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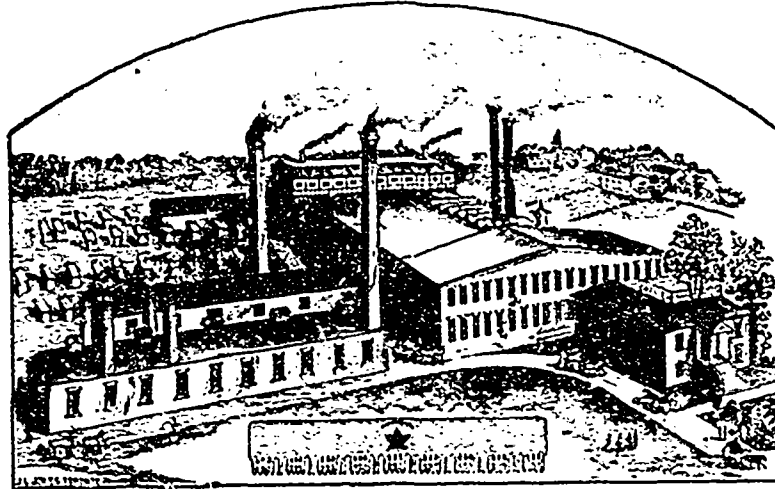
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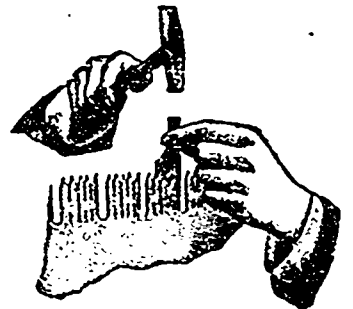
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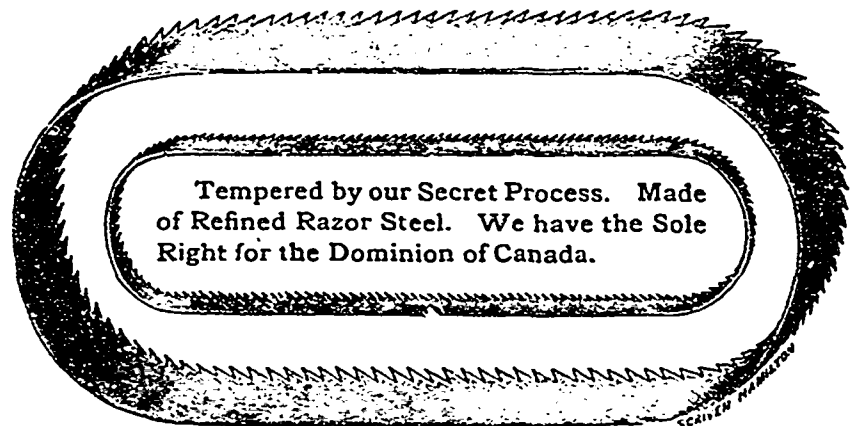
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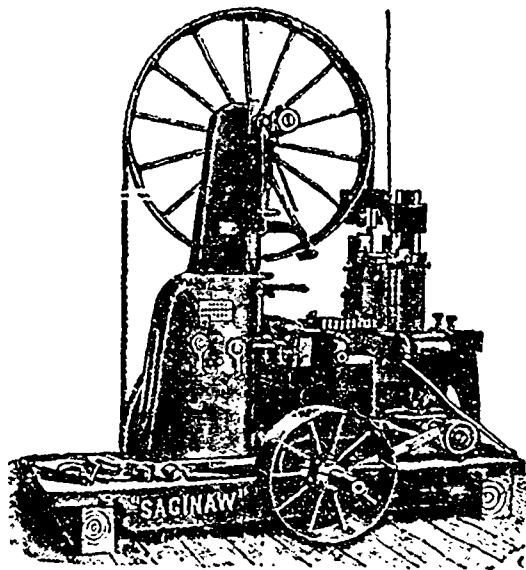
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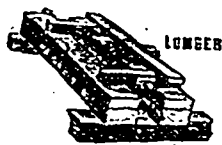


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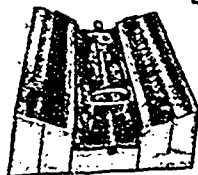
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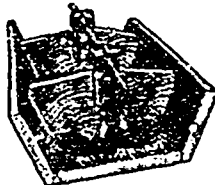
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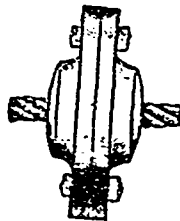
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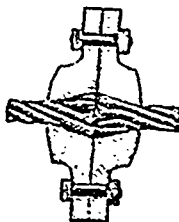
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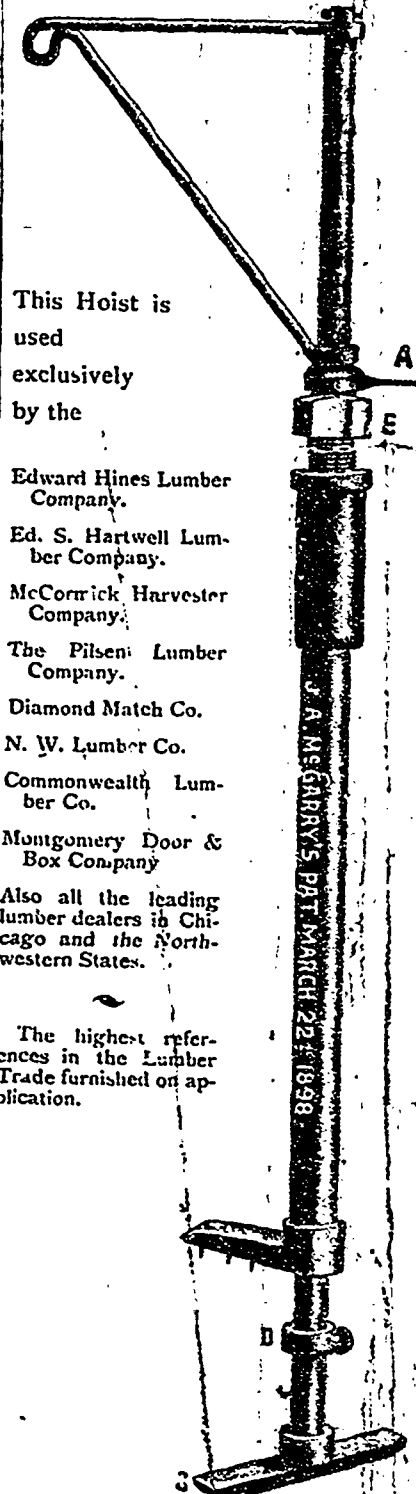


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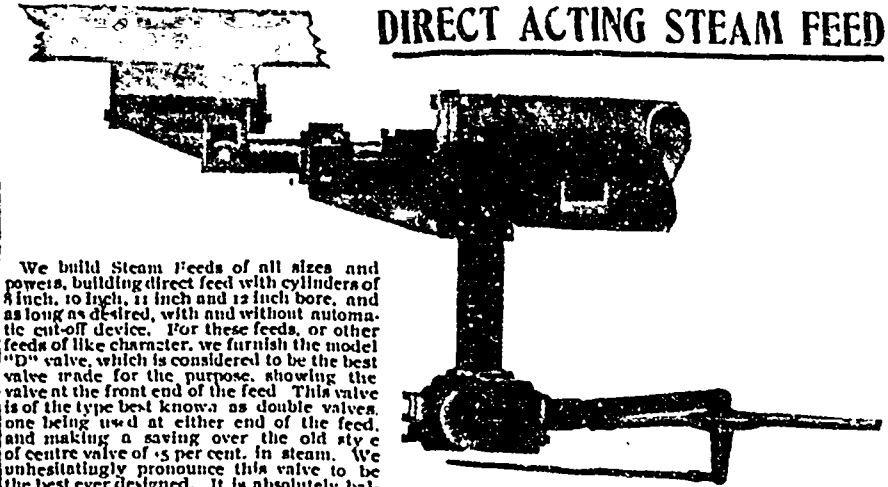
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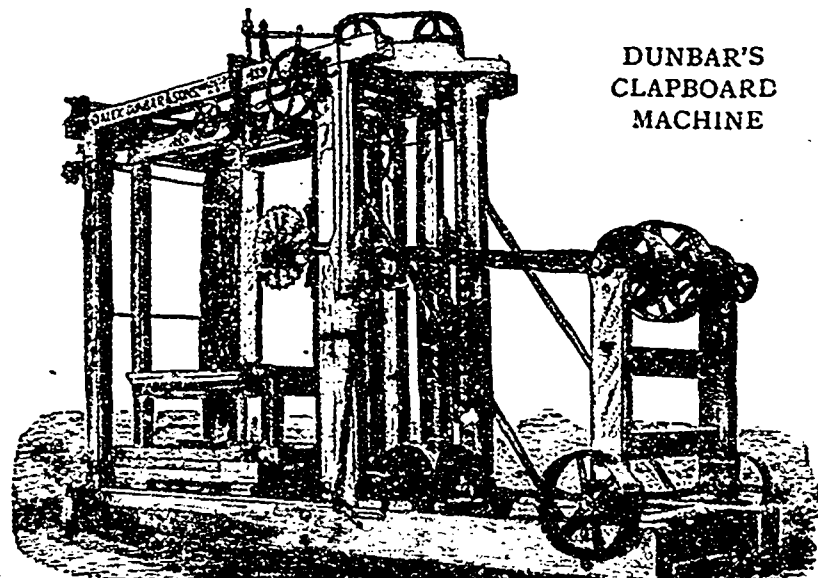


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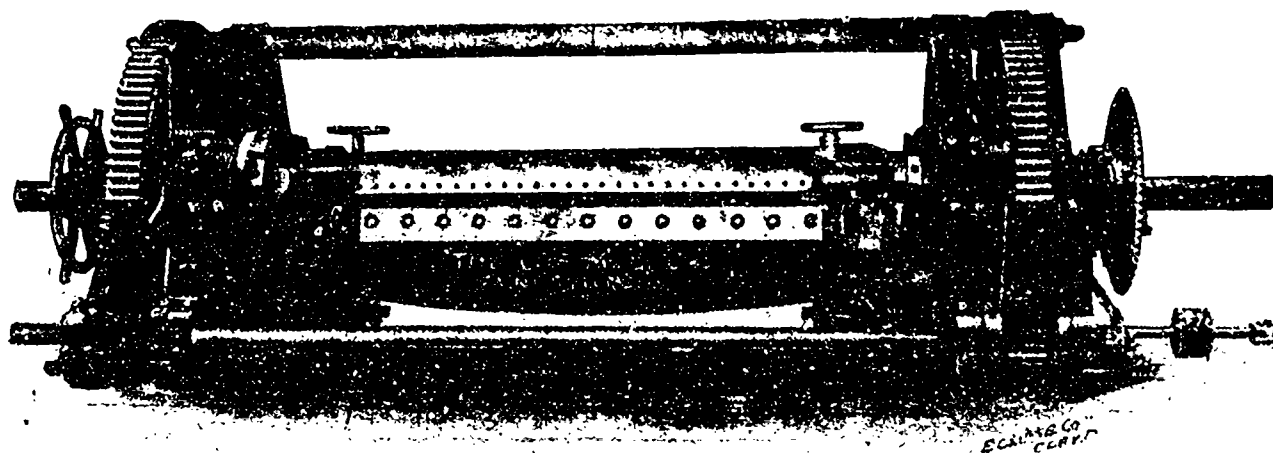
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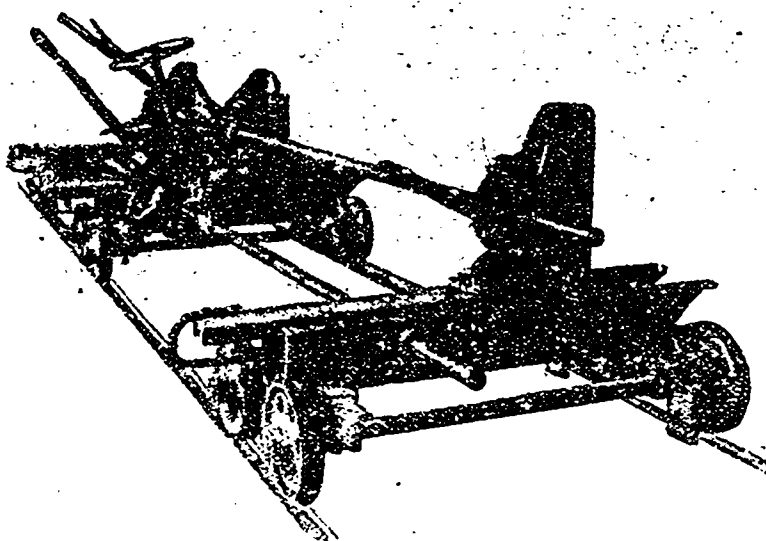
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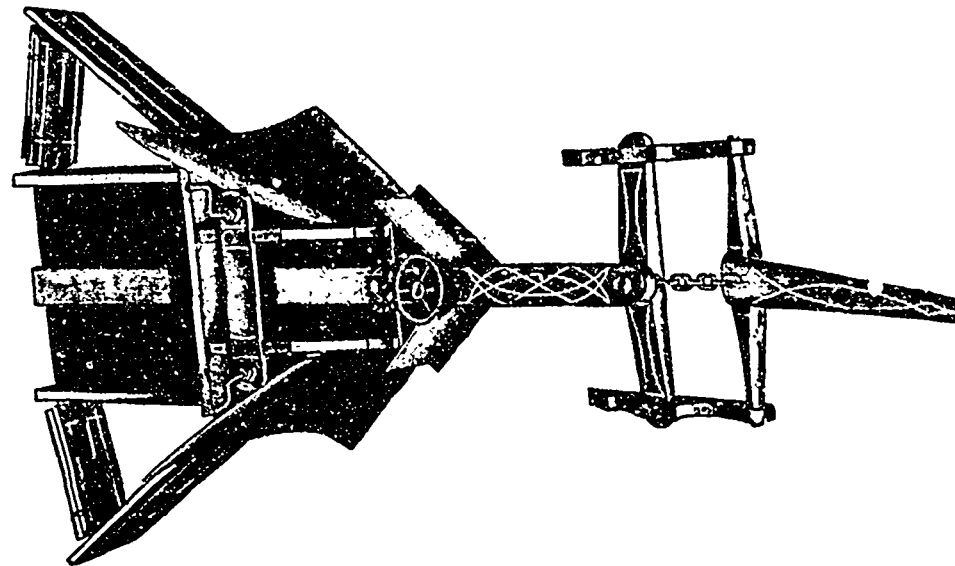
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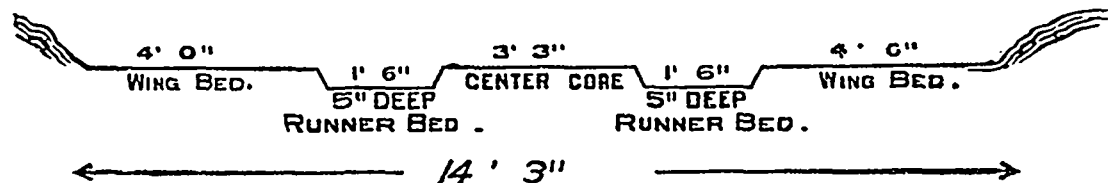
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THE BRAZEL PATENT

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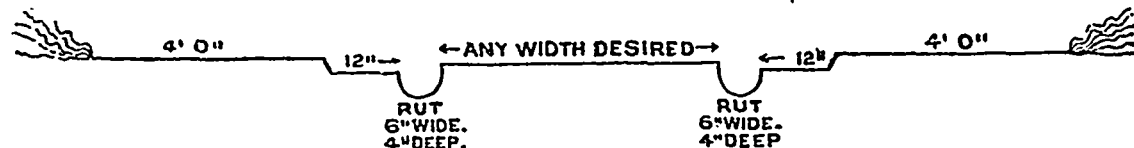
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NEW AND SECOND-HAND.

THE CANADA LUMBERMAN

VOLUME XXIII.
NUMBER 1.

TORONTO, CANADA, JANUARY, 1903

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THE LATE WILLIAM MACKEY.

In the death of Mr. William Mackey, the lumbering industry of the Ottawa district, and by that is meant the district drained by the Ottawa river, loses a figure that has been prominent in it for over half a century. Less than a year ago deceased withdrew from active operations, when he disposed of his limits by public auction to Mr. J. R. Booth for the substantial sum of \$675,000. Mr. Mackey's death will be sincerely mourned by thousands with whom he came in contact, for he was one of that stamp of men who made the world better for his residence therein. His was a life in which industry, integrity and intelligence, with just a suggestion of luck, or was it intuition, formed a perfect blend. Though dead he liveth, for his name will ever be coupled with all that is honest and upright.

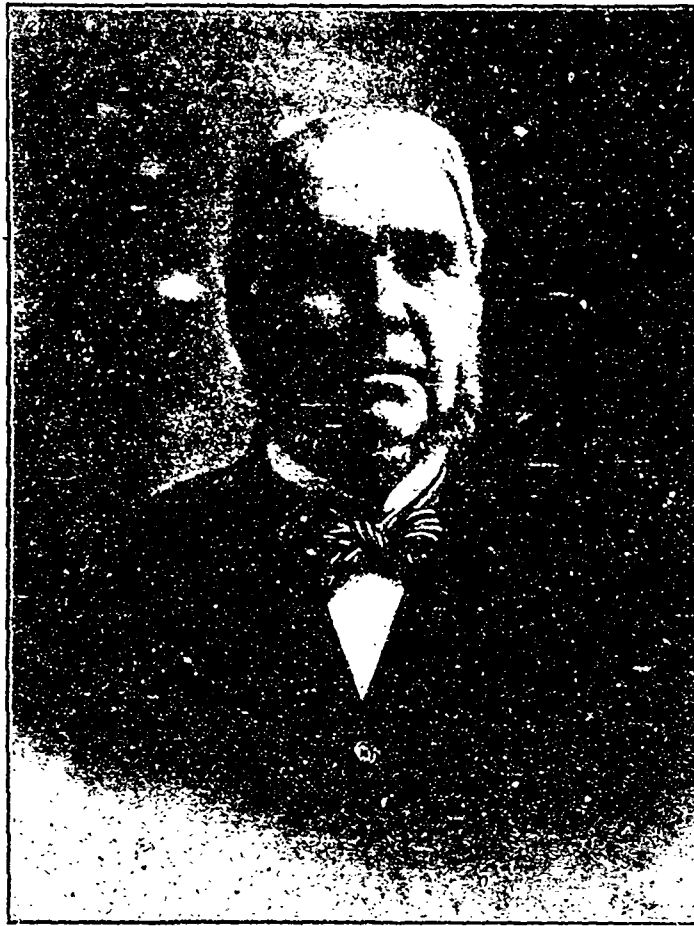
In the year 1842 a raw Irish lad—one of a family—landed in Bytown. Sawdust filled the air, so to speak, and he forthwith determined to turn his attention to lumbering, while his father established himself on a farm near Perth. Plans to overcome the natural difficulty to the movement of timber offered by the Chaudiere falls were then being put into execution, and Mr. Mackey secured employment in the construction of the first government slide. His employer was Mr. George Buchanan, who had the contract also for the construction of the slides at the Chat's Rapids on the river above Ottawa. There Mr. Mackey was also employed with his brother. The latter and Mr. Buchanan were afterwards drowned at different times, but while engaged in the same task, removing a timber blockade in the river.

The Mackey Brothers secondly secured employment in improvement work on the Upper Ottawa under Hon. James Skead. About the year 1845 the latter branched forth into lumbering operations, retaining the services of the Mackeys. The subject of this sketch soon secured a position as foreman, and in less than five years he made an independent move. In 1850 his first raft of red pine was floated down the Ottawa from the Madawaska limits, through the slides which he himself a few years previous had helped to construct.

Shortly after this Mr. Mackey married and settled on a farm near Arnprior. About this time he also formed a partnership with the late Neil Robertson. For over 20 years harmonious and profitable business relations were

continued, only to be dissolved by the death of Mr. Robertson.

