makes it of commercial value, and the abrasive efficiency of emeries varies according to the percentage of corundum they contain."

Emery is imported, mined by Greeks and Turks and contains only about 25% corundum. Our Crystal Corundum is guaranteed to be 98% pure alumina, a Canadian product, mined and manufactured by Canadians for Canadians.

HART CORUNDUM WHEEL COMPANY, Limited, Hamilton, Ont., Can.

TRADE NOTES.

The American Blower Company recently shipped a dry kiln outfit to the United States Furniture Co., of Evansville, Ind. This makes the seventh concern in that town using the "A. B. C." moist air kilns.

The Maritime Engineering Company, Limited, has been incorporated at Moncton, N. B., with a capital stock of \$30,000. It is proposed to establish a foundry and machine shops and to engage in the manufacture of engines, boilers and castings.

The Gordon Hollow Blast Grate Company, Greenville, Michigan, who claim to be the largest manufacturers of patented and liberally guaranteed hollow blast graters, most modern and up-to-date lumber edgers and trimmers for small saw-mills cutting up to 30,000 ft. in ten hours, in the world, will be pleased to send to all interested in their superior line and who will write for it, a complete set of their beautiful, instructive and valu-

able printed matter. Kindly mention this paper when making request and you will then be sure of receiving preferred attention.

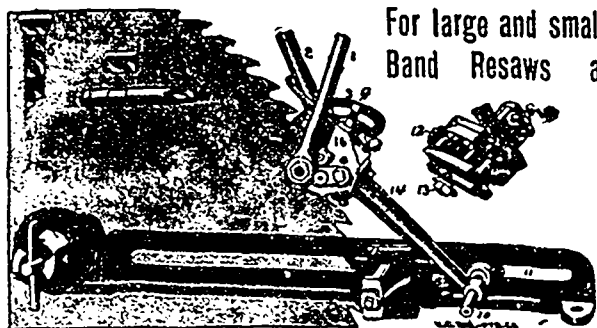
Nearly every lumberman in the Dominion has a team or more continually hauling logs or lumber; nearly every load must be bound before starting and nearly always is this done with a sapling or boom-pole. In the United States there is in use a patent device which hooks into the chain and by pulling down a lever, takes up the slack and binds a dozen times more tightly than can be done with the best hickory pole. Being so much more safe, more quickly adjusted and easily detached, it has come into quite common use in that country. Now being introduced in the Dominion, it will likely meet with a ready sale and will in time, no doubt, entirely supplant the crude, old-fashioned binding pole of our forefathers and come into general use. Being made of iron it should last a lifetime, and lumbermen generally will do well to

notice the advertisement of this load binder to be found in this issue. Eugene C. Stacy, Bloomdale, O., has control of the Canadian trade.

SUPPLIES FOR THE CAMP.

During the fall and winter months every lumberman operating in the woods will require to purchase a certain quantity of supplies for the camps. The best that is on the market will be found advertised in the CANADA LUMBERMAN. Food supplies, heating and cooking stoves, moccasins, mitts, cant hooks, logging tools, axes, snow plows the most up-to-date manufacturers of these goods keep an announcement before the lumber trade of the Dominion by using this journal. When you want supplies communicate with these firms, and don't forget to incidentally mention their advertisement. They will appreciate it, and so will THE LUMBERMAN.

The Hanchett Adjustable Saw Swage



For large and small Circulars, Bands, Band Resaws and Gang Saws.

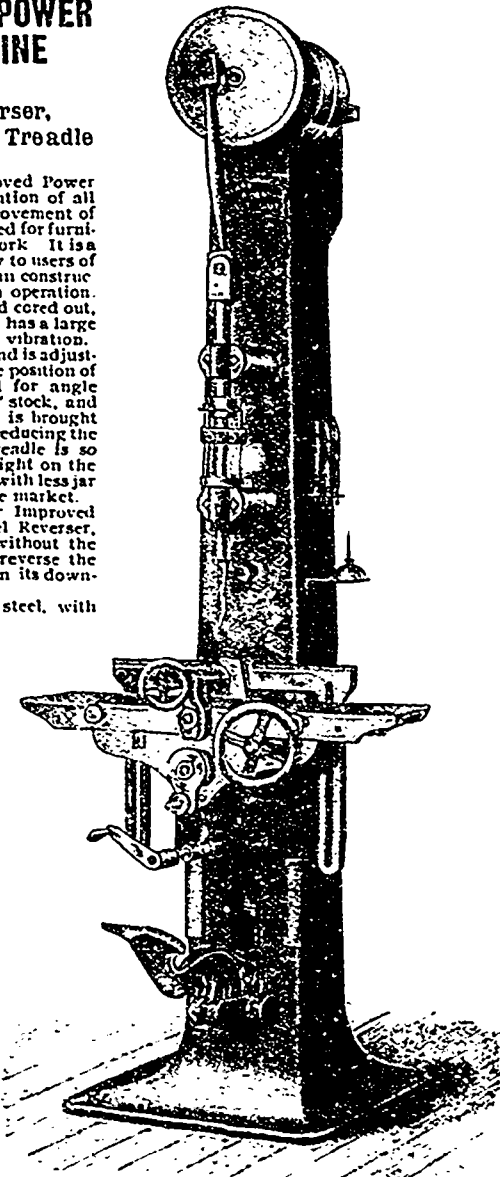
Hanchett Band Swages are noted for their speed of operation.

