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# AMERICAN LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XVIII. NUMBER 3. TORONTO, ONT., MARCH, 1897. TERMS, \$1.00 PER YEAR. Single Copies, 10 Cents.



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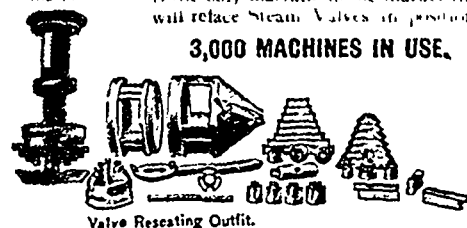
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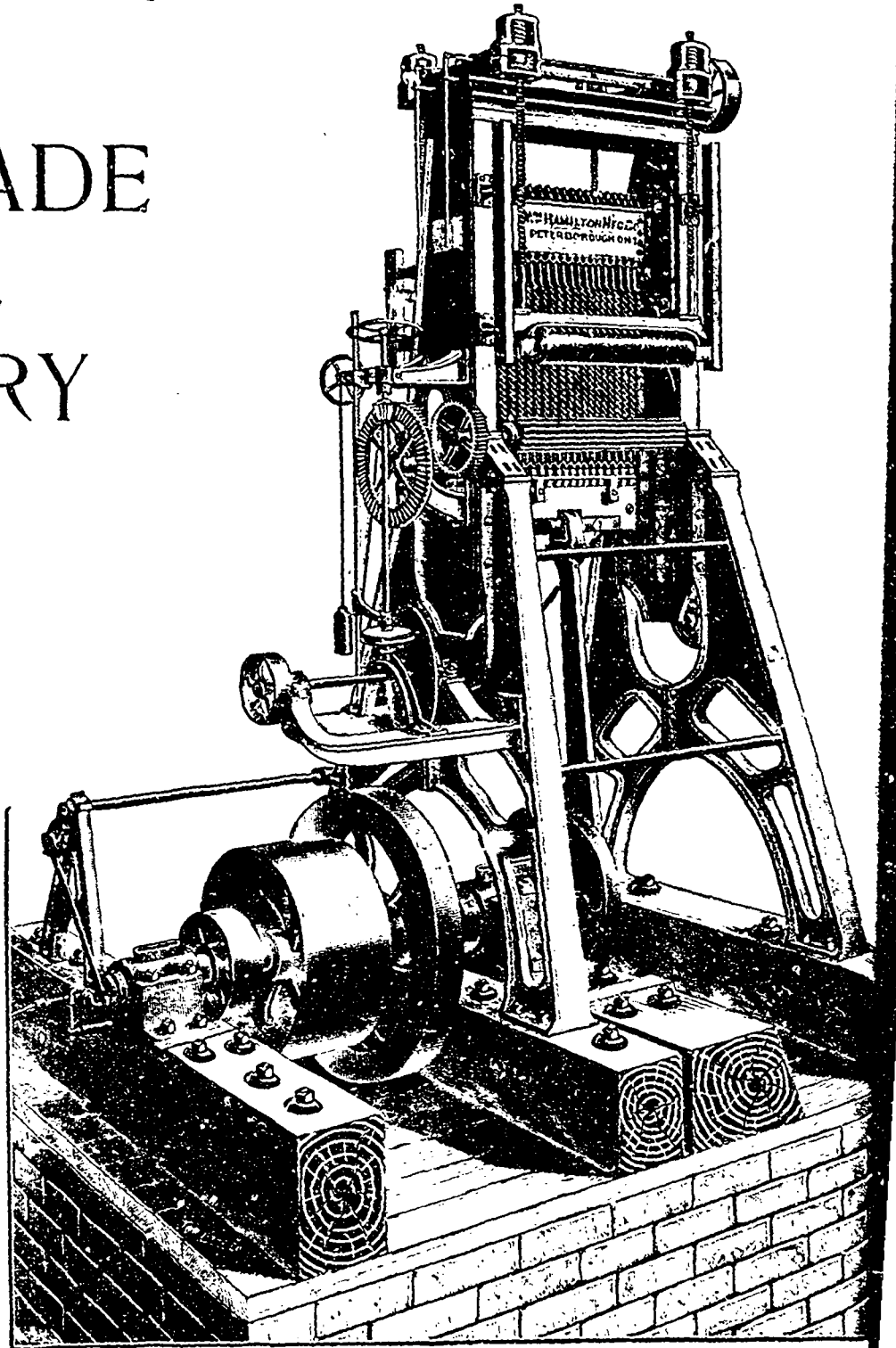
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VOLUME XVIII.  
NUMBER 3.

TORONTO, ONT., MARCH, 1897

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## AN ELECTRICALLY-DRIVEN BAND-SAW.

The application of electricity for saw mill purposes is rapidly coming to the front. At a recent exhibition at Geneva one of the interesting features was a horizontal travelling band-saw at work, as shown in the accompanying illustration. This saw was designed for sawing logs of timber of any length. The frame is made to travel, while the log is fixed on the foundation floor. This kind of saw requires more space than the ordinary one, but works without interruption, as, owing to the length of travel, while the machine is working on one log another one can be prepared and set at the other end of track. The machine is driven by two independent three-phase motors; one of them of 6 h.p., running at 810 revolutions, is set on the platform of the travelling frame, and provides for forward and backward movement. From the motor pulley the movement is transmitted by a belt to a larger pulley, and then by a worm and wheel gear to a friction wheel fixed on a vertical spindle, that can be moved radially on a large disc, thus permitting the operator to vary the rate of travel of the frame, as the movement is transmitted from this shaft to the driving wheels by means of a vertical spindle and two conical gears. The return movement is very rapid, attaining a maximum speed of 47 ft. per minute. The reversal is obtained by a double conical friction gear. The forward movement can be regulated at will; the minimum speed is  $3\frac{1}{2}$  in. per minute. The other three-phase motor of 16 h.p. is direct-coupled on to the spindle of one of the band-saw pulleys, and drives it at a speed of 480 revolutions a minute, the band saw attaining a linear velocity of about 125 ft. per second. To allow of a vertical movement of the saw frame, and of a lateral shifting of the pulleys for tightening the band-saw, the connections of the motor to the pulleys are made by means of three flexible

cables. The vertical downward movement of the saw is regulated by a dividing disc, so that the boards can be cut of equal thickness. Every movement of the saw can be directed from the frame platform by hand wheels.

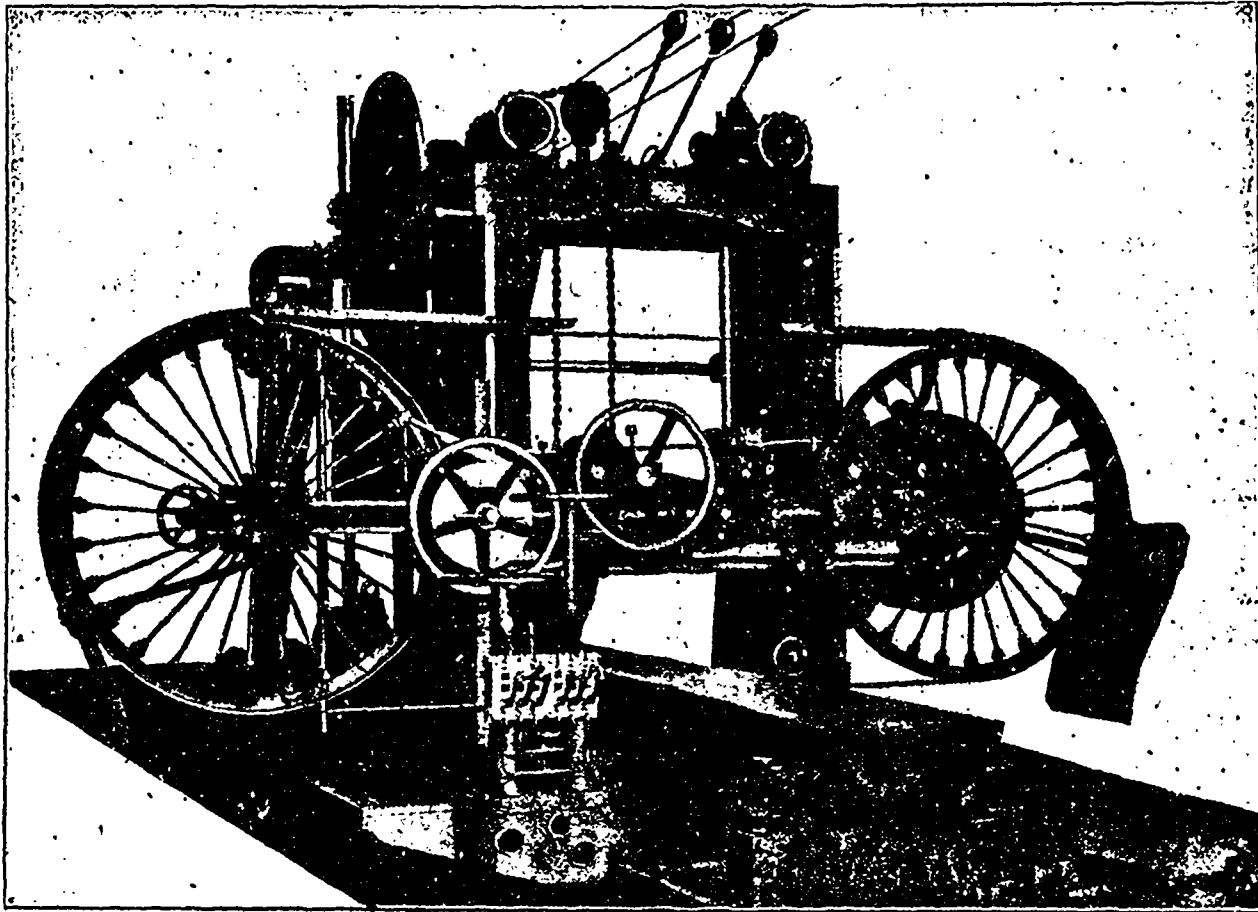
## POWER LOST IN SHAFTING.

SOME interesting experiments were conducted recently by C. H. Benjamin, Professor of Mechanical Engineering at the Case School of Applied Science at Cleveland, to determine by actual observation in factories of various kinds

and that required to drive the whole shop was found, and this reduced again to a percentage. The most startling loss was found in a bridge material factory, where the shops were spread over a lot of ground. Eighty per cent. of the engine's power was lost in the shuffling there. In a planing mill the loss was 73 per cent.; in a sewing machine factory it was nearly 70 per cent. It was 77 per cent. in a stamping mill and 65 per cent. in a boiler and machine works. The average loss for heavy machine shops was found to be 62.3 per cent. The average for light machine

work was 55.1 per cent., and in but one instance did the loss fall below 47.3 per cent.

In this one case the percentage of loss was so small that it must serve as a serious commentary upon the character of the work generally done in putting up shafting. This was in a steel screw works, and the loss was only 14.5 per cent. In this factory the machinery is all of the automatic type, very compactly arranged, and the shafting had been put up in the most careful manner. The shafting was in



AN ELECTRICALLY-DRIVEN BAND-SAW.

perfect alignment, and ran in hard cast-iron boxes without babbit metal. It is supported by very rigid hangers, and was oiled by hand instead of wick oilers.

The results of these observations were presented to the American Society of Mechanical Engineers, at its recent meeting, in a paper by Prof. Benjamin, and tables were given which showed the number of feet of shafting run in each of the factories under observation and other features of the test. One explanation of this immense loss of power, Prof. Benjamin says, is economy in either the quantity or the quality of the oil used. This cuts down the apparent size of the bills for shop expenses while the coal and water bills go piling up. A saving could probably be made by using electricity for transmitting the power.

just what loss occurred through friction in transmitting power by belts and shafting from the engines to the driven machines. The figures of loss must prove startling to factory owners, and they will also serve as a guide to engineers.

The observations were made in sixteen factories, each engaged in a different kind of work. The method of making observations was as follows: During the day-time, when the works were in operation and the machines were running, indicator cards showing the work being done by the engines were taken each hour. Then during the noon hour or at night, when the engines were driving only the shafting, similar cards were taken, and when these and the first ones had been averaged, the difference between the power required to drive the shafting alone

perfect alignment, and ran in hard cast-iron boxes without babbit metal. It is supported by very rigid hangers, and was oiled by hand instead of wick oilers.

VIEWS OF A MICHIGAN LUMBERMAN.

MR. ARTHUR HILL, OF SAGINAW, PRESENTS SOME STRONG ARGUMENTS AGAINST THE IMPOSITION OF A DUTY ON LUMBER.

THE Hon. Justin S. Morrill, Chairman of the Finance Committee of the United States Senate, received a pamphlet letter a fortnight ago from Mr. Arthur Hill, of Saginaw, on the question of the proposed imposition by the United States government of a duty on foreign lumber. Mr. Hill is an extensive operator in the Georgian Bay district, as well as a large holder of Canadian timber limits, and is therefore thoroughly conversant with the lumber business on both sides of the border. The letter is written from the standpoint of an American, and deals with the question "How shall we treat Canada, as an enemy or as a friend?"

At the commencement Mr. Hill protests against any change in the present wood schedule which shall directly or indirectly prevent the free entry into the United States of the white pine lumber of Canada. Referring to those who are pressing for this legislation at Washington, Mr. Hill says:

"They press for it on the ground that it will be prohibitive; so that the Mississippi producer of pitch pine may extend his markets and his profits; so that the Pennsylvania producer of hemlock may force consumers to use hemlock when they want white pine; so that the lumberman of Minnesota may send his white pine into New England, 1,200 miles away, and make the New Englander pay the added freight. At the recent lumbermen's convention at Cincinnati these long-distance lumber dealers pointed out that the railroads should aid them at Washington, as the railroads would get this added freight."

In describing the movement which culminated in this Cincinnati convention, Mr. Hill says that the chiefly the lumbermen had was the hard times and the great distress into which the lumber business had fallen, and the assertion that the cause of all this depression was the influx of free Canadian lumber, and that to prohibit Canadian lumber would cure the evil. To show that the afflictions of the United States lumbermen do not come from the invasion of his markets by Canadian lumber, Mr. Hill quotes the importations of lumber into the United States since 1889, the year before the McKinley bill reduced the duty from \$2 to \$1 per thousand, with lumber duty free since 1894, as follows:—

	Feet.	
1889.....	747,842,000	\$7,804,163
1890.....	659,703,000	7,744,954
1891.....	757,149,000	8,498,046
1892.....	663,134,000	7,539,766
1893.....	742,351,000	8,717,331
1894.....	514,461,000	6,134,204
1895.....	600,809,000	6,859,532
1896.....	786,102,000	8,504,607

The explanations given by Mr. Hill to account for the state of things complained of by the lumber manufacturers of the United States are interesting. He says: "The obvious cause of the prostration of the lumber industry is a natural falling off in consumption during three years of national business depression, which has not been met by any corresponding reduction in output. The editor of The Timberman, a most able statistician, who made one of the principal addresses before the Cincinnati convention, stated incidentally his estimate of the amount of pine, spruce, hemlock and so forth used in construction in this country in 1892 at 16,000,000,000 feet, and the amount used in 1895 at 12,000,000,000 feet. Here is a shrinkage of 4,000,000,000 feet, or 25 per cent. of the normal consumption. This is an amount substantially equal to the entire production of white pine west of Chicago, including Wisconsin, Minnesota, and the entire Mississippi Valley, during the year 1895, which was 4,100,000,000 feet. It is a shrinkage equal to nearly 60 per cent. of the white pine product of the entire Northwest in 1895, which was, for Wisconsin, Minnesota and Mississippi river, 4,102,000,000 feet; for Michigan, 2,923,000,000, and for Lake Erie mills and others in that region, 68,000,000 feet, equal to a total of 7,093,000,000 feet.

"In the face of this shortage in annual demand of 4,000,000,000 feet, the lumbermen gathered in Cincinnati and resolved that the way to re-establish prosperous market conditions was to put a duty of \$2 per thousand on the 700,000,000 feet of lumber which has been coming from Canada into New England and New York for these many years, whether there was a high tariff, a low tariff or no tariff against it. It has been coming because the people of that section wanted it—needed it—and even the super-

ior white pine of Michigan has been unable to supplant it in its natural markets."