Mr. Mackey's early operations were conducted on limits in the Madawaska country. He was an active figure in the lumber business in the heyday of the square timber trade. That was before the time of the extensive railway system in Canada and before the displacement of timber by steel in shipbuilding and other industries in Great Britain. Then it was found much more profitable to manu-



THE LATE WILLIAM MACKEY, OF OTTAWA.

facture the towering pines into square timber, which floated down the mighty Ottawa, and found its way after many days to Quebec and aboard ship. Now the demand for board lumber is paramount, and the extension of the railway service makes it possible to transport the output of the saw-mill with comparatively little trouble.

However, this is aside. Every summer rafts passed down through the slides, the name-marks including those of Mackey, Skead, Conroy, Gilmour, Currier, Poupore, Fraser, Aumond, Perley and Hurdman. Although Mr. Mackey engaged extensively for years in the production of square timber on his limits on the Madawaska and Anable du Ford, it must not be thought that he neglected the "board" end of the business. On his limit on

the latter river he erected a saw mill at which he yearly manufactured stocks of board lumber. He was a shrewd and successful man, and his early training stood him well in after years. As this brief sketch shows, he arrived on the scene when the Ottawa lumber industry offered its greatest reward to the man who had the mental calibre. Mr. Mackey possessed that calibre, and with confidence in his own ability and the lumber industry as his safe capital, he turned his head and mind towards the trackless forests, leaving to others the attractions of town and city. How sound his judgment was, the succeeding years show.

Several times has the one story bearing on his discernment been told, but it will stand repeating. It is said that many years ago he purchased for a few thousand dollars a limit on the Anable du Ford river. That was the ruling price, but the far-seeing purchaser was not dismayed, as was his partner, when business depression brought a decline in the value of standing and manufactured timber. The partner asked to be relieved of his obligation, and granting him a refund of his money, Mr. Mackey secured entire control of the limit. The passing years proved the soundness of his judgment, for the market recovered itself and yearly he took valuable rafts of timber off the despised limit. It was included in the territory secured by Mr. Booth last February, the particular price paid for it being \$65,000.

Mr. Mackey was content with the wealth he amassed in the lumber business, and therein he was wiser than some of his fellow operators, who, hoping to increase their gains by outside investments, lost all or a large share. It is said that Mr. Mackey once lost \$15,000 in a mortgage investment, and there and then vowed to let well enough alone, and thereafter refrained from entrusting his wealth to other than the timber limit and the bank.

He was a public spirited citizen and a philanthropist. Time and time again has charitable work in Ottawa received an impetus from his purse. He was a devoted Catholic. On March 17th last, the natal day of his native country, a beautiful altar was blessed in St. Patrick's church, Ottawa. The cost, over \$5,000, was defrayed by Mr. Mackey. Thus in his parish church stands a monument to his generosity and Christianity.

Mr. Mackey was married in the early fifties to a daughter of a prominent resident of Bytown, Mr. Peter Armstrong. She predeceased

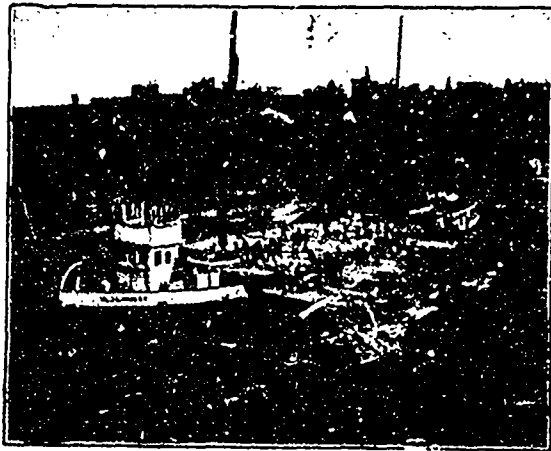
him about nine years. He is survived by a grown up family of four sons and three daughters. Those resident in Ottawa are Mrs. St Denis Le Moyne, Mrs. D'Arcy McMahon and Mr. Walter Mackey.

Probate of Mr. Mackey's will has been applied for. The value placed on the estate is \$1,197,094, of which \$1,060,395 is in personal property and \$136,699 in real estate. To his bookkeeper, Mr. D. R. Mackenzie, he left the tidy sum of \$34,000.

OHIO'S LUMBER INDUSTRY.

[BY OUR TRAVELLING REPRESENTATIVE.]

In common with the general prosperity of the entire lumber trade, the state of Ohio is experiencing quite a boom in this industry. Owing to their situation on



THE "LINDSAY" UNLOADING CANADIAN LUMBER AT CLEVELAND.

Lake Erie and splendid water facilities with Canada, Cleveland and Toledo easily outstrip all the other combined cities in the state. A large number of the retail and wholesale dealers in the state are about to enter the Canadian market for the first time.

As a general rule lumbermen are very hospitable, and in the travels of our representative over this state he met with much courtesy—incivility and curtness being rarely met with.

The Robt. H. Jenks Lumber Company, of Cleveland, are one of the largest dealers in yellow pine in the United States. They manufacture this article, having two mills in the south and making large shipments direct from their mills. They handle annually over 125 million feet. They ship lumber into Canada, making a specialty of large bills. Canadians visiting Cleveland are welcome at their head offices, 176 Euclid Avenue.

The opinion at Cincinnati is that the southern pine can be handled at that point much better and cheaper than "Johnny Canuck's" article, although there is nothing to equal the latter. Some of the southern pine, when dry, seems more like hardwood than soft wood. Among large dealers in Cincinnati are the Nicola Bros. and the R. E. Becker Company. The latter makes a specialty of hardwoods, both United States and Canada, and promise to be extensive operators on this side of the line.

One of the largest firms in Cleveland is the Owen T. Jenks Company. Their large offices on Superior Street show a very busy staff, and they are now coming into Canada, where eventually all the "good" lumbermen will go when they want good lumber. Our readers are referred to the advertisement of the Owen T. Jenks Company in this issue. They offer to buy the season's cut of any mill for spot cash. Their large yards on Merwin street are in charge of Mr. Charles M. Huey, a practical lumberman of large experience in this line. The yards are kept in splendid condition and show an enormous stock always on hand ready for immediate delivery.

The Advance Lumber Company, of 559 Rose Building Cincinnati, is a very large concern, employing an immense staff. They also have an advertisement in this issue, which all lumbermen should read.

At Dayton there are two firms who are interested in Canada lumber, Gebhart & Co. (well-known to the Michigan lumber trade), and W. A. Drake, both extensive dealers and wholesalers.

C. G. & H. H. McLaughlin, at Columbus, as well as P. W. Snyder, are interested in Canadian lumber. The former are now advertising for Canadian pine, to be delivered at Erie, Pa. In the lively city of Akron, the Lyman-Allen Lumber Company and U. G. Frederick are all doing a thriving business both in southern and Canadian pine. D. E. Holwick seems to be the leading dealer in lumber at Canton (the late President McKinley's home.) He is certainly doing a rushing business.

"What!—a lumber paper for a dollar a year? We'll take it!" greeted me at nearly all the offices. Many promised to look into the advertising proposition. If they advertise they are certain of good results.

The value of advertising in the CANADA LUMBERMAN for what they want to buy, or what they have to sell, is beginning to be recognized by the lumbermen across the border, and the fact is a plain truth that they can reach in this way hundreds of dealers and wholesalers, as well as retailers or mill men that would never otherwise know of their existence, no matter how large or how prominent they may be in the United States. Some firms say "We never advertise!" but that does not say or prove it is best not to do so or that it is best policy to let those who do reap all the "cream" or benefit of the immense lumber resources of the country.

The "young Napoleon" of the lumber industry, Mr. Edward Hines, believes in advertising, as all progressive Americans do. His half page advertisement in this issue testifies to his business acumen and success,



MR. R. H. JENKS,
President Robert H. Jenks Lumber Company and a
Prominent Cleveland Lumberman.

backed and aided as he is by Mr. Wiehe and an enormous staff of able assistants.

Like the Hines concern at Chicago, the Cleveland Box Company can boast of its own buffet, where their employees are fed on the best the market affords, instead of being forced to go distances for an indifferent meal or to the low groggeries and dives which haunt the great industrial centres.

When you are in Cleveland, be sure and take a "trolley" to Painesville. There you will find the Coe Manufacturing Company's plant. They are the largest makers in the world of veneer cutting and drying machinery. Their half-page announcement in this issue speaks louder than words of the push and business energy displayed by this company.

Cleveland has always been a great lumber centre. The Cuyahoga river here runs into Lake Erie, winding snake-like through the very heart of the city, with a maze of docks, levees and piling grounds. Here are situated great piles of lumber owned by some of the different companies mentioned in this article, among which also are the Saginaw Bay Company (the head of which, Mr. Prescott, is well known in Canada); Colonial Lumber Company; The Nicola Bros. Company; Nicola, Stone, Meyers Company; Fisher & Wilson; Lake Shore Saw Mill & Lumber Company; C. H. Foote; Howard A. Singletary; Mills, Grey, Carleton Company; The Cuyahoga Lumber Company; C. H. Gill Lumber

Company; Martin-Barriss Company; Potter, Teare & Company; M. G. Brown Lumber Company; and the Guy & Ralph Gray Company.

Besides the large lumber concerns Cleveland possesses a number of box factories. Very prominent among these are the Cleveland Box Company and the American Box Company, who are both very progressive and up-to-date. The Cleveland Co.'s advertisement in this issue offering to buy for spot cash twenty million feet of No. 4 and 5 grade lumber will show more than anything else the size of this company's enormous output. They have their own vessels on the lakes, and we have pleasure in presenting to our readers an illustration of the steamer "Lindsay" owned by the Cleveland Box Company, showing her discharging a cargo of over one million feet of Canadian pine lumber at the docks on Stone's Levee, which is the lumber district.

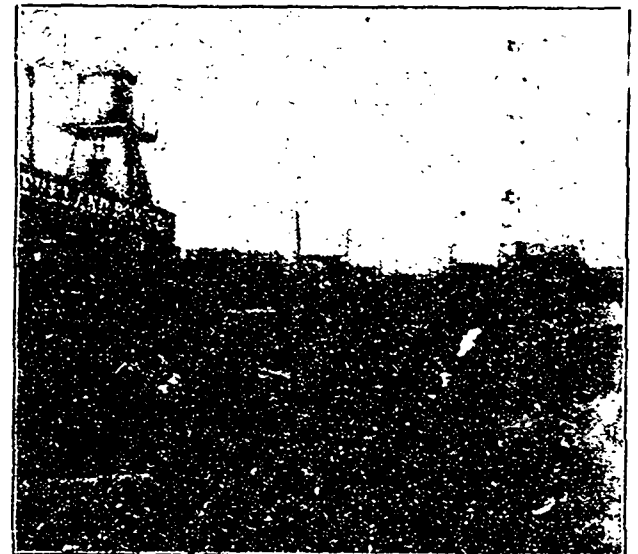
There is a club-room and cafe on the levee run by the Cleveland Board of Lumbermen as headquarters. Here they meet in the noon-hour and talk over prices and lumber prosperity generally.

The Cleveland-Sarnia Saw Mills Company have an office at Cleveland in the "Plaindealer" building, their extensive mills being situated at Sarnia, Ont. They distribute immense quantities of Canadian pine throughout the United States, sending it far south, where nothing can replace the lightest of pines.

At Sandusky I found that the Sandusky Crayon Company were thinking of getting their box material from Canada. I could not catch the American Crayon Company's officers, but heard they used considerable lumber also. The former company have a fine plant on Water street. The Geo. R. Butler Company, of this place, make a specialty of hardwoods, and do quite a business in office and interior fixtures. The Sandusky Lumber & Box Company, Bennett Bros. Lumber Company, and Gilcher & Schuck do a big business, all handling considerable quantities of the Canadian material.

Chicago ranks first as the greatest railroad center on this continent, but Toledo comes a close second. The situation of the latter on Lake Erie, and the excellent docking and railway facilities, gives it a great advantage as a distributing point to all the middle eastern states. Among Toledo's biggest wholesalers, the Rib River Lumber Company, of which Mr. D. D. Flanner is president, do an immense business, having branches at Pittsburg, Pa., and Rhinelander, Wis., with main offices and extensive piling grounds at Toledo. This company's advertisement will be found in our weekly edition. They are prepared to buy the season's cut of any mill of pine lumber or white pine lath.

The Booth-Feilbach Column Company, which was



A PARTIAL VIEW OF STONE'S LEVEE, CLEVELAND.

formerly the W. S. Booth Company manufacturers of columns and capitals, are talking of entering the Canadian and foreign field. They are large users of lumber. The field in Canada is now open to wide-awake, energetic firms who can seize the golden opportunity.

The other Toledo firms who seem to be thriving are the Alvin Peter Company, Mitchell & Rowland, Kelsey & Freeman, Barbour & Starr and the Empire Lumber Company. A couple of other firms in this city are talking of disbanding.

MICHIGAN'S LUMBER INDUSTRY.
(BY OUR TRAVELLING REPRESENTATIVE.)

At one time the Saginaw valley held undisputed sway to the bulk of the lumber trade. Now the lumber industry (which is a different thing from the timber industry) is "all over the state," as a retail dealer told me.

After a journey to Chicago to interview the Hines concern and several other companies, I came back to Durand, Mich. Durand owes its existence in the center of the state to the fact that it is an important railroad center and the junction of three or four roads. To me it looked like a lumber center, yet I found but one firm of dealers there, McBride & Son, who are certainly doing a flourishing business. After telling Mr. McBride what I knew of Canadian lumber and what I didn't know of "Hoo-Hoo," we both came to the same opinion, i. e., that there was nothing to equal Canadian white pine.

From Durand I struck north to Saginaw, where I met such well-known lumbermen as Messrs. John J. Rupp, Lewis C. Slade, L. P. Mason, J. D. Draper and others, all of whom are interested in Canadian lumber. I visited every lumber firm in the city, among which were the Saginaw Lumber & Salt Company, who have extensive mills at Sandwich, Ont., the Morse Cedar Company, Booth & Boyd Lumber Company, Saginaw Mfg. Company, Briggs & Cooper Company, Limited, and N. N. Wright & Company, all of whom are doing a thriving business.

Among the manufacturers of mill machinery and mill supplies, the Morley Bros., the Wickes Bros., and the Allington & Curtis Mfg. Company are pre-eminent in their various lines, in fact, their goods are known in every lumber mill or camp on this continent.

From Saginaw to West Saginaw is only "over the river," but I was not able to catch many of the lumbermen at home. At Governor Bliss' office I learned that he was confined to his home—having just returned from Washington, where he had met with an accident. Taking a trolley I went down the fine main street of West Saginaw to the sash, door and blind factory of Thos. Jackson & Company. This concern is up-to-date and caters extensively to the foreign trade, using Canadian pine and getting the rebate on it by shipping it back through Canada. Mr. Jackson is able to compete for the world's trade by improved methods and improved machinery and watching the market closely. While I was there he figured on an order for seven thousand dollars' worth of doors, etc., for Cape Town, South Africa.

The Mershon, Schuette, Parker & Company lumber yards and mills are extensive. Mr. E. B. Mershon very kindly showed me through the immense plant of this company. Everything here is modern. The band re-saw establishment of W. B. Mershon & Company is really one of the most interesting things I saw in my travels. They are shipping their band saws to all parts of the world.

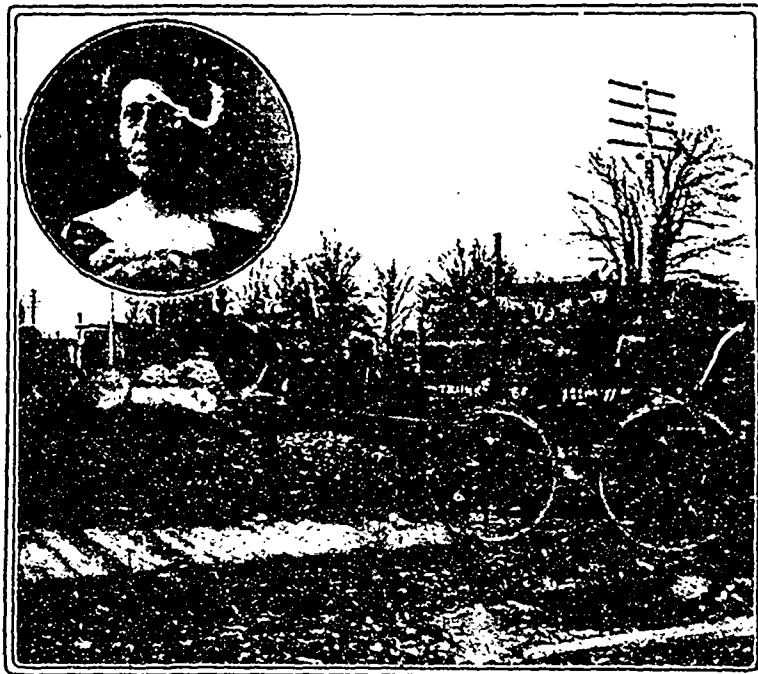
On the east side of the river Mr. Huss, at all times a very busy man, gave up a couple of hours to show me over the Lufkin Rule Company's establishment. This is the largest manufactory of rules, tapes, measures, etc., in the world.

I had a very interesting talk while in Saginaw with a Mr. O'Donnell, an old-time lumberman. He recalled with a sigh the good old days when the whole country for hundreds of miles around was a forest—now all cut down. He said that even ten years ago the hum of the saw-mill was heard all over the land—now there is not a large pine tree in sight. As the old gentleman very clearly explained to me what the city was like, I imagined myself once again on the upper Ottawa—and in my mind's eye I pictured the lumber camp, the log rolling, the drive, the immense rafts of logs and the ceaseless stream of timber going in one end of the mill to reappear as lumber at the other end. While I was at Saginaw, the Saginaw Valley Lumbermen's Association held a meeting at their club rooms, where freight rates and lumber values were discussed,

probably with as much spirit as in days of yore.

A pleasant journey on the Pere Marquette Railway brought me to Bay City. Here there is one large manufactory of high-grade saw-mill and conveying machinery, the M. Garland Company. E. B. Foss & Company are the largest wholesalers of white pine and Norway lumber. Their extensive yards contain all grades of lumber. Among the other firms I saw were the Maltby Lumber Company, Campbell-Brown Lumber Company, J. & G. K. Wentworth, J. W. Thompson & Company, Eddy Bros. & Company, the E. J. Vance Box Company, and Messrs. Geo. D. Jackson, J. W. Ritchie, John Godkin, Henry B. Smith, J. E. Prolaska and Stephen Alyea, all of whom seemed to be prosperous and thriving. I had a talk with Mr. Wm. H. Sharp, who is one of the largest tug and bargue owners on the bay. He does a splendid business connected with the shipment of lumber and timber.

At West Bay City I found the Wolverine Lumber Company fully equipped for business, with a pushing energetic manager. I was pleased to see among the office staff of this company, as also in the office of Mr. J. W. Ritchie at Bay City, several Canadians who were evidently appreciated. From Bay City I went to Grand Rapids, where exist the greatest manufactories of furniture in the world; of course, this fact means that hardwoods are predominant. The Dennis Bros. have their main office here, with mills at Tonawanda, N. Y.



MRS. MORLEY—AN AMERICAN LUMBERWOMAN.

W. O. Hughart, jr., buys basswood, ash and birch lumber from Canada. M. E. Stockwell and H. G. Dykhous are doing a good business. On my list to call upon was the firm name of Morley & Son, situated in elegant offices in the Michigan Trust Building, (Grand Rapids' largest skyscraper.) I tapped softly on the door. In answer to "come in," given in a feminine voice, I found myself in the presence of a pleasant lady. "Could I see the proprietor or manager?" "Yes, please be seated, I am the person you wish to see!" was the reply.

Now, I was not at all surprised to see or meet with an up-to-date American business woman, but to meet with the first lumberwoman I had ever seen or heard of was just a little embarrassing. However, I was soon set at ease by the lady in question, Mrs. C. S. Morley, explaining to me just why she was a lumber dealer. "Don't think I came into this business because I preferred it—but I was forced into it, and after I had been at it a little time I saw I could make a success of it," she said. "My father and my brother, before they died, were both lumbermen and it came to me quite naturally. I went into it unwillingly at first, but mastered the details." Then Mrs. Morley told me more in fifteen minutes about lumber than any lumberman had in an hour. She is the United States manager of the Arthur Rushforth concern of Liverpool, Eng., who handle more mahogany than any other firm in the world. Mrs. Morley told me of her trip to Liver-

pool to attend the big auction sales. She has the distinction of being the only woman who ever attended a regular mahogany auction sale as a bidder. "At the sale I attended in Liverpool," she said, "some of the African logs sold for 96 cents per foot, inch measure. I made successful bids and secured some good mahogany, being treated by the Englishmen with the greatest courtesy."

