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THE CANADA LUMBERMAN

WOODWORKERS' MANUFACTURERS AND MILLERS' GAZETTE

TORONTO, ONT., APRIL, 1898

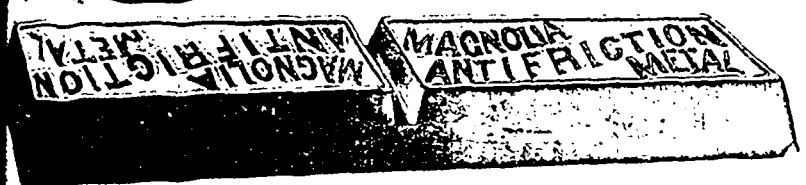
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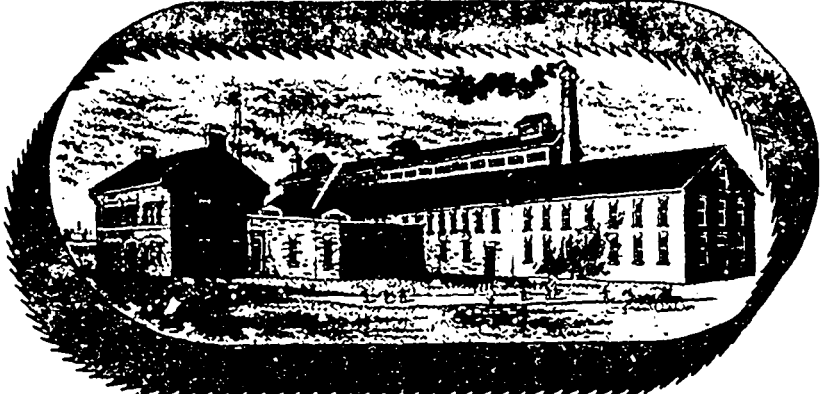


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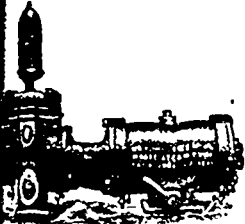
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1 Elder Down Sleeping Bag, 14 lbs.; 1 pair Fawn Wool Blankets, 10 lbs.; 1 pair Rubber Hip Boots (Corrugated Soles); 1 pair Moerasin Hip Boots (Hob-Nailed Soles); 1 pair Prospector's Waterproof Raw Hide Knee Boots (laced); 1 only Waterproof Kit Bag (leather bound); 1 suit Duck Clothing (wool lined); 1 suit Mackinaw Clothing (Storm Cuffs); 1 suit Untined Duck; 1 suit Leather Vest (corduroy lined); 1 suit Leather or Duck Pea Coat (fur lined); 1 suit Underwear (hand knit); 1 suit Underwear, lighter weight; 1 only All Wool Tweed Top Shirt; 1 each Navy and Army Flannel Top Shirt; 1 only Mackinaw Sweater (Knit Collar and Cuff); 1 pair each Elk and Hand Knit Wool Mitts; 1 pair Hand Knit Wool Sox; 1 pair Elk Moccasins (laced); 1 pair Fur Lined Leather Sleeping Sox; 1 Elder Down Cape Hood; 1 Knit Woolen Tugue; 1 suit Oil Clothing and Hat; Towels, Yarn, Mending Wool, Needles, Shoe Hemp, Wax, Linen Thread, Handkerchiefs, Patent Buttons, Scissors—All Complete for \$130.00, f.o.b. Ottawa.

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"I have been sawing for the last twelve years, and have used a great many different makes of saws, but for the past two years I have used one of your make in Davidson & Hay's mill at Cache Bay, and have found it to be the best saw I ever cut shingles with."
 RICHARD McGRATH.

"I am running one of your large solid tooth saws, and a better saw never went into timber."
 J. R. GETTLER, Fullerton, Ont.
 "I can recommend your work. The lumber saw you fixed for me is the best running saw I have had in twenty-five years."
 D. THORPE, Egerton, Ont.

We have Hundreds like these. Our Work is the BEST and Prices are Right.

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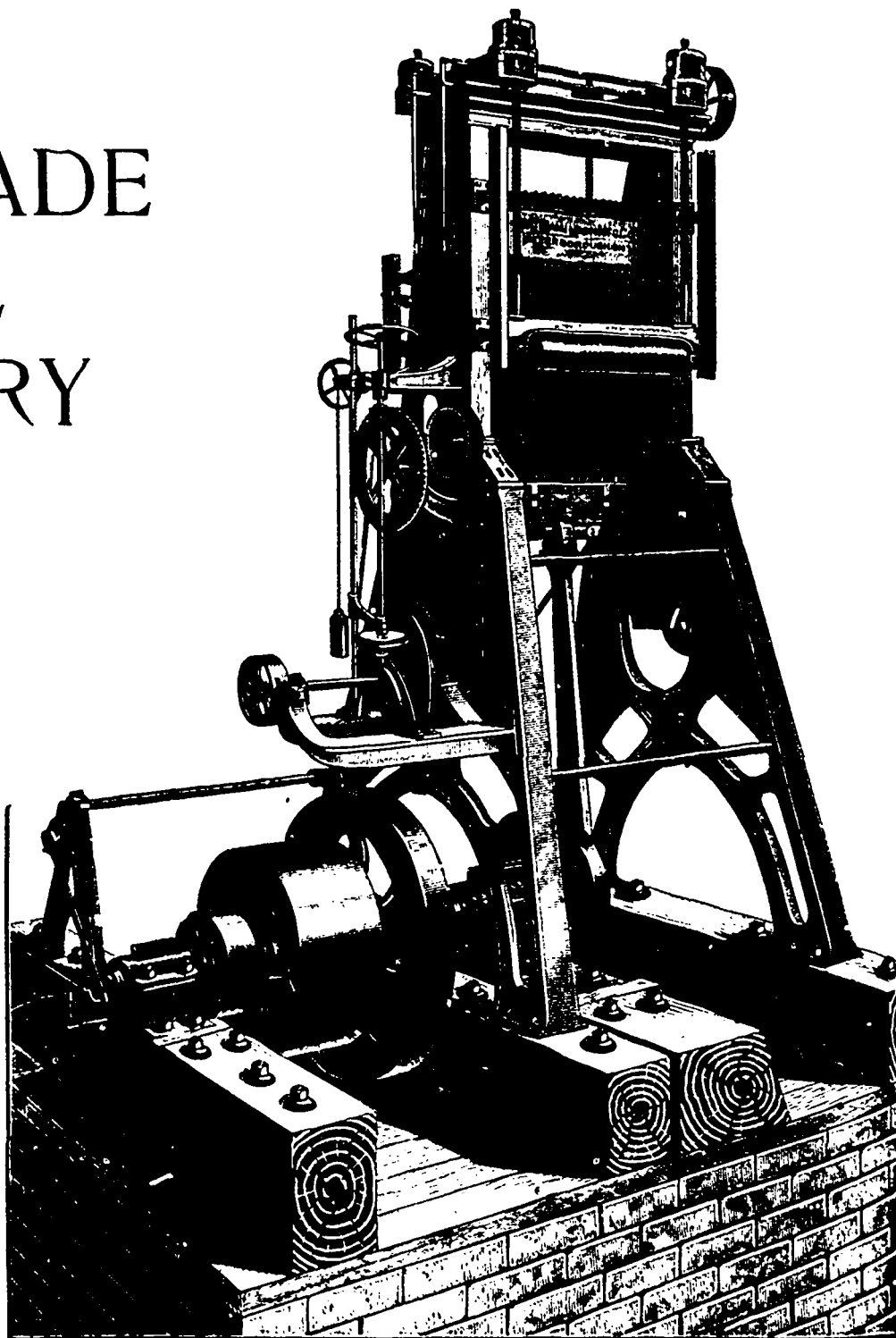
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THE CANADA LUMBERMAN

VOLUME XIX
NUMBER 4

TORONTO, ONT., APRIL, 1898

TERMS, \$1.00 PER YEAR.
Single Copies, 10 CENTS.

THE NATIONAL WHOLESALE LUMBER DEALERS' ASSOCIATION.

By far the most important organization of its kind in the United States is the National Wholesale Lumber Dealers' Association, which embraces a large number of the prominent wholesale dealers of the Eastern States. This association held its sixth annual meeting at Cleveland, Ohio, on Wednesday, March 3rd, the business which formerly occupied two days being, by judicious arrangement, executed in one day.

There was a fairly good attendance from Buffalo, Philadelphia, Cleveland, Saginaw, Tonawanda and other cities. The following Buffalo houses were represented: Montgomery Bros. & Co., Superior Lumber Co., Buffalo Hardwood Lumber Co., Empire Lumber Co., Noyes & Sawyer, Charles M. Betts & Co., Haines & Co., H. M. Loud & Sons Lumber Co., Hurd & Hauenstein, Hugh McLean & Co., J. C. Anthony & Son, and Underhill & Poole. The Tonawanda contingent included representatives of Smith, Fassett & Co., Rider & Frost, W. H. Sawyer Lumber Co. and H. M. Tyler & Co.

We notice that the membership of this association also includes the names of E. C. Grant, of the Ottawa Lumber Company; E. H. Lemay, of Montreal; and the Gillies Lumber Company, Ottawa.

Space will only permit of brief reference to the most important subjects considered. Following the reading of the address of the president, Col. Betts, and the presentation of the secretary's statement, Mr. Edward F. Henson read the report of the Fire Insurance Committee, which stated that there were five insurance companies in the district devoted solely to the interests of lumbermen. They were all successful, the one most so being the Northwestern Retail Lumber Dealers' Insurance Association, which had been the means of securing very cheap insurance for lumbermen.

A resolution was passed favoring a uniform bankruptcy law. The report of the committee on membership recommended that the secretary visit the lumber districts and solicit new members for the association. Mr. Pendennis White, of Tonawanda, read an interesting paper on "The Scalper and the Illegitimate Trade," which created a lively discussion. Another interesting question discussed was what an article costs the manufacturer to produce and sell, and what it costs the lumberman not manufacturing to put his lumber on the market. The general opinion seemed to be that ample pains was not taken to ascertain what the lumber actually cost the dealer or manufacturer.

The choice of the association was unanimously in favor of Hon. John N. Scatcherd, of Buffalo, as president. Mr. Scatcherd, whose portrait we present, is of the well known lumber firm of

Scatcherd & Son, who handle large quantities of Canadian hardwoods. His election should be a source of gratification to the trade at Buffalo, while all agree that he is eminently qualified for the duties which he will be called upon to perform. John S. Eastbrook, Saginaw, and Robert C. Lippincott, Philadelphia, were chosen first and second vice-presidents respectively. The convention closed with a successful banquet.

TIMBER RESOURCES OF THE KLONDYKE.

Mr. Ivan Petroff, special agent of the United States government in Alaska for the tenth census,



HON. JOHN N. SCATCHERD,
President-Elect National Wholesale Lumber Dealers' Association.

has furnished some interesting information regarding the forests of Alaska. The trees are mainly evergreen, the spruce family predominating. White birch is also found throughout the region that supports the spruce, chiefly among the watercourses. The alder and willow are found on all the lowlands, reaching beyond the western and northern limits of the spruce. A poplar resembling the cottonwood of the United States, and which, under favorable circumstances, attains a large size, is also found in the timber sections of Alaska south of the Arctic circle. As is well known, there are considerable forests along the south Alaskan coast, being a continuation of the great forests of Washington and British Columbia, the south-eastern Alaskan climate being very similar to that further south, though, of course, somewhat colder.

POSSIBILITIES OF TRADE WITH FOREIGN COUNTRIES.

Mr. Edmund E. Sheppard, Dominion Trade Commissioner to Mexico, Central and South America, has submitted his final report to the Department of Trade and Commerce, in which he refers at some length to the possibilities of increasing our trade with these countries. His observations and conclusions of the lumber trade are of special interest to Canadian manufacturers, and are given below:

LUMBER.

Returning to our starting point, Mexico does not take the lumber from Canada that should be exported to that country. Her trade is nearly all with the Southern States of North America, which, owing to contiguity on the Gulf side, affords a more available source of supply. Nevertheless, in white pine and spruce on the Gulf side and British Columbia pine on the Pacific side, agents of our lumbermen should do a very profitable business.

BRAZIL. In Brazil, owing to the fact that an insect attacks white pine and burrows through it until it is almost like a handful of ashes, white pine is little used except for decorative purposes and doors and windows, where it is needed for its lightness, and is protected by varnishes and paint. Yellow pine, owing to the large quantity of pitch it contains and comparative freedom from insect attack, is esteemed preferable. In my extended report on Brazil, I have given the statistics of this trade. It amounted in the year named to only about \$52,000. Already one Canadian agent at least has endeavored to increase this export, and in the interior and the southern parts of the country the importation of material suitable for window-frames and doors should be very large; but as I have before remarked, it will have to be pushed under personal supervision, the broken cargoes from United States ports being more acceptable than our large direct cargoes.

