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Wood-Workers', Manufacturers' and Millers' Gazette

TORONTO, CANADA, JANUARY, 1902

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**See Page 18**  
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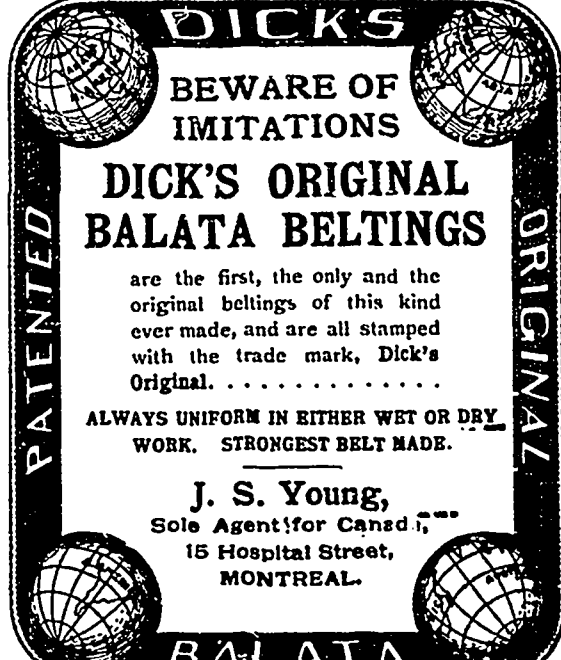
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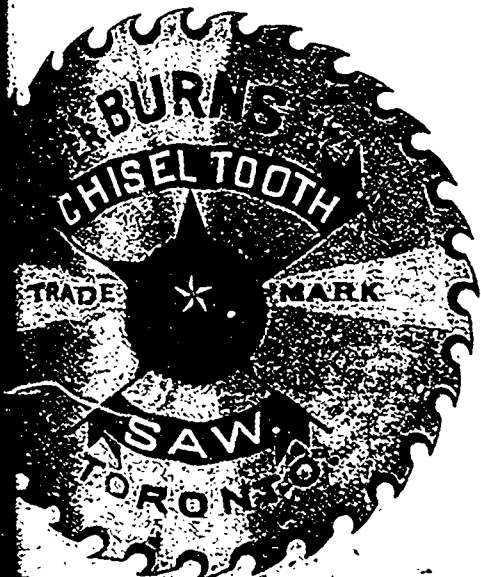
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Yours very truly, JAMES MCKINLAY.

CAMPBELLTON, N.B., Nov. 17th, 1894.

R. H. SMITH CO., LTD., St. Catharines, Ont.

DEAR SIR, In regard to your Shingle Saws, you can say that I have been using Shingle Saws of your make (Simonds) for the past four years, and they have given good satisfaction. I am running nine machines and use a good many saws, but have never had a saw yet that did not work satisfactorily. Before using your saws I used saws of American make, which worked well, but after giving your saw a trial have continued to use yours, as they are cheaper, and in regard to working qualities are all that is needed.

Yours truly, KILGOUR SHIVES.

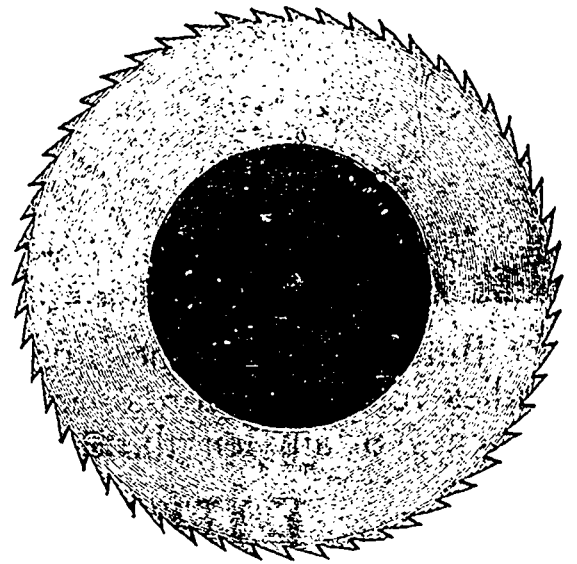
CLAWERING, ONT., May 3rd, 1897.

R. H. SMITH CO., LTD., St. Catharines, Ont.

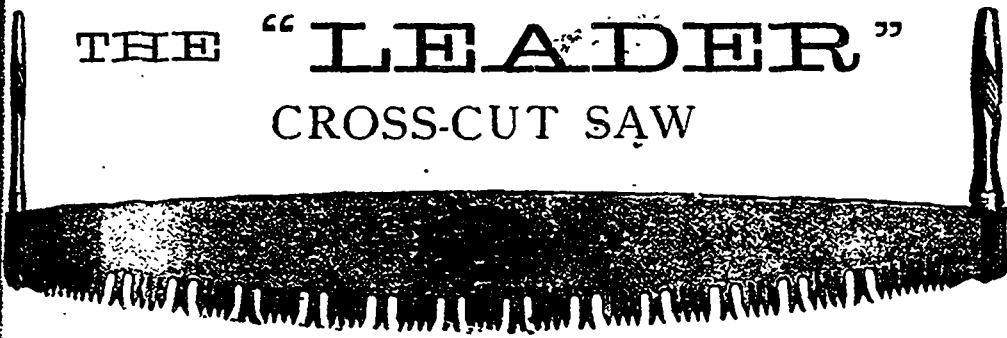
GENTS,—In reply to your letter asking me how I liked the 62" SIMONDS Saw, I must say in all my experience I never had a saw stand up to its work like the one purchased from you last month. Having used saws for the last 22 years, and tried different makes, I can fully say it is the best saw I have ever had in my mill, and would recommend the SIMONDS' Process Saws to all mill men in need of circular saws.

Yours truly, W. G. SIMMIE.

P.S.—I am sending you my old saw to be repaired; please hammer to same speed as new one. W.G.S.



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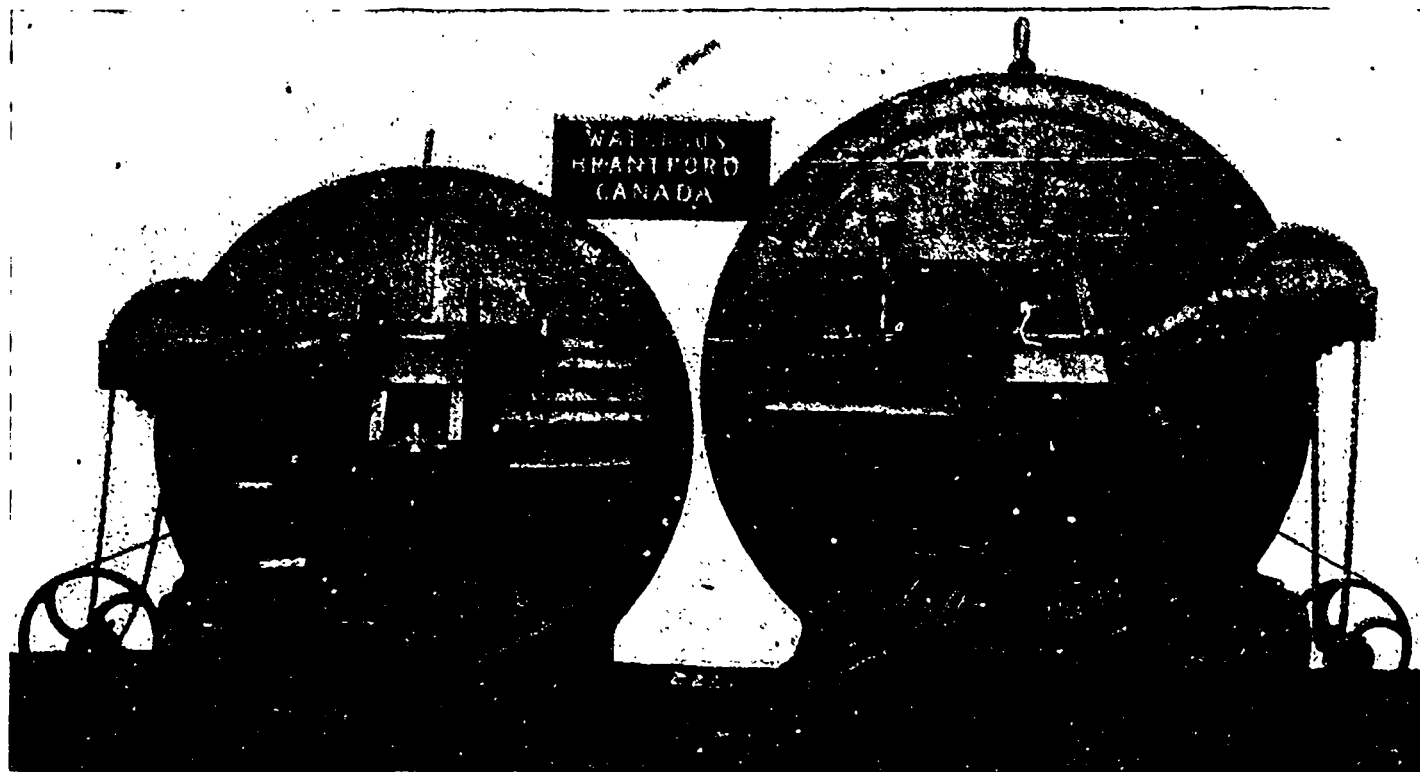


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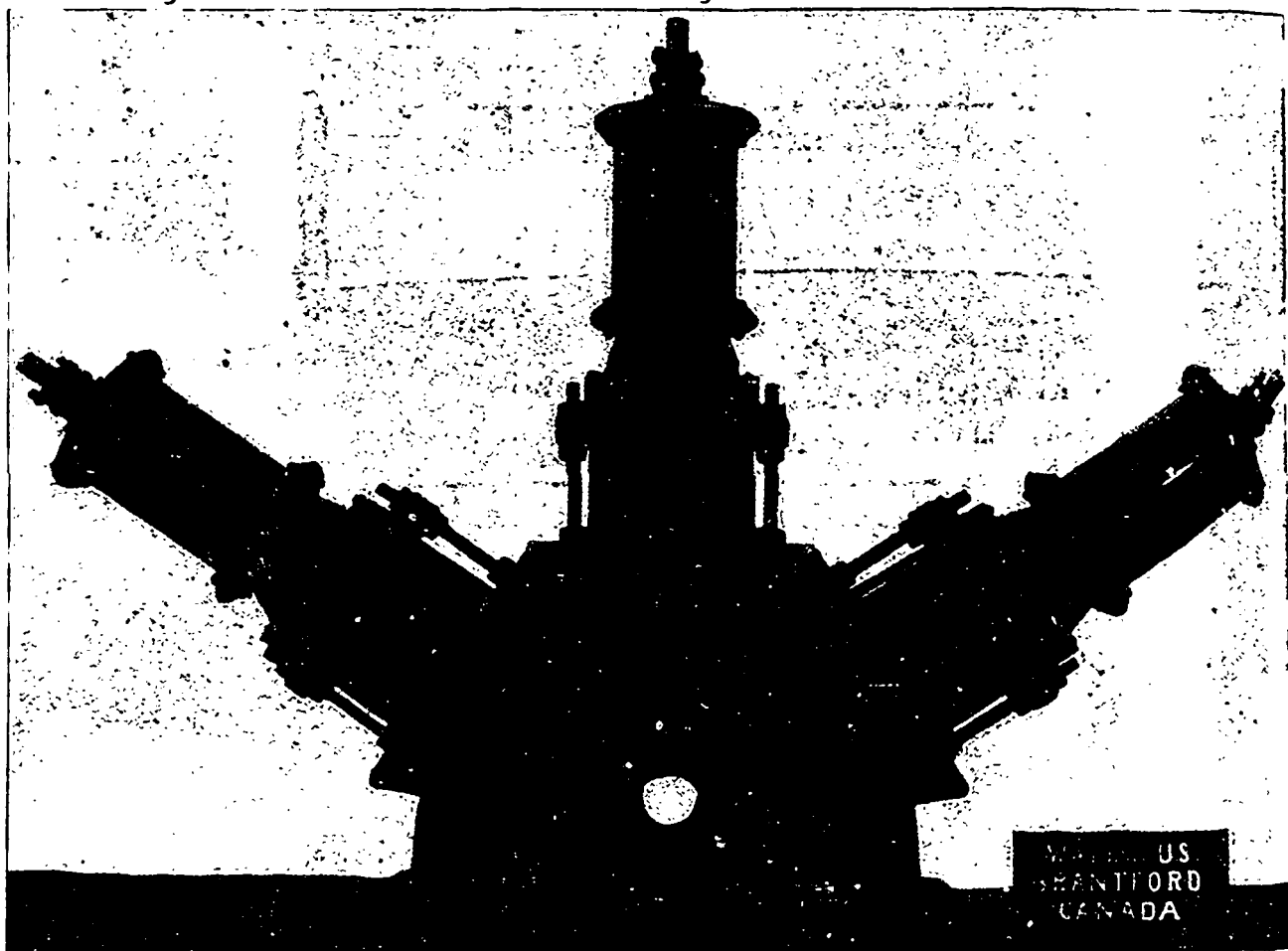
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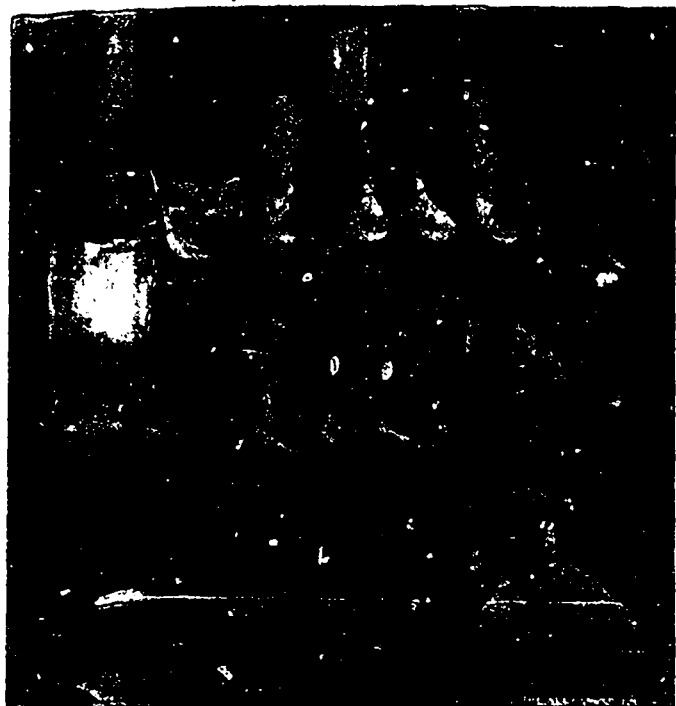
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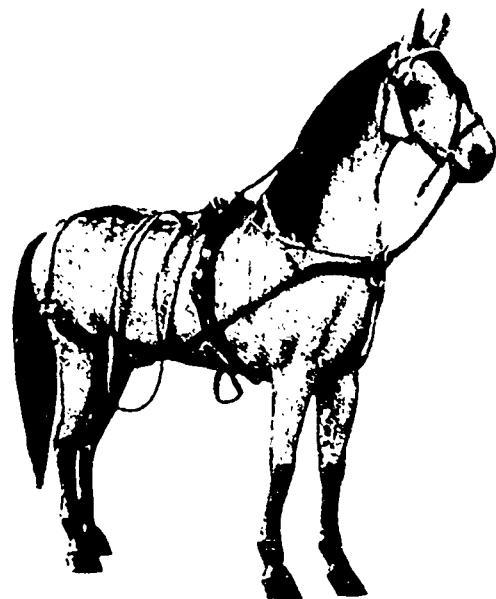
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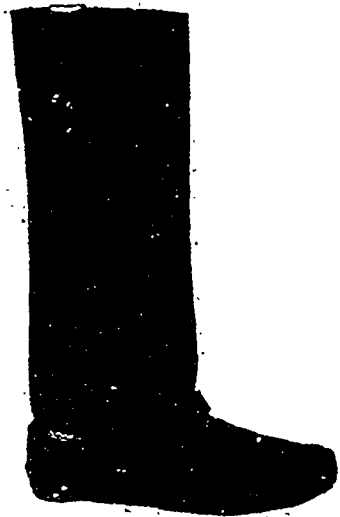
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# THE CANADA LUMBERMAN