Regarding the claim that it is the character of the lumber imported from Canada rather than the quantity to which objection is raised, Mr. Hill asks: "Has the importation of an average of less than 700,000,000 feet of Canadian lumber during the six years following the tariff act of 1890 been able to fix the price in the United States on an average white pine cut of nearly 8,000,000,000 feet, and an approximate cut of 8,000,000,000 feet of other merchantable timber? This question answers itself. The quality of the Canadian importation has somewhat declined since 1890, but it has not deteriorated proportionately with the product of other white pine sections, nor faster than the consumers are adapting themselves to the use of commoner grades of lumber in place of the superior grades, which are fast vanishing from our markets."

Mr. Hill then proceeds to point out the fact that Canada has sought for closer trade relations with the United States, and has increased her purchases from that country, while Canada's sales to the United States have not increased proportionately. He urges that the United States should open her markets to the products of the Canadian forests, and gives the following table as showing the percentage of imports into Canada:—

	United States.	Great Britain.	Other Countries.
1885.....	45 p.c.	40 p.c.	15 p.c.
1890.....	46 p.c.	38 p.c.	16 p.c.
1895.....	52 p.c.	30 p.c.	18 p.c.

"Take note that the gain to the United States is entirely at the expense of British trade. This trade revolution is explained in the following statement of the imports into Canada for 1895:—

	Dutiable.	Free.	Duty.
United States.....	\$26,000,000	\$29,000,000	\$7,000,000
Great Britain.....	23,000,000	8,000,000	7,000,000

"In these three lines the reason for all that has happened can be read. Canada has been measurably opening her markets to the United States and measurably closing them to England. She taxes England \$7,000,000 for bringing into her markets \$31,000,000 worth of goods, and the United States no greater sum for bringing in \$55,000,000. Canada collects, too, a higher average duty on dutiable goods received from England than on dutiable goods from this country."

Mr. Hill presents figures of the trade the United States does with Cuba, Mexico, Central America and South America, and shows that Canada was a more valuable market in the year 1895 than all these other countries put together for the products of the United States. Yet, he says, Canada is the one country which it is proposed the new tariff bill shall distinctly legislate against in the article which forms the chief import into the United States from Canada—lumber. What now, he asks, would be the trade situation as between the two countries if lumber was taken off the United States free list and put into the dutiable list? and gives the answer as follows: "The United States received from Canada in 1895 \$36,000,000 worth of goods, of which \$15,000,000 worth were dutiable and \$21,000,000 free of duty. Put a tariff now on rough lumber and it will transfer \$8,000,000 from the free list to the dutiable, reducing the free list to \$13,000,000, and this would be the trade situation: Canada buying \$55,000,000 worth from the United States, admitting free \$29,000,000; and the United States buying \$36,000,000 worth from Canada, admitting free only \$13,000,000."

The cost of producing lumber is next dealt with, and is shown to be greater in Canada than the United States. "The average cost, including stumping, of delivering logs at Ottawa, the main point of output in Canada, is at least one dollar more per thousand than the cost of American logs at Saginaw, Menominee, Duluth or Minneapolis. The assertions to the contrary were good ten years ago, but not to-day. With the exhaustion of pine in lower Michigan, where Saginaw alone for 30 years furnished an average of 700,000,000 feet, and with the reduction and final abolition of duties on lumber and logs, American lumbermen have entered the market for Canadian timber; stumping has advanced; wages have advanced; until now American conditions, as to cost of timber and cost of labor, absolutely prevail in the white pine sections of Canada."

With respect to the timber supply he says:

"Michigan, for years queen of the white pine states, is fast losing that mantle of green that was the source and token of her royalty. Michigan forests supplied in 1890 nearly 4,500,000,000 feet of lumber. In 1895 they furnished only 2,900,000,000 feet of lumber, and during 1896 they

have produced less than 2,000,000,000, and the signs complete exhaustion, as to white pine, are plain before Michigan lumbermen, to continue the business to which they were bred, have been compelled to go to Canada to replenish their stock of timber, at once convenient for exportation and suited to their trade. No other timber of the place of white pine, as witness England's constant demand for it, with all the lumber markets of the world to draw from.

"The great, the main, reason why Canadian white pine should not be excluded from our markets is because of the present forestry conditions in this country. There is standing to-day in the state of Michigan 8,000,000,000 feet of pine, and there is not standing in the states of Wisconsin and Minnesota 50,000,000,000 feet of white pine, in the three states, 58,000,000,000 feet. I point you now, sir, to the fact that the annual statement for 1895 shows that the cut of these northwestern states for the ten years ending with that year was 77,000,000,000 feet, and you can draw your own conclusions.

"My first conclusion is that to now legislate to take timber west and south of Lake Superior and send it to remote New England is to perpetrate an economic crime upon those great treeless states. And this is my second conclusion: that to compel the people of New England to pay an added freight on lumber from the remote northwest, when their natural supply lies near at hand and cheap of access, is to do every citizen a wrong who builds a roof for home or factory. If that citizen pays the tax, then he stands as to every other builder in this land on an unequal footing.

"I have shown that our trade relations with Canada, reciprocal and friendly. Canada has so framed her trade laws that British trade loses and American trade gains. Shall we now, while Canada opens wider her doors to American trade, shut our doors in her face, and, if we do, what will be the result? It was recently stated in a leading newspaper of the Dominion that if the United States, in the face of present fair treatment by Canada, should now enact tariff laws unjust to Canada, they would protect themselves by tariffs, too—turning first to their own people for articles now bought of us, and next towards closer relations with Great Britain, their natural ally, and in war and peace their friend. You, sir, are wiser than I to decide whether this prophecy be true; if true, its effect upon our trade."

Mr. Thomas Pink, of Pembroke, Ont., manufacturer of lumbering and driving tools, boom chains, cant hooks, etc., has issued a new and useful catalogue for 1897, showing the various lines of manufacture. Mr. Pink established a wide reputation as a manufacturer of lumbermen's tools, and his goods are now used throughout the whole Dominion. A copy of the catalogue was sent upon application.

Logging is progressing favorably in the vicinity of Warren, Ont., although there is not a great deal of work. On Tuesday, the 16th inst., Keeling & Bower had their team draw to their mill, a distance of three miles, a load of logs containing 21 pieces, that scaled in all 8,442 feet. The sleigh and bunks used were the same as the ones used every day, the latter being only 10 feet long, though they been longer they claim a much larger load could have been hauled.

The new man in the shop is subjected to much criticism and scrutiny, but he very often has several handy tricks up his sleeve which raise him in the eyes of the men. This makes it rather risky to indulge in his casualness as to his way of working till you know how much work he can do in a day, he may paralyze the old man when it comes to time.—Machinery.

Parties who have been experimenting with white pine for bicycle rims have met with such success that they will be pushed for the purpose in competition with elm. Maple has been a favorite in some quarters since the introduction of the wood, but rock elm has many points of excellence that it is not probable it will be crowded out.

There is an estimated area of 47,000,000 acres of land with marketable timber in Australia. Western Australia has 20,000,000 of these acres. The various sawmills the last named section employ about 2,000 men. The total output of sawn stuff in 1895 was nearly \$2,000,000. The two principal woods are the jarrah and the blue gum, which considerable quantities have been exported to many countries—England principally—of late years.

**PRESENTATION FROM LUMBERMEN.**

THE regrets at the removal of Mr. James Webster from the position of Superintendent of the Northern and Midland Divisions of the Grand Trunk Railway have been many, by both the public and the press, and to some extent give an idea of the high regard in which he was held. It was not long before a tangible expression was given, when on Friday, 22nd January, a few gentlemen at the head of some of the great lumbering companies of the north called upon him at his residence at Allandale, Ont., to ask his acceptance of a beautiful cabinet of sterling silver, accompanied by an address, expressing their feelings towards him as a business man, with whom they had dealings for many years.

Mr. Wm. Thomson, of Longford, read the following address :

JAS. WEBSTER, Allandale.

SIR,—We, the undersigned, having heard with regret of your removal from the office of Superintendent of the Northern and Midland Divisions of the Grand Trunk Railway, to perform other duties, desire to acknowledge in some way our appreciation of your services in connection with our business as shippers over the divisions under your charge. We have always found that so far as was perfectly consistent with the interests of the railway company whom you served, you have been ever ready to accede in the kindest way to our business requests. We beg of you to accept the accompanying oak cabinet of sterling silverware as a small token of the esteem in which we hold you as a business man of sound principles, strict integrity and sterling worth; and we trust in after years these mementoes may bring to your mind pleasant recollections of our business relations during the past number of years. Trusting that you may long be spared to a wisely-directed and happy life.

- THE GEORGIAN BAY LUMBER CO.,  
W. J. Sheppard, President.
- THE VICTORIA HARBOR LUMBER CO.,  
John Waldie, President.
- THE LONGFORD LUMBER CO.,  
Wm. Thomson, President.
- JAS. PLAYFAIR & CO.
- A. MCPHERSON & CO.
- BURTON & BRO.

The address is elegantly illuminated, the border having some excellent scenes of the mills of the companies referred to, and is handsomely framed.

The cabinet, which was transferred to Mrs Webster by Mr. Playfair, is a model of beauty, being of highly polished oak, having three shelves, containing many sets of forks, spoons, with ladels, scoops, etc., etc., all of sterling silver, and the possession of which under such circumstances any one might well be proud of. On the silver plate was the inscription:

"To James Webster, Esq., from a few of his lumbermen friends on the Midland and Northern Divisions of the G. T. R. Allandale, January, 1897."

Nothing was known of either the intended presentation or the visit, and Mr. and Mrs. Webster received so genuine a surprise that to make an adequate reply was difficult; in fact Mr. Webster admitted he was not equal to the task, but expressed his high appreciation of their friendship and good wishes, which were so kind, and their generosity, which was so great.

The quiet and pleasant way of making the presentation was particularly acceptable to the recipients.

A rather curious accident recently happened at a Wausau, Wis., box factory. A rapidly revolving pulley burst into small pieces right in the midst of numerous busy workmen, and, scattering in all directions, failed to injure any one.

**A LOG SLIDE.**

A NOVEL plan for removing spruce pulp wood from the steep declivities of the famous mountain peak known as "Old Whiteface," in the Adirondacks, has been arranged. This peak is one of the highest and most imposing mountains in the Adirondacks, and many tourists have climbed to its summit because of the magnificent view of mountains and lakes to be had there. The peak lies just north of Lake Placid, and is 5,000 feet high. Saranac and Mirror lakes are near by.

Such is the steepness of the side of this mountain that until now no lumberman or pulp man has begun operations there, although all down the side of the immense pile grows spruce in immense quantities. But operations are soon to be begun on an immense scale, to denude the great mass of its growth of spruce, by the J. & J. Rogers Company, of Ausable Forks.

The company's plan will make it comparatively easy to get wood where heretofore it has been an impossibility. A large force of men is now employed in constructing a slide, or flume, from the mountain side to Ausable River, just below the big falls in Wilmington Notch. This slide is 2½ miles long, three feet wide and three feet deep. It is constructed of two inch plank, and is supported by a wooden trestle, which in many places is from 60 to 100 feet high. In several instances the flume rests on stringers, spanning ravines of great depth. The outlet of the flume at the river is 50 feet above high water mark, at a place where the stream is narrow and deep and hemmed in on either side by perpendicular edges. The water

**CIRCULAR RESAWING MACHINE.**

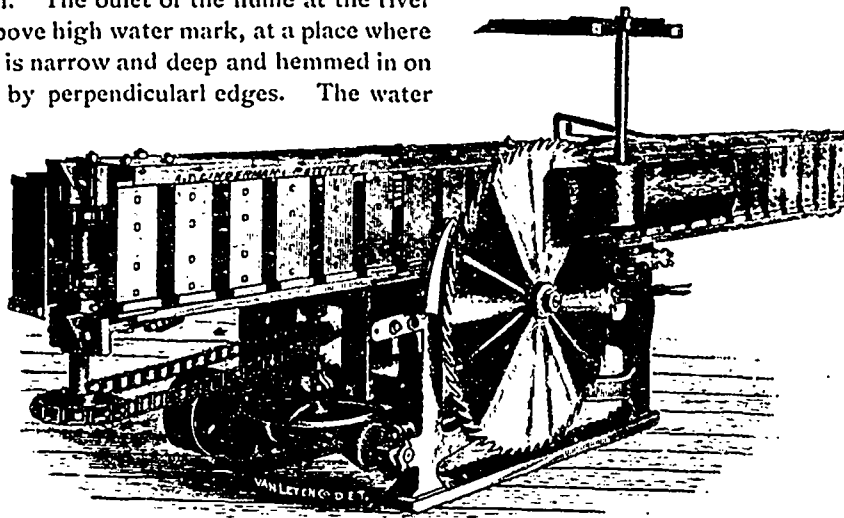
THE accompanying illustration shows a circular re-sawing machine as manufactured under the Linderman patents by the Waterous Engine Works Company, of Brantford, Ont., and which is adapted for re-sawing slabs as well as lumber. The manufacturers claim that it will convert slabs and other mill refuse into lumber at a small cost. The lumber from slabs is usually of upper grades, and much being clear, the amount that can be taken from a cord of ordinary slabs is from 400 to 700 feet surface measure, according to the thickness.

The Northwestern Lumberman, in describing the plant of the Northwestern Lumber Co. at Eau Clair, Wis., where three complete sets of this machinery are used, says:

"When a man can cause two blades of grass to grow where but one grew before, he is a benefactor of mankind—but what shall be said of the man who causes a select to exist where before there was nothing but cordwood?"

If we could gather together the values which have been thrown away in the white pine business since logs began to be cut into lumber, we could pay the national debt, a couple of river and harbor bills, square up the deficiency, and leave a surplus that would make money a bigger drug in the market than No. 2 boards are now. For years and years nobody paid the slightest degree of attention to saving or minimizing waste in making lumber. Now the great problem with the lumber manufacturer is first, how little waste can be made, and second, how it can best be disposed of. Lath and shingles, it is true, take care of much waste, but that they do not use it up to the best advantage is clearly shown by the always overstocked condition of those two commodities. The Linderman system provides a most profitable method of rescuing from the burner and the firewood pile much lumber that is valuable.

It is well-known among mill men that but little is left



CIRCULAR RE-SAWING MACHINE.

of Whiteface Brook is diverted from its natural channel into the flume, and the wood is put in all along the line for a mile down the mountain. A stick of spruce wood 18 inches in diameter, started at the upper end of the flume, will travel the distance to the river in 7½ minutes.

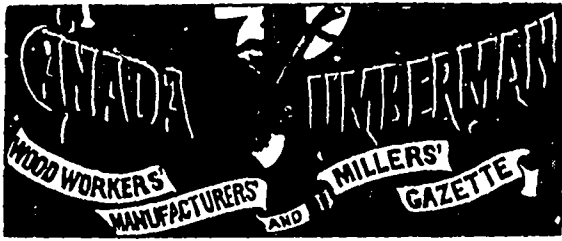
The undertaking, however, has aroused the provincial press to decry against the sin of spoiling the Adirondacks and the mountain scenes therein by denuding them of their timber. This is rather amusing to paper makers, who use only spruce anyway, and the provincial press would seem to hold the opinion that there was no other wood than spruce to be found in the Adirondacks. The Paper Mill.

Commission merchants in session at Boston, Mass., adopted the following as the standard apple barrel; seventeen and one-half (17½) inches in diameter at the head and twenty-eight and one-half (28½) inches in the length of the stave, with the usual bulge in the centre.

for the burner where lath are made, and that nearly or quite 10 per cent. of the timber goes into the slab pile. How to get it out at a profit has been the problem heretofore. This machine seems to furnish the solution—uses a thin 52-inch saw—arranged so that it is readily set for different thicknesses from 7,16 to 2 inches, to take all there is out of the slab. The change of thickness is made instantly. It saws any length. In a single band or circular mill the usual daily saving is from 7,000 to 9,000 feet of ½ box lumber, at a cost not to exceed for re-sawing, edging, trimming, of \$1.00 per 1000. Weight, 3,800 lbs.; pulley 16 x 12, speed, 700. The pressure roll, in place of hanging as shown in cut, is now attached to frame, and is driven."