URUGUAY. Uruguay imported in 1896 \$517,000 worth of pine, \$500,000 of it from the United States. The total imports of timber were \$771,000 (gold).

ARGENTINA. Our direct export of lumber to Argentina in 1896 was \$410,000; in 1897 it was \$538,000, and can be very largely increased, as the woods of that country suitable for lumber are grown nearly altogether in the south towards Patagonia and are very heavy and not adapted to the purposes for which white pine is used. In the three countries last en-

umerated spruce is nearly altogether brought from Maine, and handling it is already a very large business. The export of portions of houses already prepared is successful in but few countries, owing to the tariff, but the export of white pine lumber to Argentina, there to be milled and made into doors and sashes and frames in the yard where it is received, should be a very profitable business, for of all the countries of the South, Argentina is most rapidly increasing in population, the stretches of arable land being enormous, and the erection of small dwellings proceeding at a very rapid rate. The export to Argentina of lumber suitable for the fitting of cattle vessels is also an important feature, and is already to a considerable extent in the hands of a Canadian who is familiar with both the lumber and cattle business, but unfortunately he is not taking all his supplies from this country. Our lumber business to Argentina, instead of being about \$420,000 per annum, should be five times that sum. A table I have prepared shows the average movement of lumber, as well as of other import articles, shipped to the River Plate, which includes Uruguay and Paraguay.

While I was in Argentina Congress was in session, and what was considered the unneighborly conduct of the

United States in the, to them, most irritating tone and text of the Dingley Bill, seemed likely to be practically resented by the passage of a law materially increasing the duty on yellow pine from fifteen to twenty-five per cent. As these increases are made not only by raising the tariff, but by raising the rate of assessment on the foreign goods received, it was quite possible for Argentina to make a discrimination even to the extent of forty per cent. without incurring the charge of open discrimination against a nation having the "most favored nation" clause in its treaty. No goods in any of these countries are received at a "per invoice" valuation, an arbitrary value being placed upon them and all goods of any specified class being assessed alike.

No country in South America offers a better opening for the lumbermen of Canada than is afforded by Argentina, its chief city, Buenos Ayres, having a population of nearly 700,000, while other principal cities are being built up very rapidly. Foreign decorations and woodwork of the most elaborate sort are popular in that country. These for a while were discouraged by the hard times, but since the good harvest just gathered, commercial conditions are better and likely to improve. The prospects of peace and of permanent and progressive government are also excellent. A large amount of British capital and the industry and hopefulness and aggressiveness of both the business men and the poorer classes, all point to Argentina as an exceedingly good market, which I am informed is to be looked after by a resident Canadian commercial agent, who will also have to do with the commercial affairs of Uruguay as they affect Canada.

CHILI.—By the kindness of the British Vice-Consul at Valparaiso, I received the following statement as compiled from the most recent returns showing the imports into Chili of timber during 1896:

IMPORTS OF TIMBER INTO CHILI DURING 1896.

Building Timber, Great Britain	500 sq. metres; value, £	28
" " United States	2,667,758 "	148 910
Dressed " "	175,772 "	11,117

This indicates that the whole trade was only in the neighborhood of \$800,000, Canadian money. There were no evidences of any direct importations from Canada, though I was informed by Mr. Compton, probably the largest dealer in the republic, that a certain amount of British Columbia lumber was received, though his business was altogether with San Francisco. This being the case, I was justified in my remark at the Vancouver Board of Trade that in Chili our lumber was unknown as such, i.e., as British Columbia lumber. Objection, however, was taken to it by a local dealer, who said he had sold British Columbia lumber on the Pacific coast. Our natural prominence in the lumber trade is only self-utilized in the finding of a market for occasional cargoes if they are not known as being composed of British Columbia lumber.

Chili has large forests of her own in the southern portions of the republic. In many respects they are fortunately situated, being, to a Canadian mind, not remote from rivers and seaports, but the methods of lumbering are so crude and the milling so rough and uneven that hitherto native lumber has not had the sale which it should have enjoyed.

The Chilean lumber is practically all hardwood, some of it being exceedingly fine and much resembling our maple. Other samples, darker in color, resemble walnut and cherry, and a very attractive substitute for oak is also found. The logs are large and mills are being built, and improved facilities for marketing these different varieties will soon change the complexion of the Chilean lumber trade. The protective spirit, which is exceedingly strong through all the South American republics, is demanding in Chili an increased tariff on foreign timber. Congress was in session while I was in Santiago, and a very great increase of the import duty on lumber and codfish was being discussed. The speech indicating proposed changes in the tariff had been delivered, and, as it happened, the duty on both codfish and lumber, two of Canada's principal exports, was likely to be nearly doubled. As before stated, the Minister of Finance assured Mr. Thompson, the Canadian commercial agent, and myself, that on our representations the particular duties would be left as they were.

The prospective change in Chili's lumber business threatens British Columbia lumber more than it does white pine, for while the republic has a substitute for the harder wood, the lighter material must always be brought from a foreign country. For this reason even a duty of 35 or

60 per cent. will be unable to exclude our product if offered there in proper shape and unencumbered with unnecessary expenses, such as are incurred by passing it through the hands of middlemen. Though the market is not a large one, its present condition is more favorable to Canada than to any other country. Chili, however, is not in an exceedingly prosperous condition, nearly all of her possibilities, except lumber, having been pretty thoroughly exploited. The low price of nitrate has made it very difficult for the nitrate companies in the north to export anything like the old-time quantities. As Chili's revenues are quite largely derived from export duties on nitrate, this has caused a serious embarrassment. Enormous expenditures—for a country of Chili's size, fabulous expenditures—on the navy have made her obligations very great, and the support of her forces on land and sea is very severe, and, some might say, an almost impossible task. The Chileans are a vigorous and aggressive people, seem to live well and to build for comfort and a considerable amount of show; and notwithstanding her financial difficulties created by over-expenditure, the country contains much wealth, is fairly well cultivated, and can be relied upon as a fairly good market.

PERU.—This republic, rising from its long period of depression caused by war with Chili and the much more recent but terribly sanguinary revolution, is showing many elements of prosperity. With singular if not simulated neighborliness, she seems to buy as much as possible from Chili, but her lumber business is a good one, for Canada especially. This is also true of Ecuador, her northerly neighbor, the chief seaport of which, Guayaquil, was recently destroyed by fire and is being rebuilt nearly altogether with wood, and very largely in the insecure and old time fashion. Ready-built houses on account of pressing necessity are admitted free.

The Pacific coast of Columbia is showing very little enterprise, and but a small amount of building is being done. What lumber is used is taken almost entirely from San Francisco, which acts as shipper for Puget Sound, from which, no doubt, much of the stock comes.

CENTRAL AMERICA.—The Pacific markets of these republics for lumber are nearly altogether in the hands of San Francisco people, and this is true of nearly everything. It also seems to me no difficult task for enterprising Canadians to enter and dispossess the present owners of the market, but this will never be while they rely to so large an extent upon the co-operation of Puget Sound and San Francisco merchants. In my opinion they rely too much on occasional orders received in this way, and on the imperfectly organized enterprise in the direction of shipping now and then a few unbroken cargoes. This may not be true of exports to countries with which I am acquainted, but in regard to Mexico, Central and South America, I think it can be said that they are preferring a small certainty to a much larger business which could be had by unity and concerted action confined to Canadian mill-owners.

BROKEN CARGOES.

One of the most positive indications of the necessity of Canada having a distributing point of her own for commerce such as reaches such ports as I am reviewing, is found in the fact that merchants and forwarders in Mexico, Central and South America, when ordering goods, very often ask that the cargo shall be completed with lumber of stated lengths and thicknesses, or in ordering part of a cargo of lumber, specify other articles that they desire to complete the shipments. These orders, of advantage to Canada, almost invariably go to New York, where everything can be produced on short notice. The orders for lumber sometimes reach Canada, but for other articles the warehouses of Brooklyn and New York are ordinarily sufficient for supply. In this way we are continually passed over and our reports of commerce are apparently such as not to encourage the belief that we can fully provide everything that is desired. Next to personal solicitation for orders to be made on behalf of our merchants and exporters, stands the necessity of forcing buyers to the world's market to understand that we are sellers, producers and forwarders.

After writing the foregoing portion of this report, I mentioned to a gentleman well acquainted with Canada's output of lumber that in the year 1896 we appeared to have sent only about \$410,000 worth to Argentina. He stated that these figures must be incorrect, as he was cognizant of that amount, and perhaps nearly twice that amount of lumber, going to Argentina from the Ottawa Valley alone. He stated that this lumber had nearly all

been shipped in cargo lots to Boston, where it was embarked for the south. He also stated that a special cut of lumber, 12 inches by 14 to 16 feet, made from small logs milled in the Ottawa Valley, was a great favorite in Argentina, inasmuch as the knots were of a small size, and when the board became dry and the knot fell out a large hole was not left in the board. I had to do with a dispute over what was pretended was a cargo of this Canada lumber at Buenos Ayres, and at once recognized the description. The cargo was rejected because it did not come up to the specifications, and was classed as "Michigan Lumber." Every year a large exportation of the same brand of lumber has been going on, and Canada has appeared to sell at least a portion of this material to the United States. My informant stated that the company interested in this trade were beginning to look about them for a means of direct exportation from Canada, as in many respects the present system was becoming unsatisfactory. The greatest difficulty he apprehended would be in finding return cargoes to Canadian ports.

This question of return cargoes was unexpectedly, though perhaps but partially, answered almost at once, when one of the largest manufacturers of woolen goods in the Dominion complained to me that the immense amount of wool the firm imported, much of it from South America, particularly the variety known as Chilean wool, came filtering into Canada from sources which added unduly to its cost. He was anxious to be placed in communication with shippers who would be likely to bring him his freights direct. A dealer in hides has asked me for the same assistance, and it seems easily within the realm of possibility that if Canadian exporters and importers having to do with South America got together, the situation would be simplified or solved, freights cheapened and our export and import lists straightened so as to show who are the customers of Canadian products, and of whom Canada is a customer. Such a movement would be a patriotic one and increase an hundred-fold the opportunities for Canadian trade with South America.

PERSONAL.

Mr. Eli Claude, for ten years bush foreman for Messrs. Buell & Hurdman, of Hull, died in Ottawa recently.

Mr. J. A. Christie, of the Assiniboine Lumber Co., Brandon, Man., was a recent visitor to Ottawa and other eastern points.

Mr. T. R. Case, an extensive lumber operator of Laclede Rapids, Minnesota, was recently in Ottawa on government business.

The marriage is announced of Mr. Donald Fraser, jr., of the well-known lumber firm of Donald Fraser & Sons, Fredericton, N.B., and Miss Tenant.

Mr. Andrew McCormick, the veteran lumberman of Ottawa, Ont., returned a fortnight ago from an extended visit to Bermuda, where he went to improve his health.

The death occurred at Ottawa recently of Mr. A. M. Burgess, Commissioner of Crown Lands for the Dominion and ex-Deputy Minister of Interior. He was 48 years of age.

Mr. John Donogh, of the Swan-Donogh Lumber Co., North Tonawanda, N.Y., was recently indisposed through illness at the residence of a friend in Toronto. A fortnight ago he was sufficiently recovered to return home.

From Pembroke, Ont., comes the news of the death of Mr. Hugh Grant, for many years manager for Hamilton Bros., and latterly of the Hawkesbury Lumber Co.'s business at Rowanton, Que. Deceased was in his 69th year, and was well known to the lumbering community.

The wholesale lumber firm of D. L. White & Co., of Albany, N.Y., has secured the services of Mr. Guy Buell, of Ottawa, who for the past two years has been connected with the firm of R. H. Klock & Co. In his new field Mr. Buell will have full charge of the Ottawa and Michigan business of D. L. White & Co.

Mr. Frank Maundrell, of the lumber firm of Leshman, Maundrell & Co., Woodstock, Ont., has returned from a business trip to Great Britain. Mr. Maundrell opened a branch agency of his firm in Glasgow, and expects to secure considerable foreign business. He also succeeded in selling the English rights to manufacture an acetylene generator of which he is the patentee.

We are pleased to learn that Mr. Carl Zidler, of Toronto, has secured the appointment of European agent for Messrs. Geo. T. Houston & Co., of Chicago, the well-known exporters of hardwood lumber. Mr. Zidler expects to leave some time this month for the European continent, visiting the markets of France, Germany and England, and will no doubt return with many orders as the fruits of his trip. Messrs. Houston & Co. make a specialty of quarter-cut oak, and also handle many hardwoods which are not found in Canada, such as gumwood, cottonwood, cypress, hickory and satinwood.