MAKES A PERFECT TOOTH.

HANCHETT SWAGE WORKS, Big Rapids, Mich.

NO. 25 IMPROVED POWER MORTISING MACHINE

With Tilting Table, Automatic Chisel Reverser, and Adjustable Treadle



OUR new designed No. 25 Improved Power Mortiser is worthy of the attention of all wood workers interested in the improvement of machinery of this class. It is adapted for furniture, cabinet, sash, door and blind work. It is a tool we cannot recommend too highly to users of this class of machinery. It is simple in construction, easy to manipulate, and rapid in operation. The frame is cast in one piece, and cored out, making it very stiff and strong, and it has a large base, thus freeing the machine from vibration. The table is long and compound, and is adjustable to and from the chisel to suit the position of the mortise. Can also be adjusted for angle mortising. Will drop to receive 12" stock, and mortise to the centre of 6". The table is brought up to the chisel by foot treadle, thus reducing the strain on the chisel spindle. The treadle is so compounded that the strain is very light on the operator's foot. This machine runs with less jar than any other similar mortiser on the market. The spindle is supplied with our Improved Automatic Spindle Guide and Chisel Reverser, which holds the spindle in position without the use of keys or set screws, and will reverse the chisel by the action of the table in its downward travel.

The Connecting Rod is made of steel, with brass bushings and steel crank pin.

Note the Advantages: No friction belt to get loose or run off which has caused so much trouble and waste of time repairing in the past. The chisel can be reversed as well when the machine is standing as when in motion.

Chisels. Each machine is furnished with six chisels, namely, 5-16", 3-5", 7-16", 1-2", 5-8", 3-4".

Tight and loose pulleys run between bearings, and are 12" x 3 1/2", and should run 550 revolutions per minute.

Bearings and loose pulleys are all self oiling.

Weight of machine 1400 lbs.

No. 26 Machine is the same as No. 25, only it has boring attachment, and is furnished with 6 Borer Bits to suit the above size chisels, which spindle is in a line with the chisel spindle. The work can first be bored, then fed under the chisel and mortised without being taken from the table.

Weight of machine 1500 lbs. Cut Gears. We use Cut Gearing on all our machinery.

For price and description of wood-working machinery address

CLARK & DEMILL, Manufacturers of Improved Wood-Working Machinery. GALT, ONTARIO CANADA

“ THE REEVES ”

For Saw or Planing Mill work "The Reeves" Wood Split Pulley is the favorite. A good, strong, durable pulley made honestly and made right.

Reeves Pulley Manufacturing Company, Limited

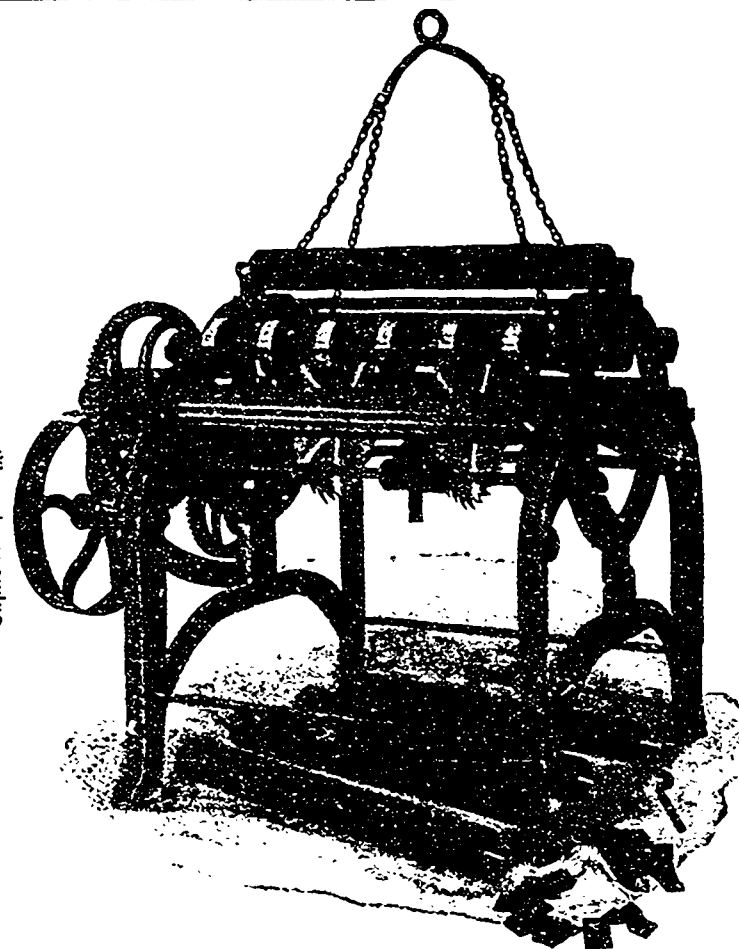
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GET OUR PRICE LIST AND DISCOUNTS

OUR 2, 3 and 4 SAW EDGERS

Are Dealers. Capacity up to 35 thousand.



Direct Acting Steam Feeds, with D Valve, acknowledged the best. Trimmers and Slash Tables Improved design. Double and Single Geared Log Jack Works with chain complete.