To do the most work in the least time, without slighting quality nor wasting stock, is the problem. It is a condition, not a theory.

In twelve tests of green Georgia pine timber taken from all parts of the tree, an average modulus of rupture of 9,313 pounds per square inch was found. Seven tests of seasoned timber gave an average modulus of rupture of 10,524 pounds per square inch, showing that the seasoning adds about 13 per cent. to the strength of the green timber. The stronger timber was found in the butts of the trees, and the heart is, of course, stronger than the sap wood.



MONTHLY AND WEEKLY EDITIONS

C. H. MORTIMER  
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ADVERTISING RATES FURNISHED ON APPLICATION

THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Special pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 25 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

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.

TO VISITING LUMBERMEN.

Lumbermen visiting Toronto are invited to use the office of the CANADA LUMBERMAN as their own. We shall take pleasure in supplying them with every convenience for receiving and answering their correspondence, and hold ourselves at their service in any other way they may desire.

SANITARY CONDITION OF LUMBER CAMPS.

COMPLAINTS of the unsanitary condition of lumber camps, and the prevalence of typhoid fever and other infectious diseases among men employed in the woods, have lately been received by the Provincial Board of Health at Toronto. The town of Sault Ste. Marie reported that a number of typhoid fever patients had been brought in from the neighboring lumber camps, and that the municipal authorities were obliged to look after them, and the authorities requested that the expenses thus incurred be paid by the Provincial Health Department. An investigation proved that there was sufficient ground for some of these reports, while others were more or less exaggerated. At the suggestion of Messrs. Gilmour & Co., of Trenton, an inspection of their camps in Algonquin park was made by Dr. Robertson, whose report, a synopsis of which was given in our January number, showed that, on the whole, the camps and surroundings were kept in good

condition and very little sickness prevailed. Lack of proper ventilation in a few instances was reported.

With a view of ascertaining the precautions taken to prevent the spread of contagious diseases from the camps, the secretary of the Board of Health caused circular letters to be sent to a number of lumber firms throughout the province. From the replies to these letters it is learned that the men are generally in a healthy condition. To the question "What provisions exist or what arrangements are made for the sanitary supervision of the camps and for the medical attendance of the sick or injured?" some of the answers were as follows: "Keep a medicine box in each camp, and keep camps clean." "Doctor visits mills once a week, or oftener, if required, and have telegraph communication to get doctor at short notice." "Doctor within few miles of camp, and hospital at Sudbury; shanties well ventilated and have good water." "Camps kept clean and wholesome; insist on men taking out hospital tickets; health excellent." "Camps well drained and ventilated, and very little sickness; careful about getting good water." "Doctor engaged to visit camps three times a week." "Keep small stock medicine in camp and at mills, and doctor easily obtainable; never had any trouble with infectious diseases." "Always have medicine on hand." "Nearly all men have tickets for hospital; camps cleaned regularly and white-washed once a year." "Men have to change clothes once a week; sick or injured are taken home, and some have hospital tickets." "Proper w. c., and camps inspected by village sanitary officer; get medicine regularly." "Fumigate camps with limestone; foreman instructed to blow sulphur in men's throats when sore." "Doctor resides adjacent; proper ventilation and systematic cleaning." "Insist on having our camps kept clean; men have season tickets for hospital; good health and no contagious diseases."

It was shown that at some camps a special building was set apart for use as a hospital, but this was considered unnecessary in most cases owing to close proximity to the general hospitals. The reports show, however, that the amount of air space allotted to each man is below that which is regarded as necessary by the Provincial Board of Health, and it is intended to seek amendments to the present Health Act with a view to improving the general sanitary condition of lumber camps. It is proposed to allow each man 500 cubic feet of air space in the camps, and to have the water supply inspected by a physician. Isolated huts are to be placed in isolated huts built for the purpose, and the local health officer is to procure a physician and a nurse at the expense of the lumber company.

Lumbermen, in common with the general public, are interested in the health of the community in which their camps are located, and realize the benefits to be derived from proper sanitary arrangements. With respect to providing ample air space we believe that no opposition will be offered, but where hospitals exist at present it should not be necessary to provide a separate isolated building and to procure a special physician and nurse at the expense of the company.

NEARING THE CRISIS.

As the date of the meeting of the United States congress approaches, a portion of the lumber manufacturers of the United States are vigorously pushing forward their claims for the re-imposition of a duty on foreign lumber. As the matter becomes more widely discussed more apparent are the conflicting interests. The proposed duty of \$2 per thousand feet of white pine is meeting with strong opposition by the Eastern Michigan lumbermen who have large timber holdings on the Georgian Bay, and by others who are obliged to look to Canada for the supply of logs to keep their mills running. A committee representing these gentlemen appeared at Washington recently to oppose the duty.

The statement was made recently that the Ways and Means Committee of the House of Representatives had completed the lumber schedule, and adopted the McKinley rates except in respect to white pine, which was raised to \$2. This report, however, is not generally believed.

On another page is printed an abstract of a pamphlet letter from Mr. Hill, of Saginaw, which are advanced very weighty arguments against any interference with present tariff arrangements. Certainly if the duty is imposed the consumers in the Eastern States will be obliged to pay a higher price for their lumber whether they use the Canadian product or that of the white pine forests of Minnesota. This argument so often used that the cost of lumber in Canada is much below that in the United States, Mr. Hill points out, is incorrect. What it may have been the case ten years ago, it is not so to-day. Furthermore, the cheap lumber which has been placed upon the United States markets has been largely of home production. This will be shown by a visit to the Canadian mills where large quantities of lumber will be found which has been held for higher prices.

To our mind there is no probability of the United States government imposing a \$2 duty upon white pine. The point of decision seems to be between any change from present conditions and the adoption of the McKinley tariff. The members of the New York Lumber Trade Association and the Buffalo dealers have already placed themselves on record as opposed to anything higher than \$1 on rough lumber and \$1.50 dressed, while in the face of the present agitation for a duty we find American lumbermen, such as William H. Parsons & Co., of New York, General Alger, of Detroit, who has a large mill at Alpena, investing heavily in Canadian lumber limits. These purchases would seem to indicate that they have little fear of the enactment of such legislation as would be certain to result in retaliatory measures being adopted by the United States government which in turn would prevent the exportation of Canadian logs and pulp. The lumbermen of the Southern States who are anxious for increased trade with the north are opposed to the shutting out of Canadian lumber, or to a duty being imposed on lumber while logs are admitted free. Singularly enough, they are in favor of both logs and lumber being taxed.

A special session of congress will probably be held before the 15th of March, and it is probable that the tariff bill will be one of the first to be considered. We may expect, therefore, to see it at an early date just where we stand.

EDITORIAL NOTES.

A LETTER has been received by the Department of Trade and Commerce, Ottawa, from Mr. J. S. Larke, Canadian Commissioner in Australia, in which he points out that the lumber trade of the Pacific coast has suffered great injury from improper classification. He believes that unless some steps are taken to improve existing conditions, the trade will eventually divert to some other country. Advice of this character should receive the most careful consideration by our lumbermen, coming as it does from one who has had the opportunity of studying the requirements of the market. Mr. Larke suggests that permanent and well qualified officers be appointed in Australia to deal with all lumber imports, their salaries to be paid by a small tax imposed for the purpose.

A MATTER in which the general public, and lumbermen in particular, are interested, is in securing the liberal publication of all government advertisements offering crown timber lands for sale. It must be admitted that where the probable purchasers are so widely distributed as is the case with those of timber lands, better prices would be obtained by inviting as much competition as possible by judiciously advertising all proposed sales. This, we have reason to believe, is not always done, in conformity with the law. A government sale of limits was recently held, the first notice of which we observed being in a newspaper published on the day following the sale. The effect of this was shown in the results obtained, the prices being much below the average. It is certainly a short-sighted policy on the part of government officials to economize in the direction referred to.

THE question of the most suitable street pavement is just now receiving more than passing attention, in view of the agitation for better road construction. Brick and asphalt seem to be most favored in the larger cities of the Dominion, but in smaller cities where the cost prohibits the use of these materials, wooden pavements will continue to be used to a large extent. For noiselessness, traction qualities and economy in cost they possess advantages over both brick and asphalt. The city of Victoria, and other cities of the Pacific coast province, are at present looking into the question of pavements, and the suggestion has been made that Australian woods be imported for the purpose, owing to their hard qualities. Before importing foreign woods into a country which possesses such a wide variety of forest trees, the municipal authorities should satisfy themselves that a suitable wood cannot be obtained in Canada. From the reputation attained by Douglas fir we would suppose it would be well adapted for paving purposes, but have not yet learned that any tests have been made in Canada. The city of Cincinnati is said to have adopted Puget Sound fir blocks for one of its principal streets. The published statement that Paris and London are adopting wood for paving purposes is a strong argument in its favor, as it must be supposed that before arriving at this decision a thorough investigation into the merits of the different classes of pavements was made.

Lumber is lumber in South Africa. Puget Sound fir sells in that country for from \$180 to \$280 per 1000 feet, according to condition and grade.

CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumber trade. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

AN OPPORTUNITY FOR THE EXTENSION OF TRADE.

THE CANADA LUMBERMAN received a letter last January from a firm of importers of Canadian goods in South Africa, requesting our assistance in placing an order for pine, doors, windows, etc. The letter stated that as they were compelled to compete with American and Baltic dealers, it would be necessary to have the order filled at the cheapest possible point, and requested that the goods be sent at as early a date as possible, as, if practicable, they proposed getting larger quantities for a sailing vessel from New York in March. Below will be a copy of the specifications furnished and the portion of the letter referring to the shipment of the stock:

500 planed pine boards 12 to 16 ft. long, 12 to 20 inches wide (as many 16 ft. and 16 to 20 inches wide as possible), to stand 3/8-in. thickness precisely when dressed, at about \$25 per 1,000 sup. feet, f.o.b. steamer at New York.

Clear pine boards, rough, without knots of any kind: 50 1 in.; 50 1 1/4 in.; 50 1 1/2 in.; 50 2 in.; 50 3 in.; as many 16 ft. long and 16 to 20 inches wide as possible; at about \$45 per 1,000 sup. feet, f.o.b. steamer at New York.

50 doors,	2/6 x 6/6 x 1 1/4;	20 sash doors
100 "	2/6 x 6/6 x 1 1/2;	20 "
50 "	2/8 x 6/8 x 1 1/4;	20 "
100 "	2/8 x 6/8 x 1 1/2;	20 "
200 "	2/8 x 6/8 x 1 3/4;	20 "
50 "	2/10x6/10x 1 1/2;	20 "
100 "	2/10x6/10x 1 3/4;	20 "
50 "	3 x 7 x 1 1/4;	

One-half plain and one-half colored marginal lights, as shown, and anything fancy in stock may be added.

WINDOWS.—Sliding sashes must be sent with frames, weights and cord complete; boxed frames.

8 x 10—12 lights,	10	} 100 windows.
10 x 12—12 "	10	
10 x 14—12 "	10	
12 x 16—12 "	10	
15 x 30—4 "	20	
16 x 32—4 "	20	
36 x 18—4 "	20	

5 pairs Venetian blinds for each size of window; 5 sets inside blinds for each size of window mentioned.

Canadian railroad companies are now granting us through bill of lading from Canada to Cape Town, South Africa, via direct steamer from New York, so that any railroad agent can write to New York and secure space in steamer before goods go on. There are now two sailings monthly from New York for this port—some months more. The goods had better be wired together for export. The railway agent at New York will insure the goods. Both land and water freight is to be paid by shipper in the first place, and all charges are to be added to invoice, for amount of which sight draft (with bill of lading attached) on us is to come through the African Banking Corporation, 74 Wall street, New York. An invoice of cost of the goods at the mill must be mailed to us also as soon as they leave the mill. The steamer's bill of lading will not be given out until the goods are on board, but if no time is lost in attaching it to the draft and getting the documents in the bank, it will generally reach here via England before the goods arrive, coming direct. By pre-paying the freight at your end 5 per cent. is saved to us. We would like catalogues, cuts, sketches and prices f.o.b. New York, and we trust this will result in the opening of a profitable business in a direct way with South Africa, as we intend having several sailing vessels at New York during 1897.

The only question is as to whether you can compete with American prices at New York, and we think you do somewhat better.

The letter and specifications were submitted to several manufacturers who it was thought would be most likely to handle the trade. Some of these went into the matter fully, and satisfied themselves as to the financial standing of the firm from whom the order was received, but expressed

a doubt that a satisfactory profit could be made in competition with United States prices, and declined to fill the order. In the case of the doors it was claimed that what is known as a No. 3 door was desired, for which a very low price would be obtained. Should any of our subscribers desire to communicate with the firm mentioned, we will be pleased to furnish their name and address upon application.

A DEFINITE POLICY REQUIRED.

MILTON, N. S., Jan. 30th, 1897.

To the Editor of the CANADA LUMBERMAN:

DEAR SIR,—Regarding the effect of the proposed import duty on Canadian lumber, we may say that, while there may be quite a diversity of opinion with regard to the utility of an import tax, we have noticed this, in our experience, that under a law upon which all could figure, the business of the United States—in the lumber trade, at least—has gone steadily on; and upon the whole, we are inclined to think that better returns were obtained than under the uncertain policy of the Democratic party. The experience of the last few years, we think, bears us out in this conclusion. Occasionally the prices have been good, but following right upon this would be a ruinous drop in prices occasioned by the uncertainty of the trade policy; and while we do not wish to be understood as advocating a protective tariff, yet under a form of policy from which the uncertain element is eliminated in the largest degree, the business of any country will develop the greatest degree of activity.

Now, during the past few years, in the matter of remittance of duties there has been a gain, but it has been more than overbalanced by the reduced price of stock occasioned by the general business stagnation. If we could have the assurance of good business prosperity with the duties removed, we should say that it would be the better form; but it does not seem to work that way.

Yours truly,  
HARLOW & KEMPTON.

The Fall Mountain Paper Company, of which the Hon. William A. Russell is the head and front, has given considerable study to the practical methods for preserving their spruce forests, or rather of utilizing them in such a way as to secure a continuous growth and product. During the past year their agents gathered many bushels of spruce cones, which they will plant the coming season on the deforested portions of their real estate on the Upper White River valley in Vermont.

If oil comes in contact with gum belts it softens them. If water gets between the canvas and the seams, and then freezes, it separates the layers. Even frosty pulleys, in contact with gum belts, tear them from the canvas. Boiled linseed oil, lightly applied on the pulley side of a gum belt, will help to overcome slipping, caused by dust, etc. Gum belts are now used with success in damp or wet places in preference to leather ones, because the leather absorbs dampness, etc. Gum belts cannot be used with success at half cross or on cone pulleys.

A German scientist has been engaged in preparing a table of ages of certain European trees. He finds that in Finland and Sweden the pine and fir trees attain to the maximum age of 700 years. The greatest ascertained age of the larch—is Bavaria—was 274 years, while the silver fir of the same locality often grows until after it is 400 years old. The oldest known German specimen of the oak is one of the "holm" variety which formerly stood near Aschaffenburg, which the ring growths proved to be 410 years of age. The maximum ages of other German trees, as formed by counting the ring growths, is as follows: Red beech, 245; ash, 170; elm, 130; birch, 200; aspen, 210, and alder, 145.



# THE RETAILER AND Wood-Worker

## WESTERN RETAIL LUMBERMEN'S ASSOCIATION.

The Western Retail Lumbermen's Association assembled in annual convention in Winnipeg on Tuesday, February 9th. The attendance was good, and included a number of manufacturers who are honorary members of the association, among whom were:—D. C. Cameron, of Rat Portage, R. Mather, of Keewatin, Mr. Graham, of Fort William, D. Ross, of Whitemouth, and J. G. Scott, of the Pacific Coast Lumber Co., New Westminster.