VOLUME XXII.  
NUMBER 1.

TORONTO, CANADA, JANUARY, 1902

TERMS, \$1.00 PER YEAR  
(Single Copies, 10 Cents)

## The Cleveland-Sarnia Saw Mills Company

A Gigantic Corporation Established in Canada.—Particulars of the Immense Plant at Sarnia.—Personnel of the Company.

Industrial progress is one of the strongest indications of a country's prosperity. When the wheels of industry are turning quickly, and the raw material is vigorously being converted from its crude form into the manufactured product, then prosperous conditions are likely to prevail throughout the country. The number of industrial establishments in Canada is steadily increasing, the development of the forest resources being a field in which considerable investments have been made.

Some of the largest saw-milling plants in Ontario have been built by United States parties whose timber supply in their own country has become exhausted. The Cleveland-Sarnia Saw Mills Company, Limited, is one of the latest corporations to establish itself on Canadian soil. It is probable that this company would not now be located in Canada but for the Ontario law prohibiting the export of timber to the United States. Nevertheless, they have erected, in the town of Sarnia, one of the

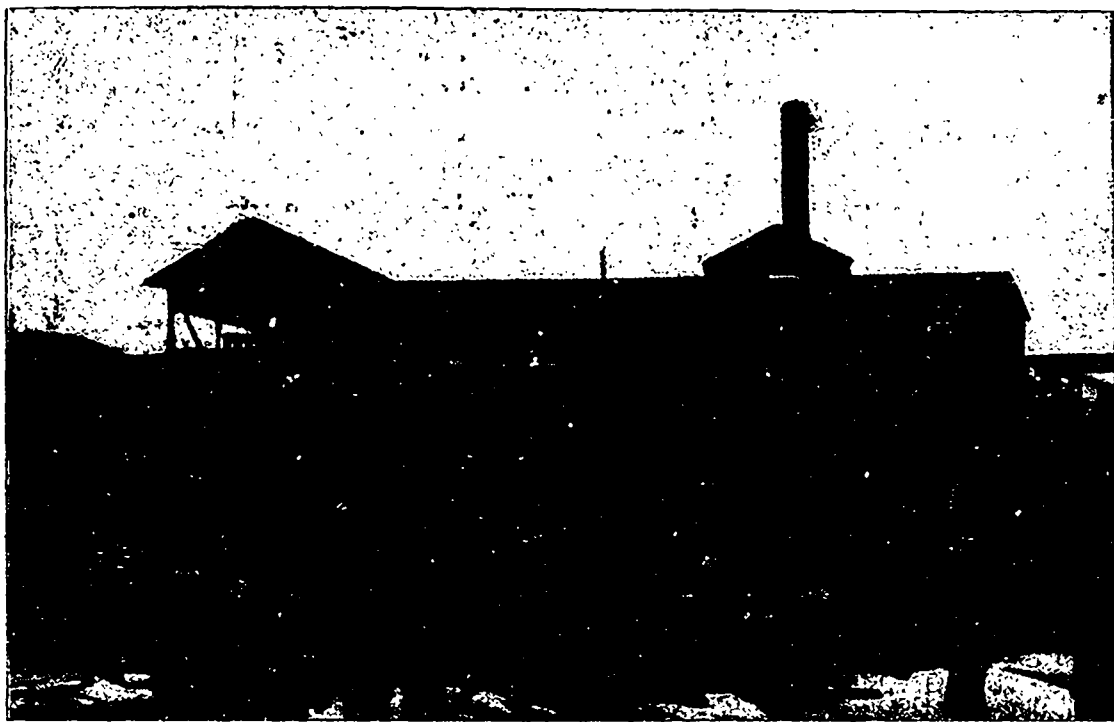
largest, most modern, and altogether unique plants to be found in the Dominion, and our reader generally will doubtless be interested in the several illustrations and particulars of the concern which are published in this number.

For many years the Cleveland Saw Mill & Lumber Company operated saw mills at Cleveland, Ohio, for the production of square timber, and also conducted an extensive lumber yard and planing mill business at the same point. The volume of business in late years has been in the neighborhood of \$1,000,000 annually. The supply of white pine was obtained from Michigan, but this supply having become exhausted, it was necessary to seek a new location for their saw mill in order that the business which they had established might be perpetuated. Hence it was decided to

locate at Sarnia, and thus be in a position to obtain a timber supply from the pine district of Northern Ontario.

### THE TIMBER LIMITS.

In recent years Mr. L. D. Holden, the president of the company, and his associates, had been investigating the white pine timber supply of the Georgian Bay district, and eventually secured options on a wide area of timber



MILL OF THE CLEVELAND-SARNIA SAW MILLS COMPANY'S SARNIA, ONT.

properties. These options have been gradually claimed, and the company are now in possession of over 43,000 acres of the best white pine timber lands. The timber is of excellent quality, and, it is said, shows a good proportion of logs running four to six to the thousand, which are smooth, sound, and of cork pine quality, and which will produce a large percentage of No. 1 lumber. The timber is all tributary to the Spanish river, which flows into the Georgian Bay and is one of the best logging streams on the continent. The logs will be rafted to the new plant at Sarnia, where storage room is provided for twenty million feet, and at Kettle Point, eighteen miles north of Sarnia, an immense surplus storage ground is provided which has a capacity of one hundred million feet of logs. The company have now available for next year's sawing over fifty million feet.

### THE MILL AND EQUIPMENT.

Work on the construction of the plant at Sarnia was commenced on April 15th, 1901, and the mill was put in operation about November 1st, notwithstanding that there was a considerable delay on account of labor difficulties in the factory where the machinery was being manufactured. The saw mills and booming ground occupy a frontage on Sarnia Bay of 2,078 feet, with a depth extending to the St. Clair river channel of nearly 3,000 feet; in fact, the main tram and piling piers are 2,732 feet in length. Lumber is piled two rows deep on each side of this tram, which will afford a piling capacity of twenty million feet. A slip on both sides affords easy access for loading lumber

on vessels, while a tramway underneath the tram provides facilities for forwarding stocks to the railroad tracks.

The main mill, illustrated on this page, will be devoted largely to sawing the best timber into boards and planks. It is 60 x 160 feet in size, with an L sorting shed attached, 40 x 140 feet, of which a view is shown. South of this mill is the timber mill, which is 40 x 204 feet in size, and will saw timber up to 75 feet in length. Between the two mills is a brick, stone and cement power house, 50 x 136 feet. The

centre of this structure is occupied by a splendid battery of six boilers, of the Dutch oven variety of furnaces, which are fired automatically. On either side of the boiler room are located the two engine rooms, each of which contains Corliss engines of the most modern type, the one running the larger mill being 24 x 42 inches in size. The entire power plant equipment was furnished by John Inglis & Sons, of Toronto.

The board mill is equipped with one right and one left hand Prescott band mill using twelve inch saws, fourteen gauge, each 48 feet 6 inches long, the right hand mill having a three-block carriage, and the left hand a four block carriage, of Allis make, latest improved type. On the left hand mill it is possible to cut any length of log up to thirty feet, and on the right hand mill short logs.





THE RESERVE LOG SUPPLY, WITH DISTANT VIEW OF SAW MILL.

The saw mill equipment is from the Allis-Chalmers Company, of Milwaukee.

Both sides of the mill are equipped with live rolls, one string extending to the transfer table inside of the mill, the other string running through to the outside of the mill to convey timber to the platform located there. The mill is equipped with two Allis edgers, where the entire product of the mill, four inches and under in thickness, passes through and drops onto a transfer table, being conveyed at right angles with the mill over the trimmer into the

sorting room. The equipment also includes a timber trimmer, which trims any size of timber, and preparations have been made to install a Mershon re-saw during the coming winter.

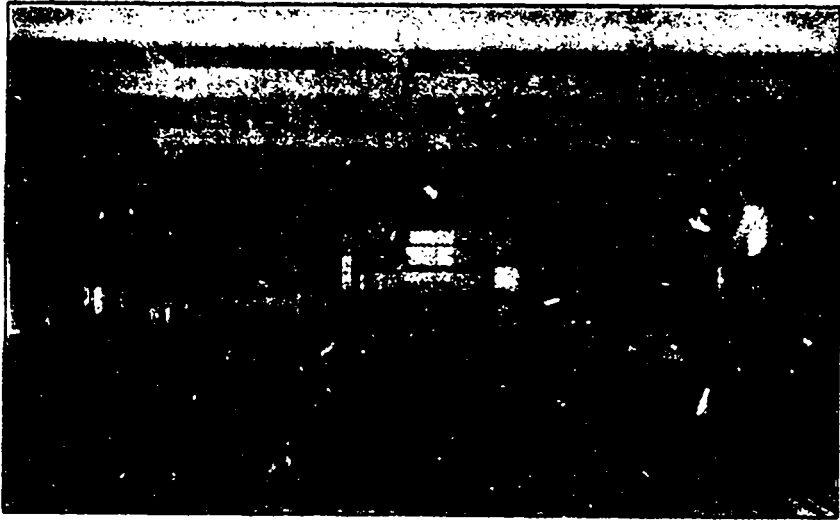
The mill frame is of the most substantial character, and is placed upon massive foundation, while the general equipment has strength enough to handle timber of the largest size.

The timber mill is equipped with one band mill, one long carriage made in two sections, and the necessary live rolls, jump saws, lath mill, steam niggers, and stave and heading

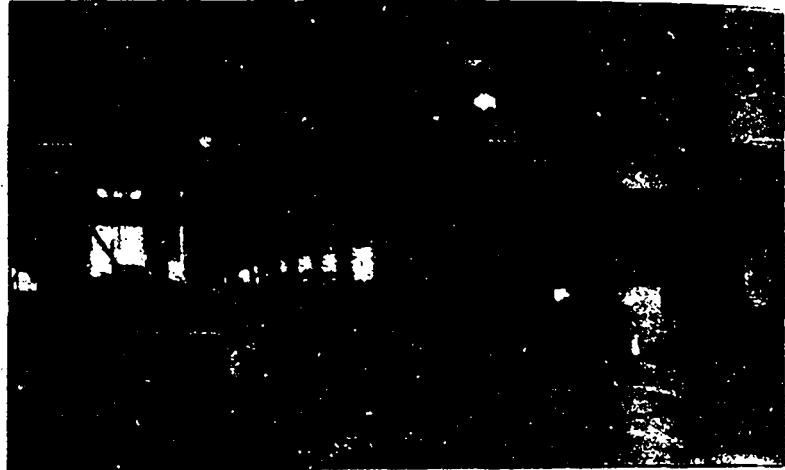
machinery. Machinery has also been installed for the manufacture of curtain rollers.

The timber mill is equipped with a gigantic timber planer capable of dressing four sides at one operation immediately upon leaving the live rolls. A long timber loading dock connects with this mill, having ample room to accumulate numerous timber bills, thus enabling the company to saw, group and load orders in a comprehensive and economical manner.