Mrs. Morley spent three months in England and on the Continent. While in Germany she concluded arrangements to purchase all the soft wood in this country that is required by one of the largest manufacturers in Germany. Mrs. Morley has lived in Grand Rapids since she was a child. Her father, the late I. L. Quimby, established a saw mill and handle factory in that city, and she did clerical work in her father's office. This factory was one of the few that was kept running during the panic of 1893, only to become closed by litigation in 1900. Mrs. Morley then turned her attention to the lumber commission business and since that time she has been a familiar figure in the furniture factories and throughout Michigan. Mrs. Morley cut 32,773 feet of mahogany in one day of twelve hours at Grand Rapids, thus establishing a record.

Through the kindness of Mrs. Morley I was able to obtain an excellent likeness of herself as well as of a couple of car loads of mahogany logs she had just received. In the picture we herewith print Mrs. Morley will be noticed seated in her buggy. I can vouch that the corner vignette does not flatter this shrewd business woman.

Some lumbermen require considerable talk in order to induce them to advertise or subscribe. Not so with Mrs. Morley. Before I mentioned one word of the real object of my visit, her intuitiveness saw I was out for "business" and thus saved me a lot of talk. When Mrs. Morley came back from St. Louis she had orders for five car loads of mahogany. She knows what canvassing is, and she makes a successful bid for a large amount of business. And right here I want to thank Mrs. Morley's son for kindness shown to me. He is a splendid fellow, and I feel sure will make his mark in the lumber world.

Grand Rapids is the second largest city in Michigan, and really a lively place. Here was erected in 1834 the first saw-mill built in Michigan. Then the state was a forest wilderness full of Indians. Here it was that the well-known lumberman, Martin Ryerson, sr., married a squaw of the Ottawa tribe and later moved to Muskegon, making an immense fortune in lumber and timber. His son by a second wife has just given Grand

Rapids a library building costing a quarter of a million dollars. The Grand River at one time was a great log-running stream. That day is past and gone never to return. Grand Rapids has nearly half a hundred or more furniture factories which cut up a great amount of hardwood in a year—some say over sixty million feet per year. Basswood is practically dead hereabouts, and they are turning to Canada for it.

Up at Muskegon, on the shores of Lake Michigan, I was told that this place once did more trade in the lumber industry than either Saginaw or Bay City. By the look of the deserted piling grounds it seemed somewhat that way. The Rogers Iron Mfg. Company are easily the largest manufacturers of saw-mill machinery in this part of the state. They have a splendidly equipped plant, which Mr. Rogers took me through. He is a very progressive business man.

Among Muskegon's lumbermen I visited the Thayer Lumber Company, Munro & Brinan, Langeland Mfg. Company, F. Alberts & Son and Mann, Watson & Company, who are the largest concerns. Several smaller dealers complete the list in this once thriving timber centre. On the way up to this city I passed through miles upon miles of second growth, scrub oak and scraggy little poplars about the girth of one's wrist. Every piece of merchantable timber has been cut down. Some of the lumbermen are going to Canada for their stock.

(Continued next month.)

SHAVINGS EXHAUST SYSTEM.

By J. L. NELSON, in "Packager."

The proper way to construct the main suction pipe of a shavings exhausting system is to reduce the area, or diameter, of it from the fan outward, according to the area of the branches that are given entrance into it.

Carry the fan inlet area back until the first branch entrance is encountered, and then start the reducing directly behind this first entrance, and continue to reduce as long as there are branch entrances to make.

Always try to have the area at any and every

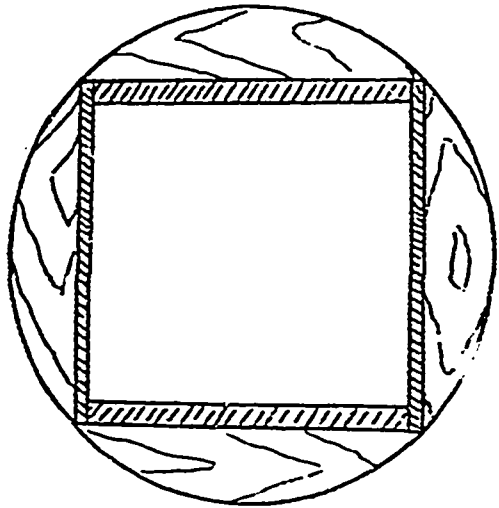


FIG. 1.

part of your main pipe equal to the combined areas of all the branch pipes that have entrance behind, or, at least, not more than ten per cent. greater (no less) than these combined branch areas, and if you have your main constructed in this manner, all else being right, there is little fear but that your system as a whole will be a success.

"But," said a friend to whom I made the above statements some time ago, "that is a bare statement, and I want to know how you reason it out, that it should be so. Why is it that an exhauster system with a reducing main suction pipe will, as you claim, be much more efficient than a pipe that carries its full exhauster inlet area back through the full length of the factory, so far as there are branch entrances to be taken?"

This, to me, seemed a very thoughtless question to ask, and had the friend mentioned given the subject a few moments' serious thought, he would, undoubtedly, have deduced more than one very good and sufficient reason why it should be so. Anybody, and almost without preliminary thought, will grant that a river bed must increase in holding capacity according to the number of branch streams that flow into it, in its course downward towards the sea, and what is more natural and reasonable, outside of various other reasons that will be mentioned later on than that a river of air, such as that which is sucked through an exhauster system in operation, should require increased area of piping to accommodate the increased flow given by the branch streams of air that join with the main draft in its course towards the exhauster.

This seems so obviously correct that one would wonder that anyone would be so thoughtless as to construct a main suction pipe of the same diameter throughout its full length, and

yet I have seen this very thing done more than once.

Not more than a three-hour's run from where I now sit, and in the very large planing mill of one of the most extensive lumbering concerns in this country, two 55-inch single exhausters are installed, and both, to the great detriment of their efficiency, are connected to piping constructed so that it carries its one diameter back through that portion of the mill in which the respective exhausters are doing duty. I have, more than once, figured that either one of these two fine 55-inch exhausters, with their inlet diameter of 22-inches, and area of 380 inches, should, under ordinary circumstances, be able to easily accomplish all the exhausting to be done in that factory, and I would guarantee to put in a system of piping which, connected to only one of the present fans, would do more and better work than both exhausters are now doing, handicapped, as they are, by their nonsensical piping connection.

Not only no the main suction pipes connected to these two struggling exhausters carry their first diameters back over their full length, but, actually, their initial area is hardly more than half of what it should be, to be equal to that of the exhauster's inlet. In putting in these systems, it was evidently decided by the management, or by the mechanical genius who had charge of the construction, that galvanized iron piping would prove too expensive a proposition, and so the less costly wood was requisitioned for the purpose. Of course, to build up a round, drum-shaped, wooden pipe to 22 inches of diameter shown by the exhauster inlet, was out of the question, owing to the costliness of such a construction, and so an ordinary square box was decided upon.

Now an ordinary square box, if well constructed, and if properly constructed, does not, by any means, make a bad makeshift for a while. For a time, it is probable that a wooden pipe, properly constructed, will give just as good and efficient service as a galvanized iron pipe. The chief objections to the wooden pipe

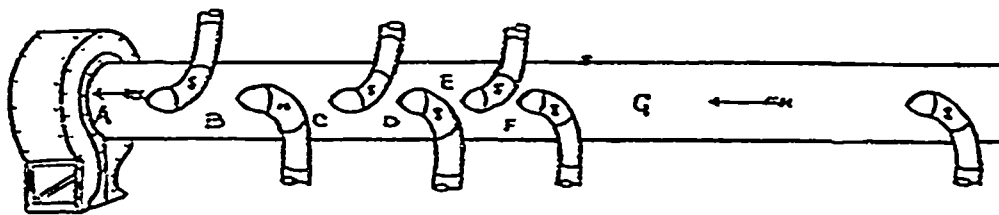


FIG. 2.

are that it does not stand the wear and tear well, and, also, that it is very prone to leakage. Moreover, its maintenance is very expensive as compared with the galvanized iron, once installed. But when a faulty square wooden pipe is connected up to an exhauster as faultily as the wooden pipes above mentioned were to these two 55-inch fans, there is little wonder that inefficiency is the result.

The entrance into these exhausters, as provided by the manufacturer, is, as has already been noted, 22 inches in diameter but this entrance is circular, and the genius of the mill was here confronted with a very serious question, viz., how to connect his square box main up to the round inlet in the exhauster. What

is more natural than that the genius should solve the question by deciding to "square a circle," by fitting four segments of 11-inch radius, with flat bases, into the fan inlet in the manner shown at Fig. 1, thus accommodating the exhauster inlet to his wooden pipe.

This was done, and, as a result, the efficiency of the exhausters was, right at the base of the system, practically cut in two, even had the main from there outward been properly constructed, reducing according to the branch entrances taken. The area of the inlet provided by the manufacturers of these exhausters was 380 square inches, but now these splendid 55-inch machines which were, and are, quite capable of handling the original volume of draft for which the manufacturer had provided accommodation, were bridled to such an extent that their available area of inlet was just equal to that which is provided for a 40-inch exhauster, having a 16-inch circular inlet of only 200 square inches area. In fact, two 40-inch exhausters, properly connected to this wooden pipe, would have been just as efficient as the two 55-inch exhausters could possibly be, connected as they are, and I do not doubt that two 35-inch fans, with only a 14-inch diameter inlet, and suitably connected to a galvanized iron main, properly constructed, would be just as efficient in this mill, upon less than half the power, as the two bridled, and badly handicapped, 55-inch machines.

My friend, before mentioned, asked me to explain to him why, in the interests of absolute efficiency, it is necessary to reduce the main pipe as it retires from the exhauster, according to the area of the branch pipes that are given entrance into it.

To do this effectively, I will introduce the sketch given below, of a 22-inch diameter galvanized iron pipe which carries a parallel area throughout its full length. The size of exhauster to accommodate an inlet of this diameter is a 55-inch, which we will attach to the left end of the pipe. The area of this pipe is 380 square inches, and the direction of

draft through it is, of course, toward the exhauster, as indicated by the arrows.

Now here we have an exhauster with a 22-inch inlet, to which is attached a galvanized iron pipe of the same diameter throughout its full length. This inlet and pipe have areas of 380 square inches and we have given entrance into it one 10-inch branch of, say, 80 square inches area, and six 8-inch branches, each of 50 square inches area, making, in all, a branch inlet area equal to the main pipe and exhauster inlet areas.

We will suppose the exhauster, or, rather, the fan, is running at a speed of 1,000 revolutions per minute, and that the speed of draft through the branches and main is 150 feet per

second, this being the proper speed to give the branches the lifting power to lift the shavings from the machines on the floor below.

Now it is evident that at A there is a certain suction power, or pressure in the main pipe. The volume of air passing through the main at this point, A, is equal to the volume of air coming into it from all the branches combined. This is quite evident. Between A and B there is an 8-inch branch inlet, with 50 square inches of draft of equal density to the draft in the main at A gaining entrance, and so it is evident that, although at the point B the same area of draft is passing through the main as at A, yet the volume of draft here is only equal to the volume let into the main by the balance of the branch draft behind B. At A, so to speak, the volume is 380, while, owing to the relief offered by the first 8-inch branch, at B the volume is reduced 50 degrees, making it 330.

As the point C, following the same line of argument, the volume of air has been relieved by the 10-inch entrance to the value of its area, which is equivalent to 80 degrees. Thus, at C the volume of air is only 380 minus 50 minus 80 or 250, as compared with the 380 degrees at A, and so on down the line, till we come to the point G, where the volume, or density of the draft is only 380 - 50 - 80 - 50 - 50 - 50 - 50 = 50, as compared to the 380 degrees of density at the point A.

As will be seen by this, all the air that is passing through the 22-inch main pipe at the point G is that which gains entrance into it through the 8-inch inlet behind this point. The speed of draft through this far end branch, we will say, is equal (although it is not, being so far away from the fan) to that through the branches in front of it, that is, 150 feet per second. Now imagine this one stream of air, loaded with wet shavings from a heavy surfacer, being discharged into this 22-inch space which has an area more than seven and two-thirds times as great, and tell me where those heavy water-laden shavings will go to.

Will they fly along to the fan carried upon the wings of a draft seven and two-thirds times less powerful than that which carried them up into the main, or will they drop and lodge in the main at G, owing to the fact that the draft here is not forceful enough to carry along to where they will come within the added strength of draft given in the main by the entrance of the next branch nearer to the fan?

If these shavings were of feather weight, such as come of a very high speed, slow-feeding machine, working upon kiln-dried stock, there is a possibility that they would be drawn into the exhauster, but as for heavy, water-laden shavings coming from a fast feeding surfacer, or matcher, there is no possible doubt but that they would, after using the forceful influence of the branch inlet, drop to the bottom of the main at G and stay there until pushed along by hand.

This, I think, is all very evident, and in the wooden pipe system I have already referred to, this clogging of shavings at the tail end of the system was constantly happening. For years it has happened regularly whenever any heavy cutting was to be done on the tail end machines, and to-day it is doubtful if the people who run

this mill know just why their pipes do clog.

And now, if my readers will apply the same line of reasoning as I have adopted above to a reducing main, they will, no doubt, readily see why manufacturers who contract for the installation of complete systems of piping always reduce according to the area of the branch pipes that gain entrance into the main.

EXPORT OF BRITISH COLUMBIA SHINGLES.

With a view to ascertaining what proportion of the British Columbia shingle product is exported to the United States, the CANADA LUMBERMAN communicated with some of the leading manufacturers, whose replies are given below:

SPICER SHINGLE MILL COMPANY, LIMITED, Vancouver: As to the quantity of shingles shipped from British Columbia to the United States, I can state that after enquiring and looking into this matter, I find that during the last two or three years about 10 to 15 per cent. of the shingle output has gone to the United States.

As to the relative cost of labor, timber and mill supplies between British Columbia and Washington, it may be true that on account of some Japs and Chinese being employed here in the shingle mills, that the cost of labor is probably a little less than in Washington. It must be remembered, however, in this connection that the Chinese and Japanese do not do so much work as a white man, and so far as the latter are concerned, we certainly pay as high wages here to white labor and inexperienced mill men as they do in Washington. Shingle bolts have always been at least 25 per cent. lower in Washington than here, and shingle logs are about the same. In regard to mill supplies, it is a well known fact that the Washington mills have a considerable advantage over us in this respect. I should say that there is a difference of from 15 to 25 per cent.

The reason why the British Columbia mills sell the few shingles in Washington which they do, is altogether on account of the superior quality as compared to the Washington article, the dealers in the United States being willing to pay about 25 cents a thousand more for our shingles than for the Washington product.

E. H. HEAPS & CO., Cedar Cove: We are sure that the proportion of the British Columbia shingle product that is shipped to the United States is less than one-third for the whole year, and at the present time we do not think it would amount to one-fifth. We might also say that the cost of labor and timber is about the same in British Columbia as in Washington, and that the reason why we are able to sell in the American market is because our shingles are of a superior grade, and many of the American buyers prefer them even at an advance of 25 cents per thousand.

HASTINGS SHINGLE MANUFACTURING COMPANY, Vancouver: We are satisfied that not one-sixth or one-eighth of the shingle output is shipped into the United States. We are satisfied that our Canadian trade is gaining so much in Manitoba and the North-West and requiring our product in the way of shingles and lumber, that the present capacity would just about supply our own market if we had it to ourselves, and we would not require to ship into the United States. It is an injustice to the Canadian manufacturers of lumber and shingles that the Americans are allowed our market free of duty, while we are handicapped by a duty in the American market.

ROBERTSON & HACKETT, Vancouver: We have not up to the present time sent any shingles into the United States. The timber may be cheaper here, but the cost of labor is the same as in the State of Washington.

BRUNETTE SAW MILL COMPANY, LIMITED, New Westminster: We are not in as good position as some Vancouver makers to say what proportion of the

British Columbia cut of shingles goes to the United States. Our shingles are preferred in the States on account of their better quality, greater care being taken in their manufacture.

PACIFIC COAST LUMBER COMPANY, Vancouver: With respect to the statement made by the Mississippi Valley Lumberman to the effect that two-thirds of the shingle product of the British Columbia mills now goes across the line into the United States. This statement is utterly untrue, and the writer who penned it is evidently not a worthy journalist. We do not know that this magnified self-importance is likely to do any harm to the British Columbia mills, we fancy they could all manage to live without any trade at all from our friends to the south.

The facts as we know them are: Probably more shingles have been shipped over the line this year than last, they have been going at the rate of 60 million shingles a year. The capacity of all the mills will probably run about 600 million, so that instead of two-thirds, one-tenth of the entire cut would be the very outside limit of these shipments.

Further, what shingles are being shipped from here in a way do not compete at all with the shingles made in Washington, as the same class of shingles is not made on both sides of the line. On our side upright shingle machines alone are used. These machines are comparatively slow-running and turn out a well-made shingle; then our packing and sorting is more carefully done, so that our shingles, made from exactly the same timber, are worth from 25 to 50 cents more per thousand to the consumer than the Washington product. Across the line the method of manufacture is different, fast running horizontal machines are used, big cuts and low cost of production is the aim, quality and everything else is sacrificed to this, the result is a very shabbily made article that will not command in any market the same price as our shingles. Any manufacturer in Washington State will acknowledge this. No matter what the Mississippi Valley Lumberman may say, we cannot begin to make shingles as cheaply as our neighbors immediately to the south are doing. We are now paying from \$7 to \$8 per thousand feet for cedar logs; they may have to pay on the average about one dollar more, so that in the cost of timber we might have an advantage of ten or 12 cents per thousand, but this is much more than overbalanced by the greater cost of manufacture in our case.

The only thing that makes the trade at all possible is the fact that we produce a better finished article. If the Washington mills produced the same quality of shingles as are produced here and could supply the demand on their side of the fence, not a shingle would be shipped from here. Any that are shipped go to such markets in the United States as demand a well made article and are willing to pay a fair price.

NOVA SCOTIA LUMBER ASSOCIATION.

A large number of the leading lumbermen of Nova Scotia met at Amherst on December 8th and decided to organize an association to be known as the Nova Scotia Lumber Association. Officers were elected as follows: President, Alfred Dickie, Stewiacke; vice-president, J. H. Livingston, Wentworth; treasurer, Ray Kent, Truro; secretary, D. G. McDonald. The following, with the above officers, compose the executive: Chas. J. Willis and N. A. Rhodes, Amherst; Henry Hunter, Wentworth; T. G. McMullin, Truro, and J. D. McGregor, New Glasgow. A request has been sent to H. J. Logan, M.P., to arrange a meeting of the Inter-colonial Railway authorities to confer with the Executive at their next meeting in reference to freight rates.

A curious freak of nature was discovered recently at High Wycombe, Eng. A quantity of Canadian birch timber arrived at one of the chair factories there, and in the centre of one piece 3 in. in thickness there was found a young birch tree 2½ in. in diameter, which had escaped the saw. It had enjoyed an independent growth, and it is supposed that years ago a seed fell into hollow part of the old tree and developed into a sapling, which forced its way up through the trunk of its parent. The hollow was completely filled a distance of several yards. We are told by Timber that this curiosity is to be preserved.

THE Canada Lumberman

MONTHLY AND WEEKLY EDITIONS

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ADVERTISING RATES ON APPLICATION.

THE CANADA LUMBERMAN is published in the interests of the lumber trade and 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 in which it can rely in its operations.

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 15 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.

THE TIMBER INDUSTRY IN 1902.

The timber and lumber industry, now classed in Canada second only to agriculture, made rapid strides during the past year. Complete statistics are not available, but the quarterly statements of exports that have been compiled show an increase of large proportions in the volume of business. The condition of the industry has been very healthy; manufacturers, with scarcely an exception, have been enabled to operate their mills to the maximum capacity and to dispose of their output at very satisfactory prices. Every class of lumber, from the highest grade of white pine to low grade hemlock and cedar, has been in good demand.