Clipper Shingle Machine, capacity 35 to 50 thousand in ten hours. Improved Double Tooth or Boss Dogs with cast steel inserted teeth. Lockport Swing Shingle Heading Machine Complete Sawmill Outfits

All other kinds of Mill Machinery. Descriptive circulars and catalogue with prices and terms on application.

THE E. LONG MFG. CO., ORILLIA, ONT.

SUPREMACY IN THE SCIENCE OF FORESTRY.

The United States government, contrary to all precedent, will participate in a competitive exhibit at the World's Fair in St. Louis. Uncle Sam will have for his rival the German Empire, which nation's methods of forest management are best and most practical is the problem to be solved by actual demonstration.

Two tracts of land, already partially covered with trees, and each about five acres in extent, have been assigned to the United States and German Governments, as the laboratory for their tests. The two lie side by side, so that the visitor may walk through what the Americans call an "arborium", and observe all American methods of forestry, and then step across

into what the German designates as a "forest garden" and learn the German method.

No trees will be cut from either tract. Rather transplanting will be resorted to, and when the Exposition opens miniature forests, perfect in every detail, with narrow gravel walks winding in and out, may be seen. Every tree that thrives in the latitude of St. Louis will be represented and the specimen can be easily designated. Attached to each tree will be an aluminum label on which will be stamped the botanical and common names.

In one respect the exhibits will be the same. Each display will embrace practically the same number of trees and they will be practically of the same varieties.

Here all similarity ceases. The treatment will accord with the practices in vogue in the respective countries. In the American arborium the trees will be planted, trained, and pruned and treated according to the American idea. In the German forest garden will be reproduced, in the miniature, the effects that obtain in the forests of the Fatherland, and the story of how the wonderful forests of that wonderful country have been preserved through ages, and renewal from time to time, will be told by practical demonstrations.

The exhibits will be in charge of the most expert foresters to be found in the two countries. Interest will not center in the exhibits merely because they represent all that is best in the forestry of both countries, but because of the practical demonstrations and tests that will be made every day of the Exposition.



The Passing of Back Woods Methods

UP-TO-DATE LUMBER DRYING

Means the use of the

Motion, Moist Air Down Draft Dry Kiln

Not cheap, yet inexpensive.

It is being adopted by all experienced lumber driers. It will pay you to investigate. CATALOGUE FREE.

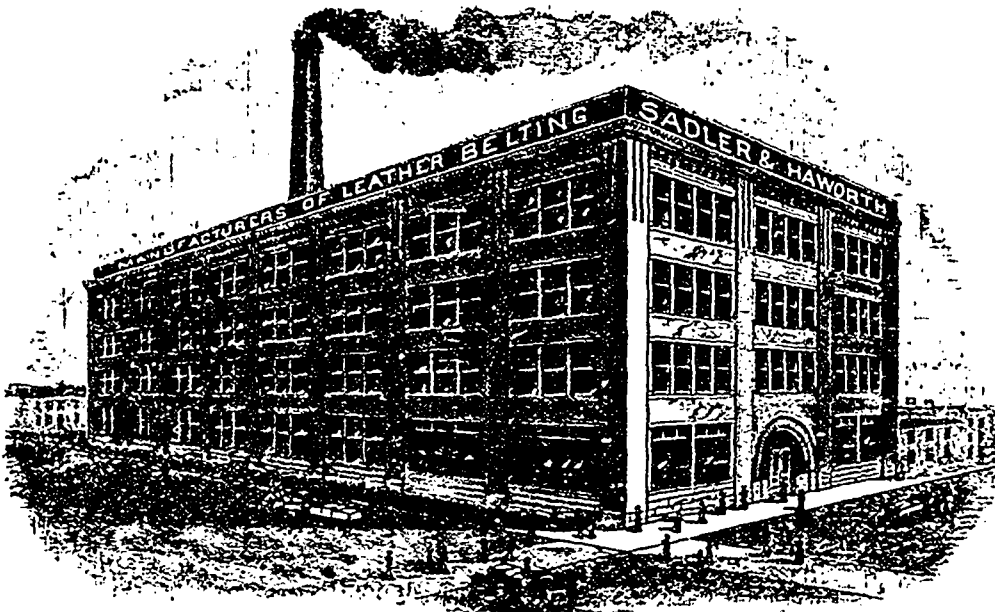
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CHICAGO, ILL.

H. A. JOHNSON, Western Sales Agent

334 Lumber Exchange Bldg., SEATTLE, WASH



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General Mill Supplies

Try our "CROWN BRAND" for saw and other heavy work.

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The Largest and Best Equipped Factory for the Manufacture of Leather Belting in Canada.

YOU CANNOT AFFORD TO BE WITHOUT A

The GEORGE REGISTERS

is being used by the largest Planing Mills in the country, who have given their written testimonials.

Here is a sample :-

THE STOUFFVILLE BRASS & STEEL WORKS, Stouffville, Ont.

Burks Falls, Ont., Feb. 13, 1903.