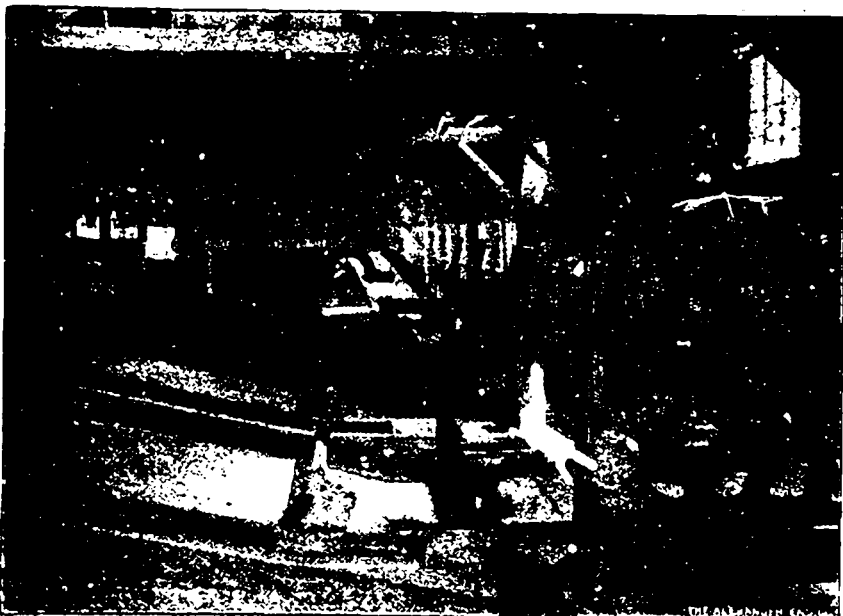
The company will be able to ship by both rail and water. The lumber will be assorted



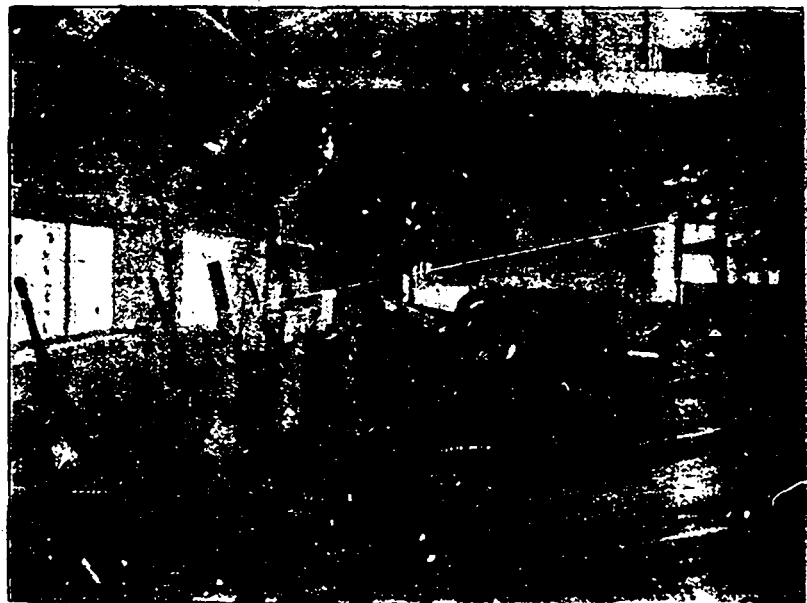
LOG DECKS.



INTERIOR VIEW OF MILL.

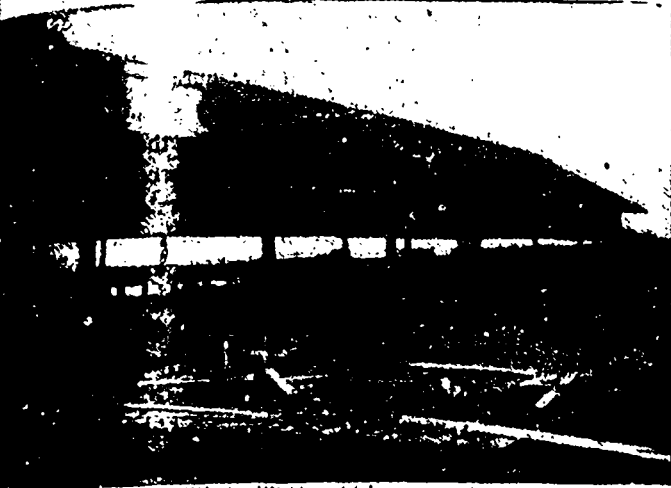


LEFT HAND BAND MILL.

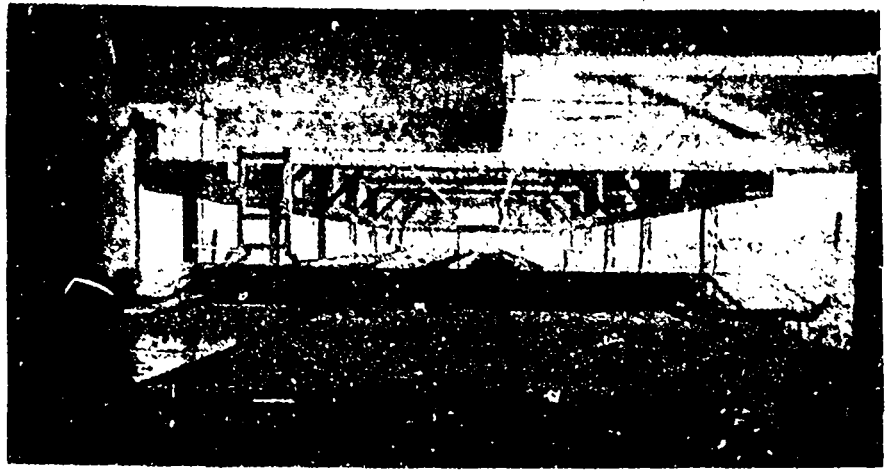


RIGHT HAND BAND MILL.

VIEWS OF THE PLANT OF THE CLEVELAND-SARNIA SAW MILLS COMPANY, LIMITED, SARNIA, ONT.



THE SORTING SHED.



INSIDE OF SORTING SHED.

to regular yard grades and handled automatically by the most modern sorting appliances. The location of the plant furnishes exceptional facilities for prompt distribution of lumber. By vessel the chief lumber distributing centres at the head of Lake Erie can be reached in twelve hours. By rail there are five lines of outlet, including a chief trunk line from Chicago to Buffalo, with branches that cover all parts of Michigan and Canada. As a matter of fact, Sarnia is the centre of the largest white pine consuming territory in the United States and Canada. The quick delivery possibilities of this plant will be a great factor in securing a very large share of the rush order business of the country in white pine lumber. It is also an exceptional plant in the particular that it can promptly furnish white pine timber bills. This assures the company an extensive trade throughout the Central and Eastern States and Ontario.

The company have some 400 men at work in their camps in Foster township, where they are putting in the present winter some twenty-five million feet of tree lengths pine.

The company have just erected a derrick and belt house at Sarnia, and are sinking two salt wells, it being the intention to erect what will be the largest salt plant in Canada.

PERSONNEL OF THE COMPANY.

The president of this extensive organization is Mr. L. Dean Holden, who is also its treasurer. Mr. Holden is interested in many other important commercial enterprises, and is well versed in the lumber business. His brother,

Mr. L. B. Beider is assistant secretary and Mr. E. C. Barre general superintendent. Mr. Frank Coleman, formerly saw mill superintendent of the Cleveland plant, and for twenty years with the Mitchell & Rowland Lumber Company, of Toledo, will occupy a like position with the new company, and will be backed by able assistants in the various departments of the business.



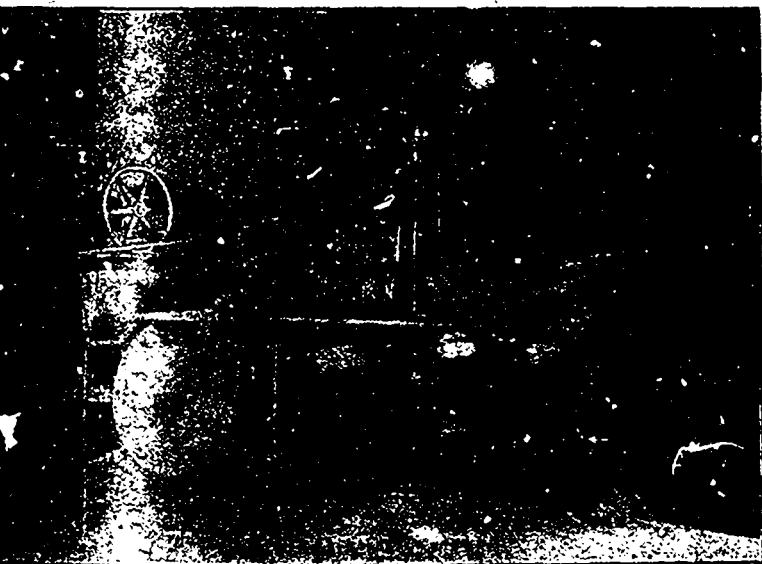
PART OF THE POWER HOUSE.

Mr. A. F. Holden, is vice-president of the company. He is also a man of large business experience, although only recently associating himself with the lumber trade. The secretary and general manager of the concern is Mr. J. M. Diver, to whom is due the splendid arrangement and equipment of the Sarnia plant.

LUMBERING OPERATIONS IN SWEDEN.

A royal commission, which was appointed to investigate the depopulation of Northern Sweden through the operations of great lumber companies, has made a report in favor of the immediate introduction of a bill prohibiting sales of forest lands in the Provinces of Norland and Dalecarlia to lumber companies until 1905. The commission finds that the peasantry in those provinces is in danger of extinction, the lumber companies laying waste farms and nursing only the forests.

The evils thus brought about are so great that immediate temporary measures are demanded. The commission suggests that after 1905 final legislation be adopted regulating the operations of lumber companies and based on the detailed investigations of the commission.



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FILING ROOM.

# THE Canada Lumberman

MONTHLY AND WEEKLY EDITIONS

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IMPERIAL BUILDING, MONTREAL.

The LUMBERMAN Weekly Edition is published every Wednesday, and the Monthly Edition on the 1st day of every month.

#### TERMS OF SUBSCRIPTION:

One Copy, Weekly and Monthly, One Year, in advance.... \$1.00  
One Copy, Weekly and Monthly, Six Months, in advance.. .50  
Foreign Subscription, \$2.00 a Year.

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 especially interested in it, who should not be on our list. By obtaining the present benefit and aiding and encouraging us to render it even more complete.

## Bank of Prosperity

Toronto, January 1st, 1902.

At sight pay to

Every subscriber of the THE CANADA LUMBERMAN  
Three Hundred and Sixty-Five Happy Days.

Value Received.

The C. H. MORTIMER PUBLISHING CO.  
of Toronto, Limited.

### ANOTHER YEAR.

With the present number THE CANADA LUMBERMAN enters upon its twenty-second year of publication. What this year may bring forth cannot be declared, but, taking the one gone by as a criterion, we are justified in looking forward to a period of prosperity and advancement.

The first year of the new century brought no serious obstacles to the lumber trade. Lumbermen generally have been prosperous. There have been a few dark spots on the horizon, but they are passing away, and the year 1902 promises to find Canadian lumber of all kinds in good demand.

THE CANADA LUMBERMAN has continued to receive the hearty support of the lumber trade and of a large clientele of advertisers. Many evidences of the appreciation of our efforts to make the journal useful and instructive have come to us from readers from the Atlantic to the Pacific, as well as from many in Great Britain, where the journal is now widely known and largely circulated. Our representative who recently returned from the Mother Country reports a steadily increasing interest there in the timber products of Canada and a growing disposition to trade with the Colonies.

This year we hope to be at the helm as usual, and shall endeavor to render the best possible service to the lumber trade, and twelve months hence, to be able to chronicle another year of prosperity.

To our readers, advertisers, correspondents and the lumber trade generally, we extend the Season's Greetings.

### THE INSURANCE AND PROTECTION OF FORESTS.

It is learned from a British insurance journal that in some countries of Europe the insurance of forests has received considerable attention, and that in rare instances risks of this character have been accepted by the underwriters. In Germany, for instance, forests are known to have been insured. The question so far as we can learn has never been seriously considered in Canada.

It seems doubtful whether it would be found profitable for insurance companies to accept the risk of forest fires in this country. Much difficulty would be encountered in ascertaining the value of the property and thus of fixing an adequate premium, while in the event of an outbreak of fire gaining progress, the great extent usually devastated would prove disastrous to the insurance companies. In Germany the conditions are different. The forests are laid out in squares and adequately protected, and there is not the abundance of underbrush to feed a fire that is to be found in Canada.

Until forests are much better protected than at the present it would be suicidal for the underwriters to accept such risks. The government of Ontario has perhaps taken more progressive steps towards forest protection than that of any other province of the Dominion, yet the measures that have been adopted are by no means sufficient to adequately protect the forests from fire. Take, for instance, the fire which occurred last summer in the Temiscaming district, when millions of feet of spruce and pine timber were destroyed. The fire, it is believed, was caused by settlers, who almost invariably take little precaution to extinguish a fire. If we hope to properly conserve our forest wealth, it will be necessary for the government to adopt more stringent laws governing the setting out of fires, and, in fact, to prohibit the starting of fires by settlers unless under the direction of a Crown official. Such a law would not retard settlement, but would simply be the means of saving the country many million feet of timber annually.

What has been accomplished by the government fire rangers on the pine timber limits is sufficient to prove the efficacy of a system of fire protection. Where fire rangers have been employed the loss has been greatly curtailed. It is impossible, of course, to bring about complete immunity from fire, as lightning or some unknown cause will occasionally start a fire which will attain such headway that it cannot be overcome until considerable damage has been done.

The spruce forests of Ontario should not be neglected in the application of a system of forest protection. In the Temiscaming district the average production of spruce is about five

acres per acre. This is now granted to settlers for the sum of fifty cents per acre. These settlers do not value the timber, but simply the land. It is all the more necessary, therefore, that the government should protect the timber from fire, otherwise that great spruce district will in a short time be completely wiped out. In exploring for minerals and timber, a party of surveyors, representing a well-known syndicate, are said to have exercised no precaution whatever when setting out fires in the woods, with the result that they are believed to have been responsible for many of the fires that have occurred in Northern Ontario.

There can be no more effectual way in which the government can expend a few thousand dollars annually than in further protecting the forests. If immediate steps are not taken we will find that in a short time our position in respect to timber supply is no better than that of the United States, Great Britain, Germany and other countries.

### LUMBER STATISTICS.

One of the needs of the lumber trade of Canada is lumber statistics. The statistics now available are confined almost exclusively to the tables of exports and imports compiled by the Dominion Government. These are good enough of their kind, but are of little value to buyers in foreign countries, and, owing to their inexplicit classification, not particularly useful to the home trade. Little or no effort is made by our lumbermen to place before buyers and consumers figures respecting the conditions of the trade, as is done in nearly every other country.