The prosperous times in the lumber business have come coincident with an inadequate supply of labor. The industrial development of Canada has proceeded so rapidly of late years that the demand for labor has been greater than the supply. Canada has not alone suffered in this respect, however, as in a lesser degree similar conditions have been experienced in the United States.

Some kinds of lumber, mainly white pine uppers, sold at record prices during the year. The supply of the better grades of white pine is gradually diminishing, and as there has not yet been found a satisfactory substitute, it is quite probable that prices may find a still higher level. What prices will rule throughout the coming year cannot be foretold, but it is a plain fact that notwithstanding the smaller percentage of lumber now used in the construc-

tion of buildings, the consumption seems to be gradually overtaking the production; in other words, at the present rate of consumption the world's supply of timber will sooner or later become exhausted.

The position held by Canada in respect to the timber supply is very forcibly stated by Mr. J. C. Hawkshaw in his presidential address to the members of the Institution of Civil Engineers of Great Britain. He points out that in Europe there are only five countries which export timber, and the amount exported by these is nearly two and three-quarter million tons short of the total amount required in Europe. Germany, with 26 per cent. of its area under forest, imports nearly half as much as Great Britain, which has only 4 per cent. of its area under forest. France, with 18 per cent. under forest, imports one and one-quarter million tons of timber annually. The timber imported into Great Britain in 1901 was valued at \$125,000,000. As Europe cannot now supply its own wants, and as New Zealand has already exhausted its kauri pine forests, Mr. Hawkshaw concludes that Canada is the only country from which Great Britain can reasonably expect to secure a supply of timber.

Some calculations by Mr. Hawkshaw as to the consumption of timber by the railroads of Great Britain are interesting. He estimates that there are in use about 90,000,000 sleepers, and that the annual consumption for renewals is 3,750,000, in addition to which much timber is used by the railways for fencing, telegraph and signal posts, and other purposes. We quote from his address: "For the last thirty years it has been said that steel would shortly be adopted in place of wood for sleepers, but although we can make our own steel and must import our timber, this has not come to pass. If we consider the sleepers laid on all the railways of the world, the number would not fall far short of 1,495 millions, and a low estimate of the value would be \$900,000,000. Might it not be well to inquire whether the supply of the material was likely to continue to be equal to the demand?"

These remarks indicate a proper recognition of the fact that the timber supply will not be everlasting unless more important steps are taken to perpetuate it. Allowing for all probable advancement in this direction, it seems extremely likely that the tendency will be to place a higher value on the product of the forest.

Mindful of the position borne by Canada in respect to the world's timber supply, we modestly predict for 1903 a continuance of the prosperous conditions which existed in the year just closed. There may not be the enormous demand that has been the feature of the past season, but there will doubtless be found a market for all the lumber manufactured, and at profitable figures.

The prosperity of the lumber trade has been shared by the CANADA LUMBERMAN. Most hearty support has been accorded to the journal, and to our readers, advertisers, and lumbermen in general, we extend our best wishes for a Prosperous New Year.

LUMBER TRADE ORGANIZATION.

Two important organization movements affecting the lumber trade have been taken during the past month. The first is the formation in the United States of a National Association of Lumber Manufacturers. This association proposes to include in its membership all associations of lumber manufacturers 75 per cent. of whose membership shall be actual manufacturers, each association to be allowed representation in proportion to the quantity of output. The policy of the association has not yet been clearly defined, but sufficient is given out to indicate that one of the main objects will be to protect the lumber interests from tariff legislation. At the organization meeting, following quotations from a paper by Mr. John Charlton, M.P., on "Reciprocity with Canada," a resolution was unanimously adopted that the association is opposed to any revision or modification of the existing tariff on lumber. Of more local interest is the recent formation of an association of lumbermen in Nova Scotia, of which Mr. Alfred Dickie has been chosen president. This, to our knowledge, is the first attempt to organize that has been made by the lumber trade of Nova Scotia, and it is our earnest hope that an influential and useful association will be the outcome. There is great need not only for the formation of provincial associations, but also for the unification of the lumber interests of Canada, as has been done in the United States.

FORESTRY EDUCATION IN ONTARIO.

The necessity for providing facilities for the study of forestry has been recognized by the Ontario Government for some time, and if we are to judge by the trend of recent events, a department for that purpose will soon be established in connection with one of our universities. The proposition which seems most likely to be adopted is to found, in connection with the University of Toronto, a school on the general plan of Yale and Cornell Universities in the United States, provision being made for a summer course of six weeks at the Ontario Agricultural College, Guelph, where a tract of land would be set apart for the practical work of the students.

It is very desirable that the course should in some way be connected with the Agricultural College at Guelph, as the attendance at that school is comprised largely of farmers' sons, who would be especially benefitted by instruction in the growing and preservation of trees. The objection to establishing the entire course there is that without a large additional expenditure the student could not receive tuition in all the necessary subjects, such as botany and natural history, which are now taught at Toronto University.

A claim to the proposed school is advanced by Queen's University, of Kingston. The friends of that institution contend that the new engineering building was designed especially for a department of forestry at the request of the Ontario Government. However that may be, it is hoped that a thoroughly equipped department will be immediately established at one of the colleges, and later this branch of study may be extended to other schools.

What Ontario proposes to undertake in the direction of forestry education should be followed by the other provinces of the Dominion. In this regard we would not exclude Manitoba and the Territories, as although frequently spoken of as the "prairie provinces," investigation made by the Dominion Superintendent of Forestry and other experts shows that great benefit would accrue to the settlers by the cultivation of trees in suitable districts.

The function of a forestry school, broadly speaking, may be summed up as reforestation and preservation. Instruction in the latter should eventually be of great benefit to lumbermen, by placing at their disposal trained foresters who would undertake the operation of timber limits upon systematic, economical methods. The necessity which exists for such working plans was emphasized in papers read before the Canadian Forestry Association at Ottawa last spring by Messrs. McGibbon and Cary, both practical lumbermen. In the United States the graduates of the forestry schools are well paid, and the demand for experts is greater than the supply. The prospects of securing remunerative employment for the graduates are therefore promising, and should be sufficient to induce many of our young men to fit themselves for the work.

MR. HARLAN P. HUBBARD.

We take pleasure in presenting herewith a portrait of Mr. Harlan P. Hubbard, who was recently appointed sales agent for Canada for the well known firm of E. C. Atkins & Company.



MR. H. P. HUBBARD,
Canadian Representative of E. C. Atkins & Company.

C. Atkins & Company, of Indianapolis, Ind., manufacturers of all kinds of saws and saw tools.

Mr. Hubbard is a young man of fine address and great energy, and is specially qualified for his new duties, having had years of experience in the manufacture of saws. He comes of a well known family of Pittsburg, Pa., his father and uncles having for years been in the saw and axe business in that city, and he having learned the trade under them at that place.

He was for several years past superintendent of the Chicago factory of the Simonds Manufacturing Company, where he was very successful, and well liked by everyone connected with the establishment, and upon his resignation he was presented with a beautiful gold watch and chain by the men.

Mr. Hubbard was made a member of the Concatenated Order of Hoo-Hoo at the Milwaukee Annual, September 9, 1902, and has recently been appointed vice-gent for Canada by the new snark.

THE NEWS

--Lecours & Bourget, lumber merchants, Levis, Que., have registered partnership.

--William Lueck has disposed of his saw mill at Williamsford, Ont., to Lueck Bros.

--Evans & Farrell, saw millers, Low, Ont., have been succeeded by Webb & Farley.

--S. Higgins has moved his saw mill to Belmont, N. S., where he will operate this winter.

--Incorporation has been granted to the Crow's Nest Lumber Company, Limited, of Wardner, B. C.

--The dissolution is announced of L. Leveille & Company, sash and door manufacturers, Montreal.

--The saw mill of James Leigh & Son, Victoria, B. C., has been leased to J. Black and J. Caskey.

--T. E. Atkins has been admitted as a partner in the Red Cedar Lumber Company, Vancouver, B. C.

--Thomas Meredith has disposed of his lumber business at Yorkton, N. W. T., to J. A. Magee and J. A. Gregory.

--An electric light plant has been installed in John E. Moore's new saw mill at Pleasant Point, near St. John, N. B.

--An examination for cutters was held by the Department of Crown Lands of Ontario at Thessalon on December 18th.

--Fugere Freres, saw and flour mill, Batiscan, Que., have dissolved partnership and have been succeeded by Narcisse Fugere.

--The new sash and door factory of the Hanbury Manufacturing Company at Brandon, Man., is almost completed. It is 50x90 feet.

--The Canada Lumber & Timber Company, Limited, has been organized at Gibson's Landing, B. C., to succeed Drew & Hutchinson.

--David Conklin has submitted a proposition to the town council of Kingsville, Ont., to establish a box, sash and door factory there.

--Clinton Bigelow, of Cumberland county, N. S., has purchased a small tract of timber land near Blomidon and intends erecting a saw mill there.

--Negotiations have been finally closed for the erection of a coeprage mill at St. Thomas, Ont., by the Sutherland-Innes Company, of Chatham.

--In connection with the new shops now under construction by the Canadian Pacific Railway in Montreal, there will be a planing mill 500x126 feet and a large dry kiln.

--Williamson & Crombie, lumber merchants, Kingsbury, Que., have admitted G. W. Crombie and T. G. Torrance into partnership, the style of the firm remaining unchanged.

--George Burtis is removing his saw mill from Munising, Mich., to Thessalon, Ont., where he has been given a free site and exemption from taxation for ten years.

--The town of Walkerton, Ont., has granted a bonus and exemption from taxation to Kerr & Harcourt, of Parry Sound, Ont., to establish a spool and bobbin factory there.

--The British Columbia Manufacturing Company, of New Westminster, B. C., are taking steps to establish a cross-ply veneer mill, the raw material for which will be cottonwood.

--John J. Gartshore, dealer in railway equipment, Toronto, has disposed of 100 tons of 30 lb. rails, one locomotive and 15 cars to the Hanover Portland Cement Company, of Hanover, Ont.

--Quebec capitalists have formed a company and secured a site for the erection of a large match factory at St. Raymond, Que. It is proposed to expend \$200,000 on buildings and plant.

--The Monarch Lumber Company, of Whatcom, Wash., have been negotiating for a site near Vancouver, B. C., on which to build a saw mill. The company recently purchased timber limits in British Columbia.

--It is said that the contract has been awarded for the erection of a large saw mill on the south shore of

Burrard Inlet, B. C., for the Vancouver Bevel Siding Lumber Company. Vancouver and Fairhaven capitalists are interested.

John E. Moore, of St. John, N. B., and J. A. Patterson, George Soper, A. L. Fenwick and Randolph Dixon, of Grand Falls, N.B., are applying for incorporation as the J. A. Patterson Lumber Company, with a capital of \$20,000 and headquarters at Salmon River Falls, Victoria county.

--The new saw mill under construction at Trout Lake, B. C., for E. L. Kinman and other capitalists will consist of a band saw mill with a capacity of 100,000 feet per day, shingle mill, lath mill and sash and door factory. There will also be an electric light plant of 1,500 lights capacity.

--The Prairie Lumber Company, of Winnipeg, Man., has been incorporated by J. C. Graham, manager at Winnipeg for the Rat Portage Lumber Company; John Love, T. T. W. Bready, G. R. Crowe and S. P. Clark, all of Winnipeg. The capital is \$100,000 and it is proposed to manufacture and deal in lumber, pulp wood, etc.

--An item in last issue referring to the formation of the Great Northern Lumber Company stated that the company had taken over the saw mill of J. B. Scott at Conception at the figure of \$24,700. This was an error, as the mill at Conception which has passed into the hands of the new company, as well as the mill at Mount Tremblant, were owned by Solomon Cole. J. B. Scott is president of the new company, and S. Cole vice-president and managing-director.

--The Graves Shingle Company, of Blind River, Ont., at the head of which is F. P. Graves, of Bay City, shut down their mill towards the end of November, having manufactured 10,200,000 white pine and cedar shingles. Mr. Graves says that the largest day's cut of pine with a Perkins' hand machine was 63,000 16-inch shingles; 26 days' average, 50,000 a day; 1,300,000 in one month with one machine. He believes it is the largest cut of shingles ever made in Canada with one machine.

--The Pacific Coast Lumber Company expect to have their new saw mill at Vancouver, B. C., completed early in January. This mill will be one of the most up-to-date establishments in Canada. It will be equipped with a Clark Bros.' double band and carriage, Simondson's log turner and the Berlin Machine Company's planers. The capacity will be 250,000 feet of lumber in twenty-four hours. The officers of the company are: President, W. J. Sheppard, Waubauslene, Ont.; vice-president and manager, J. G. Scott, Vancouver; secretary and treasurer, T. F. Gibson.

--Work has been commenced on a large wood-working factory to be built at Woodstock, N.B., by the Woodstock Wood-Turning Company, of which William Craddock is manager. The buildings to be erected include a turning and manufacturing building 30x100 feet, saw mill 24x80 feet, engine room 24x25 feet, dry kiln 30x50 feet, and store room and shipping building 30x140 feet. Power will be supplied by two 40 h.p. engines. The timber used by this company will be basswood, ash, elm, beech, birch and maple, which will be taken down to five inches in diameter. There will be three turning machines with a capacity of about 12,000 spindles per day. Later on it is the intention to make axe and cant hook handles and baskets. The bulk of the output will be marketed in Great Britain.

--Mr. R. Cook, who organized and has managed for the last thirteen years the South River Lumber Company, of South River, Ont., has resigned the management of the company and will be succeeded by Mr. Ratz, a former president of the company. Mr. Cook, with his family, has removed to Berlin, Ont., and for the present at least does not propose to engage in business. He is the owner of limits on the north shore of Lake Huron between Killarney and Little Current, which he may perhaps decide to operate. The South River Lumber Company have a contract with the Turner Lumber Company, of Midland, Ont., to cut the timber on their limits in the vicinity of South River. The company are installing in their mill new gang, band and circular saws, by means of which to increase the capacity of the mill from 6,000,000 to 25,000,000 feet per annum. At this rate of cutting five or six years will be required to complete the contract with the Turner Company.

A LARGE VENEER MACHINERY PLANT.

One of the prettiest towns in Ohio is Painesville, magnificently situated on the banks of the Grand River, which winds its way in a picturesque manner through the town. The parks, public buildings and monuments are all tasteful. The great machinery plant of the Coe Manufacturing Company is one of the sights of the place.

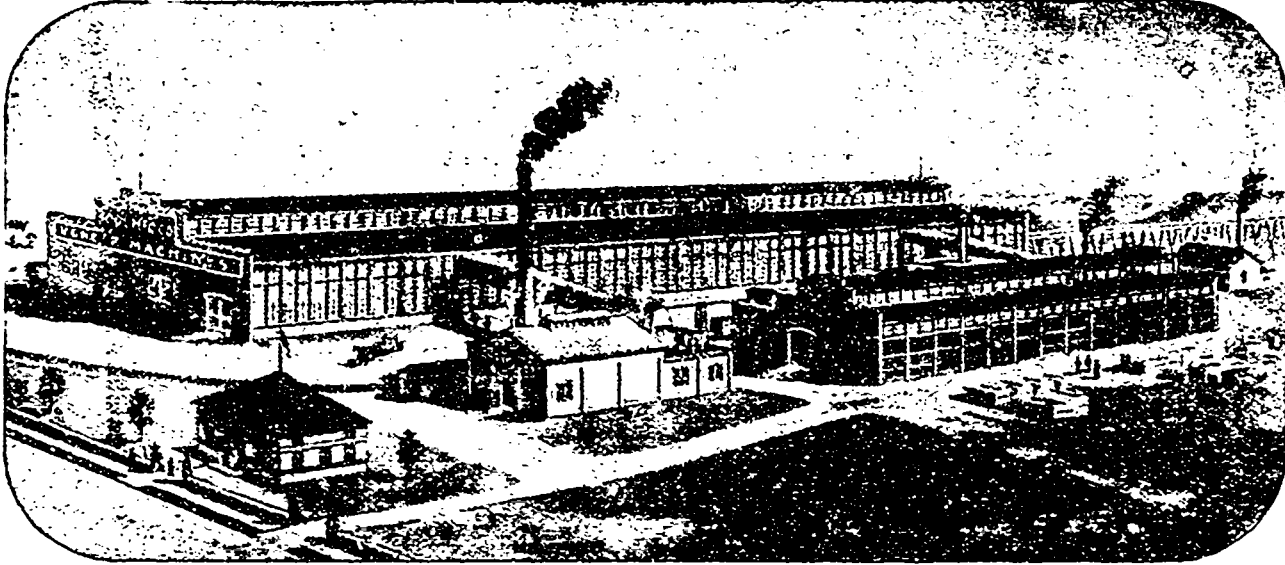
When our representative called the works were running full blast. Mr. Coe took him in hand, and a thorough inspection of the works resulted therefrom. "A great big business" is written largely all over the place, with business-like people and business-like methods.

The works are new and magnificently located, with

The veneer-drying apparatus devised by this concern is as near perfection as human ingenuity can bring it. We give a view of their automatic veneer-drying machine, which consists of a series of iron rollers incased in a rectangular-shaped box, properly geared and driven by a shaft running the entire length of the box. With it is a hot blast fan engine for driving the fan and an independent engine for driving the machine itself. Thus arranged the apparatus can be operated at night economically, only live steam being required as a power.

The Coe Company have their own natural gas wells on the premises, drawing the fuel from the bowels of the earth. The supply seems inexhaustible. Their office building is among the finest to be found, finished

feet long, and will have a holding capacity of over one and a quarter million feet of lumber at one time. The kilns will be quite a novelty from the fact that they will be absolutely fire-proof, all walls being of brick and the roofs of tile, with brick and steel supports as an under construction upon which steel cars operate. The Pullman Company have had years of experience with various makes of kilns and now, we are advised, propose to abandon all other methods, giving precedence to the Morton moist air kiln; consequently the A. H. Andrews Company, who manufacture and sell the Morton kiln, should feel highly complimented. However, as the Andrews Company have spent years of labor and thousands of dollars in bringing the Morton kiln to its present state of perfection, they are certainly entitled



GREAT VENEER MACHINERY PLANT OF THE COE MANUFACTURING COMPANY, PAINESVILLE, OHIO.

private tracks of the B. & O. Railway running through the yards, having connection with the Nickle Plate and Lake Shore railway systems. The factories are situated on the high plateau overlooking the river.

The Coe Manufacturing Company have their own electric lighting plant, also a plant for heating and ventilating the entire works. They have one of the largest and most complete plants devoted to the manufacture of veneer cutting machinery in existence, all well lighted. About thirty of the veneer machines were to be seen in various stages of manufacture. Our representative counted seven "dryers" in process of construction as he entered the works. Machines are here, belted ready to do demonstrative cutting of veneers. The works are equipped with all the latest appliances and tools used in the various lines. About 500 tons of finished parts are carried in stock in case of repair work, which can be shipped immediately.

The Coe Manufacturing Company's recent shipments to Canada included plants for the Algoma Commercial

and furnished throughout in veneers. "We use immense quantities of maple," said Mr. Coe, "and I suppose we will eventually have to go to Canada for our supply of this wood."

The experience of the Coe Company is that good machinery and good advertising is what makes an invincible combination. The company believe in steady, liberal advertising. As one put it, "It is just as much of a mistake to advertise only part of the time as it would be to make good machinery only part of the time." The Coe Company have a good thing, for they make the very best machinery, and that is too patent a fact not to let it become known.

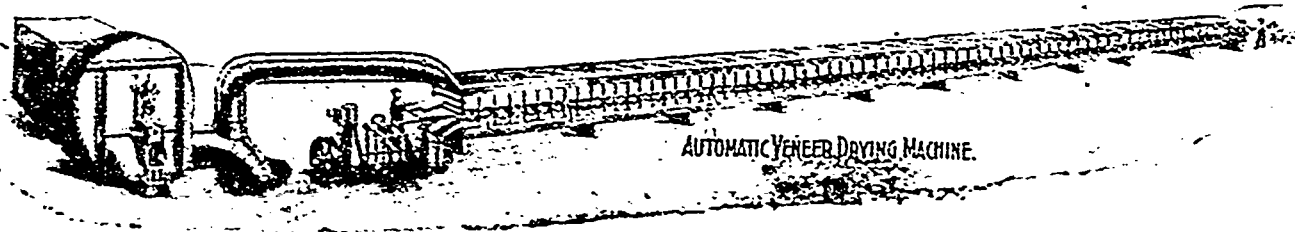
EXTENSIVE DRY KILN PLANT.