Remember the lumbermen's meeting in Toronto, April 7th. The hardwood trade should be well represented.

IMMENSE LUMBER CONSUMPTION OF A CANADIAN ESTABLISHMENT.

We give herewith a view taken in the lumber yards of the Massey-Harris Company, Limited, Toronto, and also introduce a portrait of their lumber buyer, Mr. Alex. McKee.

The Massey-Harris Company are among the largest buyers, and are, we believe, the largest consumers of hardwood lumber in Canada, their annual consumption being between 7,000,000 and 8,000,000 feet. Notwithstanding the fact that in the manufacture of agricultural implements steel is largely superseding wood, yet the growth of the business of this company is so large that their consumption of hardwood lumber is increasing year by year. The average value of the lumber which they generally carry in stock is nearly \$250,000. When one considers the enormous amount of money which is circulated by this one company alone among the mill men of western and northern Canada, and the large number of persons that find employment directly and indirectly in these mills, some idea of the importance of this industry to Canada can be conceived.

It is a great source of satisfaction to know that such enormous quantities of hardwood lumber are used in the Dominion of Canada, giving employment not only to the saw mills of the country, but to a large number of artisans who construct, from this raw material, various kinds of implements, which are exported over the entire world.

The principal object of this article is to draw the attention of saw mill men throughout the country to the fact that they can find in the company we have mentioned a purchaser for very large quantities of hardwood lumber, either dry or green, and we are satisfied that it would be to the advantage of the mill men of Canada to sell their product to local companies whenever

For such lumbers the Massey-Harris Company inform us they will pay more than mill men or dealers can obtain by exporting.

For packing cases, for which they use 1" soft elm, they consume one to two million feet annually. They buy this mill run (dead culls out), thus taking the entire cut, which is of great



MR. ALEX. MCKEE.

advantage to the mill man. For many special sizes they pay an extra price.

Their buyer, Mr. McKee, is well-known to nearly every mill man in western Ontario. He has been lumber buyer and inspector for the Massey-Harris Company and the old Massey Manufacturing Company for over 20 years, and is perhaps the best posted man in Canada on hardwood lumber. He knows the value of every board in connection with the business, and is able on this account to make an inspection more favorable to the mill man than the ordinary one.

EVOLUTION OF THE WATER WHEEL.

The essential principles of a well constructed water wheel are not unlike those of a finely balanced and adjusted automatic cut-off steam engine. In either device the first consideration is a point of impact of the power with some vehicle through which the power is conveyed directly to the machines to be driven. In the steam engine this point of impact is the piston head, and the power is the steam admitted to it through the cylinder. In the water wheel the point of impact is the bucket, and the power is the weight of water conducted to it.

During the early stages of steam engine development the margin of profit in the use of steam over hand power was so enormous that little or no attention was given to economy of fuel; but with the expansion of competition which this large margin naturally invited, the minutest detail of cost of production came to be closely scanned, and to-day the quantity of fuel consumed in any well ordered manufacturing establishment is as accurately noted as any other material that enters into the factory product, and vast sums are cheerfully paid for plants that secure the closest proportion between a certain weight of coal burned and each pound of water evaporated.

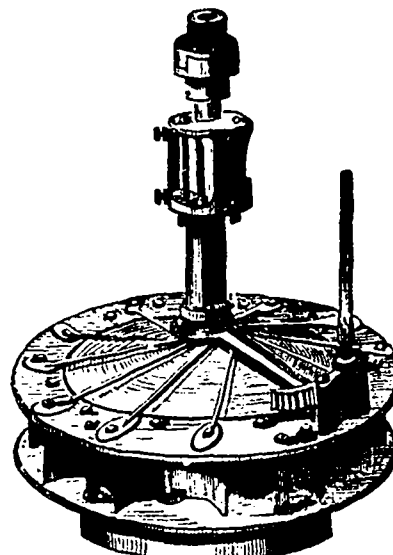
Such scaling down in the cost of steam power for a time left vast water powers throughout the land comparatively unused and apparently useless; for manufac-

turing could be pursued at any point, and in fact was diverted from localities possessing superior natural advantages to those that offered the best facilities for the distribution of finished goods.

Electricity, however, the great annihilation of distance, has, with wondrous strides, taken the front rank of the march of progress, and with the harnessing of Niagara the age of steam may almost be said to have yielded to the electric age, while in its wake, if not at its side, nature's other great elementary force—water—unassumingly stands forth the basic power of the day; the time-honored over-shot and breast water wheels which served their generation modestly but well, but for which the world became too small, are venerable relics of the past, along with Watt's steam engine and Stephenson's locomotive; and to the turbine has been assigned its final worthy place in the economy of the world.

Some will say, then, is not one turbine as good as another? Not so, any more than that one engine, of whatever type, using steam, is as good as another. There are few really bad turbines, for they all possess at least one-half the generic virtues of their species—they will let the water into them. But just as the highest type of steam engine is that which exhibits the nicest adjustment between the inlet of steam and the cut-off to the exhaust, so the highest type of turbine water wheel is that which observes the finest balance between the volume of water conveyed to it and its capacity to discharge or exhaust the same water while utilizing, by reason of its correct principles of construction, the greatest possible percentage of the power due the water.

The process up to this happy medium is, or should be, one of elimination or the dispensing with every part and weight that makes for friction, and that tends to the misdirection or mis-use of the power contained in the water. Such results are not a matter of lucky guessing or of random efforts by new men in a new field. In the case of the "Leffel," "Vulcan," and "Perfection" turbines the



"LEFFEL" TURBINE.

manufacturer, Mr. Madison Williams, successor to Paxton, Tate & Co., Port Perry, Ont., states that they represent thirty years of patient trial, experiment, modifications, and a steady aim to run parallel with natural laws, so that while many builders have multiplied devices, parts, connections, and cumbered their wheels with useless and hindering appliances, these turbines stand out as models of simple design, devisable workmanship, and high efficiency of power, that make them prototype of the most modern self-contained automatic steam engine, having the advantage over the latter that they use no fuel, require no fireman or engineer, and once properly placed may be relied on to do their work day in and out for years after, so long as the stream flows.

These turbines are built in sizes from 6 3/8 inches to 8 feet in diameter, and may be made to yield anything from 1/4 horse power to 2,500 horse power or over for a single wheel. Five sizes from 6 3/8" to 11 1/2" are constructed entirely of brass, and those from 13 1/4" to 20 inches have brass gates. Sizes larger than 20 inches are all of iron.

In illustration of the almost marvellous ingenuity of these wheels, a recent requirement was for a turbine to develop 60 horse power under a certain fall of water. The requirement was more than met by a wheel 7 3/8 inches diameter, which was capable of 90 horse power, and as the same principles apply to all the wheels built at the works of Madison Williams, it would seem that there remains little, if anything, to be attained in the improvement of water wheels that is not embodied in the three types already referred to.



CORNER IN LUMBER YARD, MASSEY-HARRIS COMPANY, TORONTO.

possible, rather than to export it to be manufactured abroad.

The hardwood lumbers mostly used by the company are white ash, white and red oak, rock elm and hickory. They also use considerable quantities of maple, basswood, soft elm and whitewood. White ash pole stock 3 1/2" x 4 1/4" and 8 or 12" x 14 feet is very valuable to them, as is also 1 1/2" x 10" x 12 feet white or red oak or rock elm, which is used for binder wheel rims.

THE SAW MILL OF THE FUTURE.

I HAVE recently travelled in different timber districts in the United States, Canada and Europe, and owing to my business, as well as my mechanical tastes, have had my attention called to the different methods of saw milling pursued in these different countries and under different conditions. As was to be expected, where the timber is most valuable, the thinnest saws are found in use. In the old countries of Europe their methods of sawing are very slow, and to the American they seem very far behind the times; in fact, their saw mill machinery would not be tolerated for an instant in a saw mill on this side of the water.

But as our timber is becoming scarcer and the better grades are becoming more valuable all the time, our progressive mill men are looking about for better saw mill equipment, and the American saw mill of the future will have to meet the demand for that economy which is practiced in Europe, without sacrificing to too great an extent the present capacity.

There can be no doubt that the band saw is the tool to which we must look, and thinner saw blades must be employed than those in common use at present. Advance in this, as in every

and hence more portable mill. Our valuable timber in many states, like Tennessee and Kentucky, is located in a hilly country, and the logs can not be transported to the large river mills. The saw mill of the future must go to the logs, and not the logs to the mill. There will be no disadvantage in the way of capacity in this respect. To begin with, we, none of us, know the maximum capacity of a band saw blade.

I was recently in a saw mill in northern Wisconsin. This mill was sawing logs averaging 18 or 20 inches through. I noted carefully with my watch the length of time elapsing from the time the saw entered a 16-foot log until it emerged from the other end. Often no more than two and one-half seconds were required, and never more than three seconds. Of course this was a 14-gage, 11-inch saw, but thin saws are doing even more than this in proportion. A firm in Illinois recently sawed, on a band resaw, carrying 19-gage saws, 39,960 feet of 1 x 12 cottonwood in nine hours. The saw blades were, most of them, old and narrow, and thus their average width was not over four inches, probably less. This firm takes special pride in the small saw kerf removed, hence this day's work means much more than if they were making this capacity at

pine in a day of ten hours. It will remove a saw kerf of 5-64 inch. This capacity, at first glance, would seem impossible, but when it is remembered that the present band mill carrying 14-gage saws will saw 40,000 feet of inch boards per day of ten hours, unquestionably the same number of logs could be handled with a thinner saw blade if only one-half of the cuts were made. In the proposed mill this will be done, the band resaw making each alternate cut.

The saw mill band resaw has many novel features in the way of set works, devices for sawing slabs, changing thickness, self-centering automatically, becoming rigid for slabbing, etc., as occasion may require. In the mill of the future all of these advantages will be insisted upon, and, moreover, in order to make all the saving which results from using so thin a saw kerf, a better class of set works will have to be used. There are a number of friction set works in existence at present, which are, undoubtedly, the outgrowth of this latest demand. In short, the future of the thin saw blade is brighter at present than ever before. It seems to meet every requirement, and the writer is never surprised at any new record that is made for either accuracy or capacity.—E. C. Mershon, in the Wood-Worker.

TRADE NOTES.

Senator Poirer, of Shediac, N. B., has purchased from the Robb Engineering Company, of Amherst, N.S., a 60 h.p. engine and boiler for his saw mill.

D. K. McLaren, 24 Victoria Square, Montreal, informs us that their western branch is open in the Imperial Block, Galt, where a full stock of belting, card clothing and mill supplies is on hand.

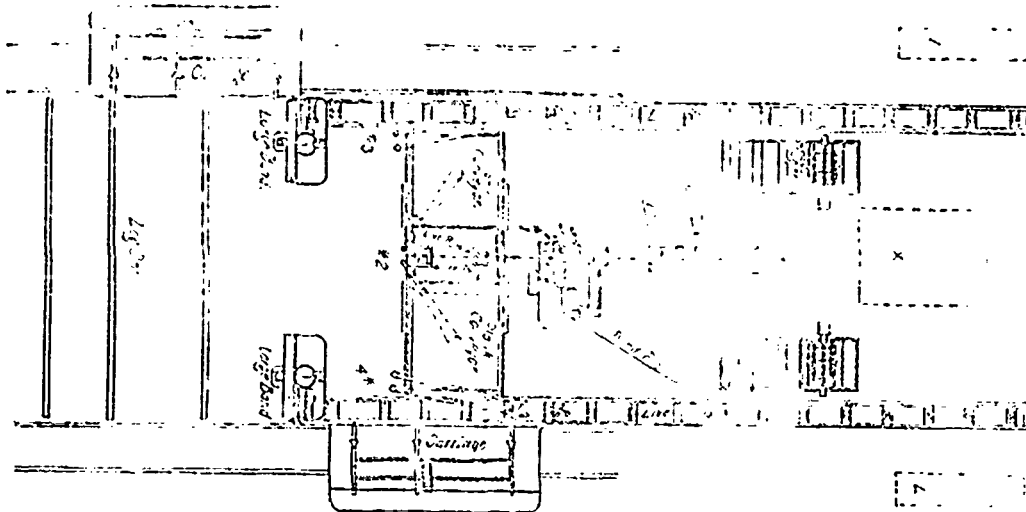
J. L. Goodhue & Co., of Danville, Que., are completing several large belts for a new saw mill on the Pacific coast, consisting of one 48 feet double, two 20 feet double, two 18 feet double, and the smaller belts required. They also have on hand a large order for an Ottawa concern.