The president, Mr. D. N. McMillan, of Morden, read an interesting address, going into the workings of the association during the past year quite fully. His remarks in part were as follows:

Gentlemen:—It affords me much pleasure to welcome you to our sixth annual meeting. I am pleased to congratulate you upon the successful working of the association during the year now passed, and upon the benefits conferred upon the members in maintaining prices, especially this last year on account of the general depression and scarcity of money; the demand for lumber and building material being considerably less than other years. Also the determination of honorary and active members to give shorter and less credit has no doubt curtailed the trade to a great extent, but this action in giving less credit has no doubt reduced the amount of slow, doubtful and bad accounts, which will in the end have the effect of placing the trade on a firmer and more substantial basis, thereby increasing the credit of the retailer and securing to the wholesaler customers in whom they can have perfect confidence.

When your present officers were elected last year we found serious trouble had existed for some time previous in Gretna, Brandon and other points. Members were competing with each other on an open list and were selling at ruinous prices, which, if continued, would no doubt have ended in great loss, and our honorary members would have been joint sufferers with the retail dealers. I am pleased to say our secretary visited these points and succeeded in having these members agree to a price list, and where serious trouble existed harmony has since prevailed to the advantage of all concerned.

I should consider myself remiss in my duties as your president if I did not tender the thanks of myself and those of my directors to our honorary members for the loyal manner in which they have lived up to the rules and regulations of our association by not selling to customers in competition with retailers, not one instance to the contrary having come before us. I would most strongly urge upon our active members the necessity of following their good example by purchasing only from honorary members. In the past honorary members have had reason to complain, which, if continued, may seriously jeopardize the success of our association.

It is true that at some points certain low grades of American lumber are delivered cheaper than the same grades from honorary members,

and a few members, apparently, cannot resist the temptation and occasionally buy from non-members. I would suggest that the president and directors you will be pleased to elect tonight, arrange a meeting with the honorary members interested, and, if possible, have a mutual understanding that the prices on a few of these grades mentioned be reduced, even if some other grades were slightly increased, thereby removing the temptation which may endanger the friendship existing between honorary and active members at the present time.

I am pleased to congratulate the association on the satisfactory state of its finances, which shows a substantial reduction in expenses over previous years, and a handsome balance carried forward, notwithstanding the reduction in our members' dues from ten to five dollars per year.



MR. T. A. CUDDY,  
President Western Retail Lumbermen's Association.

At our last annual meeting our membership stood at 141; during this year 24 new members were accepted by your directors and secretary. Five have withdrawn for various reasons, leaving our membership at the present time 160, an increase of 19 over last year. This increase shows the benefit of belonging to our association, and is appreciated by the trade.

During the year numerous other applications for membership have been received from all parts of the country and considered by your secretary and executive committee, and declined on the grounds that there was not business enough at these points to support another yard, and it would be contrary to our rules and unjust to the present members to allow competitors to their detriment. This again proves the value of the association to our members. In rejecting and accepting applications we also considered the purchasing public and carefully guarded their interest.

In the early part of the season your executive committee undertook to get a short summary of the Lien Law, thinking it would be of advantage to have it printed and mailed to each member of the association. Solicitors were consulted who wrote the secretary a long letter saying they were afraid that it would be impossible to give anything like a valuable summary of the Mechanic's Lien Law. Books of many pages have been written upon it and mere citation from

the statutes would not be sufficient. They, however, gave several points to be borne in mind but these were not considered sufficient to have printed and distributed. It might be well at the meeting to consider the advisability of waiting upon the local government and urging the necessity of a new lien act being passed at the coming session.

Before closing I feel the thanks of the association are due to the directors for the way in which they have performed their duties, and more especially to our secretary, who has, under trying circumstances, managed to adjust differences and arranged many matters tending to cause friction between members, and also in other ways greatly increased the advantages to our members.

Thanking you for your attendance and for the attention with which you have received my address, and trusting that your deliberations will tend to increase and cement the friendly relations which have hitherto existed among our members, and which have so materially benefitted the association.

After the presentation of the usual reports, it was announced that the manufacturers had decided to make a very important reduction in the price of lumber. In substance, they offered to make the wholesale price of lumber, delivered to Winnipeg, apply to country points, with the addition merely of the balance of the through freight rate over and above the rate to Winnipeg. The rate from the Lake of the Woods mills to Winnipeg is 10 cents per 100 lbs. Lumber shipped to points having a higher rate would be charged the amount of the additional rate over 10 cents, and the lumber would be billed at Winnipeg prices. This will make a very important reduction in the price of rough lumber, dimension, etc., delivered at country points. On No. 1 dimension the reduction will be about \$1.60 per 1,000 feet, on No. 2 it will be \$1.50 on 3rd common boards about \$1.50, cull boards about \$1.00, 2nd common boards \$1.50, ship lap \$1.60, 6 inch shiplap \$1.50, 3rd flooring \$1.50, etc. On finished stuff the prices will not be materially changed. These reductions, it is thought, will keep out the inferior grades of Minnesota lumber which have been brought in to a limited extent at some points.

The election of officers resulted as follows: President, T. A. Cuddy, of Minnedosa; Vice-President, J. B. Mather, of Glenboro'. Directors: J. M. Neilson, Carberry; G. N. Miller, Viré; D. Stewart, Rosenfelt; C. W. Plummer, Beavain; D. E. Sprague, Winnipeg; John Arden, not, Winnipeg. Duncan Sinclair and J. M. F. were re-elected as auditors.

At a subsequent meeting of the Board of Directors, Mr. John Dick, of Winnipeg, was elected Secretary-Treasurer.

Mr. T. A. Cuddy, who has been chosen as chief executive officer of the association, has many years carried on a retail lumber business at Minnedosa. After serving a term on the Board of Directors, he was elected vice-president at the annual meeting in February of last year. Having always evinced a deep interest in the prosperity of the association, it goes without saying that its interests will be properly looked after under his supervision, and we predict a period of steady advancement for the lumbermen of the Northwest.

Barrel manufacturers complain that hoops of black rock elm timber are undesirable at any price, as they are not easily driven into them, and they split easily.

**HOUSING LUMBER.**

THERE is a growing sentiment in favor of storing lumber under cover, especially if it be above the grade of common, or is of high-priced varieties. Of course transactions in lumber at wholesale are too large as yet to admit of a general application of the principle to all kinds. This is especially true of the white pine trade, where single concerns handle 50,000,000 feet and upwards during a single season. To house all such a stock, or even all the best grades in it, has hardly been thought feasible as yet. Granted, what is the fact, that no one handling so large an amount in a year even had one-half of it in stock at one time, it is still not quite certain that this amount, even, could be covered with economy under present conditions of the trade.

But it is a fact that vastly more stock could be housed than is now the custom, if lumbermen only thought so.

A large amount of white pine could be stored under cover to the benefit of the lumber to such an extent as to more than offset the cost. The same is true of yellow pine, and this fact is gradually being recognized, especially by dealers, the manufacturer not yet paying much attention to the subject.

Dealers and handlers of the hardwoods are taking by far the most active interest in the question, and a large number of both wholesale and retail dealers are now storing a good proportion of their stock under cover. Many of them put all their best grades and all rather scarce, high-priced stock under a shed as soon as received, even though it may be green. Others pile their green stock in the open air for from three months to a year, and then transfer it to the shed. All the hardwoods, if not all woods, deteriorate when piled in the open air, subject to alternate drying and wetting and the direct rays of a hot summer sun, and to the effects of freezing and thawing when soaked with rain or melting snow.

Many of the hardwoods are very susceptible to the influence of the elements, and begin to decay very quickly when left exposed to them. Others warp, check and twist, while if put under cover immediately from the saw, they dry out flat and straight, and with only slight checking. Many kinds of lumber become discolored and spotted or lose their natural color by long exposure to the elements in the open air, and only retain their real beauty when seasoned under cover.

Choice hardwoods, worth \$40 or more a thousand feet, such as quartered oak, cherry, curly birch, curly and bird's-eye maple, and walnut, will always pay for careful housing, and this fact is well understood by many wholesale consumers who carry a greater or less amount of stock until it is from one to four years old. Many retail dealers are recognizing the fact that money put into a well constructed shed large enough to hold all but their dimension and coarsest inch, is money well invested and that will pay a good interest.

The man who would leave his well-filled pocket-book out of doors on top of a pile of lumber, would be looked upon as a candidate for the insane asylum; but that is just exactly what he does when he leaves his piles of fine, wide quartered white oak or similar valuable lumber uncovered and exposed to all the inclemencies of the weather.—Hardwood.

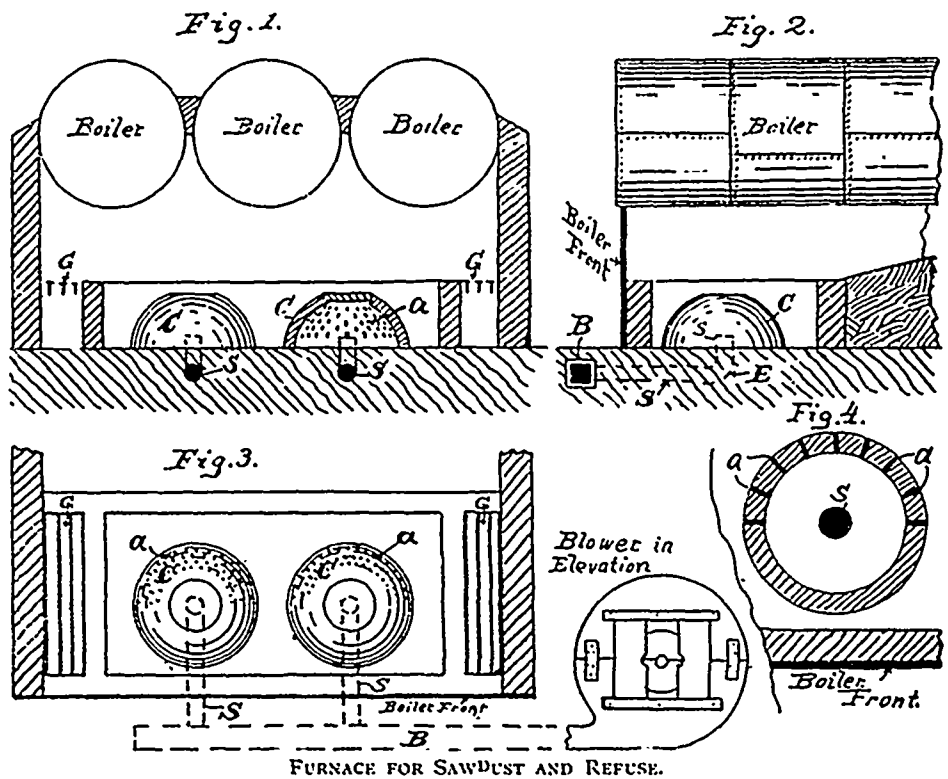
**FURNACE FOR SAWDUST AND REFUSE.**

I SEE in the December number a request for plan of furnace for sawdust and refuse to keep plenty of steam. I have tried a great many plans—a deep and narrow fire box for wood; shallow and wide for sawdust; but a brick cone with a blast without any grates whatever, beats anything I ever saw. I have run one for two years with success.

I build them like this: Throw away all grates. For three boilers use two cones; four boilers, three cones. The cones must come between the boilers so sawdust will drop back of center of cone. The top of cone must come about three inches below where top of grate originally was. If you get them too high when throwing in wood, you will hit them. I deepen the ash box just enough to get them the right height. The cones are made round like the old-fashioned straw bee-hive, and drawn in enough to leave a hole in the top 18 to 24 inches, to be covered

feet, and from the box to cone run a six-inch stove pipe with elbow to turn up into cone. You can put a damper in your stove pipe if you want, but it is not needed for three boilers. This box and pipe are buried under ground from four to six inches, and covered with brick and clay.

Now for the cones: Build them in a circular with fire bricks and tip them in a little and draw in every course. The back half of your cone must have air-holes. Use your brick in the circular endways. First tier of brick leave hole 1½ inches in opening at each end of brick, second tier 1¼ inch opening, third tier one inch opening, fourth tier ¾ inch opening. Now this is only the back half of the circular to be opened. The front half must be made tight or otherwise the blast would blow out at the doors and you could not get near them. The draft doors must be bricked up. Put in a thimble with sheet iron; cover to give draft when firing up in the



FURNACE FOR SAWDUST AND REFUSE.  
Fig. 1, Front Elevation, boiler front removed, one cone in section. Fig. 2, Side Elevation, side of furnace removed. Fig. 3, Top Plan, boilers removed. Fig. 4, Sectional Plan of Cone. C, Cones. B, Box. E, Elbow. S, Stove Pipe. G, Grates. A, Blast Openings.

tightly with an old logging car wheel, or old grates broken off the right length. Common clay will do to lay up cones, by using lots of salt. The cones must be started on the bottom large enough to leave sufficient space between them sideways and front. The bridge wall behind must not be over 16 inches from cone. If your side wall comes farther than 16 inches, build up a wall and put on several other grates. Where you can drop sawdust on side, or use wood, fire brick must be used all around.

Now about building the fan (any millwright can build one): Take 2 x 6 and match same as flooring to make the fan box. No. 14 sheet iron is just the thing to go around the outside circular; hard wood 2 x 4 for fan; arms notched and boxed together, two 10 inch flanges for fans to hold same. Fan blades to be made out of band saws or out of No. 14 sheet iron, size 8 x 10, with two belts. Fan when completed, three feet diameter, two inch shaft, and ought to run 1,200 per minute, with slides to close, or give more air if needed. Then build a wooden box out of 2 x 10 and 2 x 12, leaving a 10-inch hole from fan along in front of arch, say from two to four

morning. It takes a little longer to fire up than if you had grates, but when ready to go, and you get a little used to it, it beats anything ever put in a saw mill. It will cost less than a new set of grates, or any other device. It can all be made at your mill except shaft and boxing. This is no experiment, but is running in a great many mills. I should have stated that bottom of fire box must be bricked over with common brick, ashes cleaned out once a week; clean out holes with small iron hook at the same time. The space between cones, and cones and bridge wall, can be made larger, but it will take more fuel, and the smaller the cones the better they will stand. The cones must be set close to front of arch and a wall eight inches thick must protect fire front. In this way you get the fire well to front end of boiler. The space between cones must be regulated by size of boilers; 36 inches outside diameter is large enough for cones.

—A. J. Acker, in Wood-Worker.

A Rochester man has built a tiny engine, three-fourths of an inch long, weighs 31 grains, runs perfectly and goes in a thimble.

## WOOD PULP DEPARTMENT

### AMERICAN CAPITALISTS INVESTING IN CANADA.

A TRANSACTION of considerable magnitude has been reported from Scotstown, Canada. Wm. H. Parsons & Co., of New York city, representing the Pejepscot Mills, Maine, on the Androscoggin river, has recently made a \$50,000 purchase at Scotstown, of the Cookshire Mills Company, of their lumber mills and timber limits in that location.

Messrs. Parsons & Company have been in the habit of purchasing a very considerable part of their spruce pulp wood supply in that section of the country. Some months ago they bonded this property of the Hon. R. Pope, representing the Cookshire Mill Company, and before the bond expired they decided to purchase the property. It does not carry with it the ownership of any timber lands, but represents certain timber limits belonging to the Canadian government, and leased by them, so that whoever cuts pulp wood therefrom pays a certain stumpage for the cuttings. This price is not a fixed rate, as the government of Canada arrogates to itself the right to increase this at its own pleasure.

The cost of freighting spruce pulp wood from Scotstown to the Lower Androscoggin, where Messrs. Parsons & Co. propose to grind up this wood, is about \$3 per cord. It seems odd that a pulp and paper concern situated on the Androscoggin river, in the State of Maine, where so much spruce is supposed to be growing, should be forced to make a purchase of forest areas or leases of forest areas in the Dominion of Canada, in order to secure a supply of raw material. This is especially interesting, considering the fact that it is almost certain that the Canadian government will impose an export duty on spruce pulp wood of \$2 per cord, making with the freight of \$3 per cord—a \$5 cost, independent of the cost of stumpage, cutting, hauling and loading on the cars.