GENTLEMEN,—In answer to your inquiry with regard to the S. George Lumber Register, we desire to say that it has given every satisfaction. We put in one of 18000 ft. capacity lineal in the spring of 1902 and have used it constantly ever since and it has never given any trouble whatever, has never been out of order or laid up for repairs. We may further say that we are so well pleased with it that we have ordered another of the larger capacity of 60,000 ft. lineal, which we intend to use on another machine. In conclusion we may say that we do not see how this machine could be improved upon and we feel certain that it will be a long time before a lumber register is produced which will be superior to the S. George. Yours truly,

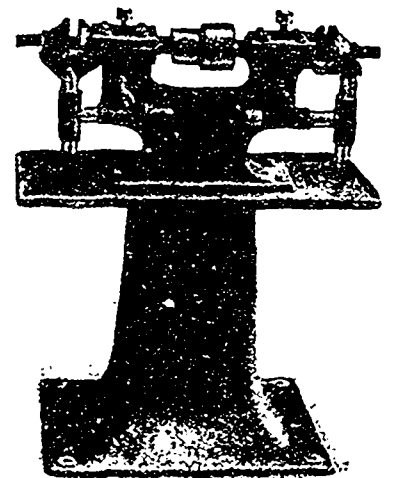
THE KNIGHT BROS. CO., HENRY KNIGHT, Manager.

EMERY GRINDERS

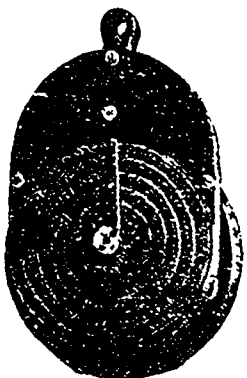
The annexed cut represents our latest and most improved style of Emery Stand and the incessant demand for a frame that will resist the vibration of the stone when running at full speed has made us particularly careful to make "rigidity" one of the principal features of the same.

THE STOUFFVILLE BRASS & STEEL WORKS
STOUFFVILLE, ONT.

SQUARE BASE EMERY GRINDERS



Write for Prices and Terms.



GEORGE LUMBER REGISTER

The Only Perfect Register on the Market

We will send one of these Registers FREE on 30 days trial to any address and pay return charges if not entirely satisfactory.

There is one very good argument that is seldom advanced for the publication that charges a somewhat fancy price for space and levies extra rates on special position and cuts. Such mediums may be costly, but they always carry a fine class of publicity, the "cheap"

advertiser with the questionable proposition being conspicuously and pleasantly absent. There are advertisers of long experience who would rather spend their appropriation in a single medium of this sort to reach a certain number of readers, though with the same

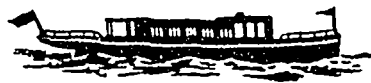
amount of money it would be possible to reach three times as many by means of two or three cheaper publications. The wise advertiser who has a high-class proposition not only learns that he is known by the company he keeps, but also by the company that he keeps out of.—Printers' Ink.

ESTABLISHED 1849.
 CHARLES F. CLARK, President. JARED CHITTENDEN, Treasurer.
BRADSTREET'S
 Capital and Surplus, \$1,500,000.
 Offices Throughout the Civilized World.

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Engines in successful operation from Halifax to Vancouver.



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Manufacturers High-grade Cylinder, Machine and Sawmill Oils.

Calypsol Grease

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This Axe stands better in frosty weather than any axe made. Send for sample. Can supply any pattern.

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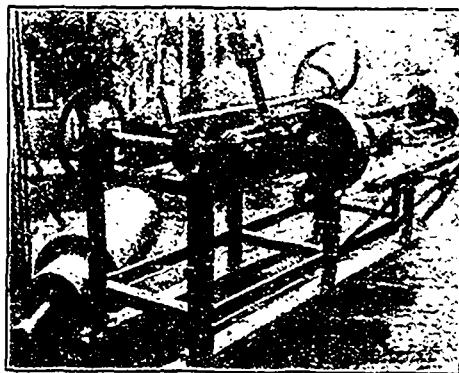
HIGHEST GRADES OF

Refined Oils
Lubricating Oils

AND ALL

Petroleum
Products

Saw Grinders



The Kennedy Island Mill Co., Ltd., Riviere du Loup, Que., says—

"I might say to you that this Grinder is all right and has paid for itself twice over since I bought it. No Shingle Mill of any account should be without one."

B. R. Mowry & Sons, GRAVENHURST, ONTARIO

TRIMMERS

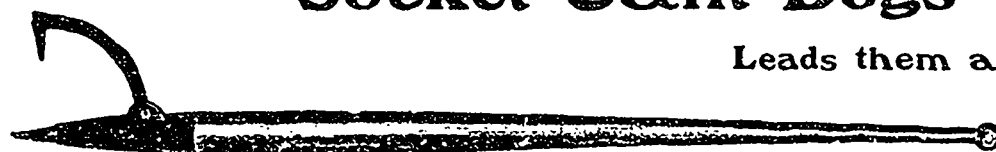
If the Board does not reach the quadrant the Saw stays down and trims, see cut. To cut off more than two feet, bad ends, etc., pull the cord, see dotted lines. The whole Board can be cut into two foot lengths or trimmed in any manner. The Saw frame is balanced, the Arbor pulleys are 8 in. x 8 in. We build several styles of Trimmers, also all kinds of Saw and Shingle Mill Machinery

Our "Boss" Shingle Machine is second to none in Canada. Our sales will prove it. We make Saw Jointers and Knife Jointers, also Packing Boxes. Send for Catalogue.