The Canadian Locomotive & Engine Co., Kingston, Ont., advise us that they have shipped a carload of shingle machinery to McLaurin & McLaren, East Templeton, Que., and a carload to Gillies Bros. Co., Braeside, Ont., this month, besides several smaller orders, and business in this line is improving.

R. Bell, jr., of the Hensall machine shop, recently shipped the following orders: One large double saw mill top saws, log jacks and overhead centre, to Arrowhead, B.C.; heavy saw mills to Arnprior and Hagarville, Ont.; medium saw mills to Orillia, Tweed and Toronto; engine and boiler to Dashwood, and wood-working machinery to Toronto.

Mr. Madison Williams, successor to Paxton, Tate & Co., Port Perry, Ont., has recently shipped and has under construction the following: 10-inch brass horizontal mining wheel, with Globe case, to British Columbia; 23-inch Vulcan to D. McInnes, Judique, N.S.; 26½-inch Vulcan and case to Thos. Elliot, Hamilton, Ont.; one 40-inch and one 48-inch Lffel to St. Hyacinthe, Que.; one 44-inch Lffel to E. H. Bartlett, Bartlett's Mills, N. B.; set of heavy gearing to Hon. J. B. Snowball, Chatham, N.B.; 20 ft. Lane saw mill and carriage, with special rope feed-works, to S. G. Parkin, Lindsay, Ont.

Messrs. Baldwin, Tuthill & Bolton, of Grand Rapids, Mich., report the following recent sales of band or gang saw filing room outfits: Mitchell & Rowland Lumber Co., Toledo; Union Dry Dock Co., Buffalo; Raine & Raine, Empire, Pa.; W. A. Jones & Co., Caledonia, Pa.; Clark-Rowson Lumber Co., Grand Rapids, Mich.; Kalamazoo Sled Co., Kalamazoo, Mich.; Saginaw Mfg. Co., Saginaw, Mich.; Montgomery Bros. Lumber Co., Buffalo, N.Y.; Woodward Lumber Co., Atlanta, Ga.; Hubbard Bros., Mobile, Ala.; Jos. F. Paul & Co., Boston, Mass.; H. A. Hodges, Buffalo Bluff, Fla., together with single machines or partial outfits to over 60 other concerns throughout the United States and Canada. They are having a remarkable demand for their 1898 book on saw fitting from both millmen and filers.



MODERN DOUBLE BAND MILL, WITH RESAW.

other line of progress, has not taken place steadily, but after an advance there has been a backward step. Thus the first band saw blades used were much thinner than those used at present. They were not entirely satisfactory, mainly for the reason that the operator did not know how to care for them. If a saw blade refuses to perform the work in the best possible manner, there are always two ways to remedy it, one to abandon the thin saw blade and use a thicker one and this, I regret to say, has been the usual practice and accounts for the thick band saw blades we are now using. The other and the correct method is to fit the saw blade more carefully, to study the reasons which have caused it to do imperfect work, and to correct these defects. We are now commencing to do this, and the writer confidently predicts that within five years, in place of 14-gage band saws being the standard thickness, you will find saws 16-gage and thinner will be the rule.

I believe that the ideal mill of the future will use saw blades 17-gage in thickness. The advantages they will possess are numerous; they will be more flexible. This means a band mill with wheels of comparatively small diameter, and will admit of a much lighter, more compact,

the expense of the quality of the sawing. This, of course, was a continuous feed, and there was no lost time as would be the case in sawing logs in a saw mill; but allowing two-thirds lost time for reversing the carriage and loading and turning of logs, you still have about 15,000 surface feet, which could be sawed by a log mill with a 19-gage 4-inch saw if it were fitted and cared for as well as these blades were.

The small band mill which will be used in the future will have 60 to 70 per cent. of the capacity of the present large band mill; 1-16 inch in saw kerf will be saved as compared with the present 14-gage saws. In the large plants of the future, where the capacity must be maintained, band resaws will be used for this purpose. They will be placed directly back of the log saw, which converts logs into flitches, and the band resaw will convert this latter into boards or planks of the required thickness. This feature is not experimental. They are being used extensively for this purpose at the present time. One firm alone has sold over thirty to saw mill owners during the past two years.

The accompanying diagram represents a double band mill, which, equipped with 18-gage saws, will produce 75,000 to 80,000 feet of four-quarter

EXTENSIVE MARKET FOR SPRUCE.

THE fact has been previously referred to in this journal that larger quantities of spruce than heretofore have this year been sold for shipment to the east coast of England, which is practically a new market for this lumber. The price of Baltic lumber, which formerly supplied the enormous ship-building and other industries of the east coast, is now so high that buyers are looking around for a suitable substitute at a lower price, and are turning their attention to the spruce lumber of New Brunswick and Nova Scotia.

For the purpose of investigating the prospects of obtaining a continuous supply of spruce, Mr. James Miller, representing Robson, Miller & Co., lumber importers, of Newcastle-on-Tyne, recently paid a visit to Canada. To a representative of the St. John Sun, Mr. Miller gave some interesting particulars of the situation. He said:

"The spruce ports are now on their trial. The consumption of lumber on the east coast of England is enormous. Hitherto the supply of whitewood has come from the Baltic. The mills there are more careful in manufacturing lumber and make it in sizes to suit the trade. The objection to spruce has always been that your mills do not make as good a class of lumber, or make sizes to suit. But the increase in the price of Baltic lumber has turned attention to spruce. What your manufacturers must do is to turn out well sawn lumber in the sizes needed—and nearly all sizes are required. I have talked with some of your mill owners. They say they have been accustomed to cutting 3x7, 3x9 and 3x11 in. deals, and driving their mills. In my opinion, if they would cut more slowly and get more out of the logs it would be better for them and for the lumber interests of your province. It would certainly give them a better chance to secure and hold the east coast market. The gang saws that I have seen in your mills are about or nearly twice as thick as those used in the Baltic mills. When one of your mill owners told me what logs cost, I was very much surprised that so much of the logs should be wasted by the use of thick saws.

"In order to get and hold a market, in these days of quick and world-wide communication, the wants of the market must be studied and suited. The Baltic people have been careful to do that. Your people now have the chance. I believe that four or five thousand standards of spruce have already been booked for the Tyne alone. Remember, spruce is, comparatively speaking, unknown on the east coast. It must make its way, and careful manufacture of all lumber sent there is the only means of cultivating the market. The people here have it in their own hands.

"There is an immense variety of sizes suitable to the market, ranging from 4x $\frac{3}{4}$ inch boards to 12x4 inch planks. Such sizes as 4x2, 5x2, 5x2 $\frac{1}{2}$, 6x1, 7x1, and 2 $\frac{1}{2}$ and 3 inch thicknesses in various sizes are required. There is a very large demand for 2 $\frac{1}{2}$ inch stuff.

"This (2 $\frac{1}{2}$ inch) is the size used by shipbuilders, and the ship-building industry is extremely active. All the companies and firms are filled up with orders for the year for steamers, while in the yards building warships there is three years' work booked. Though built of iron and steel, there is a great deal of lumber used in ceiling and the internal fittings of vessels. In this work 11x2 $\frac{1}{2}$ inch stuff is used, and that is a size seldom asked for on the west coast. You must remember, and manufacturers must remember, that different markets want different sizes. What suits the west coast will not suit the east. What suits the east will not suit the south coast. The sizes used in house-building on the south coast, for example, are not the same as ours on the east coast. A market will not take any size you choose to cut. You must cut the size it needs.

"The activity in ship-building has caused a corresponding activity in house building, and this creates a further demand for lumber. The price of Baltic lumber is likely to remain high, owing to the enhanced value of the forests. Our firm import lumber from the Baltic, white pine from Quebec, pitch pine from the south, and also import from Vancouver. We do not see why New Brunswick and Nova Scotia should not have a share

in the trade of the east coast. It rests with the manufacturers.

"There are ports on the Tyne, Wear, Blyth, Tees and Humber, and interior markets like Leeds, Bradford, Huddersfield and others, having an enormous consumption of lumber. Such cities as Newcastle, Shields, the Hartlepoons, Sunderland, Stockton, Middlesboro, Hull, Grimsby and others afford a large market."

NOTES FROM THE MARITIME PROVINCES.

[Correspondence of the CANADA LUMBERMAN.]

LOGGING operations in New Brunswick and Nova Scotia the past winter have been done on a much smaller scale than for a number of years, owing to the drop in prices in all markets where spruce lumber obtains, and the consequence is being severely felt in all lines of trade. The quantity of sawn lumber piled on the wharves and at the mills ready for shipment is much greater than usual at this season of the year. Some few mills have small stocks of logs carried over, which, with the small cut of new logs, will give ample stocks to supply the demand.

At present it is impossible to get a quotation for English deals, and it is reported that there have been no vessels chartered for Bay of Fundy ports for same. There will be a few cargoes for French and Mediterranean ports shipped from mills at Apple River, Point Wolfe and Alma, early in the season, by C. T. White and the Alma Lumber Co. The price delivered is fixed, but vessels are not yet chartered, so it is not known yet what the net price will be.

In New Brunswick the cut is estimated to be about one-half the average quantity; a number of the large operators say they would not have cut a tree but for the fact that they had a lot of families depending on them for work, and even then they were not anxious that the workmen should over-exert themselves, as from the outlook the trees would be more valuable growing than in the pond. A few of the St. John river lumbermen, such as Hale & Murchie, Donald Fraser & Sons and R. A. Estey, Fredericton, who log on Tobique, James Mutchie & Sons, Edmundston, and A. Gibson, Matysville and Blackville, will get out about their usual quantities, as also will Hon. J. B. Snowball, of Chatham. The latter is making extensive alterations and improvements in his mill, which I intend giving you a full description of when completed. William Richards, Chatham, is also improving his mill, putting in the patent haul-up and making other changes in the line of economy in handling the product of his mill. E. Hutchinson, Douglastown, is also putting in the patent haul-up, and making some changes deemed necessary for economical working when the margin of profit on lumber is as small as it is at the present time.

Adams, Burns & Co. and Sumner & Co., Bathurst, will operate on a much smaller scale than last year—just enough to keep the machinery bright.

O. F. Stacey & Co., shingle mills, Bathurst, will operate about as usual. Mr. Stacey is in California at present for his health, and while there and in Vancouver will look into the shingle business and compare methods of manufacture there with those of New Brunswick.

Gray & Lawrence Bros., Charlo, N. B., are getting their usual stock of cedar for the season. This property is for sale, and several parties have looked it over with a view of purchasing. The firm have large lumber interests in Gardner, Maine, hence the reason for selling.

Kilgour Shives, Campbellton, one of the largest shingle and lumber manufacturers in New Brunswick, took occasion to visit the English and Continental markets during the winter and make himself acquainted with the wants of the different markets in the classes of goods he manufactures, and I will venture the assertion that if there is an opening for the lines he makes or can make, and in which there is a margin of profit, he will find it and supply the goods.

The shingle market in the United States is very low, which, with the re-imposition of the duty, reflects the want of animation in the business in Campbellton, and in fact all New Brunswick and lower Quebec where this is the staple business. The mill owners are going on with their work in the hope that the near future will open up bright. Hope, like capital, is a grand thing to have, and I think lumbermen possess it to an extraordinary degree.

The early part of the winter was good for logging operations all through New Brunswick and Nova Scotia. Some heavy falls of snow in February in the northern part resulted in about seven feet—while two and a half would

be the quantity in Nova Scotia. One who has never seen seven feet of snow on the level in the woods can form but a very poor idea of what the New Brunswick and Quebec lumbermen have to contend with in this respect.

The cut of lumber in Cumberland County, N. S., is very much under the average of the past ten years, in fact some of the mill owners are seriously thinking of holding over their logs unless there is an advance in price; they claim that with the cost of sawing, piling up, insuring, interest, etc., and holding for a price, it would not be as good as to leave the logs in the pond.

Prescott, Gillespie & Co., Shulie, N. S., started in to get one and a half million, but are afraid they will have two and a half.

C. I. White & Son, Sand River, N. S., are large handlers of piling, which they buy anywhere on the shores of the Bay of Fundy, and ship to New York, Baltimore, Philadelphia and other American markets. Timber not suitable for piling is sent to their saw mill to be sawn into deals.

C. T. White, Apple River, N. S., is operating getting about four million feet for his gang mill. He has a portable mill sawing hardwood and some spruce; he will get about a million feet, six hundred thousand of which is hardwood. Mr. White also owns a good lumber property at Point Wolfe, in New Brunswick, where he will get about five million feet.