This is pretty certain evidence that some of the large pulp and paper manufacturers are willing to have their pulp wood cost more than it does at present, and also leans towards the idea that the areas of spruce forest accessible and desirable for the Maine pulp mills are somewhat scarce or difficult to obtain.

No doubt a purchase in Canada seems cheap in comparison with a purchase of similar rights in the United States, but in the end I believe the areas in the United States can be operated much cheaper than those in Canada. Besides, the accessibility and desirability of those in New England places them far ahead of similar tracts in Canada.

It will be remembered that last year the Montague Paper Company, of Holyoke, Mass., made a considerable purchase of Frank Dudley in this same section of the eastern townships, province of Quebec.

It is also learned that there are large contracts being made this year in the eastern townships for delivery of spruce pulp wood over the Grand Trunk railroad, and over the Boston and Maine

system, for New England pulp and paper mills. It is rumored that the Burgess Sulphite Pulp Company, of Berlin Falls, N. H., are making considerable purchases of pulp wood in Canada this year; also that several of the Maine concerns are contracting for future deliveries of wood, and some of the Connecticut river pulp and paper mills are expecting a part of their supply from the eastern townships.—Northeastern Lumberman.

### THE BRITISH MARKET FOR WOOD PULP.

THE last issue of Wood Pulp, published in London, England, contains the following with regard to the market for wood pulp:

The market is very quiet at present, as the bulk of the papermakers have now contracted for their next year's supplies. In the case of mechanical, although there has been no advance, there has been no decline in prices, nor any indication of such in the future—the tendency, in fact, being upward. We hear on reliable authority that the prices for Scandinavian deals have risen nearly 50 per cent., so there seems no likelihood of a fall. Makers of mechanical pulp are holding out for higher prices, but we have not heard of any orders being booked at what they now ask, nor does there seem to be any prospect of their getting what they want at the present time. As most of next year's contracts have been made, papermakers can afford to wait, and the efforts Canada is making to obtain a hold of the market here justifies to a certain extent their decision to wait. There is little doubt that in the near future Canada will prove a very important factor in this market. Already she is offering to supply mills with regular consignments at short intervals at almost the same price as the Scandinavian article; and Canadian pulp has the reputation, whether justly or not, of being superior to Scandinavian. The same thing, however, does not apply to the case of chemical pulps, as America does not yet seem to be able to compete in either quality or price with the European article. The market is accordingly firm at recent prices, while makers are now holding out for higher figures. There is not much of either soda or sulphite to be had now, however, and what little there is is being reserved in the hope of getting higher prices later on.

### NEW LIQUID FOR MAKING PAPER PULP OF WOOD.

VERY considerable advantages are presented, the Milwaukee Journal thinks, in the new liquid brought forward by James Lappen, of Appleton, Wis., for making paper pulp of wood. Instead of such pulp product being limited to spruce, this mixture transforms pine—especially slabs and endings—spruce, basswood, poplar, hemlock and tamarack, into such pulp; and whereas the liquor now used in paper mills eats the tanks and machinery and gives off violent fumes of sulphur, the new liquid does not corrode and has no disagreeable odor. The inventor further asserts that the new liquor is much less expensive than that now in use; in fact, reducing the cost of pulp some 50 to 75 per cent., and this with a good profit still remaining for the manufacturer; and one of the valuable points, in addition, put forth in its behalf is that the liquor cooks the wood to pulp in the digester in some six hours or less, while by the paper pulp process at present

in vogue a piece of spruce to be cooked requires a much longer time. The quality of paper thus produced is pronounced to be remarkably good, being firm and pliant, of satisfactory color, and on account of its texture and leathery consistency has been examined by experts in leather manufactures with a view to its employment as material for inner soles, heels and shanks.

### PULP NOTES.

A pulp mill is being erected at Chicoutimi, Que. J. Guay, of Quebec, is one of the promoters.

It is reported that the establishment of a pulp mill at Magaguadavic Falls, N. B., is contemplated.

Pulp and paper mills are proposed to be established on the Petawawa river, in the vicinity of Pembroke, Ont.

It is said that an impetus will be given to the pulp trade by the recent discovery that bottles can be made out of pulpwood which are said to be not only unbreakable but lighter than glass bottles.

Mr. D. Jalber, of Lake Bouchette, Que., states that a company is being formed in Quebec to construct a paper factory on some falls of the Ouatchouan river, a few miles below its issuing from the lake, where between 3,250 and 3,500 horse power can be obtained.

Mr. J. S. Larke, Canadian Commissioner in Australia, states that Canadian paper and pulp manufacturers are making no effort to enter the Australian market. Canadian paper is continually being asked for, and unlike most other articles from the Dominion, the sale would be an immediate one.

The first carload of manilla paper ever sent out of Nova Scotia arrived in St. John last month. It was from the paper mill at Hartville, near Windsor, N. S. Here the pulp and the paper are made there. T. G. McMillan has a band mill on the same stream, quite close to the paper mill, and the refuse from the former is utilized in making some of the pulp. The mills are run by water power, and there is a strong head at both mills. The paper mill could get a 40 foot head if necessary. Above the mills is a lake 21 miles long, surrounded by excellent spruce for pulp. The paper mill has its own electric plant, and is fully equipped for economical work.

An act has been passed by the Nova Scotia legislature incorporating "The Acadia Pulp and Paper Mills Company, the promoters being Hon. Alfred G. Jones, A. E. Jones and Walter G. Jones, merchants; John Stairs, manufacturer; Thomas Fyche, bank manager; Benjamin F. Pearson, barrister, all of Halifax; George E. Pomeroy, of Toledo, Ohio, banker; George A. Clark of Boston, pulp merchant, and a banker of London. The capital stock of the company is \$550,000, and power is given to increase the same as the wants of the company require, to \$5,000,000. The business of the company is, in effect, to take over all the pulp mill industries in Nova Scotia.

An application of the Sturgeon Falls Pulp Company to exercise certain powers under the water privilege act came up for hearing at Sturgeon Falls, Ont., on February 9th. A proposition to purchase the Russell power by the Pulp Company at a price of \$6,000, reserving to the owner a small water power and some land on the east bank of the river, was taken into consideration by the court. The claimant, the Judge adjourning the sitting to enable the parties to reach an agreement. The matter is therefore virtually settled, and the settlement gives the company from eight to twelve thousand horse power which can be effectively used. The pulp mill there is being built as rapidly as possible, and the foundation work and blasting is rapidly reaching a conclusion.

Mr. J. H. LeFebvre, of Montreal, has written a letter to the Montreal Gazette advocating the imposition of an export duty on pulp wood. He says: "If you visit the pulp and paper mills of New England and New York you will see there large numbers of Canadian workmen, engaged on Canadian woods, for the profits of American manufacturers. Why should we thus send abroad our men and the raw materials which we could so profitably utilize in our own country. In 1894 Great Britain exported \$25,000,000 of paper and paper making materials. Could we not supply the fourth or the fifth part of this? In this case five or six millions would float in our country."

## THE NEWS.

John Higgins is erecting a new saw mill at Metcalfe,

A planing mill will be started in the spring at Aylmer, by John Smith.

A bill has been introduced in the Nova Scotia legislature to incorporate the Shelburne Lumber Co., of Shelburne, N. S.

The late Richard Nagle, of Peterboro', Ont., left an estate valued at \$74,253, of which \$15,000 is invested in real estate.

Mr. Geo. F. Webster, of Creemore, Ont., is building a portable saw mill of his own design. He reports business quiet, very few logs being taken out.

Fifty-five failures of lumber dealers were reported during last year, with total liabilities of \$1,402,763. In the number was 43, and the liabilities \$413,992.

For the month of December exports from Ottawa to United States were as follows: Lumber, \$305,229.43; paper for export, \$65,604.87; sulphite pulp, \$3,763.12.

The Yokohama Gazette states that owing to a rise in the price of lumber, Japanese lumber dealers at Yokohama propose to import timber from Victoria, B.C.

Lumbering operations are being actively carried on in Ontario this winter, and both colonization and building is to be prosecuted this year on a much larger scale than heretofore.

Messrs. Hanson Bros., of Nashwaak, N. B., made a find a few days ago. They were cutting lumber in the woods and suddenly came across a bear and three cubs, enjoying their winter's sleep.

Mr. Thos. Southworth, Chief of the Ontario Bureau of Forestry, has received a letter from Mr. Edward Harris, of Long Island, N. Y., asking how to raise a forest on 2,000 acres of land belonging to a preserve at Long Island.

Small saw mills are springing up rapidly in the vicinity of Burk's Falls, Ont. Those of Thos. Spiers, on the little East river; M. Poirer, on the East river; Albert G. Gill, on Lake Vernon, and Wm. Gall in Brunel, on the little road, have lately been started.

W. R. Huntley, master shipbuilder, of Parrsboro', N. S., has obtained a contract from S. P. Benjamin, Port Jervis, to build five scows and a steamer, to be used in logging his lumber down the Avon river to a place of deposit. Mr. Huntley will build them at Port Greville.

At the annual meeting of the Tourville Lumber Mills Company, held in Montreal a fortnight ago, Mr. Edward Lette was appointed general manager. Mr. Rodolphe Lette was elected president, Mr. Napoleon Gill vice-president, Mr. Rodolphe Forget director, and Mr. Arthur Lette secretary.

Incorporation has been granted to the London Box Manufacturing and Lumber Co., with a capital of \$350,000, to manufacture from wood and deal in building material. The promoters are: Messrs. Frederick George Ball, John Watson, Edward Grant, John Alexander and John Shannon.

The Winnipeg Free Press states that Mr. D. B. Macdonald, superintendent of the Lake Manitou Railway and Lumber Co., accompanied by some eastern capitalists, recently examined the timber resources of Lake Winnipegosis, with the object, it is said, of developing the timber interests of the country.

The manager of the Takush Harbor Lumber Co., of Takush Harbor, B. C., has an idea that there is big commercial value in oil extracted from yellow pine. He is accordingly engaged an expert to experiment, but in the course of this the expert was badly injured by an explosion of highly inflammable oil, resulting in a broken arm.

The St. Anthony Lumber Co., of Whitney, Ont., recently cut a pine log which measured 72 inches, or six feet across the butt, and 66 inches at the smallest diameter at the top end. It will make, if sawn into boards, 1,000,000 and sixty feet of lumber. A picture of the log is to be kept as one of the records of the company.

The report of Mr. W. L. Haight, of Parry Sound, Ontario, was appointed by the Ontario government to investigate the cause of the fires which last summer destroyed a large area of timber in the Biscotasing district, has been sent to the Commissioner of Crown Lands. The report states that Mr. Haight's inquiries have led him to conclude that the fires were deliberately started for the

purpose of destroying the timber, so that the lands could be secured for mining, as rich deposits of mineral had been found there.

—Authority has been given by order in Council to the Sauble & Spanish Boom & Slide Company of Algoma, Limited, to charge toll at the rate of 30 cents per thousand feet for the use of their works on the Spanish river, Ontario, instead of three cents per log of seventeen feet and under, and to authorize the charge of 30 cents per thousand feet as a basis upon which the rates for other timber be charged.

—The annual meeting of the shareholders of the Canadian Rubber Co., of Montreal, was held early last month. When the annual report had been adopted, the following gentlemen were elected directors for the ensuing year: Messrs. Andrew Allen, President; Hugh McLennan, Vice-President; W. J. Withall, Frs. Scholes, J. B. Learmont, H. Montague Allan, W. H. Benyon, Andrew A. Allan, John Thos. Molson.

—Incorporation has been granted to a company to be known as "King Brothers," composed of Edmund A. King, merchant, of St. Pater; Charles King, merchant, of Lyster, and James King, merchant, of Levis; William S. Thomas, of Quebec, manager; William McNaughton, of Pabos, agent, to own and operate saw mills and to deal in lumber and timber generally, in the province of Quebec. The capital stock is \$300,000.

Incorporation has been granted to the H. Herrmann Lumber Co., of New York, to conduct the business of the late H. Herrmann. The capital is \$300,000, and the officers of the company as follows: Mrs. Rosa Herrmann, President; Mr. George Herrmann, Treasurer; Mr. Geo. C. Von Stamwitz, Secretary; Mr. Chas. Bott, Assistant Treasurer; Mr. R. Mittelmann, Assistant Secretary; Mr. John Bissinger, Assistant Secretary.

—The Holland & Emery Lumber Co., of East Tawas, Mich., which is managed by Nelson Holland, of Buffalo, will commence to move their large mill from East Tawas to Byng Inlet, Ont., as soon as the ice leaves the bay. The mill will be moved on vessels as nearly intact as possible. As it will be impossible to begin pile-driving and dock-building at Byng Inlet until the frost is out of the ground, it will probably be August before any sawing is done there.

## CASUALTIES.

—A young man named Angus McKenzie was killed in Van's lumber camps, Springhill, Que., while felling a tree.

Melville Goodwin, head sawyer for Mr. Barnhill, of Shulee, N. B., was killed by a dead striking him in the forehead.

Thos. J. Pyburn, of Gravenhurst, Ont., was rolling logs from a sleigh to the dump down the river bank, when he was jammed by a log against a tree trunk, and died in three hours.

—Jos. Beranger, employed in Mr. Chalifour's saw mill at Quebec, met his death while placing a strap on a pulley wheel recently. He was caught by the revolving shaft, and whirled around it like a flash.

## PERSONAL.

Mr. Thomas Kelly, lumber merchant, of Somerset, Que., has been elected mayor of that town for the ninth term.

Mr. E. C. Geoffrey, B. A., delivered a lecture in the University Biological Building, Toronto, on "Oaks and Their Ancestors."

Mr. W. H. Winnett, lumber merchant, of London, Ont., was elected alderman for that city at the municipal elections last January.

Mr. P. G. Mahoney, the well-known lumber merchant of Westmoreland, N. B., sailed recently from Halifax for Liverpool, Eng. Mr. Mahoney will visit the leading centres of Europe before his return.

D. H. MacDowell, an old resident and leading business man of Prince Albert, N. W. T., engaged in the lumber trade, has removed to Toronto. He was tendered a banquet by the citizens before his departure.

The death took place at Indiantown, St. John, N. B., last month, of Mr. Moses E. Cowan, one of the most respected residents of the city. Deceased was born in 1830, and for many years was a lumber surveyor and later conducted a saw mill under the firm name of Cowan & McGinty.

## PUBLICATIONS.

An interesting publication for lumbermen is the list of shipping marks on sawn and planed wood, published by Wm. Rider & Sons, London, E. C.

We have to acknowledge receipt of a copy of the proceedings of the American Forestry Association, at the Thirteenth and Fourteenth annual meetings at Washington, and at the summer meetings at Brooklyn, N. Y., and Springfield, Mass. An article by Sir H. G. Joly de Lotbiniere, the first vice-president of the association, is one of the interesting features.

"Bearings and Lubrication," a book of upwards of 200 pages published by Wm. Rider & Sons, Limited, 14 Bartholomew Close, London, E. C., contains much useful information for every user of machinery. The aim of the writer has been to give such practical information as will enable purchasers of machinery to make a choice of the proper bearings for different duties, and of the kinds of lubricants required. The book is freely illustrated, and sells at 3s. 6d.

The regular annual special number of our esteemed contemporary, Timber, of London, Eng., to hand a few days ago, is a voluminous publication of much merit. An interesting article on "The Timber Trade of Ireland" is followed by lengthy descriptions of various classes of woods, including pitch pine, mahogany and cedar, jarrah and karri, all of which are accompanied by illustrations of more than ordinary interest. Not the least important is an extensive write-up of the slate trade of Great Britain, and the liberal advertising patronage shows that the efforts of the publisher to produce a first-class journal are fully appreciated.