In the United States the eastern spruce field is represented by the New England Lumber Manufacturers' Association; the pine district of Lake Superior by the Mississippi and Wisconsin Valley Lumbermen's Associations; the yellow pine of the south by the Southern Lumber Manufacturers' Association, and so on throughout the lumber producing districts. These associations compile and place before the trade at regular intervals figures showing the lumber production, quantity of unsold stock, and other information which is found most useful. In Great Britain, the greatest lumber importing country in the world, statistics are issued by the Boards of Trade from time to time which show the actual condition of lumber stocks and, accordingly, of the lumber market.

The policy of the lumber manufacturers of Canada in the past has been to conduct their business in such a manner that their neighbor, as it were, would know little of what is being done. The Georgian Bay manufacturers are not in touch with the producers of the Ottawa Valley, notwithstanding that the production of both districts is in a large measure sold in the same markets. It is not in the best interest of the industry that this condition should continue. The day for clandestine operations has gone by, and the tendency is towards reasonable publicity of the actual conditions existing in a business.

Lumber statistics cannot be collected except with the co-operation and assistance of lumbermen. An improvement in this direction,

would seem, could best be accomplished by the formation of lumber associations throughout the Dominion, one covering British Columbia and Manitoba, another for Ontario and the Ottawa pine district, another for Quebec, and a fourth for New Brunswick and Nova Scotia. It may be said that none of these provinces are now represented by a proper organization, as even in the case of Ontario the existing Lumbermen's Association is almost solely a western Ontario organization.

There is urgent need of greater unity among the lumbermen of this country, one of the main advantages of which would be the preparation of statistics bearing upon the trade. This would doubtless result in a proper recognition of our importance as a lumber producing and exporting country, and benefit would certainly accrue to the trade in general. The matter might well be considered at the forthcoming annual meeting of the Lumbermen's Association of Ontario.

EDITORIAL NOTES.

The use of metal and other varieties of shingles has evidently not lessened the de-

even these seem to have a promising future. Since the prohibition of the export of Ontario logs, the market for Canadian pine has broadened, and it is now sold in sections of the United States where previously it was almost unknown. A remarkable instance was the recent shipment of pine lumber to Chicago by Mr. J. R. Booth, of Ottawa.

During the last month the lumber trade of the United States have been much interested in the exposures which have been made concerning the doings of the Chequassett Lumber Company. The transactions were apparently of a most questionable character, and finally terminated in the winding up of the company by the banks. An interesting feature of the case is the explanation of how a large sum of money was lost by the piling of lumber. The yard at Asheville, North Carolina, was originally used in connection with a large band saw mill. The tramways were very high, in some places as much as twenty feet above the surface of the ground. At one time the company had 3,000,000 feet of lumber in the yard, and to economize room the piles, instead of being topped

A MODERN SHINGLE MILL.

From the ruins of the shingle mill of the Spicer Shingle Mill Company, of Vancouver, B.C., has risen a mill of larger capacity and better equipment than that which was destroyed by fire on May 26th last. The new mill has now been in operation for over four months and is giving excellent satisfaction and turning out shingles in large quantities. The mill proper is a two storey frame structure 35 x 110 feet, with a boiler house 35 x 60 feet. The power is furnished by three 60 inch x 14 foot boilers, and a slide valve engine 18 x 36. The power is distributed by a four inch shaft 100 feet long.

The equipment of the mill consists of seven latest improved type of Dunbar machines, designed by Mr. F. Johnson and built by the Schaake Machine Works, both of New Westminster, B.C., also automatic saw filing and automatic regrinding machines and all other machinery required in an up-to-date shingle mill.

The boiler house is detached from the mill and is constructed of iron on a light wood frame. Both buildings are whitewashed on the inside from a receipt furnished by the Board of Fire Underwriters. The mill building, boiler



SHINGLE MILL OF THE SPICER SHINGLE MILL COMPANY, VANCOUVER, B. C.

mand for wood shingles to any extent. Throughout the past year they have been in strong demand. It would seem that either the consumption has increased or the production decreased. We do not think that the latter is the case except, perhaps, as regards white pine shingles. There is no shingle more in favor to-day than the white pine, but the scarcity of them, doubtless due to the enhanced price of pine stumpage, has caused some dealers to turn their attention to other qualities. The white and red cedar shingle has been used very largely, and spruce and hemlock to a smaller extent.

There can be no disputing the fact that white pine lumber is steadily becoming more valuable. It is doubtful if ever before in its history the position of white pine has been as strong as it is to-day—not excepting the prosperous year of 1899. The upper grades are annually becoming less plentiful, and the low prices of a few years ago are not likely to be ever reached again. As to the lower grades there is more uncertainty, owing to the larger supply, but

off level with the tramways, were carried up from 75 to 100 courses higher. The lumber, which was largely oak, remained on sticks for some time, and when taken down practically every board up to about the level of the tramways was split at each crossing of the piling sticks. It is said to have been caused by the superimposed weight on the lower boards, preventing any lateral movement or slip at the piling stick as the board contracted in drying. This is probably true, as every lumberman will have noticed the greater width of a board, which has been long in a large pile, at the point where the piling sticks cross it. This is a matter to which lumbermen should give attention, so that the quality of their lumber may not be impaired.

Pine and hemlock stumps and old logs that were supposed to have become worthless years ago, are being gathered in Northern Michigan to be manufactured into lath.

Timber should be cut down when the sap is at rest, that is, in the middle of summer or in the middle of winter. The latter is by far the more preferable. The ancients knew this as well as we do.

house, dry kiln, blacksmith's shop, dwelling house and office are painted with a fire-proof paint, reducing the fire hazard to the minimum. Three lines of iron rails extend from the mill through the dry kiln to railway siding, thus necessitating no handling of shingles until they are ready for loading on the cars. The capacity of the mill is 100,000,000 shingles a year; dry kiln, 2,500,000 shingles; storage sheds, 7,000,000 shingles.

Mr. H. H. Spicer, the head of the company, has been connected with the shingle business for many years and is thoroughly conversant with the wants of customers. The company, besides a good local trade, are making large shipments of shingles to Manitoba, Ontario and other Eastern points, and report a steadily increasing business.

The Phoenix Oil Company, of Cleveland, Ohio, manufacturers and dealers in lubricating oils, graphite greases, etc., have opened Canadian offices at Room 25 Janes Building, corner King and Yonge streets, Toronto. This firm make a specialty of Murphy's famous Green Seal belt dressing. Mr. P. R. Hood is manager and Canadian representative.



Mr. James Hardie, of Owen Sound, gave up farming a few years ago to engage in lumbering. In order to add to his success in that line he recently became a subscriber to THE CANADA LUMBERMAN, so that he might know what the other fellows in the trade were doing. Mr. Hardie was born in Owen Sound more than half a century ago, and has lived there continuously ever since. He has had the pleasure of seeing the town grow from a hamlet of three or four buildings to the dimensions and importance of a small city. It is now one of the most important shipping ports on the great lakes, the river entrance to the harbor, nearly a mile long, being at present lined as thickly as possible on both sides with iron vessels engaged in the lake trade in grain, lumber, ores, etc. In view of the great industries now being established at Sault Ste. Marie and other points in New Ontario, and the rapid development of the resources of this territory as well as of the Northwest, Mr. Hardie foresees a great future before his native town. THE LUMBERMAN hopes that he may live another half century or so and witness even greater developments than he has yet seen.

\* \* \*

I learned from Mr. R. Cook, of South River, when in Toronto before Christmas, that he expects to bank the usual quantity of logs this winter, in the vicinity of 6,000,000 feet. Weather conditions, he says, were favorable for logging operations until about the first week in December, when snow fell until it reached two and one-half feet in depth, and the cutting and skidding of logs had to be abandoned about one week earlier than usual. Mr. Cook reports labor to be quite plentiful at present, which is in contrast to the conditions prevailing previous to the middle of November, at which time nearly all the mills had closed down for the season. Before then woodsmen were very scarce, and it was difficult to keep the camps in operation, as many of the men, after working a short time, would lay off work or leave, knowing that they could easily secure employment elsewhere. The extent of this trouble may be judged from the fact that when Mr. Cook visited the camps on a certain Thursday he was told by the foreman that he was well supplied with men, but two days later he received a letter asking that ten be sent immediately, that number having absented themselves in the meantime. At another time he had one gang in the woods, another on the way out, and a third going into work. These difficulties, however, have now been overcome.

\* \* \*

I notice in a late issue of the American Lumberman a character sketch of Jacob Cummer, who was born in Canada in 1823, and whose father, John Henry Cummer, was the first white child born in Toronto. The date of his father's birth was 1797. The parents of John Henry Cummer moved from Pennsylvania to Canada at an early date. He was a lumberman in a small way, and his son Jacob was

scarcely out of his boyhood when he succeeded to his father's business. Operating chiefly in Michigan white pine, he built up a large trade and was eminently successful in timber investments. In later years he acquired timber holdings in Florida and built a magnificent saw mill at Jacksonville. Mr. Hollister, manager of the Old National Bank, of Grand Rapids, Mich., relates an incident which contributed to Mr. Cummer's success in business. Mr. Cummer had a balance of a few thousand dollars in the bank. He went to Mr. Hollister one day with the statement that he wished quite a sum of money to take back with him to Canada to pay a bill. He explained that it was not a debt he owed, but a matter that he regarded as one of honor and he wanted to pay it. Mr. Hollister provided the money and Mr. Cummer made his trip to Canada. The impression this incident made on the minds of the bank manager and his associates served Mr. Cummer in good stead some years after when the panic of the early seventies appeared. He was loaded down with lumber and had to borrow a considerable amount or sacrifice his stock at ruinous prices. It required only a suggestion on his part to obtain all the funds necessary from the First National Bank to carry him through that difficult financial period.

\* \* \*

A writer in the Mississippi Valley Lumberman commends the policy of the Ontario Government in handling timber lands. He says: The government is certainly entitled to a great deal of credit for the efficient and business-like way in which they have handled their timber lands. Every inducement has been offered to responsible parties to encourage them in building up the lumber industry across the border, yet any attempt at fraud has been dealt with very summarily. This policy is in direct contrast with the way in which a great deal of the public of the United States has been gobbled up by a lot of shrewd schemers and politicians. Apparently it has not been very difficult to get through Congress or one of the departments some enactment which permitted individuals, companies or railroad corporations to acquire possession of a lot of the very choicest holdings of the government. There are many cases of where parties have been permitted to relinquish absolutely worthless lands and take in exchange much of our wonderful resources. The Canadian government would long ago have been bankrupt if it had not been for the way in which they administered their public lands. I remember years ago I was connected with the company that had an extensive business across the border. We had leased a number of timber berths from the proper authorities, but our manager thought that there was an opportunity to take advantage of the generosity of the government to still further increase our holdings without a very large outlay. By an enactment bona fide settlers were permitted to come in and take up a very large tract of land, agreeing to pay something like \$3 an acre. They were, however, permitted to pay this in installments running three years without interest. The manager got together all the men in their employ that he could possibly spare and even induced a few outsiders to come in for a small consideration and had them file on certain of the very choicest timber lands. Of course the company, paid the first installment of 50 cents and immediately had the different men sign over their rights to the company, the plan being that as soon as they were properly passed upon, considerable of the timber could be cut without much delay. However, the proper authorities turned down every one of those applications and confiscated the 50 cents an acre which had been paid. In rendering their decision, they intimated that they were perfectly willing to go into other

deals on the same basis. Course, our company had to stand the ss, because would not have been diffic would have been difficult that we were attempting to The great advantage which the border have always had is they do not hesitate to make a decision then the den of proof is upon the individuals, it be said, however, to their that mi few cases have been found where inno persons were unjustly or ha treated, they certainly do not waste time of pathy on law breakers."

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The annual feast of the Saginaw Lumber Dealers' Association is one of the landmarks of that society. For the twelfth time members gathered in the East Saginaw on December 10th last. The speeches were mostly of a reminiscent character, and it was said that has a tinge of interest for Canadian lumbermen. John Estabrook gave a recital of the rise and decline of the white pine industry of the State of Michigan. He said that when he remembered the rise of the lumber industry of the Saginaw river to over a billion feet produced in 1882, and that one mill is now devoted solely to the manufacture of white pine, it made him feel as if his friends, the saw mills, had deserted him. In 1860 he bought lumber at \$2.50, \$5, \$12 a straight, if it could be found. R. H. Roys, the Saginaw Lumber & Salt Company, who is known to many Ontario lumbermen, contrasted the old conditions with the new, pointing out that lumbermen are obliged to follow the operations to Ontario. The men, he said, who first learned to lumber on the Coldwater on the Salt, and on the Cedar rivers, and contended with low banks, shallow flats and sand bars in the spring drive, were up against a different proposition amid the rocks and hills of the Georgian Bay country. The shanty men, too, who in former time gathered in the little hotels ready to go up the Michigan Central or the Flint and Pere Marquette Railroad to the lumbering camps, had become a thing of the past. Now the Georgian Bay lumbermen send an agent clear down the Ottawa river to Ottawa itself, hundreds of miles, when he comes up with the crew men are scarce that the foreman reports that the company saved near half the railroad fares by having the younger fellows sit on the old mauls, working them through on half fare. After viewing one motley collection of grizzled beards and whiskerless faces, in disgust he ejaculated, "Great Scott! We rob the cradle and the grave." Coming to the subject of white pine stumpage, Mr. Roys said that little over a decade ago the lumbermen would go out and buy stumpage on the Spanish tributary streams for one dollar a thousand, and frequently pieces were snapped up at less than that price. In contrast, notice the prices obtained by the Ontario Government in September last, when portions of townships back of the "Canadian Soo" brought ten dollars a stumpage, according to the reports of some of the timber cruisers. One man whom he saw to make an examination reported good timber but thought it would have to be lumbered by balloon, the hills were so high, the creeks so small, and the timber so scattered. "One singular thing about this rocky territory," said Mr. Roys, "is that fires must have swept for centuries, for on a winter night we were making some years ago the woods were kicked out of the mossy ground in fragments of charcoal, and looking at the pine trees evidently over one hundred years old that were cutting on the same ground," said the country must have been swept by fires long before our day."