The name "Morton" as associated with dry kilns for drying lumber, etc., has become very familiar to lumbermen and manufacturers of forest products during

to a just reward, and we wish them a continuance of the popularity which their kiln is now enjoying. The A. H. Andrews Company are located at 305 Wabash Avenue, Chicago, Ill. Such of our readers as are interested in dry kiln matters are requested to write to the company for a catalogue, as they desire all interested parties to have same on file even if they are not ready to negotiate for dry kiln apparatus. They will gladly send fac-simile copies of testimonial letters to persons wishing to learn the opinion of others as to their kiln.

NEW MILL OF THE LILLICRAP, TATE LUMBER COMPANY.

The Lillicrap, Tate Lumber Company have just completed the erection of a new saw mill at Lakefield, Ont. It is a circular mill with a capacity of from 25,000 to 30,000 feet per day. The machinery was manufactured and installed by the William Hamilton Manu-



AUTOMATIC VENEER DRYING MACHINE MANUFACTURED BY COE MANUFACTURING COMPANY.

Company at Sault Ste. Marie and the Aptus Veneer Company at West River, N.B. The capacity of the Coe plant is 2,000 tons, and when our representative called they were working on orders for machinery aggregating 300 tons. A very large staff of skilled mechanics is employed. The ventilating apparatus in the buildings is arranged so that hot air in winter or cold air in summer is circulated throughout. Running around the works, high vertical, was a powerful crane and conveyor, for the purpose of moving or shipping the machinery. The view of the plant we present herewith is a very good one, but it does not show the bustle and activity going on in the vicinity.

the past few years, during which period the Morton kiln has been adopted by some of the largest manufacturers in the United States, which certainly indicates a bright future. One of the greatest compliments paid the Morton kiln was when the Allis-Chalmers Company selected it for their new mammoth plant at Milwaukee for drying their pattern stock. In addition to this comes information that the Pullman Company have decided to install a battery of 20 Morton moist air dry kilns in connection with their great manufacturing industry located at Pullman, Ill. These kilns will all be about 50 feet long, and range in width from 18 to 30 feet, which will make a continuous line of kilns about 500

feet long, and will have a holding capacity of over one and a quarter million feet of lumber at one time. The kilns will be quite a novelty from the fact that they will be absolutely fire-proof, all walls being of brick and the roofs of tile, with brick and steel supports as an under construction upon which steel cars operate. The Pullman Company have had years of experience with various makes of kilns and now, we are advised, propose to abandon all other methods, giving precedence to the Morton moist air kiln; consequently the A. H. Andrews Company, who manufacture and sell the Morton kiln, should feel highly complimented. However, as the Andrews Company have spent years of labor and thousands of dollars in bringing the Morton kiln to its present state of perfection, they are certainly entitled

facturing Company, of Peterborough, who have furnished an up-to-date plant. The mill is built on concrete foundations throughout. It is 30 x 84 feet and 16 x 26 feet, with stone boiler and engine room 25x36 feet. The plant comprises the usual equipment of steam niggers, live rollers, trimmers, slab saws, etc. The saw carriage is of the newest design. The saw dust is disposed of by means of a Dutch oven, and the exhaust steam from the engine heats the water before it is forced into the boiler. The company now have a number of men at work in the woods taking out logs for the ensuing season.

TREATMENT OF SECOND-GROWTH WHITE PINE.*

BY WALLACE I. HUTCHINSON, Wolfville, N. S.

The following methods of thinning and pruning white pine, and the effect of such cuttings, are based on investigation carried on in the natural pine groves of southern New Hampshire. Many of the principles set forth, although applicable to this portion of the

opment, and on account of crowding is likely to assume a long, lanky shape, which is very easily damaged by wind and snow. It is this state of affairs that the owner should strive to obviate by thinning his trees. Thinning is the cutting out of such tree-growths as interfere with the healthy development, and hence the future value, of the crop. This form of thinning is termed the "weeding" out of the unde-

branches low down on the trunk; consequently they produce knotty and less valuable timber. Moreover, open stands are not apt to improve the fertility of poor soil on account of exposure to the light, which dries out the moisture; hence open stands can be grown best only in naturally fertile soils.

These few conditions govern profitable growth in all localities. Thus while in one case it would be proper to remove all suppressed and dominated, and even a part of the dominating, trees, in another case it would be necessary to look carefully after all of these classes in order to secure the maximum growth and the highest timber value from the land.

Certain important changes are gradually taking place in the growth of trees in the forest, both individually and collectively. There are changes in the soil in which they grow, in the surrounding atmosphere, and changes wrought even upon the inhabitants in the neighborhood. These changes are chemical and mechanical. A growing tree takes from the soil the elements that are essential to its development, but restores them to the soil through its fallen leaves and branches in the form of carbonaceous and nitrogenous matter. Thus, under normal conditions the soil grows richer and capable of supporting larger and more luxuriant forests. The mechanical changes are more easily traced. The roots of trees change the composition of soil by forcing their way into it, thus disintegrating the rocks and earth and allowing the free access of air and water.

In dividing the trees of a forest into classes an account must be taken of the dead trees.



FIG. 1.—A WELL-MANAGED FOREST; LARGE TREES READY FOR MARKET; UNDER-GROWTH SUFFICIENTLY DENSE TO PROTECT THE SOIL.

country, will have to be slightly modified to suit conditions elsewhere.

As the supply of white pine decreases and the stumpage value increases proportionately, the aim of nearly every farmer who owns a woodlot is likely to be the production of the greatest quantity of valuable timber in the shortest possible time. To do this, his first object should be to stock the area with a sufficient number of trees to form a complete cover overhead. This is not only beneficial to the soil, but also for the proper development of the trees. In the natural woods this state of affairs very often exists.

Natural forests are likely to be more valuable than artificial plantations, for most natural forests grow only in such situations as are congenial to the life of trees, the seeds of which will not germinate readily in unfavorable soil. Nature seldom errs in the choice of conditions favorable to tree-growth, a judgment in which man is very liable to error.

Shortly after the leaf canopy is established the growing trees begin to crowd one another, and the struggle for light and space commences. A number of trees overtop the rest, rearing their heads to the full enjoyment of the light. Below these a few trees here and there enjoy with their leading shoots the light which is not absorbed by the dominating trees. Others are left so far behind in the race that they are deprived of enjoyment of all direct light—that is, they are suppressed. They live for a shorter or longer period, but unless they are a shade-enduring species they are not apt to survive for any great length of time.

Thus the forest is divided into three classes—dominant, intermediate, and suppressed trees. This struggle for existence goes on during the entire life of the forest, and is apt to so reduce the growing space of each dominating tree that it cannot reach its fullest devel-

opment. A single tree growing in the open and in the complete enjoyment of light will develop a full crown and root system and lay on a maximum volume of wood, but growth under these conditions has several serious drawbacks:

1st. Trees growing in this manner do not always produce the greatest volume of wood

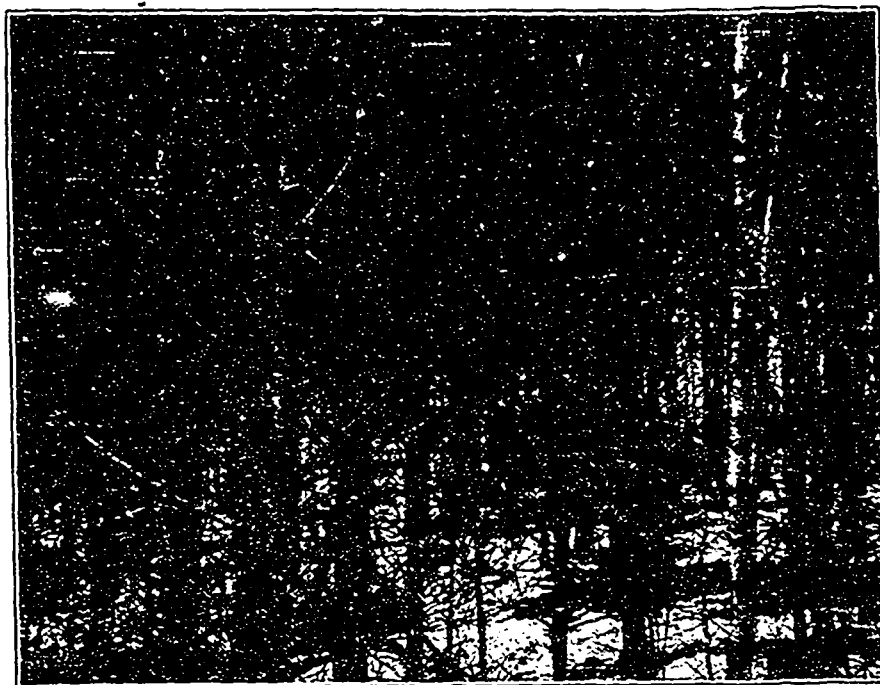


FIG. 2.—NATURAL REPRODUCTION OF WHITE PINE, SHOWING DENSITY OF GROWTH.

per acre. Although every tree in a crowded woods has a smaller volume than the isolated one, yet, owing to the greater number of trees, the crowded stand generally has a larger total volume per acre, and therefore greater stumpage value.

2nd. Isolated trees usually grow short or crooked, while trees in thick woods are, as a rule, straight.

3rd. Trees in the open generally have

These should be removed at every thinning, as they can be of no benefit to the other classes, but may be a constant source of danger from insects, fungi, and, in many cases, fire.

All thinnings are carried on with one of two objects in view: first, the production of the greatest quantity of material; second, the production of the highest quality of timber. The means of attaining these ends differ considerably.

Experience has taught that the greatest

*Reproduced by permission from Forestry and Irrigation.

quantity of timber is produced in the shortest time by the vigorous development of the dominating trees. These are removed and converted into lumber as soon as the undergrowth is of sufficient density to protect the soil (Fig. 1). The first thinning is made as soon as the struggle for existence commences—that is, when it is found that the trees are contending with each other for light and space. If the owner of the woodlot has gone over his land in the early stages of its tree growth and weeded out the undesirable trees, this first thinning may be delayed till the tenth or fifteenth year, when the trees taken out may be utilized for firewood or temporary fence posts. The thinning should be heavy enough to give the trees that remain the space they require. As white pine may naturally come up in a very thick stand, quite a slash will be necessary to rid the woods of the undesirable trees (Fig. 2). In choosing the ones to be removed, the deformed and diseased trees should be taken first. The former, if left, will never amount to anything, and are liable to injure the growth of the remaining crop. The latter usually harbor injurious forest insects, which in a great many cases cause considerable damage.

(To be Continued.)

THE "STERN WHEELER."

With the opening up of territory in New Ontario and Western Canada, the question of transportation facilities will have to be considered and the best means devised for utilizing the present rivers and lakes for the purpose of distributing supplies to the new settlements.

We present to our readers a form of steam boat specially adapted for navigating shallow rivers and lakes, and for carrying large loads on a light draft of water. This style of steamboat is known as the "Stern Wheeler" and is largely used on the Mississippi and other western rivers, where the conditions are such that a deep draft boat cannot be operated. This style of steamboat is also well adapted for service in towing logs, carrying lumber, etc.

The boat illustrated is 80 feet in length, 20 feet beam and draws only 16 inches of water. These steamers are now being constructed by the Goderich Engine Works, Goderich, Ont. The hulls can be supplied in parts so that they may be shipped by rail to destination and put together and completed by ordinary labor.

The above company will upon application supply all information regarding these steamboats.

AN OWEN SOUND MANUFACTORY.

The Wm. Kennedy & Sons, Limited, engineers and iron founders, of Owen Sound, Ontario, is one of the oldest established firms in that line of business in the province. They have been continuously in business for over 40 years and are favorably known throughout Canada. Hydraulic and mechanical engineering

any mill or factory can be supplied. Heavy shafting, pulleys, etc., are special lines with them and particular care is bestowed on this class of work.

Situated as their shops are on the waters of the Georgian Bay, they enjoy the patronage of a large number of saw mills of the Georgian Bay district. Their trade with them is constantly increasing, and we cheerfully recommend them to those who have not hitherto given them their patronage.

Years ago Messrs. Kennedy & Sons started the manufacture of propeller wheels in a small way, but it



WORKS OF WM. KENNEDY & SONS, OWEN SOUND, ONT.

seems to have "run in the family", as the Kennedys are born engineers.

In 1868 they commenced the manufacture of the Leffel turbine in Canada, and their water wheels carried off the 1st prize at the old Provincial Exhibitions whenever shown. They were also awarded the Bronze Medal of the Centennial Exhibition in 1876 and the Canadian Silver Medal for Canadian exhibitors at the same time. In 1880 they were again awarded the Canadian and French Official Silver Medals for their turbine exhibited at Paris. Later on they adopted the New American turbine, believing it to be the best all round water wheel made, and are now manufacturing it in all the different vertical and horizontal styles, to meet the continually changing requirements.

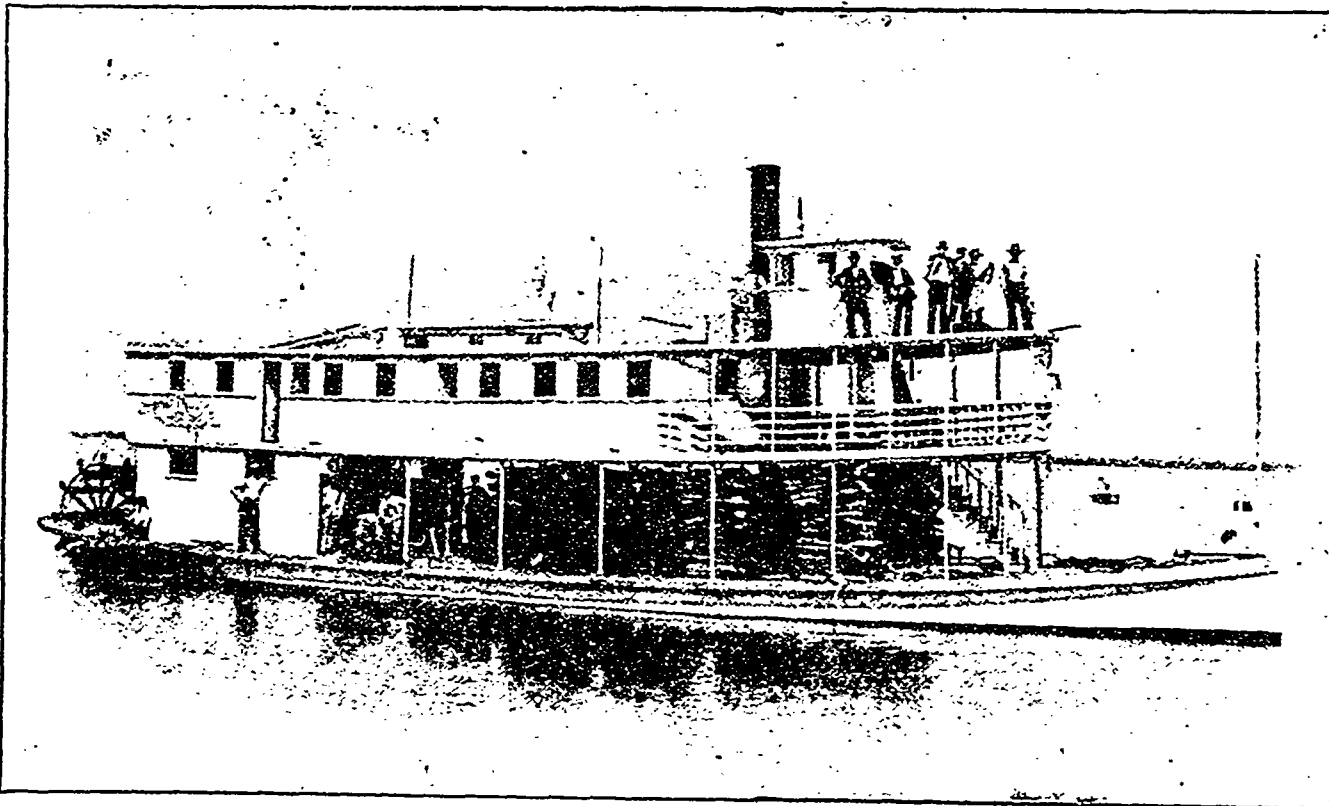
In connection with this department of their business, they have perhaps the largest and most complete set of heavy gear patterns to be found anywhere in the country, and as they have installed special, up-to-date gear-dressing machinery, they are in a position to do the very best class of work in this line.

The furnishing of iron bridgetrees, yokes and floor-stands also receive special attention at their hands. They have a large stock of patterns from which almost

has grown to such an extent that "The Kennedy Wheel" is now well and favorably known to most of the marine men on our lakes and rivers, and we are advised that they stand second to none in finish and efficiency. They make them in all sizes and for all purposes, running, towing or for general purposes as required, and solid or sectional as best suited to the different routes and conditions under which the wheel has to perform its work. We understand a special mixture of iron and steel, or all steel, is now being used to give greater strength without destroying the efficiency, as is done in the case of a "heavy club of a wheel". Particular care is taken in the foundry to get smooth, true castings, and this seems to be obtained to a remarkable degree. To help to supply customers as promptly as possible, considerably over one-hundred propellers are carried in stock, and the company claim to have the largest line of patterns and largest stock of propeller wheels in Canada. This fact of itself should be of great benefit to steamboat men, and their endeavor to furnish "Canadian made" propeller wheels promptly should be encouraged.

General marine repairs receive particular attention from them, and the close proximity of their shops to the docks and to the dry dock at Owen Sound must be a real benefit to their customers on the Upper Lakes.

Observing that no steel castings were made in Canada west of Montreal, The William Kennedy & Sons lately put up a special moulding shop (fitted with electric crane, etc.) and a plant for the production of steel castings, and now as good steel castings can be obtained from them as can be procured anywhere. Those requiring steel castings from their own patterns or from The Wm. Kennedy & Sons patterns, can get them in the rough or finished, as desired. The steel is produced by a special process, is of uniform grade and of a soft but very tough nature. We note that several of the large manufacturers of steam engines and mill machinery get their steel castings from this firm, and our readers can get "Canadian made" steel castings at Owen Sound. This industry should receive special encouragement from those wishing steel castings, because it is a pioneer industry to supply a long felt want.



THE "STERN WHEELER," MANUFACTURED BY GODERICH ENGINE WORKS.

OPENING OUT IN CANADA.

The Buffalo Tool & Machine Company, who have temporary offices at 116 Bay street, Toronto, are now engaged in the erection of extensive premises in the latter city. They are large manufacturers of wood and iron-working machinery. We hope to give an illustration of their works next month.

LUMBERMEN'S SNOW PLOUGHS.

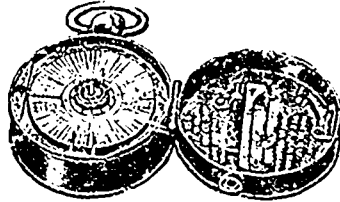
The Wilkinson Plough Co., Limited, of Toronto, are making a plough for snow or ice roads which they claim is without a peer. The manager of this company states that the advertisement in last month's LUMBERMAN paid them well and was the means of booking several very large orders. The company's page ad. in this number is only another answer to the question "Does advertising pay?" We intend giving next month a description of the company's road makers and snow ploughs.

In addition to our large list of subscribers, this number of the CANADA LUMBERMAN is being sent to a thousand firms engaged in the lumber industry and in the manufacture and sale of saw mill

and wood-working machinery in Canada and the border States. If those who receive a copy will consult our advertising pages they will find therein everything that is required in any branch of the lumbering industry, especially machinery. The firms using these columns are the leading ones in their several lines. It will be to your advantage and will oblige both the publishers and advertisers when writing firms whose announcements appear in these pages if you will make mention of THE CANADA LUMBERMAN.

**—IMHAUSER'S—
Watchman's Time Detectors**

That Cannot Fail.



Contain all the modern improvements. War-
ranted in every way. Cannot be tampered with
without detection. Manufactured by
E. IMHAUSER & CO., 206 Broadway, New York.
Write for Catalogue Highest Award Pan-
American Exposition.



You can get practically twelve good
Axes to the dozen in buying . . . **Dundas Axes**

DUNDAS AXE WORKS
Dundas, Ont.