## ENTERPRISING AMHERST CITIZENS.

A CORRESPONDENT of the St. John Sun, referring to the extensive timber limits held by citizens of Amherst, N. S., says:

Amherst is not a lumber shipping centre, nor beyond a small mill or two in its vicinity is it a lumber manufacturing centre. It is therefore the more singular to learn that citizens of the town have been reaching out and investing very extensively in timber lands. But such is the fact, and in future a notable portion of the lumber trade of Nova Scotia will be directed from Amherst. This is the result of some important deals recently consummated.

Take, for instance, the Sheet Harbor property on the Atlantic coast. A company to be known as the Sheet Harbor Lumber Co., whose members are Hon. A. R. Dickey, D. W. Douglas, N. A. Rhodes and N. Curry (of Rhodes, Curry & Co.) of Amherst, and Samuel Baird, of Leicester, owns 40,000 acres of selected spruce lands, with combined saw and pulp mill. Right adjoining this, on the East river, Hon. A. R. Dickey owns 44,000 acres, with a saw mill and sulphite pulp mill, the latter costing \$110,000. This property will be operated by a company to be called the East River Lumber Co. Again to the east of the last named property, which it adjoins, Hon. Mr. Dickey owns a mill and 18,000 acres of hardwood, bearing among other timber 50,000,000 feet of birch. Still farther east, near Liscomb, he owns 4,000 acres of spruce land and a mill site. Sum these all up and you have 106,000 acres of timber land.

Then take St. Mary's river, Guysboro, near Liscomb, already referred to. Here a company to be known as the Nova Scotia Lumber Co., the members of which are Dr. C. W. Hewson, W. T. Pipes, Clarence Purdy and Samuel Freeman, of Amherst; John W. and Job Seaman, of Barronsfield, and John Gillespie and Golden K. Prescott, of Shulee, owns about 70,000 acres of splendid timber land, with saw mill and a mill for making box shooks. This same company owns 31,000 acres recently purchased at Economy, below Parrsboro. The operations of the Shulee Lumber Co. are also directed from Amherst. They have 10,000 acres. Sum these up and you have 111,000 acres more.

There is still the Newville Lumber Co., at Newville, near the Parrsboro shore. It has 15,000 acres, and its members are Rhodes and Curry, W. W. Black (son of T. R. Black, M. P. P.), G. A. Fowler and C. A. Lushy. Rhodes, Curry & Co. own another 15,000 acres on the line of the I. C. R. Here is a total of 30,000 acres.

Add all the totals and you have a grand total of 247,000 acres, or over 386 square miles, and comprising some of the finest timber lands in Nova Scotia. On all the properties except that at Economy, operations are being carried on this winter.



As illustrating the old saying that there are two sides to every question, Mr. William McGregor, M. P., of Windsor, states that from Michigan and Maine more men go to Canada to work in the lumber woods than there are persons who go from all Canada to the United States. Annually 300,000,000 feet of logs are rafted to the United States, he says, mainly from the Georgian Bay district to the mills in Michigan, and the same men who work in the mills in summer go into the Canadian woods in winter and cut the logs. Large numbers also go from Maine to New Brunswick.

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HON. J. B. Snowball, of Chatham, N. B., it will be remembered, took an active interest in the framing of the French treaty, and as an extensive shipper of spruce deals to France, had hoped that the reduced duty would increase the demand for spruce deals in the French markets. As yet no appreciable increase in the volume of trade has occurred, although Mr. Snowball anticipates an improvement during 1897. The greatest advantage to deal shippers, he says, is in the fact that the treaty opens up a market for a class of deals which are unsaleable in other markets. For instance, the Irish market calls for a twelve foot length, the Spanish market for a fourteen foot length, and the French market for a sixteen foot length. In this way the shipper is enabled to sort out a cargo of deals according to the market for which they are intended.

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"ELI" does not wish to be understood as having anything but the kindest feelings for the saw mill man, and if at any time he has dropped a word which has aroused the anger of any one of them, he humbly apologizes, and begs now to shake hands with them and be friends. In his efforts to present to them some of their shortcomings, he has not been prompted by a fault-finding disposition, but rather by a desire to improve the position of the mill man. Let me impress upon all manufacturers the danger of misrepresentation. This warning was suggested to me by a chat which I had the other day with a wholesale dealer, who was relating some of his experiences in the trade. This dealer desired a car load each of elm and maple for a customer, and was advised by a mill man that he had exactly the quality and quantity of stock he desired. Upon arriving at the mill the dealer discovered that he had only one-half car of each, and he naturally felt somewhat annoyed at the situation. Not saying a word, however, he went to another mill and purchased sufficient stock to complete his two cars, for which he was obliged to pay a higher price, and charged his expenses as well as the difference in cost to mill man No. 1, who had misrepresented his stock. I asked the wholesaler how he accounted for this action, to which he replied that the mill man no doubt expected that he would accept some other stock for the balance of the car, and thus succeed in selling

his lumber. The lesson received will undoubtedly have its effect. To the wholesale dealer the hardwood manufacturer must look for his trade, and it should be the aim of every mill man to cultivate friendly relations.

\* \* \*

Mr. D. E. Sprague, of Winnipeg, returned a fortnight ago from a visit to his lumber camps, situated on Rosseau river, about 120 miles south-east of the city. Mr. Sprague drove the entire distance, going out when the thermometer was more than 30 degrees below zero. His method of protection from the cold is somewhat unique and interesting. In front of his sleigh is a small house built of canvas, in which there is ample room for Mr. Sprague and the driver to move about. An oil stove serves the double purpose of keeping the interior quite warm and supplying a range for Mr. Sprague to do his cooking on. A large couch makes a very comfortable bed, and under it is kept a full supply of provisions. The lines from the horses pass through a slit in the canvas, and the road is seen through a window in front of the peregrinating home. A head light throws its beams between the horses heads on to the trail, and there is no danger of straying from the beaten path on the darkest night. The interior is so warm, even in the coldest weather, that it is not necessary to wear a cap, much less an overcoat. The rear of the sleigh is occupied with forage for the horses. A trip to the lumber camps and return is a drive of four days' duration, and in Mr. Sprague's turn-out it rivals in comfort a jaunt in a palace car.

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Mr. Thomas Southworth, Clerk of Forestry for Ontario, returned last month from a trip to the Rathbun Company's limits in Hastings county, where he spent a few days enjoying the comforts of a lumberman's life. That he was royally entertained may be judged from the good natured manner in which he refers to his visit. Mr. Southworth is an enthusiastic admirer of the method of lumbering pursued by the Rathbun Company. Speaking along this line he said: "It is simply astonishing to observe the manner in which the company utilize the forest products. Trees which other lumbermen would cut down and leave on the ground, owing to defects, are cut up by the Rathbun Company and converted into different manufactures. This means that the government not only receives a much larger revenue from crown dues, but also that the utilization of this timber provides employment for a vast number of men, which is an important consideration at this time. Of course, the immediate profits under this method of lumbering would not be as great as though only the best timber was taken off, but would be spread over a greater number of years. Another advantage is in the direction of reforestation, as young trees cannot but flourish much better where the ground is well cleared up."

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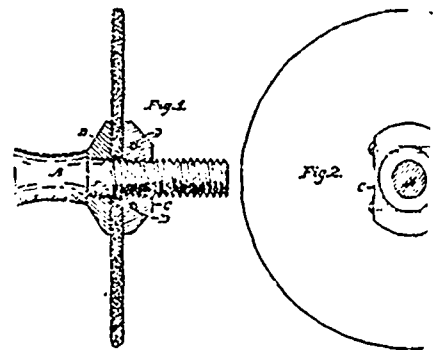
MANY readers of this journal will remember the Dollar family, who were at one time prominently connected with the lumber business in Canada and removed to California a few years ago. The death of Mr. John M. Dollar, shortly afterwards, was referred to in this journal. Messrs. Robert and James Dollar are now located at San Francisco, where they are known as the

Dollar Lumber Company, and manufacture wood and pine lumber, etc., with mill equipment. They have not forgotten their Canadian friends, even after residing for a number of years in Uncle Sam's country, but still interest the news from their old locality. Mr. James Dollar, who is now returning to the LUMBERMAN, will look for your paper regularly, as I like to see it is going on among those I knew. The business is very dull here at present, and we look for a change for the better shortly. (The Dollar Lumber Company) are making arrangements to take out a cargo of sugar to Liverpool, that is, a cargo of board timber to have our man now up on the mountain to haul up timber for that purpose, and he reports that it will be done. We will have to haul it 30 miles to the vessel. How would that answer you Canadian? We drive it down the river, where it is on the vessel." Mr. Dollar seems quite satisfied with the business success with which he has entered in his new field. He refers with regret to the loss by fire of a portion of the parliamentary buildings at Ottawa.

#### A MAKE-SHIFT SAW GRINDER

THERE is no excuse for any mill man turning lathe to go without means for grinding saws, says a writer in the Lumber Worker. The sketch herewith shows a simple arrangement, and one that will serve the purpose in the absence of a more expensive piece of equipment. Fig. 1 shows the arrangement plainly that an explanation is hardly necessary in order to make it clearer I offer the following:

A, Fig. 1, is a screw taken from an old lathe and cut off about six inches long, and a collar about three inches in diameter is cut out of a hole through centre large enough



to fit a nut, and glue fast to shoulder of the screw, as shown at B, Fig. 1. When dry, place the collar on a lathe and turn up true on face, also turning a hole in wheel to fit on screw nut, use a part of hand-screw jack to hold the collar in place. Cut a hole of the same length, as shown at C, Fig. 1, through each end, as shown at D, Fig. 2; these will keep the nut from splitting.

By placing your emery wheel on the lathe, you can gum your saws as with any ordinary emery grinder. For a wooden pin to fit in rest socket; then you can turn your saw in any direction.

The Goderich Lumber Co., in recognition of your subscription to THE LUMBERMAN for 1897, sends you a copy of the paper. We are much pleased with it. A copy to hand, it is the first paper we look

BRITISH COLUMBIA LETTER.

(Regular Correspondence of the CANADA LUMBERMAN)  
ANOTHER COMBINE.

COMBINE is being formed to take the place of the Central Lumber Company, which went to pieces on the first of the year. The new organization will, however, only endeavor to control the foreign trade, and consequently we bespeak for it a better prosperity, the refusal of some of the smaller mills to join the former combine being really the cause of its failure. The mills which have already signified their intention of entering the new combine are the Tacoma Mill Co., Port Blakely Lumber Co., Puget Sound Lumber Co., of Port Gamble, Washington Mill Co., of Port Hadlock, British Columbia Mills, Lumber and Trading Co., Vancouver, Moodyville Land and Mill Co., the Victoria Lumber and Manufacturing Co., the Brunette Saw Mill Co., of New Westminster, while it is believed that others will come in before the final organization. The St. Paul & Tacoma Lumber Company and the Bellingham Improvement Company are offering opposition to the combine, but on the other hand two British Columbia mills that had agreed to join the Central Lumber Company are parties to the new agreement. In the event of the organization being successfully accomplished operations will begin about April 1. It is the intention to have joint representation in all the foreign markets. The business will be equitably divided among the shareholders and profits shared accordingly. Mr. R. P. Rithet, one of the directors of the Victoria Lumber & Manufacturing Co., states that he believes the new organization will prove a success. As far as he knew all the mills which are doing a large export business are ready to join. Rithet explained that the object of the organization was to force big prices, but rather to secure more uniformity of prices in the foreign markets and to extend the foreign trade in a systematic way.

VICTORIA LUMBER AND MANUFACTURING COMPANY. The annual meeting of the Victoria Lumber and Manufacturing Company was held last month, at which officers were elected as follows:—Messrs. J. A. Humbird, of St. Paul, president; R. P. Rithet, vice-president; E. J. Palmer, manager; and W. H. Phipps, secretary. These, with D. Humbird, form the board of directors. The mills of the company remain as running day and night to fill orders.

KOOTENAY LUMBER COMPANY. The Kootenay Lumber Company, Ltd., composed of Messrs. Hewitt Bostock, Archer Martin and Ian Coltart, has been organized, with head office in Victoria. The object is to control the lumber business of the Kootenay Lumber Co. at Hazelton, where a new mill has been put in operation. The mill is driven by a Pelton wheel, the power being derived from the waters of the creek, which is dammed at a height of 100 feet above the mill, from whence the water is led through a 24-inch supply pipe; this narrows down to a 2-inch pipe, which plays on the wheel, which is only three feet in diameter. The power is thus developed to drive all the machinery of the mill. Over 40 men are at present employed in and around the mill.

COAST CHIPS. The shipment of railway ties has been made from Vancouver to Bombay, India. Royal City Mills are building a new dry kiln at New Westminster, 40 x 75 feet. Nelson Saw Mill Co.'s mill near Trail, which was recently, is being rebuilt on a larger scale.

R. Miller is building a saw and shingle mill six miles south of Rosland, with a daily capacity of 30,000 feet of lumber and 50,000 shingles.

The British government will, it is said, in future purchase whatever fir is required for government work in British Columbia, instead of on Puget Sound.

The shingle mill of the Pacific Coast Lumber Company, New Westminster, has recently been re-fitted with new and improved machinery, and is running twelve hours per day.

The suit of the Queen vs. Victoria Lumber Co. has been settled, the decision being against the latter, by which they will be compelled to pay taxes on certain lands amounting to about \$15,000 per year.

NEW WESTMINSTER, B. C., Feb. 18, 1897.

NEW BRUNSWICK LETTER.

(Regular Correspondence of the CANADA LUMBERMAN.)

It is reported that Messrs. Watson & Todd, of Liverpool, will open an office here in the spring, their intention being to ship lumber from this port the year round. The past two winters they have shipped large quantities of deals by the Beaver line of steamers to Great Britain, and their trade from this port will, no doubt, assume larger proportions in the near future. Mr. Martin Power has charge of their business.

To the enterprise of Mr. G. J. Vaughan, of Chatham, will be due the operation of two mills on the Miramichi which have been closed for several years. Mr. Vaughan has lately secured control of the Black Brook mill at Loggieville and the Kerr mill above Douglstown, and is getting out a stock of logs for both. The former will cut about eight million feet, and the latter probably four million.

Donald Fraser & Sons will close down their Aberdeen mills next month for the purpose of adding some new machinery and making necessary repairs. A new boiler will be put in, and the two engines in use at present will be replaced by a larger one.

In the High Court of Justice, Dublin, recently an appeal was allowed in the case of Hannevig v. Dixon & Sons, Belfast. This was the case of the owners of the Norwegian bark Rolf, who brought an action for £500 for demurrage while the vessel was loading at the Miramichi. The lower court decided in favor of plaintiff and defendants appealed on the ground that six witnesses at least could be found in New Brunswick to testify that the time demurrage was claimed it was so stormy that timber could not be put on board.

BITS OF LUMBER.

It is rumored that Mr. Ross, of St. Stephen, will erect a saw mill at Fredericton.

Mr. John McLeod has completed the building of a new lumber mill at Black River.

Mr. Harding, of Coal Creek, intends building a steam saw and grist mill at Douglas Harbor.

Hale & Murchie intend building a new chimney at their mill at Fredericton in the spring.

Messrs. Walter J. Mills, of the firm of S. H. White & Co., Sussex, and Harley White, of Apple River, are at present on a trip to Bermuda and Trinidad.

The exports of forest products from St. John during the month of January were valued as follows: Deals, \$54,353; deal ends, \$221; laths, \$1,333; planks and boards, \$11,895; scantling, \$6,632.

ST. JOHN, N. B., Feb. 18, 1897.

MICHIGAN LETTER.

(Regular Correspondence of the CANADA LUMBERMAN.)

On the 26th of January last a meeting of Michigan manufacturers sawing Canadian logs was held to consider what steps should be taken regarding the proposed duty on lumber. Mr. F. W. Gilchrist, of Alpena, acted as chairman, and the following committee was appointed to formulate a plan and report: Joseph Turner, Bay City; A. T. Bliss, Saginaw; W. D. Churchill, Alpena; C. E. Mould, Chocoygan; and Thos. Pitts, Detroit. This committee went to Washington the first week in February and presented a strong protest against the imposition of a \$2 duty.