CORRESPONDENCE

SAWING FROZEN LOGS.

LISCORVILLE MILLS, N.S., Dec. 18, 1901.

CANADA LUMBERMAN:  
SIR,—After seeing on page 9 in your monthly issue of the LUMBERMAN the question about sawing hardwood, I may say that if the logs are not full of knots, if saws are properly hammered and teeth shaped, you can make better and even lumber from frozen logs, as the log will not spring when cut through the heart of the log. You need not slow up if you have plenty of power and the right kind of saw. If the party will send me the exact make of his saw, a templet of teeth, I will be glad to try it with him and tell him if his saw is right for hardwood. No man can do good work in frost easing logs up the feed.

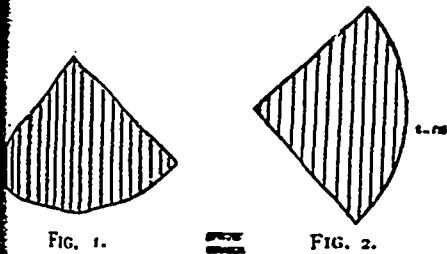
For cleaning dirty and gravelly logs I have used a Penberthy injector with some piping from in front of rubber hose was connected. I then put a pipe from dome of boiler, connected in some way to heat the water hot, then a boy to handle the pipe and play it on the logs and skidway before rolling them in the mill. If a little care is taken you can clean logs perfectly clean, and if they are not affected about frost if not more than 20 below zero it will work some harder.

Reason I write this is that I know it to be so, because I have worked in the Adirondack mountains in New York for five winters sawing hardwood boards. It was years before I knew how to properly fit and use saws.

Yours truly,  
M. J. KILLAM.

QUARTER-SAWING.

CANADA LUMBERMAN:  
SIR,—An article on quarter-sawing appeared in the November number of the CANADA LUMBERMAN. The method of sawing adopted by the author of this article being entirely different from what I have been accustomed to, I would like to know which is the correct way to do the work. His method is to cut the log into quarters and lay it as shown in Figure 1, with the bark down. The way some sawyers have advised me to do is to quarter the log and then lay it as in Figure 2,



the bark against uprights of saw carriage. The circular lines shown in both drawings is the way the boards are sawn. Will some of your readers kindly let me know as to the correct method?

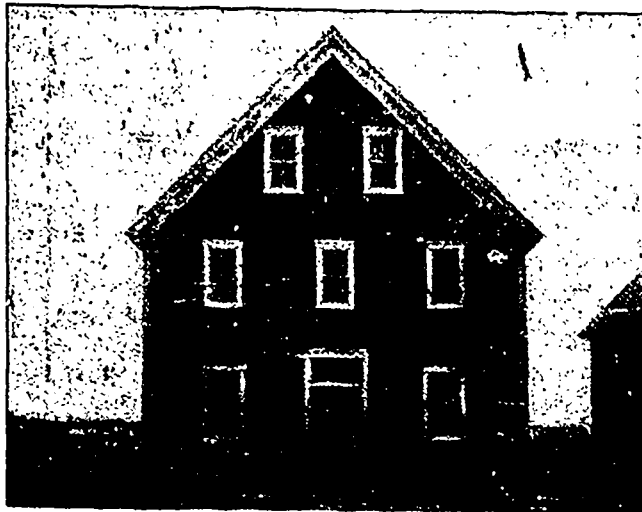
Yours truly,  
"SUBSCRIBER."

THE "ROSSENDALE" MAY-WOVEN BELTING.

Learn from Messrs. R. H. Buchanan & Co., of Montreal (who handle the "Rossendale" belting), that they are sending these belts out very extensively to pulp and paper mills, who speak very highly of them being specially adapted for damp work. It will be well to note that the "Rossendale" belting can only be obtained from the agents here in Canada, and that we carry the largest stock of woven belting in the Dominion. We mention this because we learn from several Canadian firms have enquired from the Rossendale Co. direct to Manchester, England, only to be referred back to their agents in Montreal. Messrs. Buchanan & Co. are being ably assisted by the Rossendale Company's own representative, Mr. W. E. Rossendale, of Manchester, England.

JAMES P. SHERRY.

Attention is directed to the advertisement of James P. Sherry, Memramcook, N. B., manufacturer and dealer in shoe packs, larrigans, lumbermen's hand-made boots and shoes, lace leather for belting, harness, etc. Mr. Sherry succeeded his father, the late Owen



TANNERY OF MR. JAMES P. SHERRY.

Sherry, twenty-one years ago, the business having been established by him in the year 1851 as a general store. With close attention to business Mr. Sherry has increased his business to such an extent that it is one of the largest jobbing and retail stores in the provinces. Mr. Sherry thought there was an opening for manufacturing, and in the year of 1899 he erected a building 80x35 feet, three storeys, with engine room and out-buildings attached. A tanning mill was added and modern machinery installed necessary for a well equipped shoe, harness, larrigan and shoe pack factory. The hides are brought in in their rough state and afterwards turned out into manufactured goods. This branch of Mr. Sherry's business has been in operation ever since that time and is gradually increasing, giving employment to a large number of men.

In addition to the above factory, Mr. Sherry carries on a large jobbing and retail business. The main store is 80x35, three storeys and basement, a second store 100x35, two storeys, together with four warehouses which give ample accommodation to exhibit his large stock of goods. Memramcook is situated on the main line of the I. C. R., thus affording convenient shipping facilities to all points.

LUMBER CONSUMPTION.

Dr. N. H. Eggleston estimates that the United States consumed last year more than 36,000,000,000 square feet of sawn lumber alone. This amount of lumber would load a train of cars long enough to encircle the earth at the equator. If to the sawn lumber be added the timber, the railway ties, the telegraph poles, the posts for fences, and the wood cut for fuel and for mining, the train of cars would have to be 100,000 miles in length, or long enough to reach four times around the globe. The annual consumption of wood in the United States is 350 cubic feet per capita, says Dr. Eggleston, whereas in Germany it is 40 cubic feet and in Great Britain only 14 cubic ft.

THE LATE J. W. McRAE.

Many lumbermen throughout Canada and the United States learned with regret of the death of Mr. John W. McRae, of Ottawa. Deceased, who accidentally shot himself in his office a few days ago while cleaning a revolver, was well and favorably known to the trade.

Mr. McRae was born in Renfrew on January 31st, 1848, and for the past 30 years had resided at Ottawa. He entered upon the forwarding business, and was for many years vice-president of the old Ottawa and Rideau Forwarding Company, which has since been incorporated in the Ottawa Forwarding Company. Mr. McRae was also a leading promoter of the Ottawa Transportation Company, which now handles all the lumber shipped from Ottawa by barge. In the latter concern he became actively and prominently identified with the lumber interests of the Capital. He was secretary and treasurer of the latter company for

years. Mr. McRae was also well-known as one of the strongest workers in the development of power at the Chaudiere. He was one of the organizers of the Ottawa Electric Street Railway, the first of its kind in Canada. He was also prominently associated with several other successful enterprises.

The fire on April 26th, 1900, dealt him a severe blow, as it wiped out several of the industries to which he had subscribed capital, two being the Ottawa Paper Company and the Dominion Carbide Works. The latter had just before the fire been rebuilt after an explosion which wrecked them.

In his death, Ottawa loses one of its most energetic and generous citizens. Associated



THE LATE J. W. McRAE.

with Mr. McRae at different times were Mr. J. R. Booth, Mr. E. B. Eddy and Mr. Denis Murphy.

As a young man Mr. McRae was identified with the business of Mr. L. Barnes, an extensive lumber operator of Burlington, Vt. There he learned the lessons of the trade that stood him so well in Ottawa.

## THE NEWS

Andrew Wood has built a saw mill at Wyevalle, Ont. A new mill has been built at Abbotsford, Ont., by a Mr. Johnston.

D. A. Huntley has enlarged his saw mill at Parrsboro, N.S.

The mill of Baillie & Company at Bonfield, Ont., has been purchased by Klock Bros.

James Forman, a lumber dealer at Alexander, Man., is advertising his business for sale.

W. B. Maclean, of North Bay, Ont., is enlarging his saw mill and putting in another boiler.

It is understood that O. G. Anderson, of Woodstock, is looking for a site for a chair factory.

A branch yard has been opened at Franklin, Man., by T. Harrison & Son, lumber dealers, of Neepawa.

Logan & Sutherland, of Musquodoboit Harbor, N.S., are sawing laths by a portable saw mill at Astrea Lake.

B. R. Kean is reported to have sold his veneer factory at Orillia, Ont., to the Canada Wood Specialty Company.

The Ontario Government have re-appointed the thirty forest rangers who looked after these duties last season.

The West Coast Timber Company, Limited, of Victoria, B.C., has been incorporated, with a capital of \$25,000.

The annual meeting of the Fredericton Boom Company, of Fredericton, N.B., has been postponed until January 15th.

The lumber firm of Hughes & Long, Brandon, Man., has been dissolved, and the business will be continued by A. M. Long.

H. Brown & Sons are reported to have purchased the water power and mills of the Canada Lumber Company at Carleton Place, Ont.

J. H. Douglas, M.P.P., of Warkworth, Ont., has purchased the grist and saw mills at that place, and also the mill at Norham.

George Chew & Son, of Midland, Ont., have asked for tenders for operating their two band saw mills by the thousand next season.

A number of small rotary saw mills are in operation this winter in New Brunswick. It is said that they have been found to be a paying investment.

The Chilliwack Shingle Mfg. Company, Limited, of Chilliwack, and the Moyie Lumber Company, of Moyie, have been incorporated in British Columbia.

The Cascade Lumber Company have completed their saw mill on False Creek, B.C. The power plant was supplied by the Albion Iron Works, of Victoria.

A. & P. White, of Pembroke, Ont., are this winter putting in a new lath and shingle mill and slash table and making other repairs to their saw mill.

The Parry Sound Lumber Company are converting their saw mill from water to steam power, the work of installing the necessary power plant being now in progress.

Mr. Champion, who has been engaged in the lumbering business near Dalhousie, N.B., for the last ten years, proposes to build a saw and shingle mill at Chatham.

It is reported that Capt. R. C. Bacon, of Moncton, N.B., intends building a large saw mill in the vicinity of Grand Lake, N.B., where he has purchased a block of timber land.

Forests cover one-tenth of the world's surface, but to those of us who are never "out of the woods," says the funny man of the Toronto Star, the timber area seems much greater.

The new saw mill of Thackray & Rawlins, of Pembroke, Ont., is nearing completion. Most of the lumber manufactured in this mill will be utilized in their sash and door factory.

Gilmour & Company, Limited, propose to again put in operation their large saw mill at Trenton, Ont., and are asking the town for exemption from taxation for a period of ten years.

The box factory of the Parry Sound Lumber Company at Parry Sound, Ont., is nearing completion, and will probably be in operation this month. It will employ about 40 hands.

Robert McNair has disposed of his interest in the Hastings Shingle Manufacturing Company, of Vancouver, to his brother, J. A. McNair. The former will continue to manage the mill at Hastings.

The saw mill of the Tobique Manufacturing Company, near Woodstock, N.B., was closed down last month, after cutting 20,000,000 shingles, 3,500,000 laths and 5,000,000 feet of long lumber.

Alex. Mustard, of Brucefield, Ont., has leased the Bayfield saw mill from William Jowett and intends operating it next season. He has added some new machinery to his mill at Brucefield.

It is understood that work has been commenced on the preparation of a site for a large saw mill to be built in Vancouver by J. G. Scott, of New Westminster, Theodore Ludgate, and Michigan parties.

Freeman Goodwin, of Hopewell Hill, N.B., who is carrying on lumbering operations near Bathurst, intends putting in a shingle machine next spring, as there is a large amount of cedar on his property.

O'Neil & Scell, of London, Ont., have purchased the Anderson saw mill at Sundridge, Ont., and next spring purpose rebuilding the mill and installing a new plant. They will saw a large quantity of hemlock.

The improvements which A. Tessier is making to his planing mill at Penetanguishene, Ont., will make it one of the most complete factories in Western Canada. He has built a large engine and boiler house and new dry kiln.

Octave Declaire, foreman of a gang of men who were taking out square timber in the vicinity of Woodstock, Ont., for the Wilson Lumber Company, was killed recently by a falling tree. Deceased lived in Quebec city.

The Canadian Pacific Railway expect next year to haul a large percentage of the timber brought into Winnipeg, and for this purpose are surveying new lines of railway into the Western Ontario and Eastern Manitoba timber belts.

The Dominion Lumber Company, which recently bought the Young lumber property at Ingram River, N.S., intend putting in four new boilers of 100 horse power each. They are now being built by the Robb Engineering Company, of Amherst, N.S.

The North Pacific Lumber Company, of Barnet, B.C., intend putting in a shingle mill and extending their operations. The manager, H. DePencier, has gone to Australia for the purpose of arranging for the chartering of ships and the shipment of lumber there.

A report from North Bay, Ont., states that some 400 deer were shipped from Trout Creek station last fall; and 377 deer from Burk's Falls. Owing to the high price of pork many of the lumber camps have laid in a stock of venison, so that the shantymen will live high this winter.

The Revelstoke Lumber Company, of Revelstoke, B.C., have purchased two boilers of 80 horse power each, two engines, a carriage with three head blocks, two planers, a four saw edger, steam nigger, live rolls and kicker, trimmers, and lath and shingle machines. With this equipment their mill will have a capacity of 50,000 feet per day.

John E. Moore, of St. John, N. B., has had plans prepared for a new saw mill which he proposes building at Pleasant Point, on the site of the Barnhill mill burned last fall. The mill will be two storeys, 150x34 feet, and will likely include a band saw, edger, lath mill, planer, two stave machines, and box making machinery. Mr. Moore is undecided whether to put in a stock gang and slabber or a band saw. The mill will cost about \$25,000 and will saw deals for the British market exclusively.