IN OUR LINE WE LEAD

McFarlane Patent Wrot Forged Steel Socket Cant Dogs

Leads them all



Used in every Lumbering District from the Atlantic to the Pacific Ocean

Extra Fine Quality Split Rock Maple Handles

Round and Duck Bill Peaveys and Cant Hooks

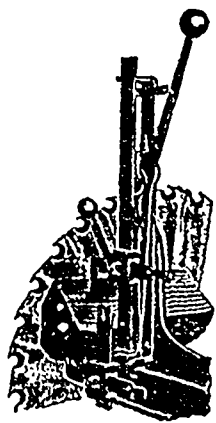
Write for quotations. It once used you will never return to the old malleable sockets.

THE McFARLANE-NEILL MANUFACTURING CO., Limited ST. MARY'S, YORK COUNTY New Brunswick

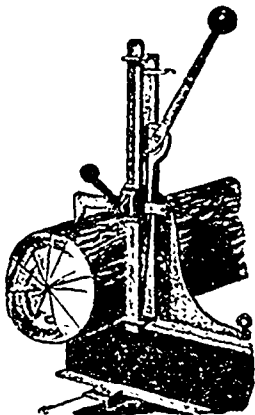


Glass Patent Duplex Mill Dogs

These dogs have no springs, no ratchet, no pawls, nothing to get out of order, but have a positive grip so that no log can become loose or turn while being sawed. Dogs can be fastened on any head block knee and will hold small blocks on single head block if necessary to do so. Upper and lower dogs can be used together or independent of each other.



Right Hand Duplex Dog



Right Hand Single Dog

Dogs made either right or left hand as required.

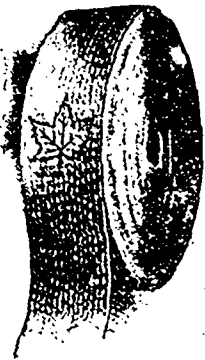
THE CANTON SAW COMPANY

Manufacturers of Saws, Saw Mill Dogs and Supplies.

South Rex Street, CANTON, OHIO

MADE IN CANADA

STITCHED COTTON DUCK BELTING



SUPERIOR TO ALL OTHERS

-FOR-

Agricultural Machines, Elevators, Pulp and Paper Mills, Cotton, Woolen, Cement and Saw Mills, Machine Shops and Electric Power.

MANUFACTURED BY

DOMINION BELTING COMPANY Limited

HAMILTON, CANADA
USE OUR

"MAPLE LEAF BELT DRESSING"

SEND IT BACK

if you do not like it. Unless you are fully satisfied with

The Goodyear Load Binder

we do not want your money.



Stop Cutting Saplings

One Goodyear will outlast a forest of them.

If you had known

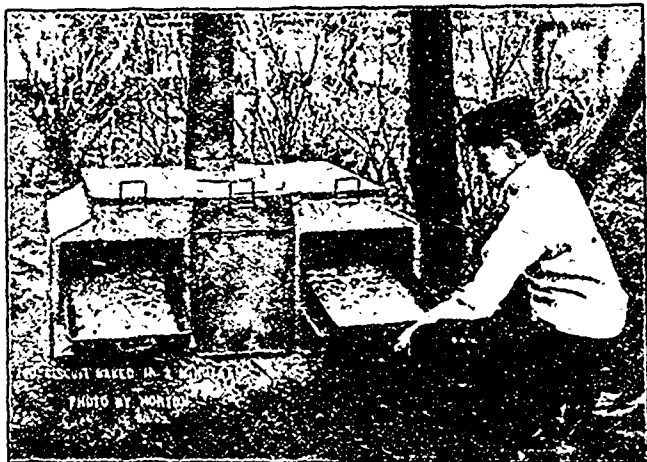
HOW MUCH BETTER
HOW MUCH EASIER
HOW MUCH MORE QUICKLY

a load of lumber or logs can be bound you would not have waited so long.

TRY ONE--\$2.00 EACH.

EUGENE C. STACY - Bolomdale, Ohio

Watson's Portable Air Tight Baker



The most convenient stove ever constructed for use in the Woods, on the Drive, in the Camps. Bakes as perfectly as the finest range.

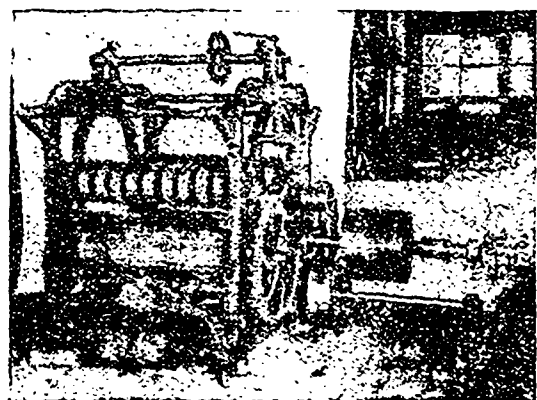
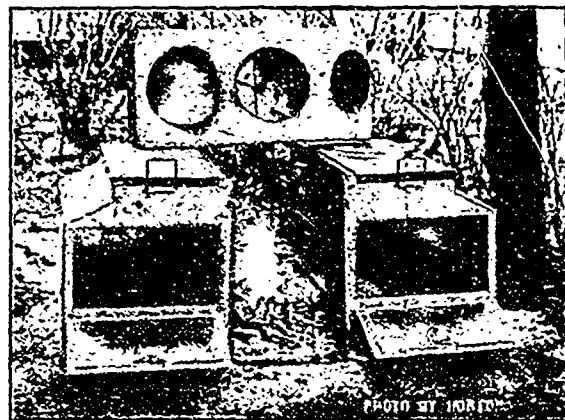
Read What Experienced Woodsmen Say of it: "We used your Portable Woods Baker all last season with a crew of men in the woods, travelling from place to place. We found it convenient to handle and the best steel range cannot beat it in baking. It is a perfect baking oven and a success in every way."