Labor Commissioner Morse, in his annual report, has devoted considerable space to forestry in Michigan, giving some interesting figures of the amount of standing timber in each county. There are 6,166,977 acres of standing hardwood in the state, 775,208 acres of standing pine, and 1,468,166 acres of hemlock. There are eighteen counties without any pine whatever and 32 with less than 100 acres each. Nearly all the standing pine is in the upper peninsula.

The new mill of Smalleys & Woodworth, Bay City, is nearing completion. The firm have several camps in operation, and will yard about 10,000,000 feet of Norway for next season's sawing.

A new development in Michigan lumbering furnishes a profitable market for the hitherto valueless slab piles. Several prominent salt manufacturers at Saginaw have entered into a deal with the Hamilton & Merryman Company, of Marinette, to put in special machinery for getting out salt barrel staves from pine slabs. If the move proves profitable other users of salt barrels will enter the market, and another article of mill waste will thus be provided for.

The Saginaw Courier estimates that the Michigan production of lumber and shingles in 1896 from Canadian logs was about 12 per cent. of the total quantity cut in Michigan, the figures being 253,759,846 feet.

The lumbermen are complaining of the lack of snow for logging purposes. In the northern section of the state there has been less than six inches in depth.

SAGINAW, Mich., Feb. 18, 1897.

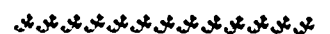
It is said that castor oil will keep leather belts from slipping. The oil penetrates the leather, makes it soft and pliable, and leaves no sticky surface to collect the dust.

An innovation in the construction of floors is the use of a special preparation of paper pulp invented by Otto Kraner, of Chemnitz, Saxony. He calls the new material papyrolith. It comes in the shape of a dry powder, which is mixed with water, dries in a short time, and may be spread and planed down upon a foundation of either natural or artificial stone, cement or wood. The wearing quality of papyrolith is very remarkable, as are also its qualities of perfect solidity, of being a bad conductor of heat, and of deadening all noise. A further advantage is the considerable amount of elasticity which it possesses, and perfect safety from fire. Since the mass may be tinted with almost any color, it is possible to lay down several layers in different colors alongside of each other, or to lay a floor with a mosaic design. Parquets with varied colored borders can also be laid down, and the same material may be used for wainscoting and stucco work, as also for panels and other decorative and architectural purposes. Mr. Kraner has also recently succeeded in producing a material similar to Lincrusta Walton at only one-tenth the cost of that expensive material.

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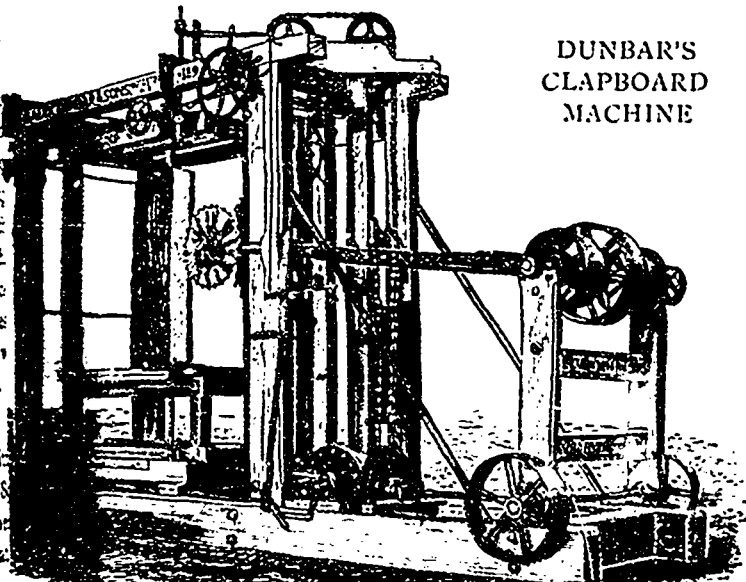
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**SHAVINGS.**

The largest single wood pulp plant in the world is that of the Hudson River Pulp and Paper Co., at Corinth, N. Y., which consumes over 30,000,000 feet of spruce per annum.

Vertical running belts should be drawn tight enough so that the belt will cling to the lower pulley. Laced belts often break where connected, on account of friction caused by slipping and movement between the lace and belt, which wears away the face.

Russia has 503,000,000 acres of forest; Sweden and Norway, 62,000,000 acres; Austria, 45,000,000 acres; Germany, 34,000,000 acres; Turkey, 25,000,000 acres; Italy, 13,000,000 acres; Switzerland, 1,700,000 acres; France, 22,000,000 acres; Spain, 8,000,000 acres; Great Britain, 3,000,000 acres.

To those who wish to know when lumber is dry, a writer says that the surest way to tell is when the heat swells the lumber and it becomes larger when heated than when cool, the same as iron does. You can rely on it being dry. This seems to be the nearest to a solution of the problem of anything yet.

The last page of Munsey's Magazine has been sold for one year to four advertisers, each of whom occupies a quarter of a page and pays \$6,000, making a total of \$24,000 for the page. One line in the Youth's Companion, one time, costs \$3, while a page in the Ladies' Home Journal, one time, costs \$4,000.

If you want to reduce your cost of insurance, equip your plant with automatic sprinklers, light it with electricity, and incidentally locate a reel of hose and a steam pump in such a way that your mill crew will form an efficient fire brigade. To the extent that you reduce the hazard, insist upon a reduction of your premium.

The Chicago Timberman estimates that the agricultural implement manufacturers of the United States use a total of 1,448,293,750 feet of lumber annually, of which white pine, principally low grade stock for packing purposes, furnishes 20 per cent.; ash, 19 per cent.; oak, 9 per cent.; yellow pine, 8 per cent.; cottonwood, 5 per cent.; poplar, 8 per cent.; hickory, 7 per cent.; maple, 7 per cent.; elm, very largely rock elm, 4 per cent.; and basswood, 1 per cent.

The Ladies' Home Journal, in speaking of hardwood floors, says: "Since utility is the foundation of true beauty, the floor of a vestibule or entrance hall should be of hardwood or tiling; and of the main hall, plain hardwood or parquetry. From both a practical and artistic point of view hardwood floors are more desirable than all-over carpets, and little if any more expensive. They are not injured by contact with muddy boots or wet umbrellas, are easily cleaned, and with one or more handsome rugs laid over the centre, are almost certain to

impart that air of pleasing formality so essential in a hall."

The total cost of timbering the Witwatersand mines, in the Johannesburg district, South Africa, has been nearly \$1,500,000, says an exchange. The timber has mainly come from Australia and the North Pacific coast of the United States, a distance, in the latter case, of 8,000 to 10,000 miles. But a scheme is being carried out for furnishing the gold fields with a home supply. Millions of trees have been planted in the vicinity of the mines and are growing promisingly. It is thought, also, that by the opening of the timber regions in South Africa by the construction of railways the native supply will be considerably augmented.

The clever and inventive Yankees have been to Sweden and promoted a company called the Swedish Compo-board Aktiebolaget, with a capital of maximum 750,000 kronor. The object of the concern is to work a patent whereby boards are made out of offal and pulp to almost any size. Deals up to four and five feet wide have been made, stronger than ordinary wood, unignitable, and with a splendid isolating quality against heat and cold. The trials that have been made have turned out quite satisfactory, and a great future, the promoters feel sure, awaits the new article, and we understand that a syndicate is being formed at Stockholm to introduce it into Germany and this country. Letters addressed to the company at Stockholm will find them.—Liverpool Timber News.

**THE INTRODUCTION OF BAND SAWS.**

The first attempt in the United States to turn out lumber with a band saw was made about twenty years ago. The saw then used, however, while excellent in cutting on a beautiful wave line, scorned the inartistic, mechanically straight one. The true theory in regard to the nature and treatment of circular saws, which were then in well-established use, was only beginning to be understood; and ten years elapsed before it was understood in reference to band saws. After the first introduction of band mills, many years passed before this constructive principle was applied to them. As soon as this took place, the band saw began to take rank, in speed of lumber making, with its powerful rival, which hitherto held the field. Tension in the cutting edge of the blade is the principle referred to, which all saws must possess in order to do their best work. In the circular saws this is obtained by hammering the central part of the saw; in the band saw it is obtained by rolling the middle portion of the blade—that is, the saw is passed through a machine between two small steel rollers under heavy pressure, which expands the middle portion of the saw throughout its entire length. Applying a straight edge to the side of a saw, either longitudinally or transversely, will show convex and concave places alternating all along the blade; but when placed

on the wheels of the mill, under a four to all these kinks disappear. It then becomes a straight ribbon of steel, with its edges that there is no chance for deviation in. It cuts straight.—W. Trout, in "Cassieazine."



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**OF**  
**LUMBERING**  
**TOOLS**

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**OUR EXTRA HAND-MADE AXE**

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

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FINE BLANK OFFICE FURNITURE L. CHURCH & LODGE FURNITURE SEND FOR CATALOGUE.

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**LUDELLA CEYLON TEA**

has made this task easy. It is not only good, but pure and wholesome, and makes a good cup. Have you tried it?

From All Grocers at 25, 40, 50 and 60 cts., in Lead Packages.

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**RAILS FOR TRAMWAYS**

NEW AND SECOND-HAND iron rails for tramways and 12 lbs. per yard and upwards; complete outfit.

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Compound Wound, 110 volts; (stat, Sliding Base, etc.

Just the thing for an Isolated Pl Mill.

These Dynamos are perfectly new will be sold very low to close

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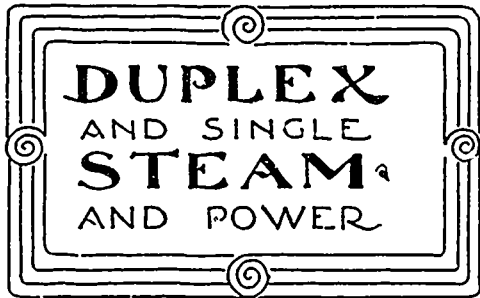
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Goods will be forwarded same day as order is received.

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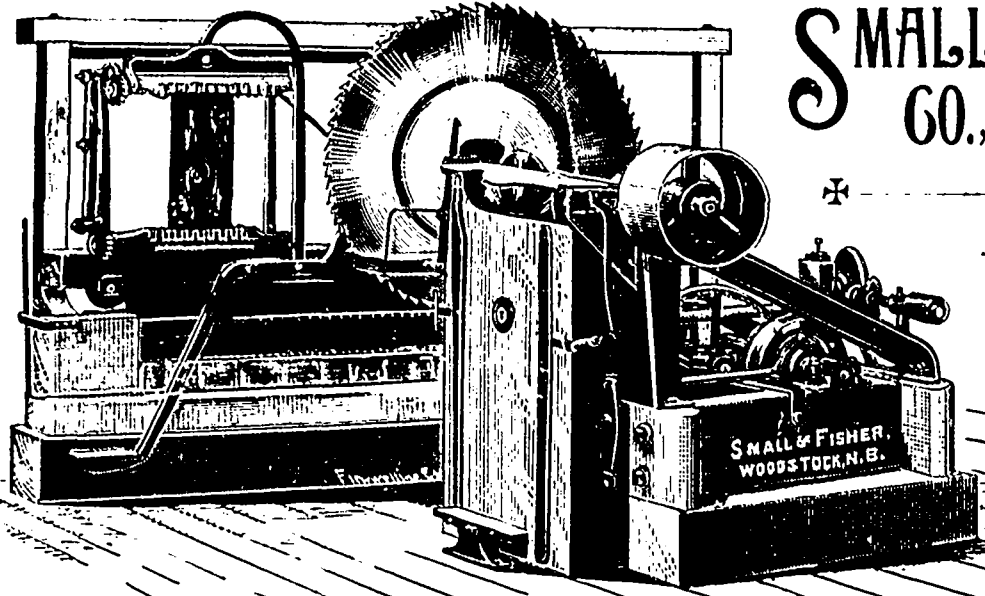
# OAK TANNED BELTING

TORONTO THE J.C.M<sup>c</sup> LAREN BELTING CO MONTREAL  
FRONT ST EAST  
PHONE 475



A BIG TREE.

The Liverpool Timber News of the 30th January says: "We have heard of monster Californian and Kauri pine trees, but at least one in India is a giant even to those. It is a banyan tree. It would now be interesting to know which is really the largest banyan tree in India, since new ones are constantly being discovered that appear to dwarf the rest. Thus, a correspondent writes to a contemporary to claim that he has just discovered the biggest at Madhupur, on the E. I. railway, between Calcutta and Patna. According to him, the circumference is 440 yards and the extreme diameter 152 yards, whilst the area it covers is given as 9 bigahs 23 chittacks. The longest branch, not touching ground anywhere, is at the S. E. corner and measures 29 yards; and the longest branch of all, touching earth at more than one point, runs due east for 55 yards. The Timber News thinks the Yankee will have to stretch a point to beat this record."

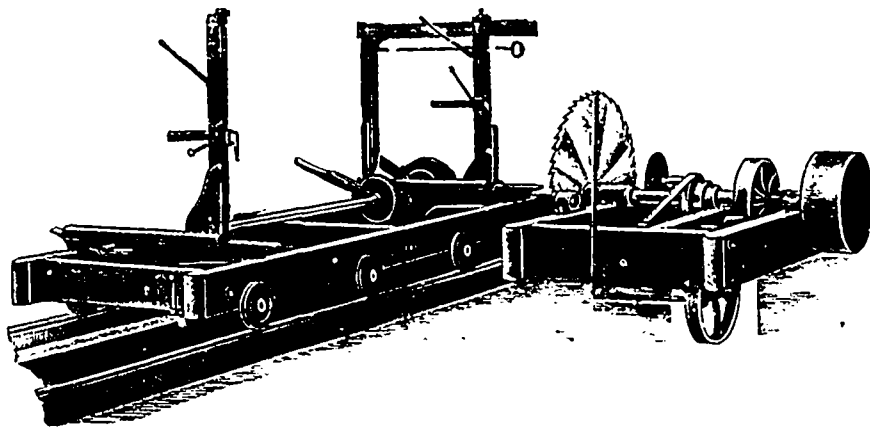


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An Entirely New Machine, and without doubt Best on the

Besides these we build four larger sizes of Saw Mill Trimmers, Slab Slashers, Single and Double Edgers, Bolted Stave Machinery. Several Second-Hand Portable and Stationary Engines and Boilers. . . . . Send for Catalogue.