The new mill of Alfred Dickie at Liscombe Mills, N.S., has finished its first season's cut of 5,000,000 feet and is now undergoing improvements for a much larger cut next year. The equipment consists of a gang and rotary saw and other necessary machinery. The rotary is said to be the fastest and best cutting saw of this class ever constructed in the eastern provinces.

In a test on October 15th 110 logs were sawn in 1 1/2 hours, aggregating 12,704 superficial feet, in 1, 2, and 3 inch stock. The saw used was 60 inches diameter, fitted with an improved top saw guide, and the carriage a Lloyd's, fitted with improved friction gear.

### PERSONAL.

By a large majority Mayor John Arbutnot, of Westport, known to many readers of the CANADA LUMBERMAN, has been re-elected for a second term as Mayor of that city.

Mr. Duncan Anderson, for many years one of the prominent public men in Peterborough county, and for twenty-five years Crown Lands Agent at Apsley, Ont., died at his home in Toronto last month, after a lingering illness.

Mr. Charles McCool, M. P. for Nipissing, who conducts lumbering operations at Geneva Lake, recently underwent an operation for appendicitis in the Ottawa hospital. At last report he was on the way to convalescence.

Mr. Archibald Fraser, son of Mr. Donald Fraser, lumberman, of Fredericton, N. B., has joined the ranks of the benedicts, his bride being Miss Dunbar, daughter of Mr. Alexander Dunbar. Mr. and Mrs. Fraser will reside at Cabano, Que., where the firm of Donald Fraser & Sons have extensive saw mills.

The term of Mr. McClellan as Lieutenant-Governor of New Brunswick expires this month, and it is thought that the appointment will be given to Senator Scobell, the well known lumberman of Chatham, N. B., and that the vacancy in the Senate representation will be met by the appointment of Mr. Robert Thompson, of St. John.

Mr. Julian Vowles, representing Harry Collins, a large lumber dealer of Natal, South Africa, recently visited British Columbia cities to look into the conditions of the lumber trade to ascertain if it would be advantageous to obtain lumber from the Pacific coast rather than from the Baltic. He stated that considerable lumber has been shipped from British Columbia to Cape Town, but that Natal is as yet a virgin field which affords an excellent opening for Canadian lumbermen.

The CANADA LUMBERMAN was favored with a Christmas week from Mr. Thomas Kirkpatrick, of Vancouver, B. C. Mr. Kirkpatrick has been engaged in the manufacture of shingles in Vancouver almost ever since the city was incorporated, and has two shingle mills, one at Cedar Cove and the other at Hastings. Although he has always done a considerable trade to the east, he was making a trip through Ontario for the first time, to become better acquainted with the trade, and subsequently to visit his former home in Nova Scotia.

Mr. George W. Campbell, who has been manager of the Winnipeg branch of the British Columbia Lumber & Trading Company since 1898, has severed his connection with that company and has associated himself with Mr. Henry Byrnes. Under the title of Campbell & Byrnes they will act as manufacturers agents for lumber, with headquarters in Winnipeg. They have already arranged to handle the business of the Canadian Pacific Lumber Company, of Port Moody, B. C., and will no doubt secure the representation of other well-known concerns.

The export of timber from West Africa is every year increasing, the trade in mahogany being a large and growing one. In the timber belt, forming part of the Central Africa forest, there is abundance of the red mahogany. The imports of mahogany from Africa in 1900 are said to be 14,034,408 feet. Barwood, camwood, wormwood, rosewood, almond, and waterwood are also sent over in large quantities. A great difficulty connected with the transport of mahogany is that it exists some distance from the waterways. An idea of training the African elephants and utilizing them as a means of transport is regarded as most feasible. If they were trained to move timber as the Indians do with the African elephants, it is thought, would be a boon to this growing industry. In Southern Nigeria there is abundance of the best mahogany. In the coastal territories of the Gold Coast herds of elephants are to be found, chiefly at Gurnsi and Daboya.

NEW BRUNSWICK FOUNDRY AND MACHINE SHOPS  
FREDERICTON, N. B.

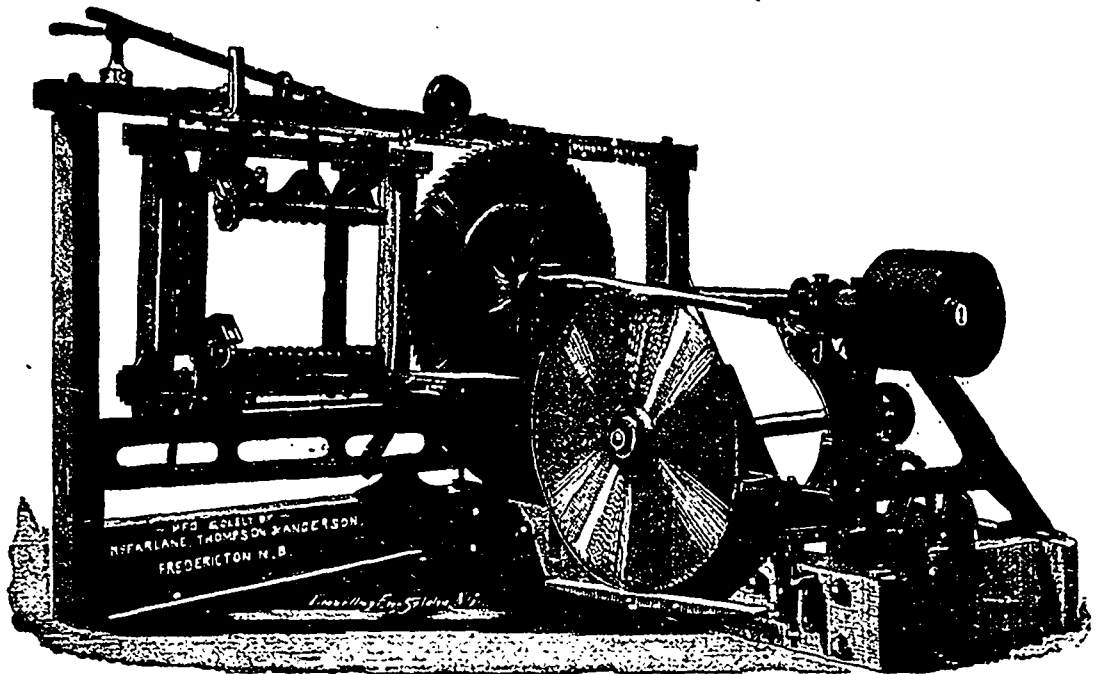
McFarlane, Thompson & Anderson

Manufacturers of the only original

PATENTED DUNBAR SHINGLE MACHINE

And Sole Proprietors of the said patent

Universally admitted  
as being the best  
machine on the  
market from the  
Atlantic to the  
Pacific.



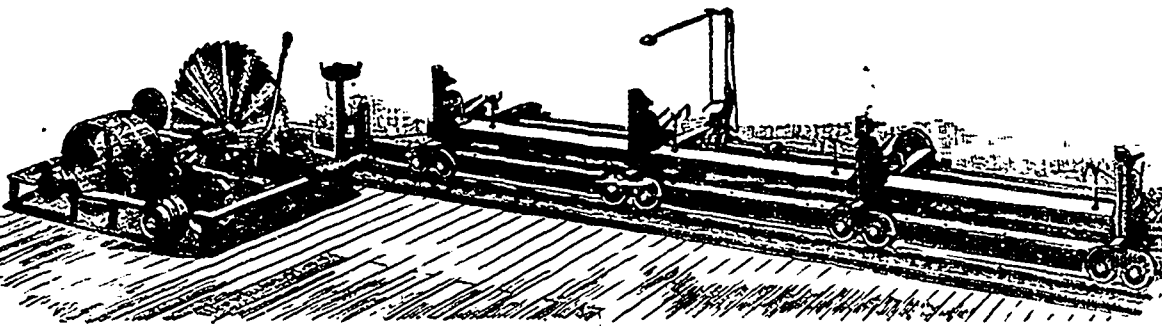
PATENT DUNBAR SHINGLE MACHINE.

The following well known firms are a few of the many who are using the celebrated Dunbar Shingle Machine:—Metis Lumber Co., Quebec, 15 machines; John A. Morrison, Fredericton, N. B., 16 machines; Gibson R'y. & Manufacturing Co., Marysville, N.B., 10 machines; Hastings Shingle & Manufacturing Co., Vancouver, B.C., 16 machines.

The McFarlane, Thompson & Anderson Dunbar Shingle Machine is a record breaker in the west—(New Whatcom Blade, Washington State). The following may be of interest to mill operatives and others; it is we believe the best six day record ever made on this class of machine—a Dunbar upright; the bolts were taken as they came from the woods, without selection, and were a good average quality. This remarkable run was accomplished last week at the George A. Cooper mill, Chuckanut siding: Total cut for six days, 2 shifts of 10 hours each per day, 394,000 eighteen inch shingles. In the day shift, Harry A. Edison, sawyer, cut 218,000, an average cut of 36½ thousand, and the night shift, Levi Loop, sawyer, cut 176,000, an average of 29½ thousand of eighteen inch shingles per day.

“When all the rest fail, or are down for repairs, or are cutting shins, the  
McFarlane, Thompson and Anderson **Shingle Machine**

is still cutting the standard shingle of the world.” From the Atlantic to the Pacific they all say it.



ROTARY SAW MILL, MANUFACTURED BY MCFARLANE, THOMPSON & ANDERSON.

We manufacture a complete line of IMPROVED ROTARY SAW MILLS, BUCK-EYE AUTOMATIC CUT-OFF ENGINES and all kinds of MILL MACHINERY.

Our prices are right.

Kindly allow us to quote before purchasing.

For further particulars address

**McFarlane,  
Thompson &  
Anderson**

Fredericton, N. B.

Latest Bulletin from the seat of war, October 17th, 1901—From the Metis Lumber Co., Price, Que., in reference to the 15 Shingle Machines sold them this season:

“Replying to your enquiry as to the running of the Shingle machines you sold us, would say that they have given entire satisfaction, and have run very successfully so far. We have sawn 30 million shingles in 70 days to date, and count on sawing 10 million more this season.”

THE METIS LUMBER COMPANY.



# WOOD PULP DEPARTMENT

## THE PULP AND PAPER MARKET.

The demand for pulp and paper has greatly improved within the past month. Chemical wood pulp is in better demand in the United States than during any time within last two years. For mechanical pulp also prices have an upward tendency, as many manufacturers suffered from low water in the fall, and later from freshets. It is stated that the total output of the Sault Ste. Marie pulp mill for the next few months has been purchased by an American paper maker. The price has not transpired, but it is the opinion of Mr. J. R. Barber, of Georgetown, that it was close on \$25 a ton. The paper makers held a meeting in Toronto recently and determined to advance the price of new print an eighth of a cent.

## PULP WOOD—TREATMENT OF THE RAW MATERIAL IN THE LOG AND ITS MEASUREMENT.

BY A CANADIAN PULPMAKER.

### CHAPTER IV.—MEASUREMENT BY DOYLE'S RULE.

The application of Doyle's rule, to which reference was made in the previous chapter, is a simple matter, and the rule reads as follows:—Take the diameter of the log at the small end, deduct four from it; square the result; deduct from this figure, one-fourth of itself. The remainder is the number of feet board measure in a log 12 feet long. The contents of longer timber is in proportion.

The rule will be evident from the examples given.

Example 1.—What is the contents of a log 16 feet long, 9 inches diameter?

Diameter.....	9 in.
Deduct four.....	4 "
Remainder.....	<u>5 in.</u>
Remainder squared.....	25 in.
Deduct one-fourth.....	<u>6 "</u>
Final remainder.....	<u>19 in.</u>

Hence, a 12-foot log contains 19 feet board measure. A log 16 feet long would contain 25 feet board measure, and a 20-foot log 31 feet board measure.

Example 2.—How many feet board measure are there in a log 19 inches diameter, and 31 feet long?

From 18 deduct 4; this leaves 15; square this figure; result is 225. Deduct one-fourth, viz., 56, leaving 169 feet. This is the content, of a 12-foot log

19 inches diameter. A 31-foot log would contain 436 feet board measure.

In actual practice it is found that Doyle's rule is not accurate for small logs under nine inches, as the calculated amount of timber is a good deal less than can be obtained. With large logs the quantity estimated by the rule is about right.

The following comparison between the estimated quantities as given by the rule, and the amount as found obtainable in actual sawing as tabulated in the Quebec Government tables, is of considerable interest in this connection:—

TABLE SHOWING THE CONTENTS OF LOGS 12 FEET LONG IN FEET BOARD MEASURE.

Diameter.	Contents Doyle's Rule.	Contents as per Quebec Tables.
6	3	12
8	12	24
10	27	44
12	48	60
14	75	90
16	108	120
18	147	160
20	192	210
24	300	315
28	432	435
32	588	570
36	786	710

A study of the above figures shows that the Doyle rule is not a fair one for application in the case of small logs. In the case of an 8-in. log the contents, as per the Quebec table, amount to just double the contents according to Doyle's rule. With the larger logs this large relative difference disappears, for at a diameter of 20 inches the excess measurement, according to the Quebec scale, is only a very small one.

But while these rules obtain for saw logs, they are not so much used for pulp logs, the conditions under which the wood is cut and manufactured being of a totally different description. For example, it is possible to utilize logs for pulp wood which would be perfectly useless for conversion into lumber. As a general rule, the logs less than 10 inches are considered of little value for lumber, whereas logs as small as four inches in diameter can be manufactured into pulp wood. In this respect it may be noted that the lumberman prefers as large a log as possible, but the pulp manufacturer likes his logs to be of some uniform size without any great variations.

This being so, the use of Doyle's rule, or of any of the ordinary saw log scales, is not a reliable method of determining the contents of pulp wood.