A. C. & C. W. Elderkin, Advocate, N. S., purchased the lumber property, mill, and all logs, lumber and supplies from C. F. & F. R. Eaton, Eatonville, in December last. They have about three million feet ready to drive when water comes. They also have a large steam portable mill at Advocate, in which they will saw one and a half million.

Moses Hatfield, Port Greville, has a water power circular mill in which he will saw during the spring eight hundred thousand, and in a steam portable mill at Fraser-ville will saw about as much more.

Girvin Elderkin has a portable steam mill which he will start in a few days sawing for H. Elderkin & Co., at Port Greville, N. S. The mill is about five miles from shipping point, and the deals are run down in a water sluice at very little expense.

At Parrsboro, where there was a very large export of lumber last year, and charters for thirty million feet made by the 1st of March, 1897, there is said to be now not one vessel chartered. Of course there will be considerable lumber go out from here, but at present lumber is quiet.

Pugsley Bros. mills at Five Islands and River Hebert have five million feet. Huntley & Pypys have one million feet. Newville Lumber Co., Newville, got out three million feet, with one and a half over from last year.

W. J. P.

The construction of the Manitoulin and North Shore Railway will join Manitoulin Island with the mainland. The island is richly timbered, and contains large quantities of pulp-wood, which will no doubt be utilized as soon as railway facilities are secured. There are many good water powers on the island.

"Use and Care of Band Resaws" is the title of a creditable hand-book published by W. B. Mershon & Co., of Saginaw, Mich. This is the third edition, and its preparation was rendered necessary earlier than was expected owing to the great demand for the second edition. The compilers claim that it represents a line of machines excelling anything so far attempted in band resawing machinery. The Standard, Perfect, Saginaw and Ideal resaws, special band edgers, and many other types of machines are nicely illustrated and described. As a treatise on the use and care of band resaw blades it should be of value to filers and mill superintendents.

A Canadian engineer has evolved a theory that forest fires are often started by the friction of trees rubbing against one another. He claims to have discovered an instance of that kind. While with a government surveying party in the far northwest, where forest fires are frequent, he happened to catch a tree in the very act of setting fire to itself and its companion trees. It had been partly uprooted by a windstorm, and leaned against the trees near, some of which were dead. Gusts of wind from the mountains caused the inclined tree to rub those against which it rested. This developed much friction, and after several hours the dead wood on which this friction was exerted began to glow, and at length burst into flame, and a fire which swept through miles of valuable timber was the result.



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

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

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

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 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.

TO VISITING LUMBERMEN.

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

THE FORESTS OF ONTARIO.

It would be difficult to over-estimate the importance to the province of the preliminary report presented to the Lieutenant-Governor of Ontario by the Royal Commission appointed to investigate and report on the subject of restoring and preserving the growth of white pine and other timber trees upon lands in the province which are not adapted for agricultural purposes or for settlement. This report, published in our February number, is by no means exhaustive, neither does it deal with many of the problems of forestry, but it certainly casts an entirely new light, to many, on what we are to do with our cut-over and burnt-over pine lands.

The common idea held by lumbermen and others has been that a pine forest, once cut down and the ground burnt over, would not again re-clothe itself with pine timber. This has now been shown to be a mistaken idea, and that under certain conditions pine will again become the dominant wood of the district. If a forest fire is so fierce—as sometimes happens—as to kill every tree in the district, then only those trees will appear as second growth whose seed can be carried in quantities and long

distances, such as poplar and ash; but if, on the other hand, some of the large pine trees escape and are left standing, if only a tree here and there, then the seed from such pine trees will so disseminate itself as to produce slowly it may be, if the parent trees are scarce another crop of young pine trees, who find the necessary conditions of their growth as forest trees by coming up amongst the young poplars. It has not yet been determined how far a pine seed will carry; the wing or tail attached to each seed, measuring about three-quarters of an inch long by one-quarter of an inch wide, will no doubt fly a considerable distance or strike the ground near at hand, according to circumstances. The cone opens late in the fall, and as it gradually opens, the seed will usually become detached during a gale of wind, and so from its altitude be carried a considerable distance away.

Some districts visited by the Commissioners are thus described: "In most of the burnt-over territory examined, pine was found intermixed with other trees, and gradually as was no doubt the case with the original forest—asserting its supremacy and dominating the surrounding trees of the young generation." A specific case is given of a typical young forest in the county of Peterborough, twenty-three years of age, the exact date being verified by the postmaster of the district. "Viewed from the Burleigh road it has the appearance of a thrifty young poplar forest, with a few pine trees appearing on a level with the poplar; on close examination it was found that the young forest was largely composed of white and red pine, poplar, white birch, balsam, spruce, with some cedar, black ash and spruce on the low lands, as well as odd pine trees here and there that had been left by the lumbermen, relics of the original forest that had survived the fires."

The rate of growth of pine timber has been variously estimated, and is, of course, subject to many conditions. A young tree may begin life in the forest under adverse circumstances, germinating later than its near neighbors, and so grow up under their shade; while still young it may make fair growth, but as the forest space surrounding it is gradually taken up by the older trees, shutting it out from the sunshine, the struggle for existence can only end one way—by the gradual stoppage of growth and final death of the less favored specimen.

Leaving out of account, however, trees of this description, and taking only those living under fair and normal conditions in our northern country, it takes, according to the average made by the Commissioners, about forty years for a young pine to reach any commercial value; at that age it will make an eight inch log sixteen feet long, or say sixteen feet board measure. How important it is to preserve this sapling will be seen by considering its growth during the next thirty years, when, according to the apparently moderate calculations made, and by actual tests taken, it will, at the age of seventy years, produce 164 feet of merchantable lumber, and thereafter increase in growth at the rate of 3½ per cent. per annum.

All the recommendations made by the report can be carried out by order-in-Council except clause 5, which required the sanction of Parliament, and that was given at the last session by

the enactment of Bill No. 54, "An Act to Establish Forest Reserves," which, being entirely away from the strife of parties, attracted little notice, but which we consider the most important act which has passed the Legislature for many years. Taken in connection with the recommendations that no pine tree should be cut smaller than 12 inches diameter measured two feet from the ground, that the system of fire-rangings should be compulsory on all lumbermen, and adopted by the government for their unsold berths, the system, if carried out, would introduce a new era in forestry, which would show its effects in after years.

The necessity of adopting a policy of forest reserves has long been admitted by those who have given the conditions prevailing in our north country any consideration. There are many millions of acres quite unfit for settlement that are admirably adapted for growing coniferous trees, and it would seem the height of absurdity to allow settlers to enter an area unfit for permanent cultivation, and where their presence leads to the destruction of valuable timber, as may be seen in many sections of the province.

There is a little over 20,000 square miles of territory now under license in this province, and presumably there is as much more to be sold, although not all pine lands; and of this vast area a considerable proportion may be set apart for forest reserves, as it reverts back to the Crown when the present crop of timber has been taken off. It certainly looks as if no better investment could be made by the government looking forward to obtaining a permanent revenue for the province. As to those areas which have been so completely burnt over that valuable varieties will not immediately reproduce themselves, it is a question on which we require further information and more complete investigation. Meantime we welcome the report, with its valuable initial suggestions, and as an earnest of what may be accomplished by close and practical attention to the interesting subject of forestry.

TWO MAIN FACTORS IN TRADE.

It is not always easy to determine just how far the price of a certain commodity may advance before the consumers thereof cast around for a suitable substitute. The relation between price and demand is one which should be carefully studied by lumber manufacturers, as upon it depends, to some extent, the volume of consumption. After guarding against an over-supply, perhaps the next thing to be carefully watched is that prices are not forced so high as to cause substitutes to be purchased; for it is vastly easier to hold a market after it is secured than to capture it for the first time. Shippers in foreign markets may continue to advance prices until, to their surprise, they find the demand weakening, and upon enquiry, learn that other woods have been substituted.

Two illustrations may be given, one showing the evil effects of over-production, and the other the necessity of maintaining prices within easy reach of probable consumers. It is well known to readers of this journal that the spruce production of 1897, especially in New Brunswick and Nova Scotia, greatly exceeded that of any previous year. The result was the overstocking of our principal market, Great Britain. Early in the

year the demand was very active, but as heavy shipments continued to arrive, the market weakened, and prices throughout the entire season showed a gradual decline. The difference between the opening prices and those realized in the late fall was about £1 10s per standard. The depression would have been more severe had it not been for the active consumption, induced in a measure by the low price. Taking the year's business as a whole, profits of manufacturers on this side were perhaps no more than if the production had been curtailed by one-half. Thus we see the evil effects of an over-supply.

Turning to the influence of price upon consumption, we find that this same overproduction has assisted in opening the way into new markets. Heretofore the Canadian spruce trade has been confined almost exclusively to the west coast of England, the east coast obtaining its supply from the Baltic. Within the past two years, however, the price of Baltic lumber, owing to the increased value of the forests, has advanced in price, until today whitewood is quoted at more than two pounds higher than spruce. The result of this is that consumers are turning their attention to other woods, and have made large purchases of Maritime province spruce. There appears to be reason to believe that for many purposes it will entirely supersede whitewood, and that an immense market will be created by shipbuilding and other industries. Some estimate of the requirements of the east coast may be arrived at by taking the ports of Hull, Grimsby and East and West Hartlepool. Their combined import last year was 1,709,084 loads of 50 cubic feet. This is equal to over one billion feet board measure, which is only a small portion of what is imported by all the ports combined. It is not to be expected that Canadian spruce will supply more than a mere fraction of the total requirement, but the figures show the opportunity that exists for extending our trade.

The Baltic shippers will undoubtedly come down in their price in order, if possible, to hold the market, and our manufacturers will find it no easy task to capture the trade.

Two things should receive the careful consideration of Canadian producers: First, the overstocking of foreign markets should be guarded against; and, secondly, attention should be given to lessening the cost of production by using thin saws, utilizing the waste material, and by every other possible means. It is manifestly more advantageous, when competing in the markets of the world, to obtain from a given log 1,000 feet of marketable lumber which can be sold for, say, twenty dollars, than to lose 25 per cent. through waste or careless sawing and be compelled to ask the same price for the remaining 750 feet.

FOREIGN TRADE IN LUMBER.

The abstract in this issue from the final report of Mr. E. E. Sheppard, trade commissioner to the South American Republics, further corroborates the statements reiterated in this journal that the lumber of Canada is little known in many foreign markets. It clearly points out that the policy of allowing our export trade to be handled by United States houses has been, and will continue to be, detrimental to our best interests, and until some means is devised of affording direct steamship communication we need not expect any great expansion of trade.

Mr. Sheppard has evidently devoted considerable attention to the lumber trade, and has placed the government and Canadian lumbermen in the possession of facts and figures which should serve as a basis to work from. There appears to be a fair prospect of increasing our trade in lumber with Mexico, Central America and some countries of South America. The trade of Mexico is now held by the Southern States, while the Pacific markets of Central America know little of Canadian lumber. It is Mr. Sheppard's opinion that persistent efforts on the part of our mill-owners would capture much of this trade.

Of the South American countries, Argentina and Chile appear to offer great possibilities for our spruce and pine lumber. Spruce is shipped in large quantities from Maine, and could no doubt also be profitably exported from the Maritime provinces. One drawback with which shippers have to contend is in respect to the payment of duties, the valuation of the goods, instead of being taken as per invoice, being fixed by the authorities, according to their judgment. All goods of any specified class are assessed alike. It is a singular fact that, although Chile imported \$800,000 worth of lumber in 1896, Canada is not credited with supplying any portion thereof. The methods of saw-milling in these countries are very crude, which suggests the thought that if Canadians would manufacture their lumber carefully and into proper sizes, they might in a short time build up a much larger trade.

EDITORIAL NOTES.

The memorial recently presented to the Dominion government by western lumbermen, and which is printed in this number, presents strong arguments in favor of an import duty on lumber, and should dispel the erroneous idea which seems to prevail to some extent that the consumer of the Northwest will be compelled to pay a higher price for his lumber when United States competition is shut out. There are sufficient mills and timber in Canada to supply the requirements, and the competition between local concerns is sufficiently keen to keep prices within reasonable bounds. Every lumberman in the Dominion should exert himself to secure the exclusion of United States lumber until such time as the tariff of that country is more favorable to Canada.

FOREST culture and forest preservation, although not identical, have as their purpose precisely the same object, namely, to provide present and future generations with a necessary supply of timber. In Canada, with her large tracts of timbered land yet unsold, and all lands reverting back to the crown after the timber is cut therefrom, there has been but little done in the way of forest culture, more especially as the government have taken steps in ample time to perpetuate our timber supply by establishing forest reserves and investigating the possibilities of a regrowth on cut-over lands. In the United States, where the timber supply is more nearly exhausted, forest culture has become more necessary. The suggestion of Governor Black, of New York, should therefore meet with favor. He proposes that a bill should be passed by the State Legislature authorizing the lease to Cornell University for twenty-five years of 25,000 acres of State lands

for experimental purposes in the cultivation of timber, an annual appropriation to be granted for the purpose. In this way the University would be in a position to proceed with forest culture along the same lines as practised in some of the older countries of Europe, and the practicability of the scheme would soon be demonstrated, and copied on a larger scale.