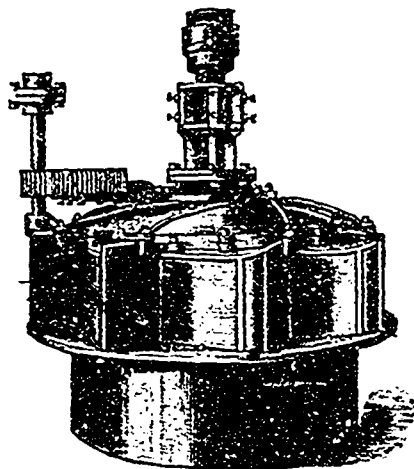
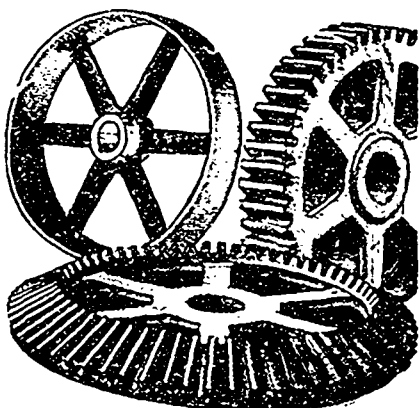
The Wm. Kennedy & Sons, Limited

Hydraulic and Mechanical Engineers, & Co.

OWEN SOUND, ONT.

Manufacturers of
the latest and best

**Turbine
Water
Wheels**



Heavy Machine Dressed
Gearing, Iron Bridgetrees,
Rope or Belt Pulleys, &c.,
for Mills or Factories.
Swing Shingle Machines.
Superior Steel Castings.
Iron or Steel, Sectional or
Solid Propeller Wheels for
all purposes.

Goderich Engine Works

Goderich, Ont., Canada.

FRED W. DOTY, Man

MANUFACTURERS OF

**Marine
ENGINES
and
BOILERS**

High pressure, steeple
compound, fore and
aft compound, triple
expansion

ENGINES

Vertical, Scotch, Fitz-
gibbon, Fire-Box

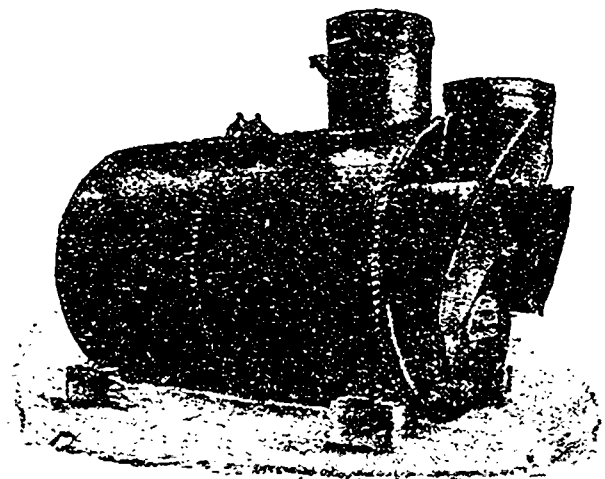
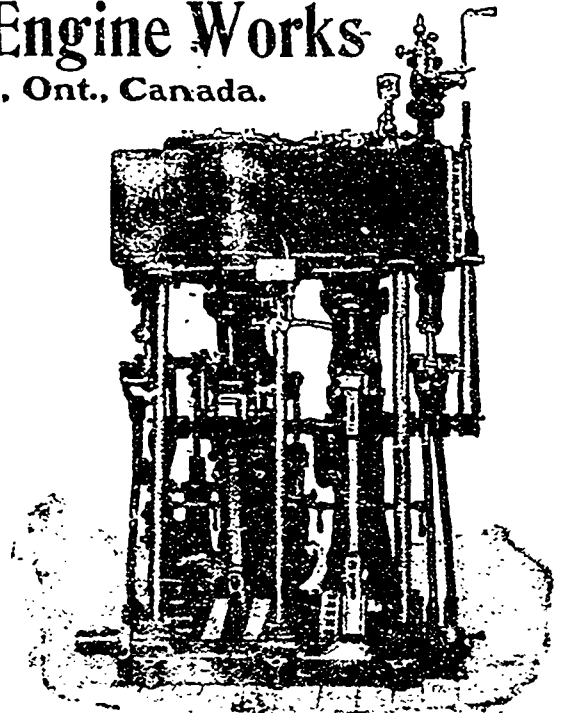
BOILERS

under Govern-
ment inspection.

Machinery for
light draft stern
wheel steamers
a specialty.

Also wooden
hulls for steam-
ers, tugs, yachts,
&c.

Send for illus-
trated catalogue.



BUFFALO TOOL AND MACHINE CO.

176 Terrace - BUFFALO, N.Y.

Front St. West, Toronto, Ont.
Temporary Office, 116 Bay Street.

MANUFACTURERS AND DEALERS IN

**Wood and Iron
Working Machinery**

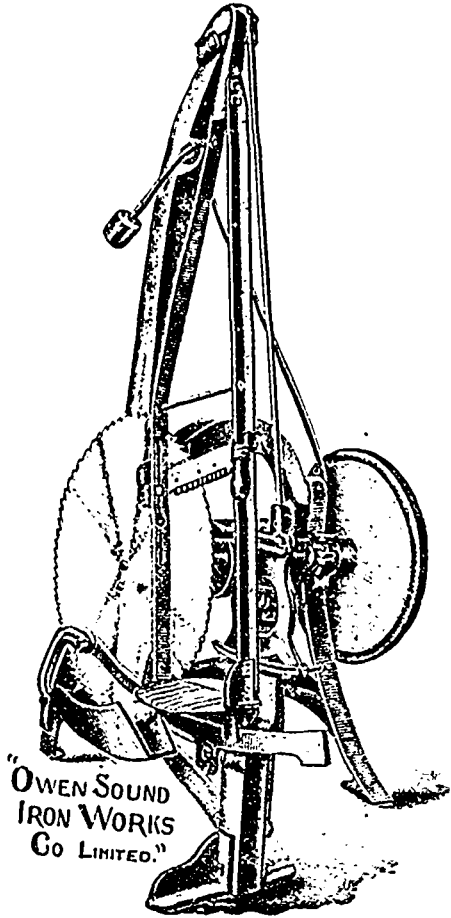
Save your money. Save middlemen's profits.
Buy direct from factory All goods fully guaranteed.

- Band Saws*
- Jointers or Buzz*
- Planers*
- Cabinet Planers*
- Surfacers*
- Planers and Matchers*
- Shapers*

- Turning Lathes*
- Engines and Boilers,*
all sizes
- Saw Tables*
- Moulders*
- Saw Mills*

THE OWEN SOUND IRON WORKS COMPANY.

The Owen Sound Iron Works Company, Limited, are just completing at Owen Sound, Ont., a modern, up-to-date plant for the manufacture of engines, boilers, saw and shingle mill machinery, etc. The following gentlemen are the officers of this company: President, Mr. D. M. Butchart; vice-president and secretary,



"OWEN SOUND
IRON WORKS
CO LIMITED."

SWING SHINGLE MACHINE MANUFACTURED BY OWEN SOUND IRON WORKS COMPANY.

Mr. C. A. Fleming; treasurer, Mr. J. Tolton; manager, Mr. J. M. Wilson.

The new buildings of this company will comprise one of the finest plants on the continent. Our representative was shown through the immense works and given details of the plans now being worked out. One of the buildings will be 330 feet long and about 50 feet wide, with railway tracks and over-head travelling cranes running right through the works. The machine shop will be 165 feet long and 45 feet wide, the moulding shop 60x42 feet, and the furnace room 45x28 feet. The pattern storage room will be 52½x31½ feet, with a smaller one 20x35 feet, and the boiler house will be 75x50 feet. All the buildings will be of stone, and will be heated by hot air blast in winter, and cold air will be circulated through them in summer.

The buildings are splendidly lighted, having a square foot of glass for every 2¼ square feet of floor surface. Artificial light will be provided by a combined system of electric arc and incandescent lighting from their own plant. The floor of the works will be of cement.

Power will be furnished by one of the latest type of Corliss engines, with necessary boilers. There will be installed a complete pneumatic plant for use in the machine and boiler shop. Among the equipment for the main shop will a complete set of rolls, punches and drills.

The location of the extensive works of the Owen Sound Iron Works Company is on Marsh street, extending to Water street. Splendid shipping facilities are provided, and the company are very accessible to New Ontario, where there is a ready market for saw mill machinery, boilers, etc.

The principal machinery to be manufactured will consist of steel saw carriages, shingle machines, lath machines, steam feeds, niggers, log jacks, and conveyers, also all kinds of cement machinery, a specialty being made of slurry mills and pumps.

We present an illustration of this company's all-iron

and steel swing shingle machine, which has a capacity of 10 to 20 thousand per day. The saw and collar of this machine can be removed in five minutes and replaced by another without changing the set of the machine, saving much time when the saw is dull or impaired. The machine will cut shingles, heading, etc., and changes can be quickly made to suit different lengths and thicknesses of work.

The energetic manager of this concern, Mr. J. N. Wilson, speaking to a representative of this paper, stated that a single insertion of the company's advertisement in the CANADA LUMBERMAN paid them better and brought greater results than any other advertising ever done. "Yes," said Mr. Wilson, "we got a better return from that single insertion in your paper than from all our previous advertising, and if you like you may say I can vouch for it. We got large orders from Edmonton and the B. C. coast."

The company do a very large business in the ship repair line, and are putting in new equipment for this purpose.

ECONOMY IN LUMBER MANUFACTURE.

Lumber manufacturers, in keeping with the general progressive spirit of the times, are striving more and more to utilize every possible foot of timber in the log, and are now converting into profit what in former years had gone to waste, and was even an expense to get it out of the way. This has naturally created a demand for new and improved machines and labor saving devices, and opened up a wide field for the inventive genius of up-to-date saw mill machinery manufacturers.

Mr. M. Garland, president of the M. Garland Company, manufacturers of special saw mill machinery at Bay City, Mich., has always been to the fore, and usually in advance of the demands in this field, and to the versatility of his inventive genius is due many of the greatest labor saving devices known to saw mill engineering.

From the many excellent machines manufactured by the M. Garland Company we have selected the improved Eureka bolter and lath mill, which we illustrate in the accompanying engraving, as a sample of the high character machinery now demanded by the wide awake saw mill men of the country.

The cut shows a combined bolter and lath mill, in a substantial iron frame, of a neat design, and in addition to cutting lath and lath bolts, by a slight change of

11" face, having a speed of 1800 revolutions per minute. The bolter feed pulley is 14 inches in diameter with 4-inch face, and runs at 105 r. p. m. On the lath mill arbor is a 7-inch pulley, 9-inch face, and has a speed of 2,600 to 3,000 r. p. m. The feed pulley of the lath mill is 7 inches, with 4-inch face, and runs at 130 revolutions per minute. The combined machine requires a floor space of only 7 feet 6 inches long by 3 feet 6 inches wide. When built separately the lath mill requires a floor space of only 4 feet 7 inches long by 3 feet 6 inches wide, and the bolter the same.

From these specifications it will be seen that this machine is scientifically proportioned, and adjusted so as to get the best possible results with the least expenditure of energy.

That the economical saw mill men recognize the merits of this machine is evidenced by the large number the M. Garland Company are installing in new mills, as well as mills that have been in operation for years. Detailed specifications will be cheerfully furnished on application.

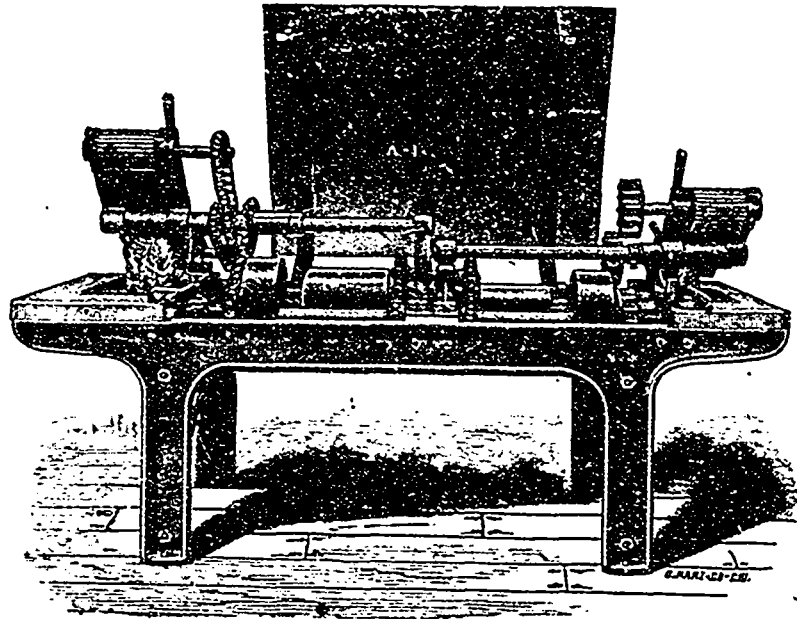
DO THEY GET RESULTS?

One secret of the success of many a business firm is that they are willing to try new propositions to reach some of the world's trade. There are to-day hundreds of firms languishing instead of thriving because they do not place enough reliance on printer's ink and advertising.

That the CANADA LUMBERMAN is one of the best mediums in Canada has again been evidenced by a recent trial advertisement placed with us by the Walkerville Wagon Company. This wide-awake concern has an up-to-date manager who advertised lumber sleighs for sale. Before the second insertion of the advertisement they had sold their entire output, and attribute it solely to the use of our columns.

When our representative called upon the company he was shown several car loads packed to the doors of logging sleighs and lumber bobs—the last of the entire output—all sold by one insertion in the CANADA LUMBERMAN.

The Walkerville Wagon Company's specialties in lumber sleighs are the Ontario two-knee bob, the heavy teaming or logging sleigh, and the camel back Manitoba sloop sleigh. The logging sleigh is supplied with 2½, 3 and 4 inch runners, heavily built especially for logging. The draught is made directly from the bench



COMBINED BOLTER AND LATH MILL MANUFACTURED BY THE M. GARLAND COMPANY.

collars it can be adapted to sawing pickets and any stock from ¼ to 4" square or other forms. Both bolter and lath mill are equipped with upper and lower feed rolls in front and rear of saws, insuring a strong and positive feed of stock to saws. A wide deck or table (A-1) is arranged to conveniently receive the bolts from the bolter, from which they are taken and passed through the lath mill. The capacity of the machine is claimed to be from 40,000 to 60,000 perfect lath per day, when intelligently operated.

The pulley on the bolter arbor is 10" in diameter,

where the load rests by means of chains and cross-chains.

The company show their appreciation of this journal by taking advertising space for a year in advance. Do they get results? Ask them. The CANADA LUMBERMAN is the best medium not only for saw mill machinery, engines and boilers, but for supplies and equipment of any kind used in the mills, on the drive, or in the lumberman's own home. The LUMBERMAN not only goes to nearly every saw and planing mill from the Atlantic to Pacific, but to large numbers actively engaged in the lumbering business in Canada and the States bordering thereon.

TRADE NOTES

The M. Garland Company, Bay City, Mich., recently received a telegraphic order for a lath mill and bolter from the Canadian Soo.

The Goldie & McCulloch Company, of Galt, Ont., recently installed a 300 horse-power Wheelock engine in the factory of Davidson & Thackray at Ottawa.

The Victoria Machinery Depot Company, of Victoria, B. C., are furnishing three large boilers for the saw mill of the Victoria Lumber Company at Chemainus.

The works of the Canadian Oak Belting Company at Brockville, Ont., were damaged by fire on December 11th to the extent of \$3,000. The loss is covered by insurance.

M. Mitshkun Company, railway equipment supply dealers of Detroit, Mich., have opened a branch office in Chicago, for the accommodation of their Chicago and western customers. The office is located at 711 Western Union Building.

The Dodge Manufacturing Company, of Toronto, have secured the contract for the entire equipment of elevating, conveying and power transmission machinery for the large elevator now under construction in the Montreal harbor.

The M. Garland Company, of Bay City, Mich., have just shipped three of their patented log loaders for handling heavy coast timber to the Eby Machinery Company, of San Francisco. A large number of these log loaders are being shipped to western mills.

The Harrigan factory of J. S. Henderson at Parrsboro, N. S., was almost totally destroyed by fire on November 28th. The factory was one of the largest of its kind in the eastern provinces. It is understood that the loss is partially covered by insurance, and it is hoped that Mr. Henderson will rebuild.

The Syracuse Smelting Works advise us that owing to the large demand for their celebrated Syracuse babbitt metal and Columbia phosphor tin, they have been obliged to run their Montreal plant day and night. They are now further increasing their facilities for manufacturing the above metals, and intend to have all orders hereafter filled promptly.

N. Thompson, late manager of the Albion Iron Works, of Vancouver, T. Smirl and W. McCulloch

have formed a partnership under the name of N. Thompson & Company, and have established an engineering and machine shop at Vancouver. It is proposed to make a specialty of logging camp outfits and repairs. Their works are situated on Alexander street.

Those of our readers, and we presume they are in the majority, who require machinery, will be interested in the extensive list of new and second-hand machinery for the use of lumbermen and wood-workers printed in the advertisement of Mr. H. W. Petrie on page 4 of this number of the LUMBERMAN. A similar announcement will appear each month in future on this page, and it will be to the interest of machinery buyers to scan the list month by month.

The Standard Dry Kiln Company, of Indianapolis, have issued a neat booklet describing the "Standard" kiln equipment and moist air system of drying, in which are shown views of "Standard" transfer car loaded with lumber end-wise, cross-wise and on edge. A feature of the book is extracts from testimonial letters received from users of the "Standard" apparatus, among which we notice the names of the J. C. Scott Company, Toronto; Shultz Bros. Company, Brantford; Patent Clothboard Company, Parry Sound; J. Oliver & Sons, Ottawa; R. Thackray, Ottawa; J. B. Smith & Sons, Toronto; Pacific Coast Lumber Company, Vancouver; J. A. Sayward, Victoria, and Kootenay Lumber Company, B.C.

The American Blower Co., of Detroit, Mich., report among recent orders for dry kilns the following: H. Hermann Lumber Co., Ashland, Ky., Grand Rapids (Mich.) Piano Case Co., Nicholson Furniture Co., Huntington, W. Va., Michigan Elm Hoop Co., Grand Rapids, Mich., Otter Creek (Fla.) Lumber Co., Trexler-Turrell Lumber Co., Rickets, Pa., and the Sebewung (Mich.) Sugar Co.; also heating contracts for the Iron City Sanitary Mfg. Co., Zelenople, Pa., Enterprise Mfg. Co., Columbiana, O., B. F. Lee Co., Braddock, Pa., Monongahela (Pa.) Forge Co., New York Glucoss Co., Edgewater, N.J., and the Michigan Malleable Iron Co., Detroit; mechanical draft apparatus for the International Paper Co., (Corinth, N.Y., Mill), Geo. H. Hammett Co., Chicago Lehigh Valley Coal Co., New York, Princeton (N.J.) University and the Binghamton (N.) Electric Light & Power Co.

BABBITT METAL.

In the original recipe for babbitt metal the ingredients were:

Four pounds of copper (lake), 8 pounds regulus antimony, 96 pounds Banca tin.

First melt the copper, then add 12 pounds tin by degrees; put in 8 pounds antimony, and 12 pounds more tin should be added while composition is melting. This forms the hardening which is to be used with tin in proportion of 1 to 2 when casting.

—McBride & Schoeoleben, lumber merchants, Weyburn, N. W. T., have adopted the style of The Weyburn Lumber & Elevator Company.

—The saw mill at Warton, Ont., which has been operated for some years by Jones Bros., has been purchased by G. Kastner, who has also secured their timber limits on the peninsula. It is the intention to move the mill to the north shore, where Mr. Kastner will conduct lumbering operations on an enlarged scale.

DRY KILN

Recording Thermometers

Adopted by

A. H. ANDREWS CO.
STANDARD DRY KILN CO.

For their kilns they supply the trade.



NO. 300

HELIOS - UPTON CO., Peabody, Mass.