The cooking is not affected by rain or weather and can be used outdoors or in a tent.

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MEMONINNE RIVER BOON Co.,
Per Wm. H. Stephenson, Gen'l Supt

We make these stoves in three sizes. Our No. 10 will cook for ten men; our No. 20 for twenty men, and No. 30 for from fifty to one hundred persons. We want those interested in a stove of this kind to write us for full description and prices.

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Feed Side View.

COMPOUND 4-SAW EDGER

"Will edge lumber from 1/2" to 4" in thickness, and widths from 2" to 25" Edge as high as 90 thousand in ten hours. Machines made either right or left hand according to position in mill; guaranteed to saw straight lumber. A 1 testimonials from largest manufacturers in Maritime Provinces.

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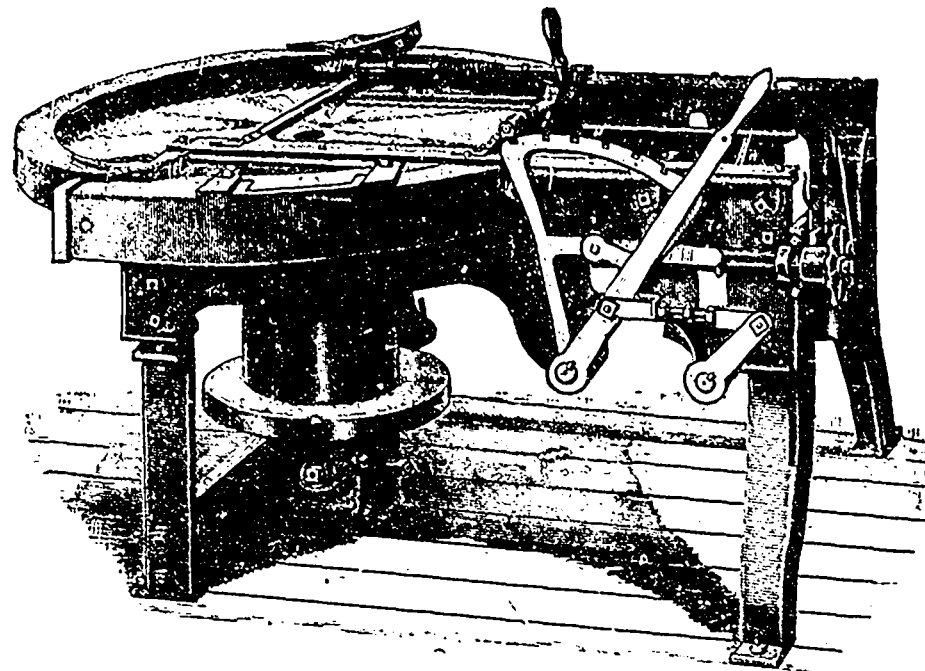


End View Showing Open End.

These Cuts Show a Right-Hand Machine

"Dauntless" Shingle, Heading and Box Board Machine

The strongest and best machine in the market. I am now making these machines to take saws up to 44 in. diameter, and to cut shingles, heading or box boards up to 26 in. long. Carriage made of steel tubing will take blocks up to 18 in. wide or wider if specified in order, and fitted with extra dogs to hold the last shingle, cuts four shingles from piece of board 1 in. thick, leaving no spalt.

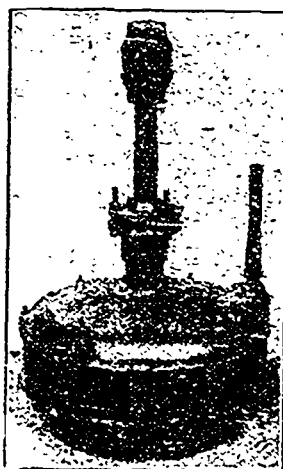


This machine with one of my new Canadian Saw Jointers makes an outfit that cannot be beaten on earth.

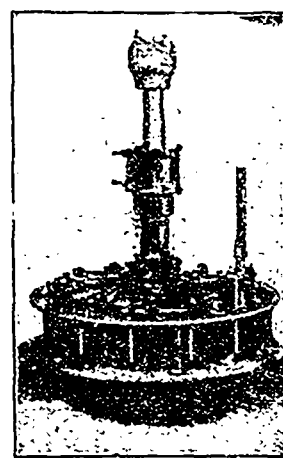
I make other mill machinery too. Let me quote prices and send you a Catalogue.