This may be rendered apparent by an example. An 8-in log, 20 feet long, contains 20 feet board measure

according to Doyle's rule. A log 20 inches diameter and 20 feet long will show 180 feet board measure. The ratio of the contents is 1 to 9. Now, the true comparison of the contents is best arrived at from a comparison of the cubical contents. In such cases the ratio of the cubical contents of logs of equal length can be found by means of the following formula:

$$\frac{C}{c} = \frac{R^3}{r^3}$$

or, in other words, the contents are in direct ratio to the squares of half the diameter. In the example quoted the logs are eight and 16 inches respectively, giving a ratio of 16 to 64, that is, one to four.

The measurement almost exclusively employed for the determination of the contents of logs intended for pulp wood is by means of a standard known as the "Cord." This is a measure or quantity of wood so called because it was originally measured with a cord of a certain length. A pile of wood cut into 4-ft. lengths and stacked up so as to measure 8 feet by 4 feet high is taken as a cord of wood. Hence the standard cord consists of a pile of wood 8 feet long, 4 feet wide, and 4 feet high, giving 128 cubic feet in the pile.

For the sake of convenience the actual dimensions of the pile are sometimes allowed to vary, so long as the cubical contents are 128 cubic feet. Thus, a stack of wood 8 feet long, 8 feet high, and 2 feet wide contains 128 cubic feet, or one cord. A number of pieces of wood, each 12 feet long, stacked up to give a pile 6 feet long by 5 feet 4 inches high, will contain 384 cubic feet, or three cords.

Strictly speaking, however, the cord is supposed to consist of pieces of wood four feet long piled up as described.

A definite relation exists between the "cord" of wood and the system of measurement adopted for use in the lumbering industry, but so far this has not been properly determined or agreed to. As a result arbitrary figures, differing considerably, are found everywhere.

## PULP NOTES.

Continued low water in the rivers has caused a partial famine of pulp wood in Quebec.

It is said to be the intention of McLaren & Company, who are erecting a large pulp mill at Buckingham, Que., to build a paper mill in the near future.

Higher prices are talked of for ground wood pulp during the coming season. Contracts are being closed at figures which are very satisfactory to manufacturers.

The Paper Mill is authority for the statement that John H. Coburn, of Carthage, N. Y., intends building a large news, ground wood pulp, and sulphite pulp mill in Canada.

John Hudson & Company, 13 Sise Lane, London.

## P. PAYETTE & CO.

Manufacturers of Saw Mill and Engine Machinery, and all kinds of Marine Machinery.  
PENETANGUISHERE, ONT.

## To Purchasing Agents:

Corner 22nd and Centre Avenue,

CHICAGO, October 12th, 1901.

GENTLEMEN:

Preparatory to increasing our manufacturing interests at Vicksburg, Miss., we have decided to close out and wind up a number of our scattered yards in Mississippi and Arkansas. The stock consists of several million feet of all kinds of Hardwood Lumber, Yellow Pine and Cypress, well seasoned and in good condition for immediate use. We propose to put a price on the above-named material that will move it, and make a grade that will be an inducement to the purchaser.

Owing to the rapid wholesale manner in which we move and handle lumber we do not consider it practicable to issue a stock sheet or make standing quotations, for which reason we solicit your inquiries for any material that you are in the market to buy or will use in the future, and if you will take the time to furnish us the above information, we will make you some interesting quotations.

Respectfully yours,

GEO. T. HOUSTON & CO.

Eng., have been appointed sole agents for the United Kingdom for the Ste. Marie Pulp & Paper Company, of Sault Ste. Marie, Ont.

The ratepayers of Thorold, Ont., have approved of the granting of a loan of \$5,000 to assist the Thorold Pulp Company in building a paper mill. Only eleven votes were cast against the by-law.

A measure has been introduced in the House of Representatives in Washington to repeal the duty on wood pulp and all other material used in the manufacture of printing and writing paper, and to restore the duty on manufactured printing papers.

James G. Stevens, Jr., of St. Stephen, N. B., gives notice that he will apply for the incorporation of a company for the purpose of constructing a pulp mill and other manufacturing on the St Croix River at Sprague's Falls, in the province of New Brunswick.

The Quebec Government gives notice that the Metabetchouan Pulp Company will ask for power to acquire, on the river Metabetchouan river and in the counties of

Saguenny, Chicoutimi, and Lake St. John, water powers, timber limits and the lands it may need to erect mills and dams necessary for the manufacture of pulp, lumber and paper, to develop electricity and to build railways and telegraph and telephone lines.

During the nine months ended September 30, 1901, the pulp mills of Canada manufactured 142,085 tons of ground mechanical pulp, 6,1934 tons of sulphite pulp, and 8,485 tons of soda pulp, of an aggregate value of \$6,100,000. Great Britain took 58,000 tons, United States 28,000 tons, and other countries 1,500 tons.

A deputation from Parry Sound, Ont., including W. L. Haight, Walter Foote and Beveridge Walsh, recently interviewed the Commissioner of Crown Lands with a view to securing for the town the rights to a water power on the Magnetawan river, in connection with which a pulp industry may be established.

It is said that the Brompton Pulp & Paper Company intend at a later date to develop another power for electrical purposes alone, with a view to furnishing

light and power to Windsor Mills and Sherbrooke. Work on the construction of the dam and pulp mill is now under way, under the direction of J. D. Straw, of Lewiston, Me., who is engineer in charge of construction.

The employees of the St. John Sulphite Pulp Company, of St. John, N. B., recently presented their manager, Mr. M. F. Mooney, with a beautiful gold watch, and the assistant manager, Mr. Philip Grosset, with a fur coat. The foreman, Mr. Francis Druet, was also made the recipient of a watch. The gifts were made as an expression of personal regard, and indicate the good feeling which exists between the management and the employees.

It is reported on good authority that J. A. McNair, of the Hastings Shingle Manufacturing Company, Vancouver, has purchased a site in the eastern part of that city for a new shingle mill, to be one of the largest and best equipped on the coast.

**JOSEPH H. WALLACE, C. E.**  
MILL AND HYDRAULIC ENGINEER  
PULP AND PAPER MILLS.

**WATER POWER DEVELOPMENTS**

Surveys, Examinations, Reports,  
Preliminary Estimates, Plans,  
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**DREWSEN COMPANY**  
CHEMISTS AND MILL EXPERTS  
SULPHITE PULP MILLS.

Drewsen acid System  
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**BUCKINGHAM, QUE.** and Engineer  
Plans, Est. mates, Supervision and Contracts.  
SPECIALTIES—PAPER, PULP AND SULPHITE FIBRE MILLS, ELECTRIC PLANTS, SURVEYS AND IMPROVEMENTS OF WATER POWER.  
Many years' practical experience. References on application.

**DUNDAS AXES**

In the Crown Jewel single and double bit and Perfect Jewel single bit inserted, we use a high grade of steel to get the necessary tensile strength to make an axe that will stand in frosty weather.

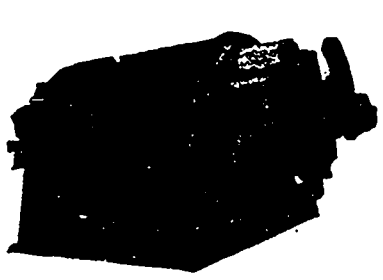
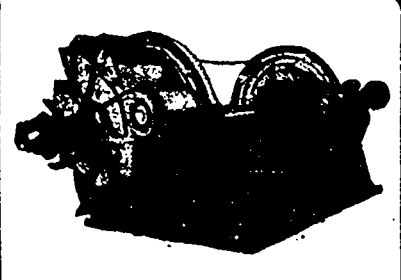
**Dundas Axe Works Dundas, Ont.**

**JOHN BERTRAM & SONS**  
DUNDAS, ONT.

MANUFACTURERS OF

**PAPER MACHINERY**

Cylinder Moulds  
Wet Machines  
Cutters  
Dryers

"Experience has shown that unquestionably the easiest plants to govern are those in which the turbines are set in open flumes leading directly from open forebays."—GARRATT.

The cuts above illustrate one of our methods of placing water wheels in open flumes, as applied to a pair of our

**GROCKER PATENT TURBINES**

arranged horizontally, for direct connection to main shaft or otherwise. We have several other designs for open flume settings, adapted to single wheels, or for pairs, and to suit particular locations.

We are prepared to examine and report on water powers, and to advise as to methods of development for the same. Estimates promptly submitted. Send for Bulletin No 200, 88 pages, of interest to all owners and users of water power.

**THE JENCKES MACHINE CO.**  
36-40 Lansdowne Street - SHERBROOKE, QUE.  
Rossland, B.C. 81 York Street, Toronto  
Hallfax, N.S.

CORRESPONDENCE SOLICITED

### MEETING OF COOPERAGE MANUFACTURERS.

The semi-annual gathering of the Slack Cooperage Stock Manufacturers' Association took place at Detroit, Mich., on December 10th, when stave and heading men were present in large numbers. Those in attendance from Ontario included the following:

John Hayne, Brigden; A. A. Scott, McGregor; D. R. McGarvin, Chatham; Wm Niebergall, Geo. & Wm. Niebergall, Geo. Niebergall & Son, McGregor; J. L. Reaume, J. L. Reaume & Co., Essex; T. H. DeCew, T. H. DeCew & Sons, Fenelon Falls; D. N. Menzies, Niebergall Stave and Lumber Co., Staples; Ed. Smith, Leamington, S. W. Mitchell, Warwick; H. P. Lawrence, Jacob Lawrence & Son, Waterford; N. Watson, Mull; James Innes, the Sutherland-Innes Co., Chatham; J. C. West, Sutherland-Innes Co., Chatham.

Some business was transacted, but the meeting was largely of a social character. The most important feature of the association is the grading of stock according to the rules adopted at the last meeting, which are printed below:

#### GRADES AND SPECIFICATIONS.

**STAVES.** Elm staves 30 inches long shall be cut not less than 5 staves to 15-16-in. in thickness. Elm staves 24 to 28½-in. long shall be cut not less than 5 staves to 1¾-in. in

thickness, except 24-in. or keg staves when specially cut, when said staves shall be cut 6 staves to 2-in. in thickness.

Cottonwood staves of all lengths shall be not less than 5 staves to 2-in. in thickness.

No. 1 staves shall be of full thickness and uniform throughout, free of knots, slanting shakes, doty wood or other defects.

Meal barrel staves shall be free of slanting shakes over 1½-in. long, knot holes, unsound knots, (but sound knots of not over ¼-in. in diameter shall be allowed), free of thin staves, and shall consist of good, sound, workable staves.

No. 2 staves shall be free from dead culls.

Mill run staves shall consist of the run of the knife, made from the regular run of stave logs, dead culls thrown out.

**SPECIAL STOCK.**—White ash staves shall be cut 5 staves to 2½-in. in thickness, graded the same as elm, but only No. 1 and No. 2 quality.

Mill-run elm or hardwood apple barrel staves shall be cut 6 staves to 2-in. in thickness and shall consist of the run of the mill, from the regular run of stave logs, dead culls thrown out.

Mill-run cottonwood apple barrel staves shall be cut 5 staves to 2-in. in thickness.

All the above staves shall average in measurement 4-in. per stave or 4,000-in. a 1,000 staves across the bilge, with the exception of the keg staves, which shall measure 160-in. per bundle of 50 staves, across the bilge, and

24-in. half barrel staves, which, when not otherwise specified, shall measure 3½-in. wide or 175-in. per bundle across the bilge. All other staves not specifically mentioned shall be sold according to the local custom or under special agreement.

**HOOPS.** Sugar barrel hoops shall be 6-ft. 4-in., 6-ft. 6-in. and 6-ft. 9-in. long, cut so as to be not less than 5-16-in. and 3-16-in. in thickness when finished and seasoned, and not less than 1¾-in. wide when seasoned.

Flour barrel hoops shall be 5½-ft. and 6-ft. long, and shall measure, when seasoned, not less than 5-16-in. to 3-16-in. in thickness, and not less than 1¾-in. wide.

Keg hoops shall be sold on special specifications, as agreed upon between the buyer and seller.

No. 1 hoops shall be of good, sound timber, fully up to specifications, free from broken hoops in the coils and well finished.

**HEADING.**—No. 1 basswood or cottonwood heading shall be made from good, sound timber, free of damaging defects, of such diameter as is required, well jointed, 1-2-in. in thickness and thoroughly kiln-dried.

No. 2 hardwood heading shall be of the same specifications as above, but only 7-16-in. in thickness and thoroughly kiln-dried.

Mill-run heading shall be the run of the mill, dead culls out, thickness and dryness the same No. 1.

No. 2 heading shall be the heading thrown out of the No. 1, dead culls out. All staves, hoops and heading not specifically mentioned shall be bought and sold on terms and specifications agreed upon between the buyer and seller.

PRACTICALLY STRETCHLESS

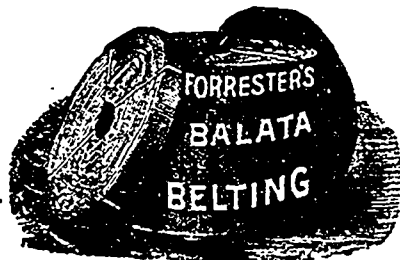
THOROUGHLY WATERPROOF

# FORRESTER'S

## Stitched Flexible Seamless Balata Belting

**WEARS LIKE IRON.**

The most modern belt manufactured; combines the greatest Solidity with Flexibility.



Every BELT

Guaranteed to give

Complete Satisfaction

## THE THOS. FORRESTER CO., BELTING SPECIALISTS

Office, 325 St. James Street

MONTREAL, QUEBEC

*Have you received one of our calendar Price Lists. If not, advise us and we will send one by mail*

TRADE NOTES.

The Atlantic Refining Company, of Toronto, have removed their business offices to the corner of Front and Scott streets. The warehouse will remain at the old location on the Esplanade.

James W. Woods, manufacturer of lumbermen's supplies at Ottawa, has purchased property on which he intends to erect next spring a new manufacturing establishment and a large warehouse, at a cost of about \$50,000.

At a meeting of the leather belting manufacturers of Canada, held on the 2nd inst. at the Windsor Hotel, Montreal, it was resolved that on account of the very high price of hides it was necessary to advance prices twenty per cent., to take effect at once. For the same reason all the manufacturers in the United States in this line of goods advanced their prices on the 12th ult. to the same extent.