LUMBERMAN'S ASSOCIATION OF ONTARIO.

For the purpose of reorganizing the Lumberman's Association of Ontario, which had not held a meeting for eight years, members of the trade assembled in the rotunda of the Board of Trade on Tuesday, March 22nd. The members of the association present were: A. H. Campbell, sr., president; J. B. Miller, secretary-treasurer; James Scott, John Waldie, A. H. Campbell, jr., Toronto; C. Beck, Penetanguishene; T. Conlon, Little Current; W. A. Charlton, M.P.P., Lynedoch. Others present who identified themselves with the association were: C. D. Warren, Imperial Lumber Co.; John Bertram, Collins Inlet Lumber Co.; Allan Macpherson, Longford Mills; R. Laidlaw and W. J. Smith, Toronto; R. Cook, South River.

The president, Mr. Campbell, took the chair, and called upon the secretary to read the constitution. After some discussion a committee was appointed to revise the constitution, those named being Messrs. John Waldie, J. B. Miller, R. Laidlaw, John Bertram and C. D. Warren.

The report of the treasurer was presented. It showed a membership of about fifty, and a surplus in the treasury of over \$300.

A committee was appointed to take steps to secure the imposition of an import on lumber, and to meet a deputation of western lumbermen the following day.

It was resolved to adjourn until 10:30 a.m. on Thursday, April 7th, 1898, when the committee on the revision of the constitution will present its report.

At this meeting many important questions will likely be considered, among them being the formation of a hardwood section and the possibility of securing cheaper freight rates to the Northwest. An advertisement elsewhere extends an invitation to all lumbermen desirous of identifying themselves with the association to be present, and we hope to see new life infused into the organization. For the information of our readers, we give below the original membership of the association:

M. M. Boyd and W. T. C. Boyd, Bobcaygeon; John Macdonald, Albany, N. Y.; Jas. Scott, Waubaushene; John Charlton and W. A. Charlton, Lynedoch; James M. Irwin, Peterboro'; N. Dymont, M. Burton, J. L. Burton and C. H. Clark, Barrie; Robert Thomson, Hamilton; David Gilmour and Allan Gilmour, Trenton; Alex. Fraser, Westmeath; C. McLachlin, Arnprior; T. Murray, Pembroke; J. B. Miller, Parry Sound; J. M. Dollar, Midland; C. Beck, Penetanguishene; W. C. Caldwell, Lanark; Alex. McArthur, East Saginaw; A. M. Dodge, New York; H. Malone (The Calvin Company), Garden Island; R. C. Strickland, Lakefield; Thos. Conlon, Thorold; D. L. White, jr., Midland; W. C. Edwards, Rockland; Jas. McLaren, E. H. Bronson, E. B. Eddy, E. D. Moore, C. B. Powell, J. R. Booth, G. H. Perley, W. R. Thistle, W. H. Rowley, Ottawa; A. H. Campbell, J. L. Hatton, H. H. Cook, A. H. Campbell, jr., J. H. M. Campbell, John Waldie, W. W. Belding, Toronto.

MEMORIAL FOR AN IMPORT DUTY ON LUMBER.

The lumbermen of Canada have taken vigorous action to secure the imposition of an import duty on lumber coming into this country from the United States, and apparently do not intend to relax their efforts until the desired end is accomplished. In December last, it will be remembered, the British Columbia lumbermen passed a strong resolution, for presentation to the Dominion parliament, favoring such a measure, and since that time the movement has been gradually spreading and growing in interest.

On Thursday, March 17th, a deputation of lumbermen from the Georgian Bay district waited upon the Premier and Sir Louis Davies, Minister of Marine and Fisheries. The representation included Messrs. John Waldie, Victoria Harbor Lumber Co.; John Bertram, Collins Inlet Lumber Co.; E. W. Rathbun, Deseronto; John Charlton, M.P.; C. Beck, Penetanguishene, H. Lovering, Coldwater; and James Playfair, Midland.

The purpose of the deputation was to present to the government a resolution passed at a meeting of lumbermen held in Toronto on August 19th, 1897, requesting the imposition of an import duty on lumber. It was pointed out that, as the Congress of the United States had prevented Canadian lumber from reaching the American market by the imposition of a duty of \$2 per thousand feet, the government of Canada should impose a similar duty on American lumber, which now comes in free, until such time as the American duty on Canadian lumber is removed and free trade in lumber restored. It was further stated that yellow pine from Georgia comes into Quebec and Ontario very extensively, and that red pine also from the States is shipped in at a low rate, because of the displacement of red pine by hemlock in the American market. The Premier, in reply, said that the great difficulty was with the lumber supply of Manitoba and the Northwest. He would, however, give the whole question careful consideration.

A few days later a deputation of western lumbermen, comprising Messrs. Walter Ross and D. C. Cameron, Rat Portage; Geo. Graham, Port Arthur; J. A. Christie, Brandon, Man., and F. Gordon, of the British Columbia Mills, Timber and Trading Company, Vancouver, B.C., presented a similar request to members of the Dominion Cabinet. The situation was fully explained in the following memorial:

OTTAWA, March 21, 1898.

Right Hon. Sir Wilfrid Laurier, G. C. M. G., Premier, Ottawa:

Sir, The lumber trade of Canada, suffering as it now is from unfriendly legislation by the neighboring republic, is in an entirely opposite position from what it was when the lumbermen of north western Ontario and Manitoba had the pleasure of appearing before the tariff commission at Winnipeg. Before that commission we stated that we had no grievance and no complaint to make against the tariff. Rough lumber and lumber dressed one side was on the free list, and this was fair and equitable, as the United States then had rough lumber on its free list, and our statement was that so long as the United States admitted lumber free the Canadian Government should do the same, but should the United States Government impose an export duty on lumber it was the duty of your Government to impose a similar duty. The latter condition has arisen: the United States has passed an act which not only imposes a duty on lumber, but presumes to punish by imposing double duty on the lumber of any foreign country which may impose an export duty on logs. Under these circumstances we ask the Government to impose an import duty on lumber entering Canada.

Our position is not changed since appearing before the tariff commission at Winnipeg. We believe in free lumber if it is reciprocal, but we object to the one sided condition of affairs that at present exists, and believe that by meeting them in the same spirit they themselves display, the desired condition of free lumber on both sides of the line will be sooner reached than by giving them free access to our markets, which they are now allowed to enjoy. We believe that the vigorous policy of the Ontario Government, if supplemented by the imposition of an import duty on lumber, will bring to the front an influential and numerous body of men in the United States who will exert sufficient influence to bring about the desired condition of free lumber in both countries.

Some anxiety has been expressed that in Manitoba and the Territories a rise in the price of lumber would result from an import duty; this would not be the case, the price would remain as it is, but the trade, which is now divided to a very large extent, would then flow naturally to Canadian mills, giving employment to many thousands of Canadians (instead of, as at present, this labor going to foreigners), and give increased trade to Canadian merchants and manufacturers. If Canadians have any trade or calling which is capable of being called their national calling we think it is that of producing lumber, and they can be depended upon to keep the prices at a reasonable rate through competition. Lumber is widely diffused, and no corner has ever been successfully formed in lumber either in Canada or the United States. It has been the experience of the trade that if lumber from any cause becomes scarce and the price abnormal, it springs from all points of the compass to fill the demand and reduce the price.

It is quite generally accepted as a fact that large portions of the province of Manitoba and the Northwest Territories are treeless, but nature has provided within their own limits extensive tracts of timber which supply mills at Whitemouth, Selkirk, Winnipeg, Brandon, Dauphin, Rapid City, Calgary, Edmonton, Prince Albert, and numerous other points in Manitoba and the Northwest Territories. To supplement these sources of supply are the inexhaustible forests of British Columbia. To the east are extensive mills at Keewatin, Rat Portage, Savanne, Fort William and Port Arthur, and further east are the mills on Georgian Bay, which are now shut out of the American market and anxious to ship lumber to Manitoba. We might say that many millions of Georgian Bay lumber have been shipped to Manitoba and the Territories. With all these sources of supply operated by as enterprising lumbermen as any in the world, it would seem to us unreasonable to conclude that it is necessary to divide the limited home market of Canada with the United States lumbermen for fear of high prices, which cannot and will not occur, except in the minds of men who do not understand the conditions.

It is a great hardship to have the markets of the neighboring republic shut to us, and besides have to divide our market with the United States lumbermen. We can compete with them, and do compete, but with Canada treated as a dumping ground and foreign railways granting rates on traffic consigned to Canada much more favorable than they grant their own countrymen similarly situated, we cannot more than compete, and on even terms the trade would be naturally divided. As further evidence that no attempt would be made to advance the price in Manitoba or the Territories, we would state that all lumber is sold at one price, and that price is the Winnipeg price, and although there are many points in Manitoba and the whole of the Northwest Territories which cannot be reached by American lumber owing to the fact that the American and Canadian railways do not pro rate their freight charges, and all this territory is entirely dependent on Canadian mills for its lumber, still each and every point so situated is supplied at the price prevalent at Winnipeg, which is the centre of railway competition, the price here being the lowest in the province.

The mills at Rat Portage and Fort William shipped lumber to the United States, and would have continued to do so had it not been for the imposition of the United States duty; in fact the mills at Savanne were built with a view to shipping to the United States. The mills at Fort William devoted all their attention to the American market, and last season, owing to the threatened impost of United States duty, the mills at Fort William were idle and the logs were sawed in the United States; and to illustrate how the Canadian market is whipsawed, as it were, the Fort William people, although sawing in Duluth, were able to market a portion of their lumber in Sarnia, Ontario, thus proving that the Canadian market can be divided with ease by a country of pronounced antagonism to our lumber trade. These mills, like all Canadian mills, are shut out of the United States, and are besides forced to divide a limited home market with American lumbermen. There is twice as much plant in northwestern Ontario and Manitoba as would suffice to supply the home market, which

is a strong argument that competition will keep the price reasonable.

We also protest against lumber being the only important industry allowed to be subject to free trade, more particularly when there is no reciprocal treatment by the United States. Our market is divided with foreigners, and everything we use such as machinery, belting, oil, pork, food, farm products, etc. are highly taxed.

Much capital is invested in the lumber business, which is now greatly impaired by the existing tariff arrangements, and we ask for relief at the hands of your government. So far as the mills of northwestern Ontario, Manitoba and the Northwest Territories are concerned, it is not more money per thousand that is required—it is more sales. This is in your power to grant, with great benefit to a large number of Canadians and to the detriment of no citizen of our country.

Respectfully submitted on behalf of the lumber trade of western Canada.

This western deputation also met, in Toronto, a representation from the Lumbermen's Association of Ontario, including Messrs. J. B. Miller, John Bertram, John Waldie and C. D. Warren. The above memorial was unanimously endorsed, and it was decided to bring all possible pressure to bear upon the government to pass such legislation as was asked for.

The British Columbia Legislature, on March 18th, unanimously adopted a resolution urging the Dominion government to impose a duty on imported lumber equalling the United States duty on Canadian lumber.

NEW BRUNSWICK LETTER.

[Correspondence of the CANADA LUMBERMAN.]

THE business of Mr. Alexander Gibson, of Marysville, is about to be taken over by a company, to be called the Alex. Gibson Railway and Manufacturing Company, for which incorporation is now asked. It has been known for some time that a change was contemplated. Col. McLean, while in England a short time ago, arranged a loan of two million dollars for Mr. Gibson, and the government is asked to give authority to issue debentures for that amount secured on the entire property. Mr. Gibson's property embraces the timber limits of 200,000 acres on the Nashwaak, town of Marysville, cotton and lumber mills and the Canada and Eastern railway, valued at seven million dollars, and capital stock to that amount will be issued to Mr. Gibson. The loan will be a mortgage on the property, and will enable him to discharge his liabilities and leave a working capital of half a million, exclusive of the railway. Mr. Gibson's sales of lumber and cotton last year amounted to two million dollars, and he paid out at Marysville half a million for wages. His disbursements at St. John, loading 60 vessels with lumber, and the labor bills of the Canada Eastern, swell this to \$700,000. The incorporation sought is the largest ever asked in New Brunswick.