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FURNISHED  
WITH  
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AS A  
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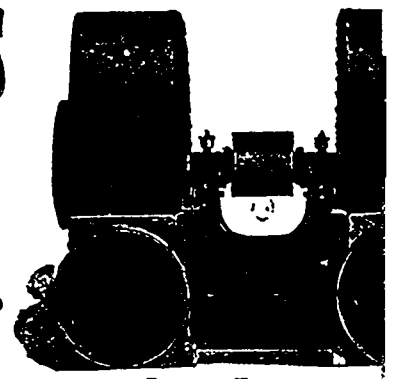
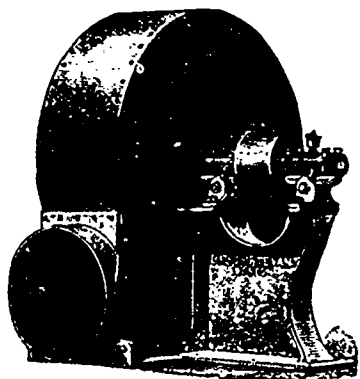
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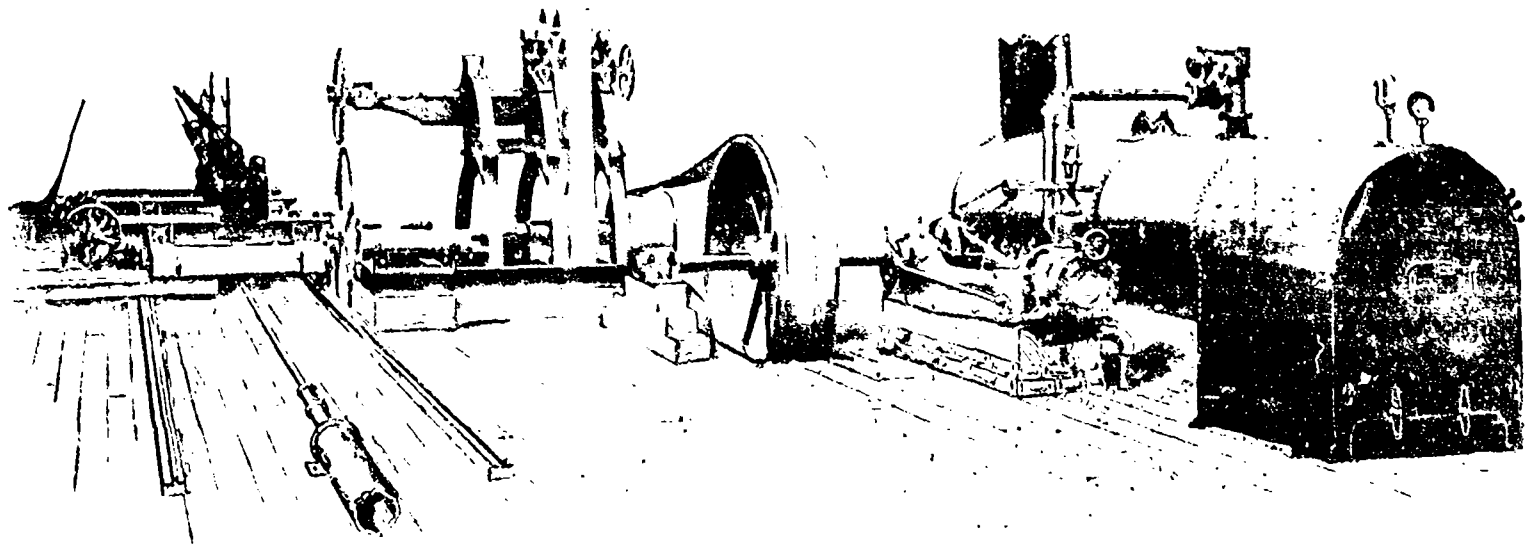
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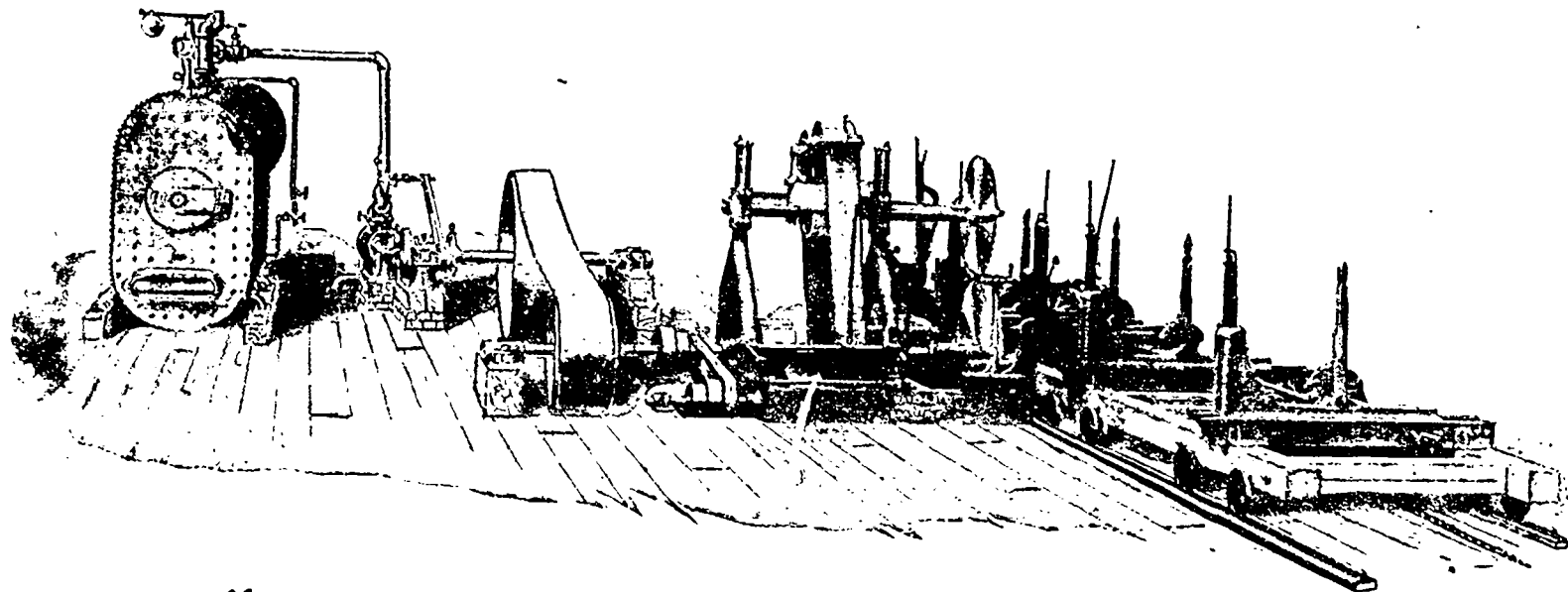
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in many instances are indispensable. Our Experience in building them extends over Half a Century. . . . .



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With No. 4 Saw Frame, 72" Lower and 56" Upper Saw ; No. 6 Girder Steel Unbreakable Carriage, opening 72 inches from Saw all portions of Carriage either Rolled or Cast Steel, Direct-Acting Steam Feed, etc.



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With No. 3 Saw Frame, having 12 inch face Friction Feed Works, taking 60" Lower Saw and 40 inch Upper Saw. A No. 3 1/2 5 Block Girder Steel Carriage opening 50 inches from

Saw, with Peel and Reliance Cant Hook Double Spud Dogs—Rope Feed, Automatic coupling in Carriage between 3rd and 4th blocks extras when required Bull Wheel, Slab Saw, Single or Double Edger, Trimmer, Live Rolls, Planer and Matcher, etc.

THE above are our Large Portable Saw Mills. We Manufacture all sizes down to 12 H.P., with Saw Irons of Smallest and Lightest Dimensions for Mule Back or Dog Train Transportation to the Mines. One of our 12 H.P. mills is operated by the Hudson Bay Co., at Fort Churchill, H. B., and many are scattered throughout the Dominion. We shipped last month of the smallest to "Omenica Consolidated Hydraulic Mining Co." for transportation 600 miles north from Ashcroft, B. C. Write or Wire us for Prices and Delivery Date.

### If Your Log Chain Troubles You, Read This Letter



**iant** CHAIN  
DETACHABLE  
4 Sizes  
SAVE  
MANUAL  
LABOR  
LOG  
TOOTH

MESSRS. WATEROUS CO., Brantford.

PENETANG, ONT., April 30th, 1896.

GENTLEMEN,—Yours of the 29th received, and enclosure carefully noted. We have had one of your No. 1075 log chains in use in our Penetang mill for about fourteen years—as nearly as I can recollect, and we consider it about the best chain for the purpose that we have yet seen, and we have tried numbers of others.

About three or four years ago it became so worn and loose that it was necessary to heat all the links and tighten the rivets. This, however, narrowed the links some, and although we used it in this way one season, the following we knocked out all the rivets and put in new ones. Since that the chain has been doing its work the same as ever, and this is the only work we have put on it, except renewing some of the tooth plates on the bunk links, and occasionally put in a few complete bunk links, as they, receiving most of the weight of the logs, wear a little sooner, although they are made heavier. When it is taken into consideration that most riveted chains require some looking over every spring, the fact that we used this for about eight or ten years without doing a particle of repair on it speaks for itself.

A year or two ago, requiring a new log chain in our new Keene mill, we put in another of the number 1075's, although the chain we had been using was good of its kind—a steel-riveted chain.

With our chains (1075's) we have never had the links come apart through the rivet head wearing off, and do not consider them at all likely to do so, as there is very little wear on that part of the chain.

Trust this is all the information you require as to our experience with the No. 1075 chain.

Yours truly,  
C. BECK, President Beck Lumber Co.

P. S.—We also have this chain in our Savanne mill.

On 100-1050-1075.  
Satisfactory and Durable Chain for Log Hauling, Heavy Refuse Conveyors, Etc.  
15 TONS OF LINK BELTING, COVERING ALL SIZES, CONSTANTLY IN STOCK.  
EVERYTHING FOR Saw Mills, Wood-Working Establishments and Pulp Mills.

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S. E. FISHER, Box 238, Rochester, N. Y.

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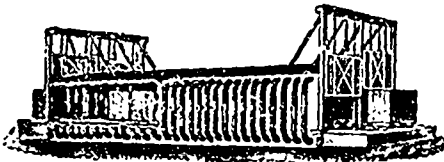
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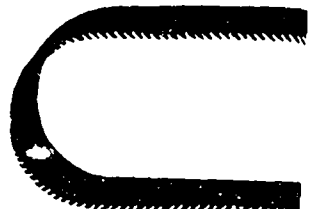


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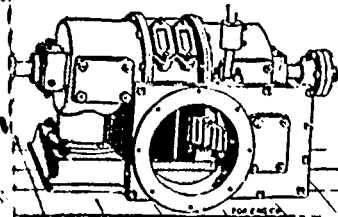
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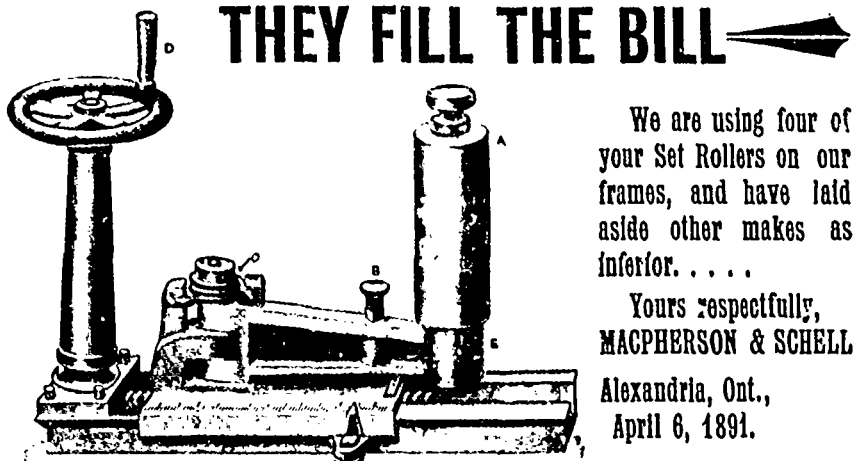


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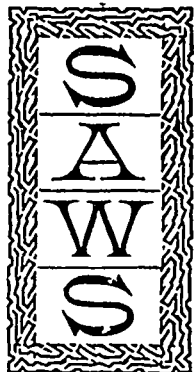
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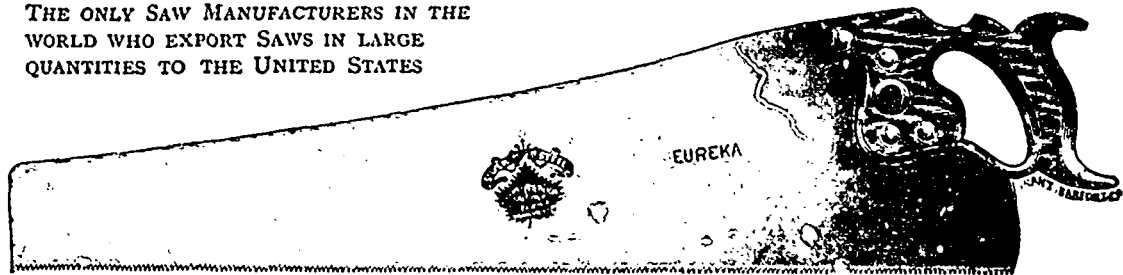
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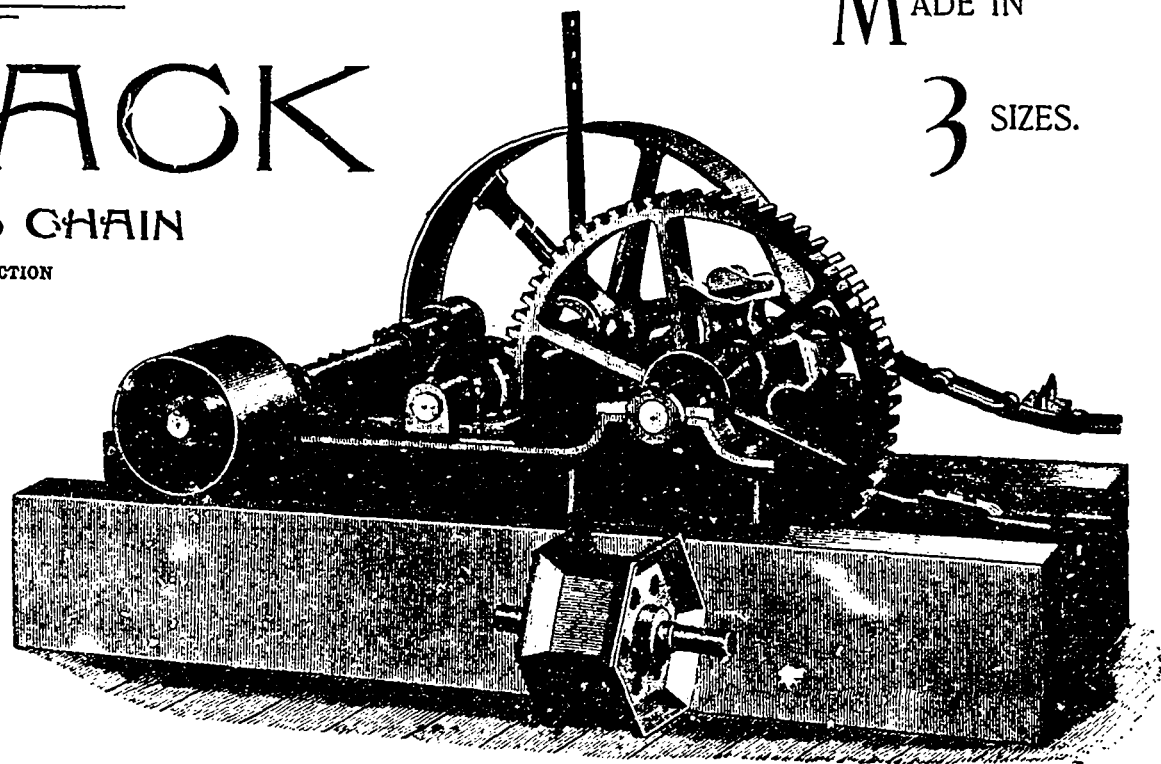
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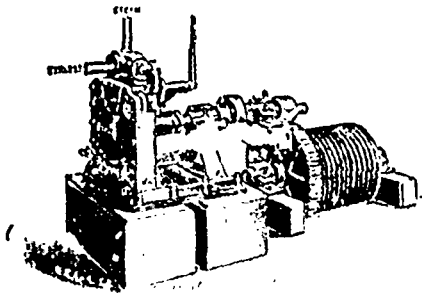
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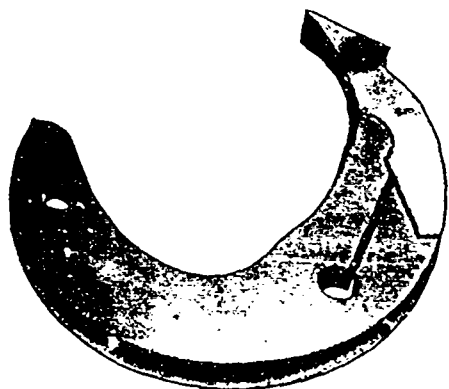
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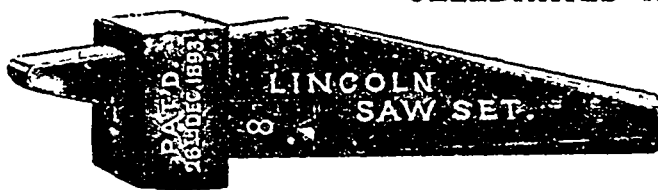


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