To Those Who Carry Insurance on Lumber

You are compelled to pay more for your insurance to-day than a year ago. This is particularly true in Canada where rates have been abnormally increased by Tarriff Association Companies. It is our business to insure nothing but lumber. We study the advantages offered by each risk submitted and accept only the best moral and physical hazards. Thus by carrying only selected risks we can offer lower rates. We are saving money for hundreds of lumber dealers. Why not let us take care of from \$1,000 to \$20,000 of your insurance?

For information apply direct to our home office,

LUMBER UNDERWRITERS, 66 Broadway, New York.



Atkins High Grade Silver Steel Saws
Are the "Quality" Saws of the World

They are the Finest in Material, Temper, Workmanship and Finish. Maybe they are not so cheap as some—but saws that are "Cheap in the Bill" often prove "Dear in the Mill." You take no chances on Atkins Saws. Write for our Sawyer's Hand-Book. Its free.

E. C. ATKINS & CO., FACTORIES:
INDIANAPOLIS, IND., U. S. A.
Manufacturers of Circular, Band, Hand and Cross Cut Saws, Tools, Etc.

Branch Houses:
44 Scott Street, Toronto, Ont.
Memphis, Tenn. Minneapolis, Minn.
Atlanta, Ga. Portland, Ore.
No. 64 Itcado St., New York City, N. Y.

NOTE: Any Lumberman, Sawyer or Filer who will write for one of our Souvenir Watch Fobs may secure same Free of Charge. Mention this Journal.

WOOD PULP ~ DEPARTMENT

REQUISITION FOR AN EXPORT DUTY.

A meeting of the pulp and paper manufacturers of Canada was held at the Windsor Hotel, Montreal, on December 2nd, for the purpose of considering the presentation of a memorial to the Dominion Government requesting an export duty on pulp wood. It is understood that opinion was unanimous that such action should be taken.

It was accordingly decided without a dissentient voice that a committee, after consulting the Government of the province of Quebec with the view of devising means whereby the views of the manufacturers could be carried out, while at the same time the requirements of the provincial authorities should be complied with, proceed to Ottawa and interview the federal Government for the purpose of securing the imposition of an export duty, which, while not onerous during the first and second years, so as not to interfere with the present export business, would, at the same time, give opportunity to all present owners of timber limits to erect pulp or paper mills if they think it necessary, and should progressively advance until such a figure should be charged as would afford reasonable and yet complete protection to the pulp and paper interests of this country.

Those in attendance at the meeting were: E. B. Eddy, of the E. B. Eddy Company, Hull; John R. Barber, of Barber Bros., Georgetown, and the Toronto Paper Mfg. Company; F. P. Buck, president of the Royal Paper Mills Company; Walter Wray, of Price Bros. & Co.; Jonquiere Pulp Company, Montmagny Pulp Company, and Rimouski Pulp Mills; J. E. Valliere, of Jas. McLaren & Co., Buckingham, Que.; W. D. Gillean and A. McArthur, of A. McArthur & Co.; C. F. Smith, vice-president Laurentide Pulp Company, Grand Mere, Que.; J. D. Rolland, of Rolland Paper Company; John Ford, of John Ford & Co.; John MacFarlane, president

St. Raymond Pulp Company; A. MacFarlane and Robt. Miller, of Miller Bros. Company; W. Jalbert, Quiatchouan Pulp Company; F. J. Campbell, general manager Canada Paper Company; Wm. Hanson, director of Quebec & Lake St. John Railway Company; J. E. Caron, M.L.A., secretary Metabetchouan Pulp Company; F. Florentin Soucy and Wm. Ayers, Hamelin & Ayres; N. Garneau, president Chicoutimi Pulp Company; Jas. Davy, Merritt Pulp Company, and John Forman, Montreal.

THE ST. GEORGE PULP AND PAPER COMPANY.

At St. George, in Charlotte County, N.B., a syndicate of United States capitalists have undertaken an extensive project with a view to the manufacture of pulp and paper. The settlement of St. George is situated on the Magaguadadic river. In the summer of 1901 Messrs. James Goodfellow, of Fort Fairfield, N.Y., and E. W. Murphy, of Albany, N.Y., organized the St. George Pulp and Paper Company. They purchased the necessary water power and rights, also fifty square miles of timber lands from J. Dewar & Sons. The contract for turbines required for the power development was placed with the Jenckes Machine Company, of Sherbrooke, Que., who are to furnish two pairs of 45-inch special Crocker turbines and two pairs of 20-inch special Crocker turbines, all in steel cases and arranged for horizontal setting, to be capable of developing 2,668 horse power under 40 feet effective head of water.

The water necessary for the supply of the turbines is to be carried through a steel plate riveted pipe 16 inches in diameter and 450 feet long, also supplied by the Jenckes Company. The penstock has just been erected by their workmen on the site of the mill, it having been punched, rolled, fitted together, and painted at their works before shipment.

The mill will be located on a peculiarly

advantageous site. It will be one-storey high, 65x120 feet, and will have a daily capacity at the outset of 20 tons of pulp, but this will be ultimately increased to 50 tons. The Jenckes Machine Company have also received the contract to supply the pulp mill machinery, including grinders, wet machines, screens, barkers, cutting off saws, hydraulic press, baling press, conveyers, etc. The screens to be used are the celebrated Moore centrifugal screens, a comparatively new invention.

The mill is to be lighted by electricity and steam heated. The electric plant will be furnished by the Westinghouse Electric & Manufacturing Company, of Pittsburg, Pa. In addition to supplying electricity for their own use, the company expects to develop 750 horse power to be furnished to the Granite Company whose water power they acquired. Electric lighting may also be furnished for the corporation of St. George.

The operations are being conducted under the supervision of Mr. E. G. Murphy, who is manager of the company.

PULP NOTES.

Surveys are being made for a pulp mill to be built at Baring, N.B.

The Riviere Ouelle Pulp & Lumber Company, of St. Pacome, Que., is applying for incorporation.

P. Holmberg, representing Cleveland and Pittsburg capitalists, has taken steps towards the erection of a paper mill at Sprindale, Kings County, N.B.

The Ontario Government have given permission to the Sturgeon Falls Pulp Company to dam Lake Temagami for the purpose of securing a more regular water supply.

The by-law to grant a bonus of \$15,000 to assist J. J. Warren, of Toronto, and others, to establish a pulp mill at North Bay, Ont., will be placed before the ratepayers of that town on January 5th.

An aerial cable is to be used to convey to market the pulp of the new 25-ton mill to be built near Rimouski, Que. This method is found advisable on account of the rugged country and the deep snow in winter.

The Nova Scotia Wood, Pulp & Paper Company have almost completed the enlargement of canals, etc., by which the available power will be increased 100 per cent. They are rebuilding their pulp mill and expect to grind again in February.

J. C. Wilson & Company, Limited, has been incorporated, with a capital stock of \$1,000,000, to take over and conduct the business of J. C. Wilson & Company, paper manufacturers, Montreal. Power is also given to acquire timber limits and manufacture pulp.

The Quatsino Power & Pulp Company, Limited, of Victoria, B.C., have elected the following officers: President, Henry Hewitt, Tacoma, Wash.; vice-

JOSEPH H. WALLACE, C. E.

MILL AND HYDRAULIC ENGINEER
PULP AND PAPER MILLS.

A. U. Jaas'ad, M.E., Associate Steam and Electrical Engineer

WATER POWER DEVELOPMENTS

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DREWSSEN COMPANY

CHEMISTS AND MILL EXPERTS
SULPHITE PULP MILLS;

Drewsen Acid System

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Richards-Drewsen Chip Separator

Herreshoff Pyrites Furnace

The above are associated in the furnishing of expert services for industrial development.

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NEW YORK

president, W. G. Dickinson, Victoria; secretary, C. H. Lugin, Victoria; treasurer, E. E. Welsh, Victoria. Preliminary to beginning the manufacture of pulp the company will establish a saw mill at Quatsino.

P. C. Hohlenburg and J. T. McNeill, of Cleveland, Ohio, representing an American syndicate, recently secured an option on the properties of William Bruckhof and William Godard at Springdale, Kings County, N.B. It is understood that if the option is taken up a pulp mill will be erected on the property.

An idea of the importance of the pulpwood industry in the Eastern Townships of Quebec, is shown by the fact that the Quebec Central Railway alone has carried 80,000 cords of this wood since last spring. This wood cost \$20,000 to load on the cars and yielded the railway \$100,000 in freight. Farmers sell the wood for \$4 per cord, when barked, and four feet in length.

The December meeting of the American Sulphite Manufacturers' Association was held in Boston on the 3rd

ultimo, among those present being Charles Riordon and George E. Challes, of the Riordon Paper Mills, Merriton, Ont., and M. F. Mooney, of the St. John Sulphite Pulp Company, Mispec, N.B. It is understood that the reports submitted showed that the mills were well sold up, with very small stocks on hand.

F. H. Clergue, of the Sault Ste. Marie Pulp & Paper Company, does not fear a retaliatory duty on pulp imported into the United States. He contends that the extra duty would have to be paid by the consumer, and that if the law were applied in the case of pulp, by a parity of reasoning it must also be applied with respect to lumber. This would bring about an awkward situation, as many American companies have built large saw mills in Canada.

A very distinguished party of British merchants and manufacturers, representing the London Chamber of Commerce, who are now touring Canada, were banqueted by the Canadian Manufacturers' Association in Toronto on November 21st. In the speeches the pulp

wood question was repeatedly referred to. Hon. G. W. Ross, Premier of Ontario, pointed out that England consumed 504,000 tons of wood pulp annually, of which only 78,000 tons came from Canada. He advocated the building of British mills in Canada and the consolidation of the empire by each part purchasing as much of its supply as possible from some other part, instead of from a foreign country.

The Toronto Globe is not in favor of an export duty on pulp wood. Summing up the situation it says: "It is clear that the export duty will accomplish everything the paper manufacturers desire, but not so clear that it can be imposed without inflicting serious hardships on many settlers and other owners of pulp wood. Canada is too fully dependent on the advance of settlement to risk the restoration of early and onerous conditions until it is clear that important public interests are to be served by the change. The paper-making industry is entitled to every consideration, and its interests should be furthered in every way so long as no other Canadian interest is adversely affected."

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ESTIMATES, PLANS, SUPERVISION AND CONTRACTS

SPECIALTIES.—Paper, Pulp and Sulphite Fibre Mills, Electric Plants Surveys and Improvements of Water Power.

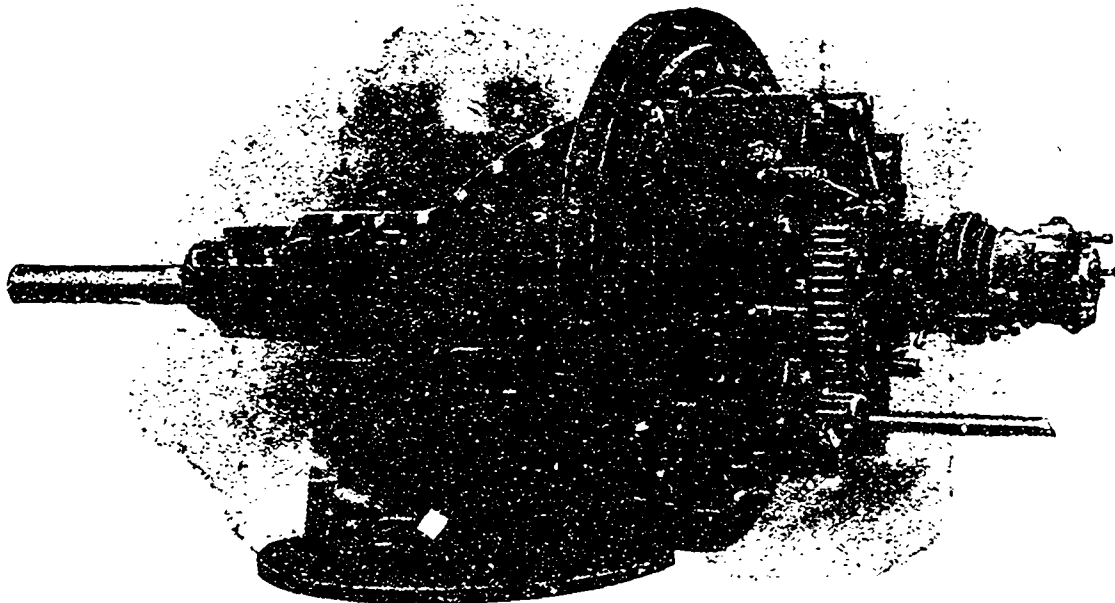
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Quick, Cool, Strong, Durable.

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The wheel, as shown in cut, is for use in steel case. With some modifications it may be arranged for setting in open wooden flume or for bolting to outside of flume.



Send particulars of your water power and we will send you our 90 page catalogue and preliminary information.

Engineer sent to any point for consultation and report.

Some recent contracts filled and under way are the following :

Brompton Pulp and Paper Co., Brompton Falls, Que.
St. George Pulp and Paper Co., St. George, N. B.
J. R. Booth, Ottawa, Ont.
Georgetown Electric Co., Glen William, Ont.

Town of Cornwall, Ont.
D. F. Jones Mfg. Co., Gananoque, Ont.
Jos. Beaumont, Glen William, Ont.
Kinleith Paper Co., St. Catharines, Ont.

THE JENCKES MACHINE CO., Head Office and Works:
36-40 Lansdowne St. Eet.,
Sherbrooke, Que., Canada

81 York Street, TORONTO, ONT.
MONTREAL, QUE. HALIFAX, N. S.
ROSSLAND AND GREENWOOD, B. C.
Winnipeg Machinery and Supply Co., Agents, WINNIPEG, MANITOBA

PERSONAL.

Mr. J. Arbutnot, lumber merchant, of Winnipeg, has again been elected Mayor of that city.

Mr. Alfred Dickie, of Lower Stovacke, N. S., expects to sail in a few days for Liverpool, England, on a business trip.

In the recent by-election in Argenteuil county, Quebec, Mr. G. H. Perley, lumberman, of Calumet, was defeated by a majority of 201 votes.

Before leaving on an extended tour through California and the Southern States, Mr. C. Mayne, manager of the Royal City Pining Mills, Vancouver, was presented with an address and a gold watch by the employees of that concern.

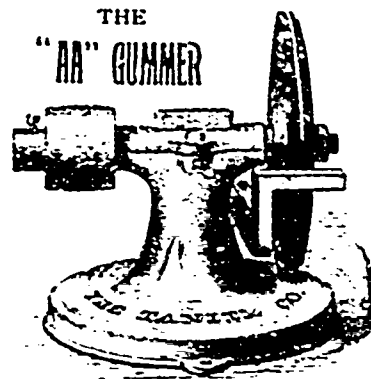
Mr. Joseph H. O'Neill, of the Edwin S. Hartwell Lumber Company, Chicago, who has had charge of the company's operations at Parry Sound, Ont., the

past season, returned to Chicago early in December, intending to remain there for a few weeks.

A serious accident occurred recently to Mr. H. H. Cook, president of the Ontario Lumber Company, of Toronto. A street car from which he was alighting started somewhat prematurely, with the result that Mr. Cook was precipitated to the pavement, breaking his left leg above the ankle and receiving a serious shock to his system. For some time he remained unconscious, but by the aid of skillful medical attendance we are pleased to learn that he is now rapidly regaining convalescence.

Under the name of Donald McNeicol at Lammersmoor, Ont., is conducted a saw mill industry that has quite a unique history. The father of the present owner established his plant on the Little Clyde in 1825, but since that time the mill has been rebuilt twice, at each rebuilding improvements being made.

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\$4.50 Net Cash, 14
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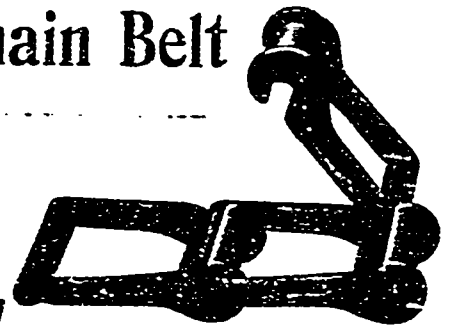
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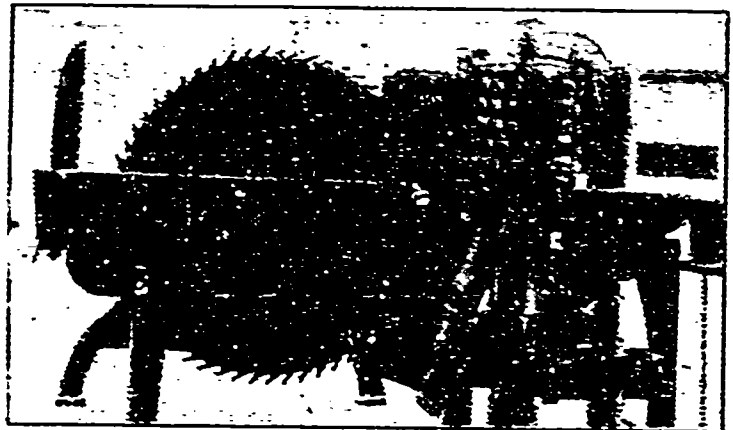
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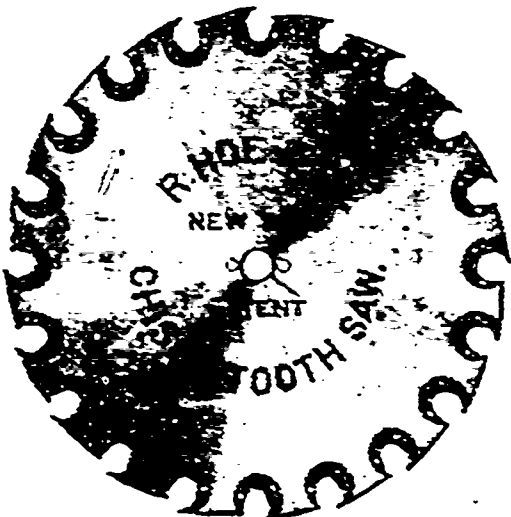
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Our Chisel-Tooth Saw is adapted to all kinds and conditions of sawing, and does equally well in hard or soft woods, winter or summer, large or small mills.

It increases the output of the mill, requires less power and makes better lumber at less cost than any other saw.

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Blyth Handle Works
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LUMBER CAMP SUPPLIES A SPECIALTY

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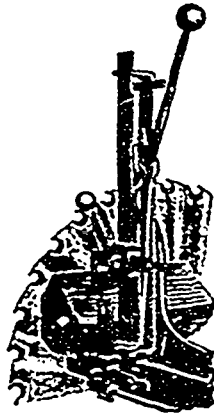
These dogs have no springs, no ratchet, no pawls, nothing to get out of order, but have a positive grip so that no log can become loose or turn while being sawed. Dogs can be fastened on any head block knee and will hold small blocks on single head block if necessary to do so. Upper and lower dogs can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

Dogs made either right or left hand as required.