The St. John River Log Driving Company will hold its thirteenth annual meeting at Fredericton on Wednesday, April 6th. This meeting will be a very important one, as besides the election of a board of directors and the usual general business, tenders will be opened for the contract of log driving on the river for a period of three years. The rates to be paid for the work are as follows: 1st, from the head of Grand Falls, 20 cents; 2nd, from the mouth of Salmon river, 18 cents; 3rd, from the boundary line on Aroostook river, 2 cents; 4th, from the mouth of Tobique river, 16 cents; 5th, from the mouth of Big Presque Isle river, 13 cents; 6th, from the mouth of Becaguimac river, 13 cents; 7th, from the mouth of the Meduxnickag river, 11 cents.

INDIFFERENT LENGTHS.

New Brunswick lumbermen are protesting against the new local freight rates enforced on the government railway by Mr. Harris, the new traffic manager.

In some sections of the province there was a heavy snow fall early in March, which interfered with log hauling. Reports of three feet of snow are common.

Mr. Richards has a large number of teams hauling supplies into the woods from Boistown and Glassville for next year's operations. He will have about \$20,000 worth stored in the woods.

ST. JOHN, N. B., March 21, 1898.

THE NEWS.

—Stewart & Reeker have opened a retail lumber yard at Roland, Man.

—Doris & Gatchell will probably build a stove factory at Kimmount, Ont.

—John Hanbury contemplates starting a wood working factory at Brandon, Man.

—Macpherson & Schell, of Alexandria, Ont., have erected a large new office.

—W. D. Vansickle is building a shingle mill in connection with his saw-mill at Barrie, Ont.

—C. A. McCool, formerly of Geneva Lake, has started a saw mill at Coal Creek, B. C.

—W. H. & W. J. Blackhouse have succeeded Wm. Gordon, sash and door factory, Udora, Ont.

—It is reported that the Georgian Bay Lumber Company will erect a saw mill at Canoe Lake, Ont.

—The Keewatin Lumber Co. have recently constructed new dams and put in water wheels at Keewatin, Ont.

—Arrangements are being made for the erection of a saw mill at the mouth of Mossy river, Lake Winnipegosis.

—The Bank of Toronto recently placed a new dynamo in the Fenelon Falls mill, with a capacity of 325 lights.

—The Sauble Falls Ranch & Lumber Co., of Sauble Falls, Ont., has been incorporated, with a capital of \$75,000.

—A saw mill at Shannonville, Ont., owned by Francis Wallbridge, of Belleville, was badly damaged by flood recently.

—The town of Clinton, Ont., has granted to W. Doherty & Co. a bonus to assist them in rebuilding their organ factory.

—Wm. Train has purchased the water power saw mill at Stirling Falls, Ont., recently operated by the Stirling Falls Milling Co.

—A provincial charter has been granted to the Columbia Lumber & Trading Co., of Nelson, B. C., with a capital of \$30,000.

—The opinion of Ottawa lumbermen is that the ice will be cleared from the river this spring a fortnight or so earlier than usual.

Mr. Adam Beck, veneer manufacturer, London, Ont., was an unsuccessful contestant for that riding at the late provincial elections.

—R. Kinney is establishing a planing mill at Gladstone, Man., and will put in machinery for the manufacture of sash and doors.

—The Pacific Coast Lumber Co., of New Westminster, B. C., has advanced the wages of its day laborers from 12½ to 15 cents per hour.

—The Golden River Lumber Co., of Golden, B. C., now employ 95 hands. The company have recently completed a large contract for ties.

—The High Commissioner for Canada has received an inquiry from a Toronto firm regarding the prospects of exporting sash, doors, etc., to Great Britain.

Mr. Frank Davidson, of E. D. Davidson & Sons, Bridgewater, N.S., is at present in England on a business trip. He has sold considerable spruce through his agents, James Smith & Bro., of Liverpool.

P. McLaren purposes building a large saw mill near the spring in the Crow's Nest Pass, for which machinery has been ordered. It is said that this mill will exceed in size the C.P.R. mill at Coal Creek.

—The Department of Interior at Ottawa is said to be considering the advisability of changing the method of disposing of timber berths in the Yukon district, by placing a set fee upon each five mile block.

—The total amount of lumber received in the Chicago market in 1897 was in round numbers 1,450,000,000 feet, against 1,320,000,000 feet last year. Shingle receipts amounted to 375,000,000, as against 300,000,000 in 1896.

The Ottawa Saw Works Company report an active demand for saws, having recently booked orders from all parts of the Dominion. Their business so far this year has been more than double that of any other three months since they commenced business.

Jas. S. Neill has recently started a factory at Nash-

waaksis, N. B., for the manufacture of lumber drivers' boot calks, having purchased the Hathorne patent for manufacturing these articles in Canada. The factory has a capacity of one million calks per week.

—Mr. Albert Oakley, for several years manager of the lumber business of Davidson & Hay, Toronto, has accepted a position with the Cariboo Hydraulic & Mining Co., of Cariboo, B. C. Before leaving Toronto Mr. Oakley was the recipient of many tokens of friendship.

—J. R. Booth, of Ottawa, is erecting an incinerator for burning the saw-dust of his mills. The bill preventing the dumping of saw-dust into the Ottawa river takes effect in June. The Bronson & Weston Company are putting in carriers to take the refuse away from their mills, but have not yet decided how they will dispose of it.

Andrew Haslam, of Nanaimo, B. C., is preparing plans for a large saw-mill, sash and door factory, to be erected at that place. The machinery of the present mill will be removed, and larger machinery added. The work of construction, which will include loading docks, will be commenced immediately.

—Graham, Horne & Co. have been in business at Fort William, Ont., for 21 years. Their annual cut is from eight to ten million feet, which is manufactured by band mills. They are now cutting on their limits on Pine river, the logs being floated to the lake and then towed into the Kaministiquia river and to the mill, a total distance of some fifty miles.

—An application has been made to the Dominion parliament for a charter for the Nickel Steel Company of Canada, with the immense capital of \$20,000,000. The chief promoters are lumbermen, and include the following: Alex. Fraser and David McLaren, of Ottawa; Alex. McLaren, of Buckingham, Que.; Nathaniel Dymont, of Barrie. Should the government impose an export duty on nickel, the company will establish smelters and manufacture nickel steel for export.

The report of Mr. R. J. Skinner, Timber Inspector of British Columbia, states that the cut on crown lands during 1897 was 61,961,647 feet, and on timber lands 39,014,010 feet, making a total of 100,975,657 feet, on which the royalty paid was \$50,487. On private property the cut was 4,963,740 feet, making a gross total of 105,939,397 feet. The estimated rebate allowed for export was \$17,358, and the rental accruing on timber leases \$46,931.

—Mr. B. E. Fernow, Chief of the United States Forestry Division of the Department of Agriculture, in an address before the National Association of Paper and Pulp Manufacturers, said that the supply of spruce in that country was threatened by the inroads of the pulp mills, and he thought unless present methods were changed, it would be nearly gone in ten years' time. The consumption of wood pulp in paper manufacture, Dr. Fernow said, was equal to 2,000,000 cords per year.

—Mr. Davis obtained the following information in reply to a question asked in the Dominion parliament recently: The Moore & McDowall Company held under license timber berths north of the north branch of the Saskatchewan river to the extent of 265 square miles. They had assigned to George Burn, general manager of the Bank of Ottawa, who had paid all the ground rents due up to December 31, 1898, and all royalty up to June 30, 1896. The company had not a mill in operation, as required by regulations, but negotiations were nearly completed for the purchase of a saw mill formerly operated by the company at Saskatchewan territory.

—The Pacific Coast Lumber Co., of New Westminster, B. C., have commenced the manufacture of grained lumber. By the method employed the natural grain of various native woods is cleverly counterfeited. Clear cedar is used, mostly ½" thick and 4 inches wide. The lumber is first thoroughly kiln dried, then tongued and grooved, and a small V joint run on the edges. Then it is smoothly sand papered and passed over to the graining factory, where, for certain designs, the lumber is oiled by machinery; for other designs it is painted two coats. It is then piled open and grained on the patent graining machine, of which H. Silver is the patentee. The effect produced is as a veneering of oak, walnut or maple.

—The appeal case of Lindsay vs. Klock was recently heard at Ottawa, judgment being reserved. This case, referred to in a former issue, arose out of the destruction by fire of the Lindsay steam saw mill at Aylmer, Que., in May, 1896. The mill was leased to Klock Bros., and

the plaintiff claimed that they were responsible for the fire owing to negligence, and also because they had made alterations in the building and introduced Dutch ovens to burn saw-dust, which increased the fire risk, without the permission of the plaintiff. The action was dismissed by the trial court of Hull, but an appeal was allowed by the Court of Queen's Bench at Montreal, and a verdict given for the plaintiff for \$10,000. In the appeal case recently heard the defendants asked to have the judgment of the trial court restored.

CASUALTIES.

—David Giggey had his right arm broken in Clark, Skillings & Co.'s spool wood mill near Newcastle, N. B.

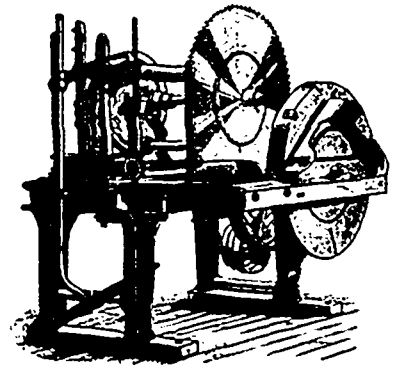
—Mark Whalen, of Miramichi, N. B., was killed in Welch's lumber camp at Burnt Hill by a log rolling over him.

—Louis Soucisse was recently seriously injured in Bradley's saw mill at Buckingham, Que. At last report little hope of his recovery was entertained.

—Martin Bulger, of Shramrock, was killed in the lumber woods in the upper Ottawa, near Biscotasing, while working for Mr. Barnett. He was struck by a falling tree.

LANE AUTOMATIC SHINGLE AND HEADING MACHINE.

THE frame of this machine, of which an illustration is given, is of heavy cast iron, well supported with tubular braces and strongly reinforced by broad ribs. The saw arbor is finished 2 3-16 inches throughout, of best forged steel, running in long adjustable phosphor rabbit bearings. This saw has 18 or 20 inch flange, drilled and fitted



LANE AUTOMATIC SHINGLE AND HEADING MACHINE.

from steel templet, and either saw or flange can be duplicated at any time.

The lower jaw which holds the under feed roll is part of the carriage casting, while the upper jaw is movable to accommodate blocks from 16 to 24 inches long, and in the case of a 40 inch machine the standards can be raised and by putting iron plates underneath cloth boards 31 inches in length can be cut. When desired these plates are furnished without extra charge.

The carriage is driven by a substantial friction feed works, dispensing with all gears, racks, clutches and weights. The average cost of renewing friction is about one-fifth cent per thousand shingles cut. Carriage slides are of iron planed, and adjustable to take up wear. The machine is furnished with or without jointer, as desired, and is at all times under the control of the operator, whether sawing or jointing. The sectional feed rolls are very positive in their action and so superior to ordinary fluted rolls that one or two more shingles are dropped from each block than when the teeth are in a straight line.

The machine is provided with two guards, one to prevent the carriage starting while putting in a block, the other swinging out of way when the carriage is in motion. The jointer can be run from saw arbor or detached and set in separate frame, and two persons can joint at the same time. With each machine are furnished three sets of wheels for cutting 5-11, ¾ and ½ inch cuts, also a set of heading wheels for cutting parallel stuff from ½ to 1 inch thick, varying by eighths. Special wheels are supplied as ordered. The machine is made in three sizes for 36, 38 and 40 inch saws, occupies floor space 4½ by 7 feet, and requires from 10 to 12 h. p. for a cut of 10 to 20 thousand shingles per day.

The manufacturer, Mr. Madison Williams, of Pottery, Ont., will be pleased to give further particulars to interested persons.

All lumber manufacturers in Ontario interested in the formation of an active lumbermen's association should attend the meeting in Toronto on April 7th. See advertisement on another page.

WOOD PULP DEPARTMENT

THE BRITISH WOOD PULP MARKET.

MECHANICAL pulp makers have been greatly exercised lately owing to the alleged endeavors of certain speculators to corner the market, to cover their "bear" sales, says Wood Pulp, of London, Eng. Norwegian makers have been frightened by their inability to place their output freely at the high prices they have hitherto demanded. We can, however, see no reason for any slump in prices. On the contrary, owing to the exceedingly mild winter, there has been difficulty in bringing forward supplies of wood, and prices for timber should therefore be higher. We have warned Scandinavian makers repeatedly of the large quantity of pulp coming from America, but after all, this has its limits, and should the now strained relations between America and Spain reach the breaking point, there can be no doubt the consequences will be widespread. Our advice, therefore, to sellers is now, as it ever has been, don't hold out for the highest price, but sell as soon as you see a reasonable margin of profit. "Live and let live" is a good maxim.