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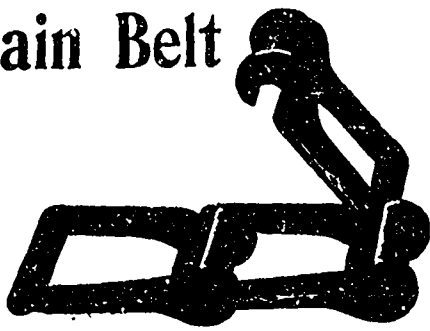
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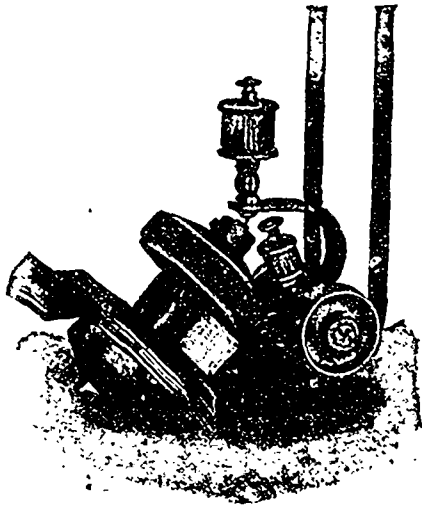
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Used as an attachment to any flooring machine to bore jointed flooring.

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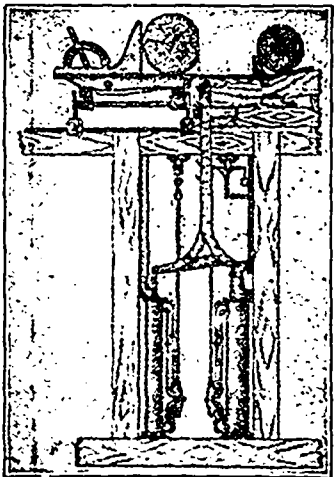