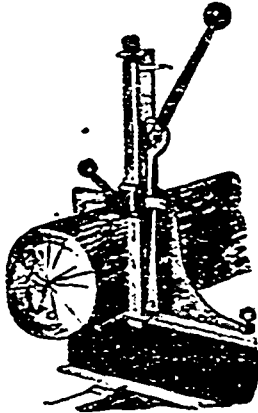
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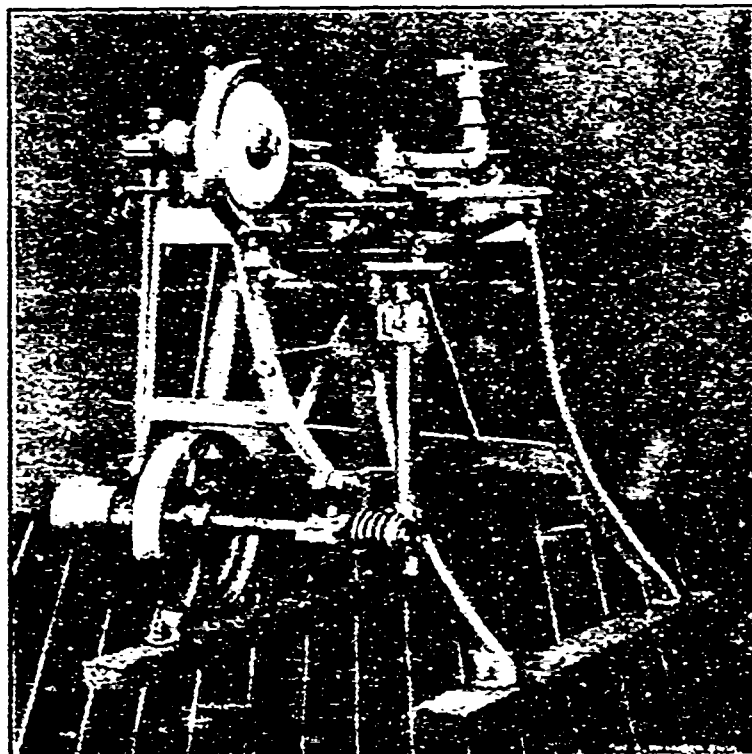
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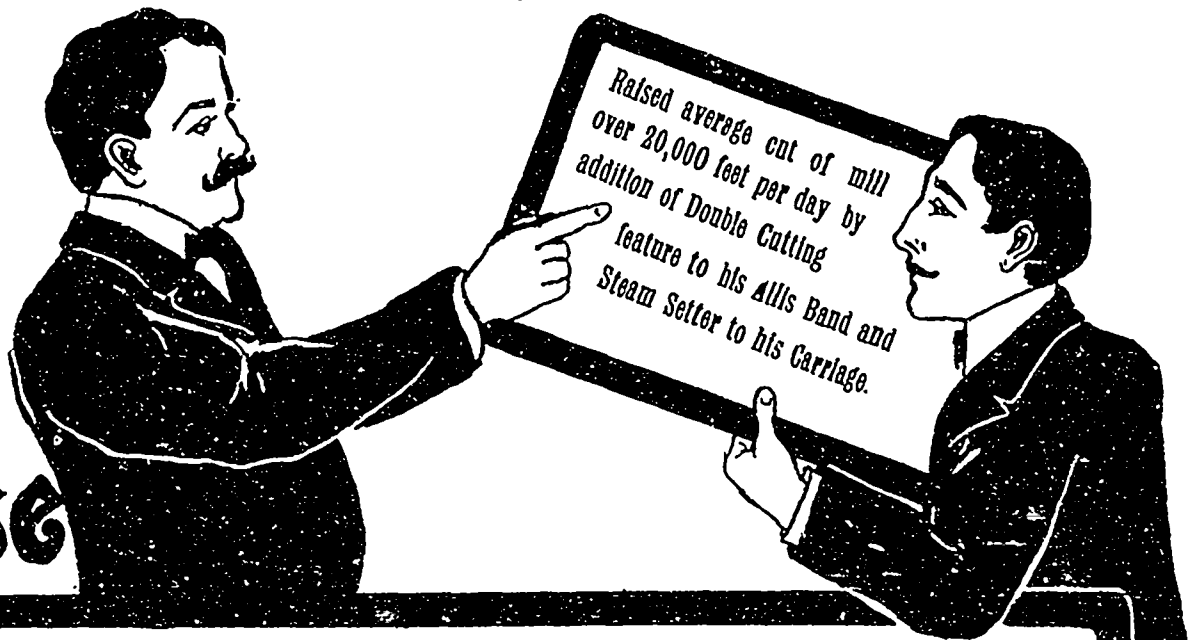


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The above cut shows one of our Automatic Saw Sharpeners for gumming or sharpening circular saws, either rip saws or cross cut. It will take a saw from 12 inches up to 7 feet in diameter. No mill should be without one of these machines; they will last for years and are cheap. We build other styles. We also build all kinds of Saw and Shingle Machinery. It will pay you to send for our catalogue and prices.

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The following letter is particularly interesting in its bearing upon the merits of the Allis Double Cutting Band:

PARRY SOUND, November 6, 1902.

WATEROUS ENGINE WORKS, Brantford.

DEAR SIRS:—Replying to yours of the 27th ult. in regard to the merits of the double cutting band mill and steam set works over single cutting and hand set works, I beg to say that very much better results have been obtained with double band mill and steam set works, the average daily cut this season being some 91,000 feet per 11 hours, to 54,000 last year. The saw culls will not exceed 7,000 feet out of about 18,000,000 feet of lumber. Yours truly,

J. J. GRANT, Supt. Conger Lumber Co. Saw Mill.

Last year the above firm had a single cutting Allis Band and Gang. This year by the change from the single to double cutting band and the addition of a steam setter to the carriage the output was increased over 60 per cent. This increase was gained without added cost for labor and therefore means a corresponding increase in the daily profits of the business, and the saw cull loss was practically eliminated.

Write us and let us tell you more about the actual performances of the Allis Double Cutting Band Mill and Steam Setter.

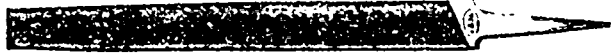
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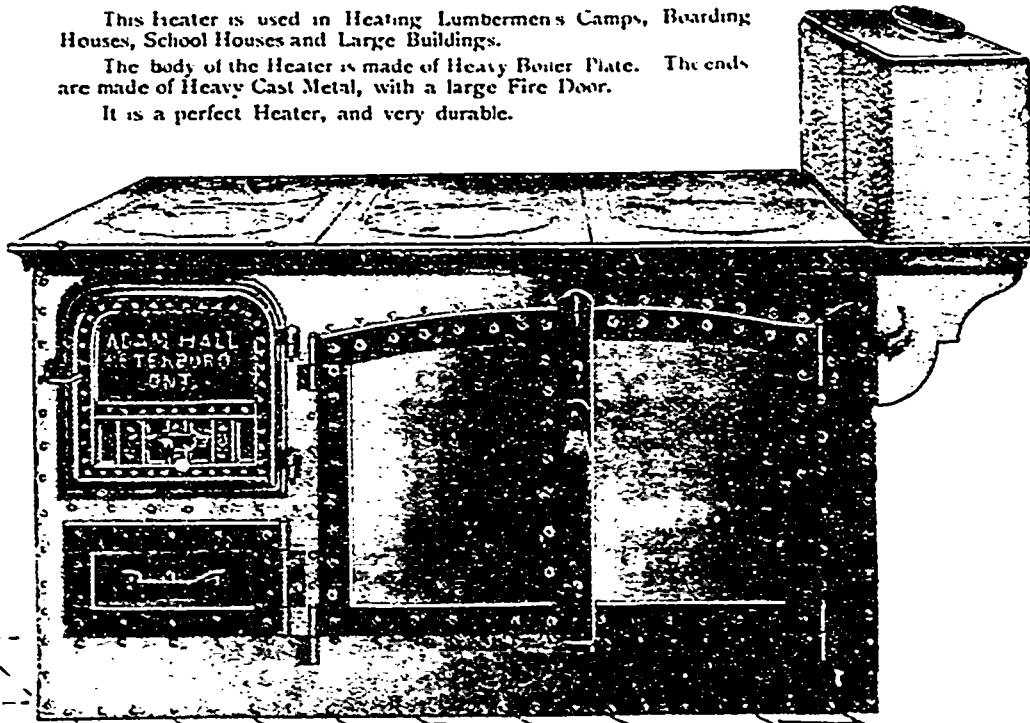
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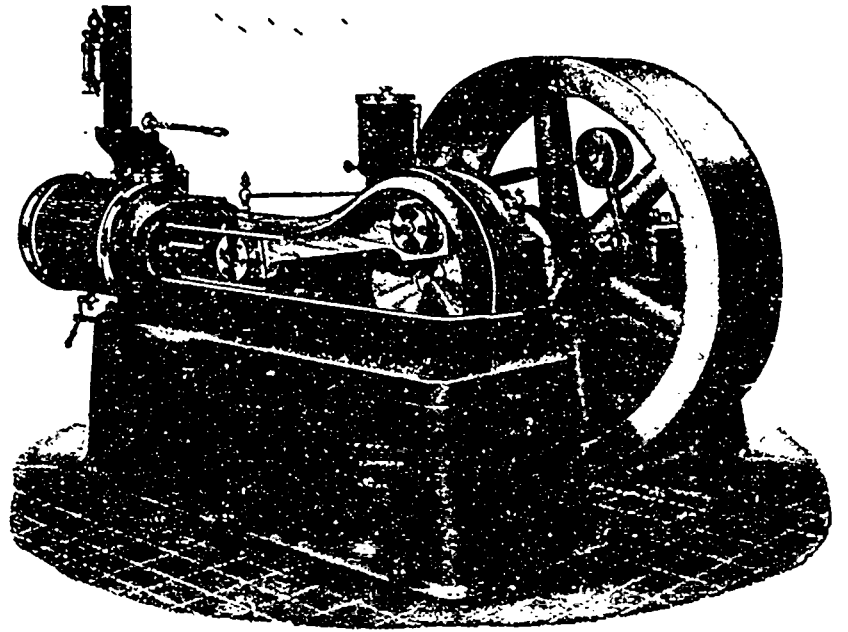
This heater is used in Heating Lumbermen's Camps, Boarding Houses, School Houses and Large Buildings.

The body of the Heater is made of Heavy Boiler Plate. The ends are made of Heavy Cast Metal, with a large Fire Door. It is a perfect Heater, and very durable.



Lumberman's Six Pot Range with Reservoir.

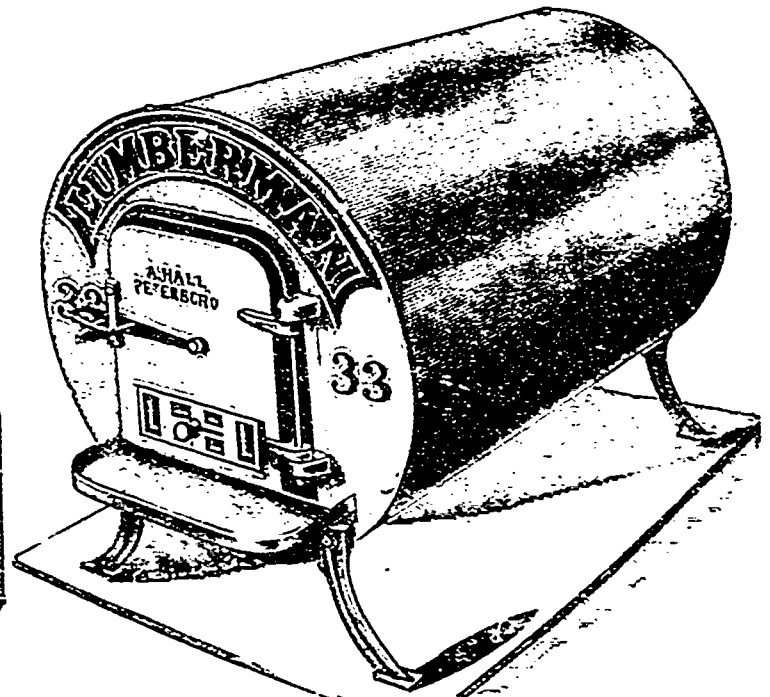
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A Customer says:—

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We have been manufacturing Steel Ranges and Heaters for Lumber Camps for the past Twenty-four Years, and have supplied the wants of nearly all the Lumbermen in Quebec, Ontario and Manitoba they are unexcelled for Baking and Cooking, and are strong and durable.

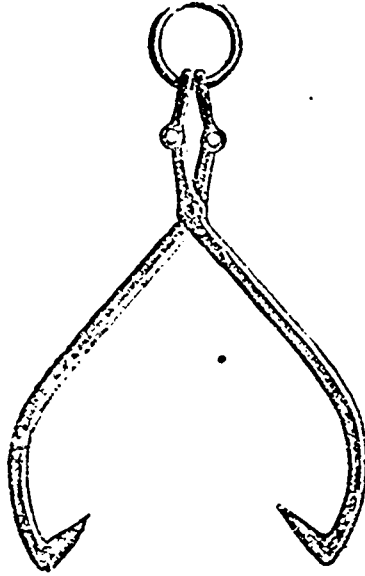
This No. 10-25 Range with 25 Gallon Copper Reservoir is the one we sell the most of, owing to the convenience of having a supply of hot water at all times. Will cook for 50 to 60 men. Weighs 450 pounds

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For Forty Years the Standard Tools for

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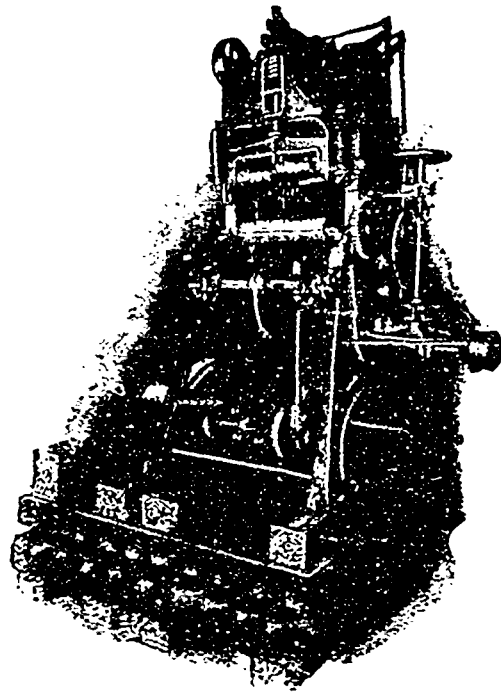


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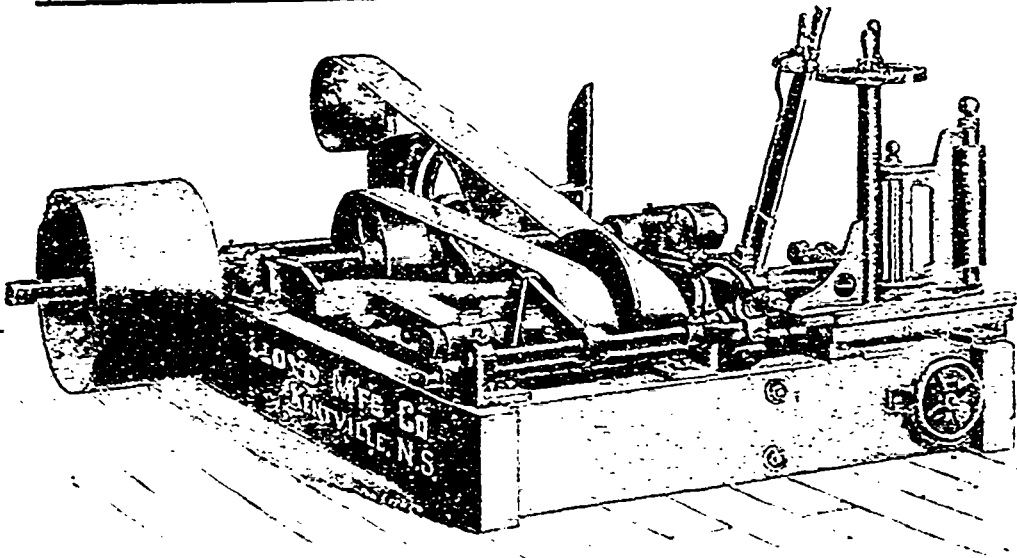


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Pulp Machinery, Belting, Etc.

OUR SPECIALTIES:

- Band Saw Mill Machinery,
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- with Green Mountain Dogs,
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IN OUR LINE WE LEAD

McFarlane Patent Wrot Forged Steel Socket Cant Dogs

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

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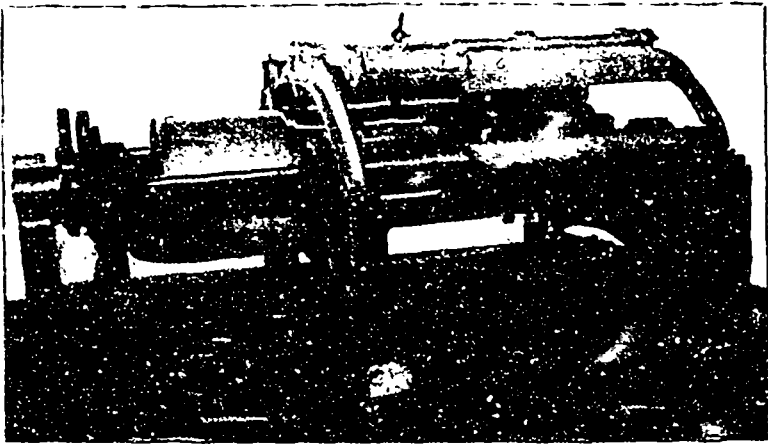
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Respectfully,
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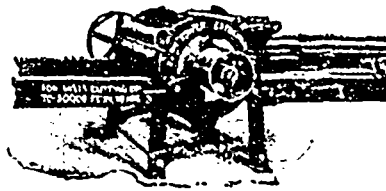
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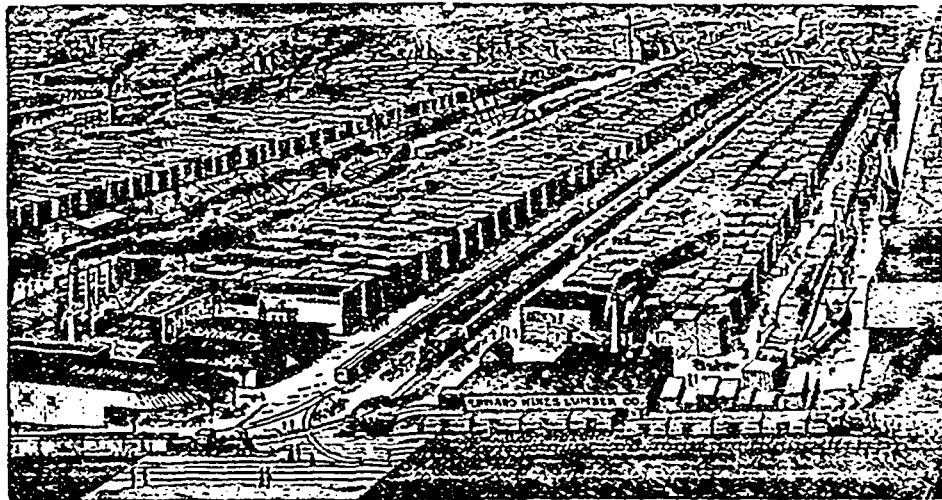
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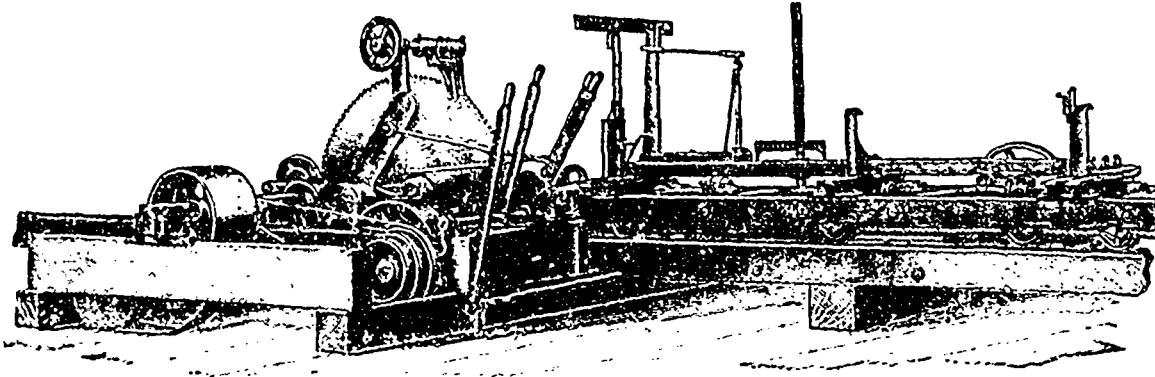
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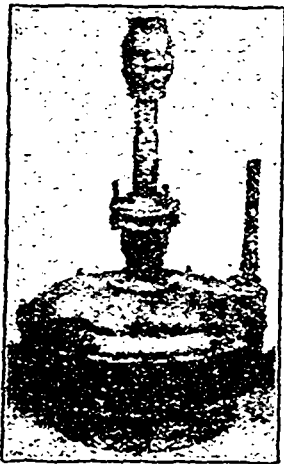
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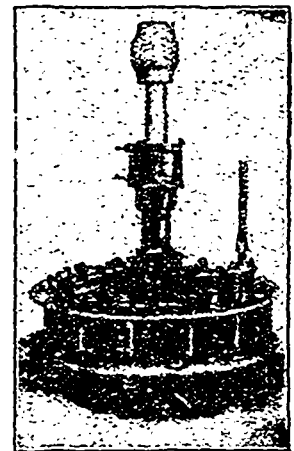
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