The Bradley, Levy & Weston Machinery Company, Limited, has recently been organized in Toronto, to deal in iron and wood-working machinery, engines, boilers, and general engineering supplies. A warehouse has been opened at 102 Front Street West, two doors west of the Queen's Hotel. The officers of the company are: President and mechanical superintendent, W. J. Levy; vice-president and business manager, W. J. Bradley; secretary, W. H. Weston; treasurer, A. E. McLean.

It is gratifying to learn that Mr. E. Livingstone, of the Blyth Handle Works, Blyth, Ont., finds difficulty in keeping up with his orders, notwithstanding his factory

has only been in operation since March last. He reports a large trade in cant hooks and peavies, also rock elm axe handles and whiffletrees, his trade in this line extending to lumbermen up the North Shore as far as Port Arthur. Mr. Livingstone's works are located in a district where maple and rock elm are plentiful, hence he can guarantee quality and prompt shipment.

We have received from The B. Greening Wire Co., Limited, Hamilton, an advanced copy of their annual calendar for 1902. They will be mailed to the trade before the close of the year, and no doubt will be much appreciated. The leading feature is good bold type that can be read from some distance. The extra spaces of each month are filled in with attractive cuts illustrating the principal seasonal lines of manufacture. We are pleased to hear that this enterprising firm have had a very successful year's business, and have in contemplation some important changes. Contracts will be signed in a few days for the erection of fine new offices. Plans are being prepared for a large new paint tower. Their last catalogue was issued January, 1900, and should be in every architect's office.

THE DODGE COMPANY'S NEW PLANT.

The Dodge Manufacturing Company, Limited, of Toronto, have just completed what may be termed a model plant. The new building consists of a machine shop 200x75 feet; foundry, 125x75 feet, with annex; two storey office building, 60x40 feet. The buildings are of modern type, solid brick, with monitor roofs. Both machine shop and foundry are equipped with ten

ton, three-motor travelling cranes and industrial narrow gauge rails and turntables. Among the massive machine tools installed in the machine shop is a 62x62x20-foot planer, and a 16-foot boring and turning mill weighing in the vicinity of 40 tons. In the foundry a modern Whiting cupola has been installed.

The shops are heated with the Webster system of steam heating, lighted with both incandescent and arc lights, and electric power is used throughout. The electric light and power is generated on the premises by means of a 15x14 high speed engine, direct connected to a 100 kilowatt generator.

The office building is of handsome design, pressed brick and stone, the ground floor being used for the company's general offices, and the first floor as engineering and draughting rooms.

The entire plant covers some six acres. It is located on Pelham avenue, Toronto Junction, just north of the C. P. R. tracks and without the city limits. A system of railroad sidings encircles the plant, giving the company their iron, coke, coal, sand, etc., direct from car to stores. The new machine shops and foundry are employed altogether in manufacturing the Dodge Company's special lines of power transmission machinery. Their extensive wood pulley plant has also been materially improved. The company have a daily manufacturing capacity of 300 wood pulleys, apart from their iron pulley output. Over 1,000,000 feet of lumber is earned, and a new brick dry kiln of 60,000 feet capacity has been built. The Dodge Company extend an invitation to the trade to call and inspect their new works.

The city sales offices and warerooms of the Dodge Manufacturing Company are situated at 74 York street, Toronto, where a large stock is carried.

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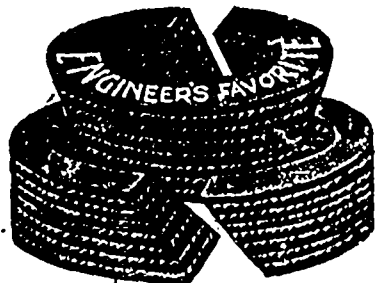
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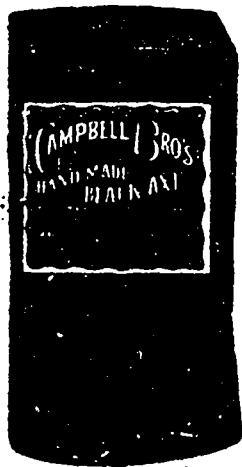
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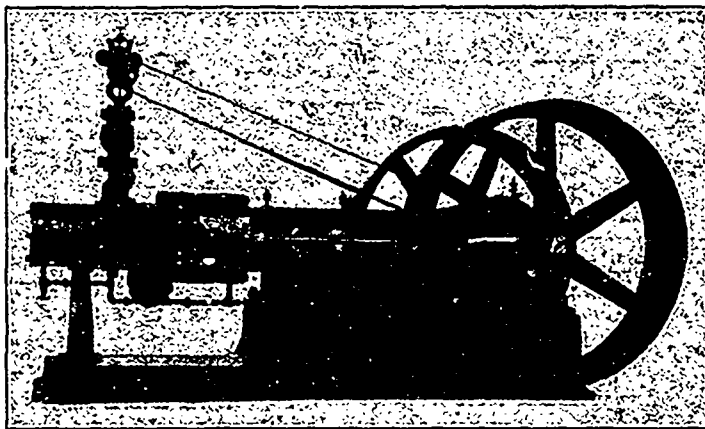
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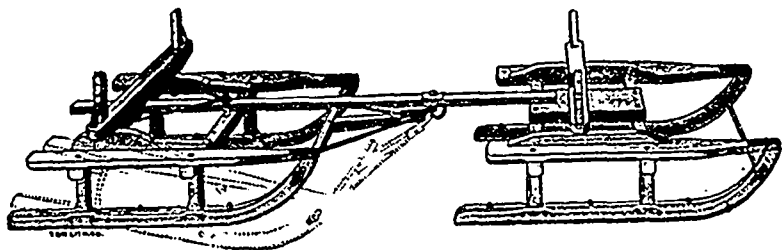
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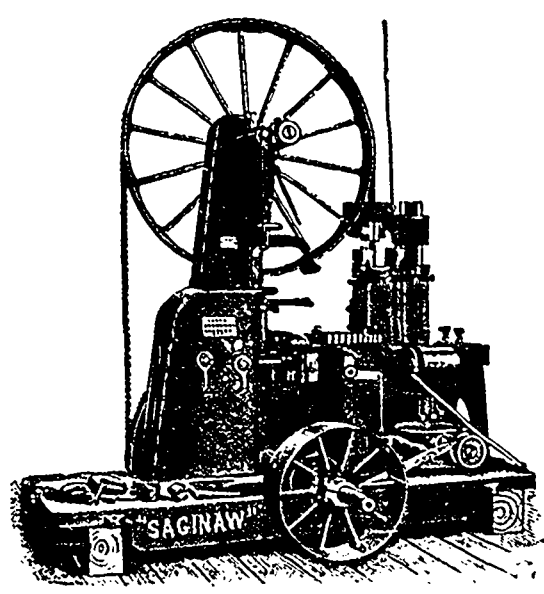
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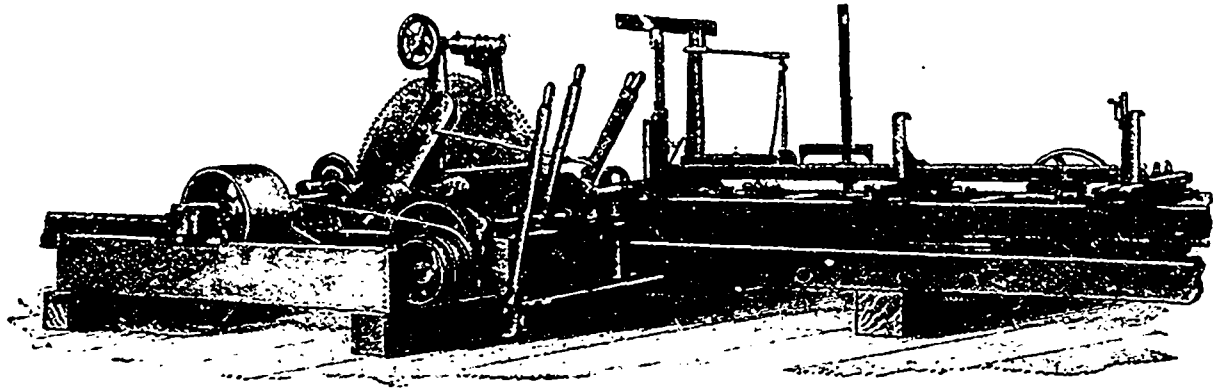
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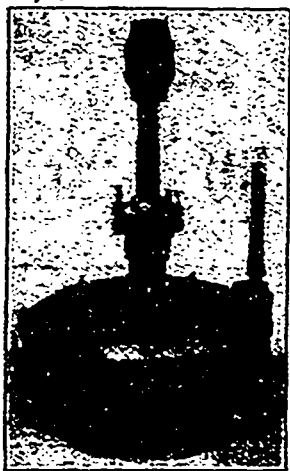


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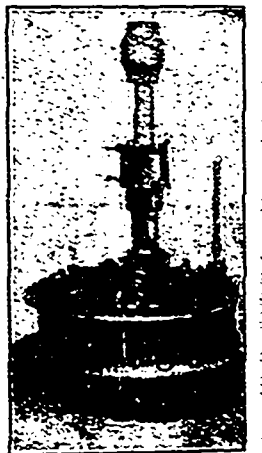
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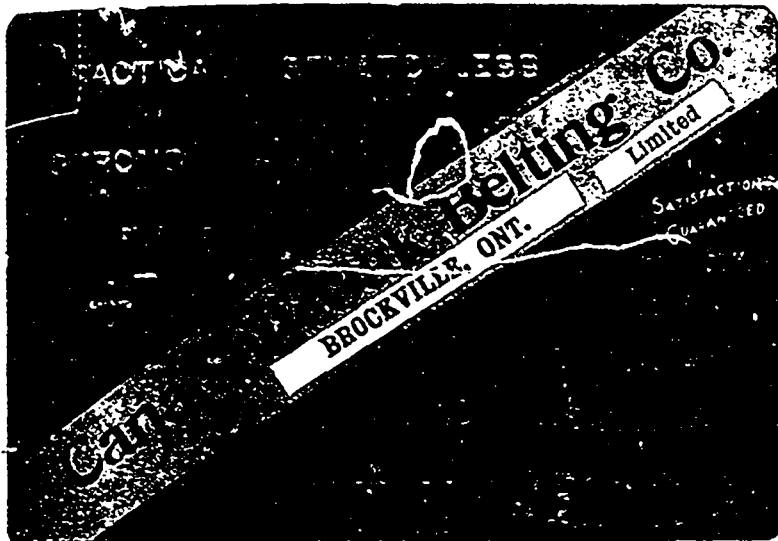


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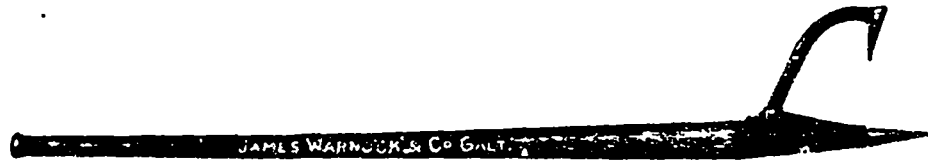
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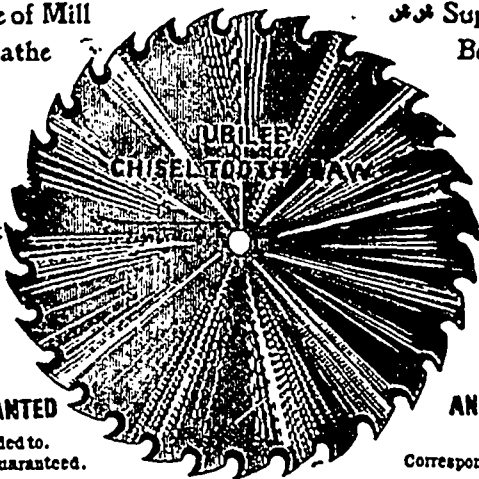
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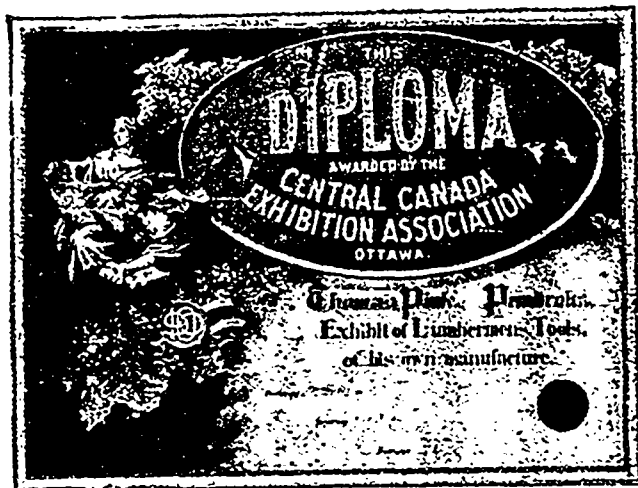
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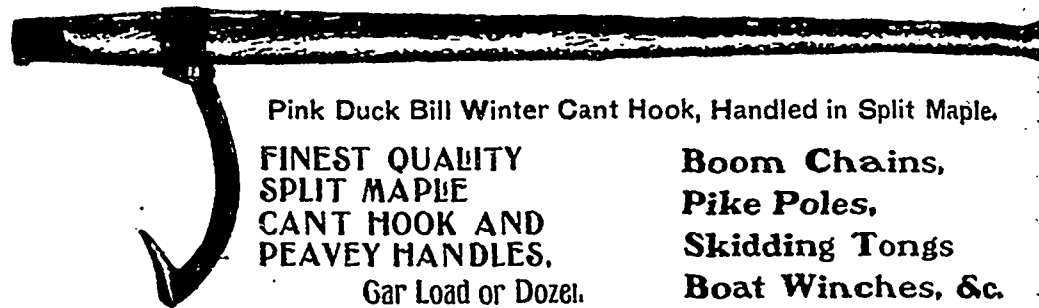


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