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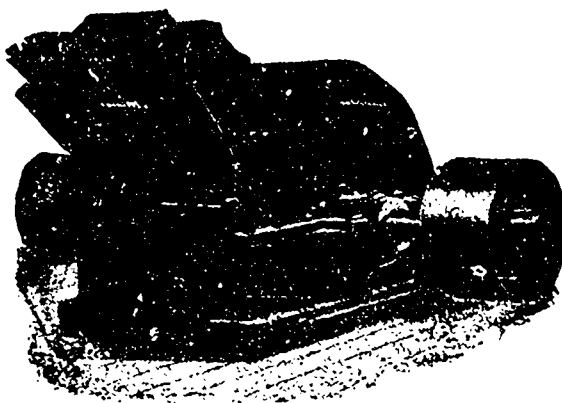
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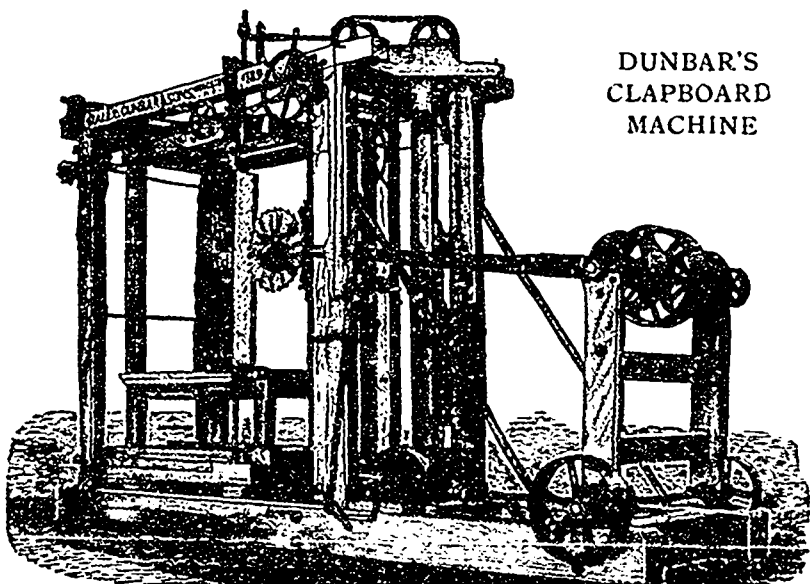
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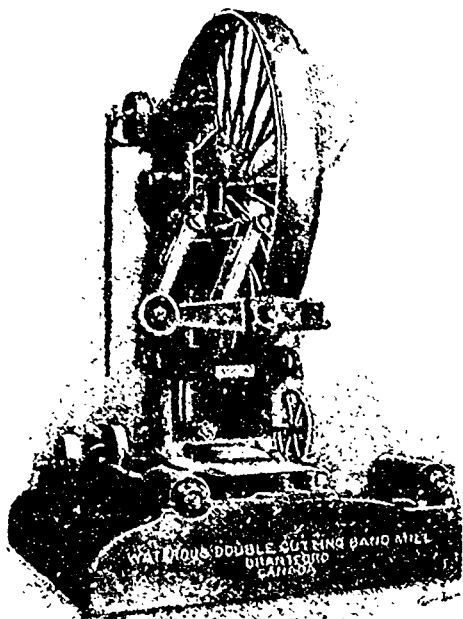
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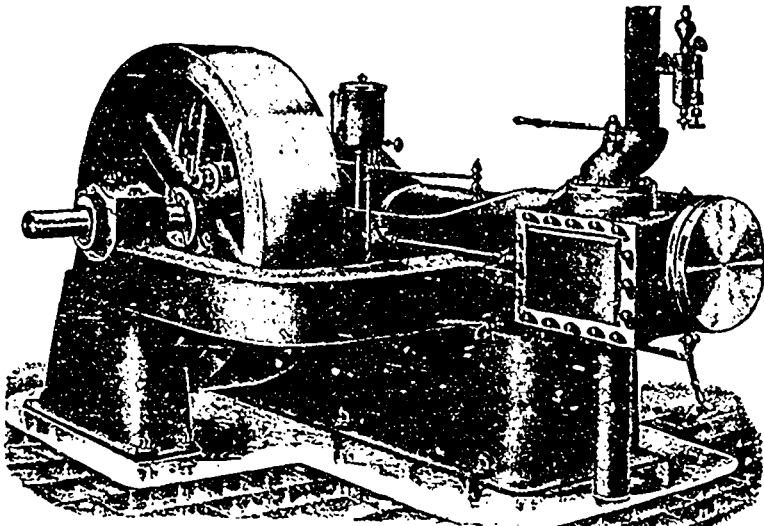
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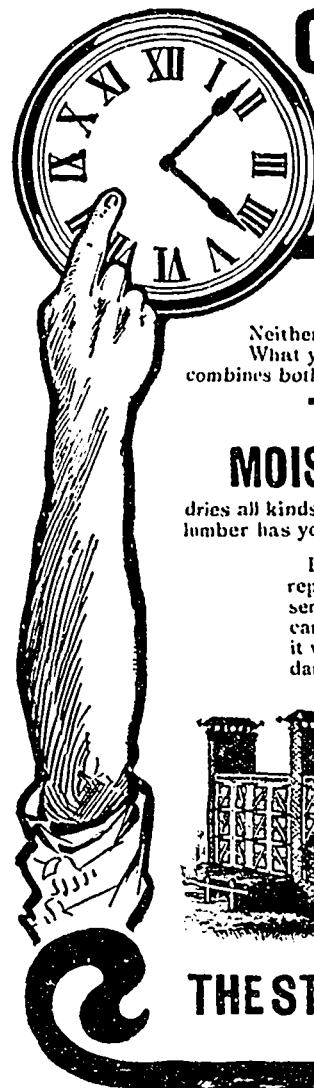
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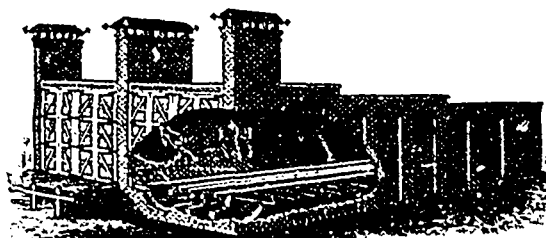
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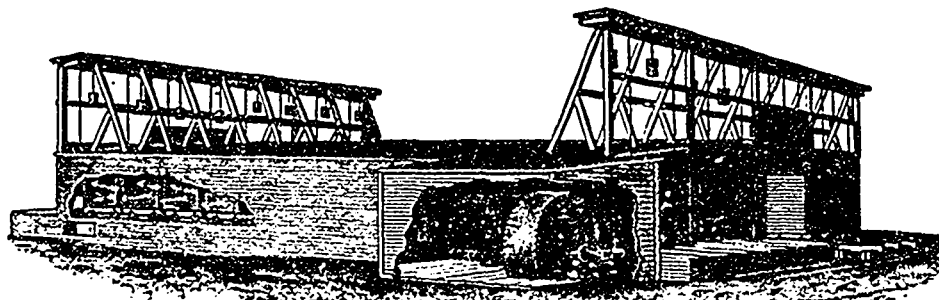
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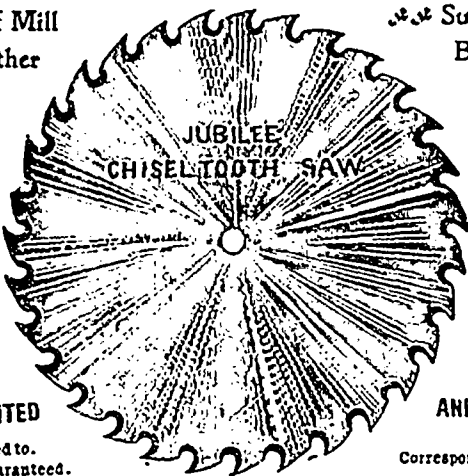
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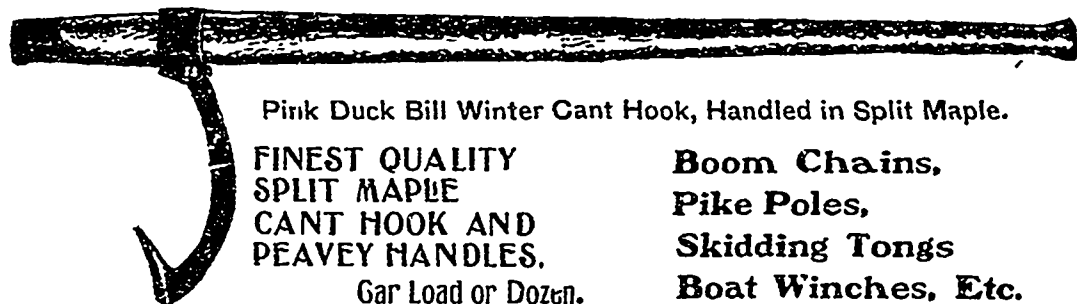


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