With regard to sulphite this has also been affected by the mild winter, as there has been absolutely no stoppage of inland communication, and owing to the exceptionally late closing by ice of the Baltic, supplies from that district were shipped as late as January. The weather has, however, now changed, and it is therefore expected that the opening of navigation will be later than usual. We hear a good deal about sulphites being offered at low prices, but on investigation

cannot find that any large quantities have changed hands.

The market, however, is certainly dull, and we generally find that when this is the case, small buyers become frightened, and pressing for sales through various agencies tend to lower the market without any actual business having been effected. Prices, notwithstanding, keep firm, with the exception of those for some low quality pulps and American consignments.

There is little spot soda pulp offering, and prices are firm, owing to the fact that the bulk of this year's pulp has already been disposed of. We regret, however, to hear that some makers are already trying to effect sales for next year, but this we think bad policy, and quite unnecessary, as no new soda mills have come into existence, and we can hear of only slight increases in the output of existing ones. Esparto, however, has never been so low before, and this will not tend to raise prices.

PULP NOTES.

The town of Woodstock, N.B., is desirous of interesting capitalists in its advantages for pulp making.

The World's Paper Trade Review records the arrival at British ports of large quantities of American and Canadian wood pulp.

The Takush Harbor Lumber Company Vancouver, B.C., is considering the establishment of paper and pulp mills on an extensive scale.

A correspondent of the Truro, N.S., News states that the East River, Sheet Harbor, saw mill is to be replaced by a pulp mill, with four grinders.

Frederick Bonney is erecting a paper mill in Ottawa. The paper will eventually be manufactured from sawdust, but for the present pulp-wood will be used.

Mr. G. O. S. Conway, of Stonefield, is organizing a company to develop a water power at Grenville, Que. The scheme includes the erection of a pulp mill.

Messrs. Drysdale & McInnis, representing a syndicate, have made a proposition to the town of Dartmouth, N.S., to establish a paper and pulp mill to employ from 200 to 300 men. The town council has been asked to exempt

the works from taxation for 50 years, and has offered exemption for 30 years, which will probably be accepted by the syndicate. The company propose to manufacture chemical pulp, to be consumed in its own paper mill. The capacity, 20 tons per day, would require 15,000 cords of spruce wood, 8,000 tons of sulphur and 1,000 tons of limestone per annum.

LUMBERMAN'S ASSOCIATION OF ONTARIO

SECRETARY'S OFFICE,
74 Freehold Loan Building,
TORONTO, 23rd March, 1898.

The adjourned Annual Meeting of The Lumberman's Association of Ontario will be held in the

BOARD OF TRADE ROOMS, TORONTO,

Thursday, 7th Day of April, 1898, at 10:30 a.m.

At the Annual Meeting held here on Tuesday, March 22nd, a committee was appointed, composed of the following gentlemen, John Pertram, John Waddie, C. D. Warren, R. Landlaw and J. B. Miller, to revise the constitution of the Association and to report to the adjourned meeting on the 7th April.

NOTICE

is hereby given that the constitution will be amended or replaced by a new one at this meeting.

All interested in the manufacture of lumber or holding timber licenses are invited to attend, and if not already members, then to join the Association.

As there are many matters of importance to all lumbermen likely to arise in the near future, it is hoped that there will be a full attendance, and that the Association will once more be placed on a sound footing and in a position to conserve the interests of the lumber manufacturing trade of Ontario.

J. B. MILLER,
Secretary-Treasurer.



FELTS FOR PULP MILLS

20 years in the business — the first to make Felts in Canada; capacity 1,000 lbs. per day. All our Felts are woven endless, without a splice. Our Felts will last longer and make dryer Pulp. All up-to-date mills use our Felts. New mills, when in need, write for samples and prices.

HAMELIN & AYERS, Lachute Mills, P.Q.



Saw Mill Machinery

ROBT. BELL, JR.
HENSALL, ONT.

Don't you want a new set of Saw-Mill Dogs and a Roller Gauge before you start up this spring? Send for prices.

RE-BUILT ENGINES—

- One Waterous 12 x 18 Right Hand.
- One Inglis & Hunter 11 x 18 " "
- One Corbett & Sons 11 x 14 " "
- One Morrison 10 x 14 Left Hand.
- One Darvill 9 x 12 Centre Crank.
- One Abell Portable, 16 horse power.
- One Sawyer & Massey, 14 horse power.
- One Waterous, 12 horse power.
- Two White & Sons, 14 horse power.

PLANERS AND MATCHERS—

- One Cameron & Co., 24 inch.
 - One McKechnie & Bertram, 24 inch.
- Also Several New and 2nd Hand Governors, Inspirators and Boiler Feed Pumps.

Send for Catalogue of New Saw-Mill Machinery, Engines, Boilers, &c.

Robt. Bell, Jr. : Hensall, Ont.

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THE J.C. McLAREN BELTING CO MONTREAL

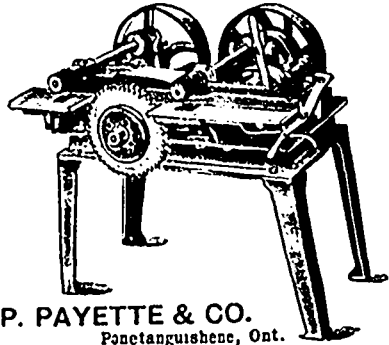
It is said that a pulp mill will be erected at Victoriaville, Que., by Hon. R. R. Dobell, of Quebec, and Mr. Panneton, of Three Rivers. They ask a bonus of \$25,000 from the town after they have spent \$250,000 upon the undertaking.

In his annual report, Secretary Barrett, of the Minne-

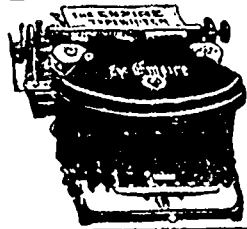
sota Forestry Association, says: "Pulp men concede that no other substance, as yet discovered, is equal to spruce as a basic fibre for white paper. Their pulp and paper mills consume fully 65 per cent. of all the spruce trees in the United States. Standing spruce in Minnesota is officially reported at 1,050,000,000 feet. It is questionable

whether our cut for pulp and other purposes is proportional to that of some States in the east, where the manufacture is more concentrated. To avert a pending famine of the raw material, different companies are buying up large tracts of cut-over and abandoned lands to raise spruce from seeds and seedlings."

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SAW MILL MACHINERY



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HAY THE PRICE
of other
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AXE

This Axe stands
better in frosty
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axe made.
Send for sample.
Can supply any
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12 lbs. per yard and upwards; estimates given for
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Lumberman's....

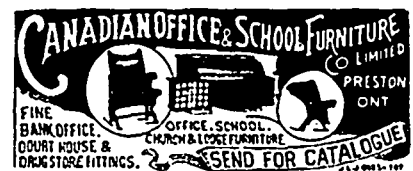
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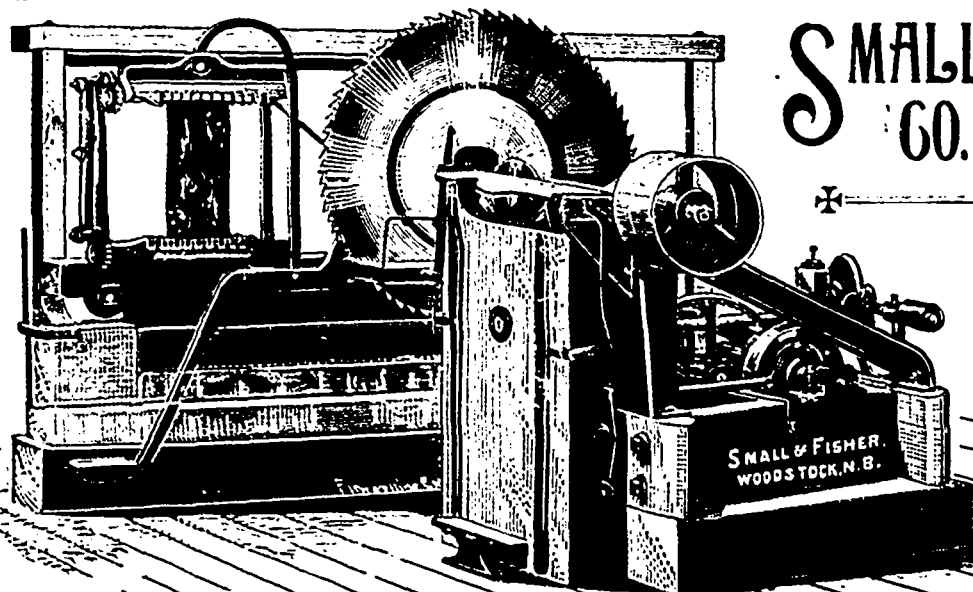
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**Patent
Shingle
Machine**

The Sault Ste. Marie Paper & Pulp Co., of Sault Ste. Marie, Ont., recently shipped eight cars of wood pulp to Marseilles, France. It is said that the pulp will be used in the manufacture of artificial silk.

The British Columbia Pulp & Paper Mills Co. has been incorporated, with a capital of \$30,000. The company is composed of Glasgow capitalists, including W. S. Workman and Geo. Smith, jr., ship owners, and Robert D. Findlay, stock broker. The object of the company is stated to be to enter into an agreement with Mrs. Josephine Carmichael, of Victoria, to carry on business as manufacturers of paper, wood pulp, wood meal, etc. The Glasgow office is at 48 West Regent street.

ARE YOU LOOKING FOR A CHANCE IN LOCATION?

If you are not satisfied with your present site, or if you are not doing quite as well as you would like to, do not consider the advantages of a location on the Levee Central R. R. or the Yazoo & Mississippi Valley R. R. These roads run through South Dakota, Minnesota, Iowa, Wisconsin, Illinois, Indiana, Kentucky, Tennessee, Mississippi and Louisiana, and possess

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**INTELLIGENT HELP OF ALL KINDS
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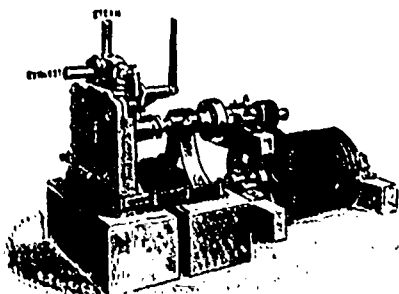
For full information write to the undersigned for a copy of the pamphlet entitled

100 CITIES WANTING INDUSTRIES

This will give you the population, city and county data, death rate, assessed valuation of property, tax rate, annual shipments raw materials, industries desired, etc.

To sound industries, which will bear investigation, substantial inducements will be given by many of the places on the lines of the Illinois Central R. R., which is the only road under one management running through from the North-Western States to the Gulf of Mexico. GEO. C. POWER, Industrial Commissioner I.C.R.R. Co., 506 Central Station, Chicago.

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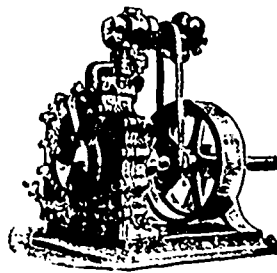
The movement of the engine in either direction is under the absolute control of the Sawyer, thus accommodating the speed of the feed to the size of the logs.

Mill men who have used other makes of Steam Feeds comment favorably on the economical use of steam of our feed over others.

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For Running Dynamos in



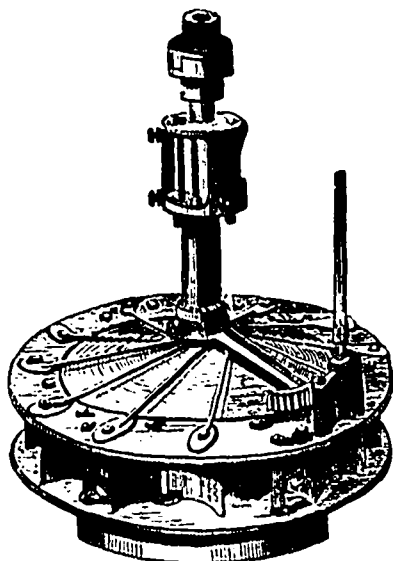
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Succeeding The PHELPS MACHINE CO., Eastman, Que.



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**"VULCAN" "PERFECTION"
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WHAT IS SAID OF THEM: "Some years ago we bought two 36-inch "PERFECTION" Water Wheels from Paxton, Tate & Co. I tested a "Little Giant" alongside a "Perfection," and the "PERFECTION" can BEAT the "GIANT" on every point."

Simcoe, Ont., 21st Feb., 1898.

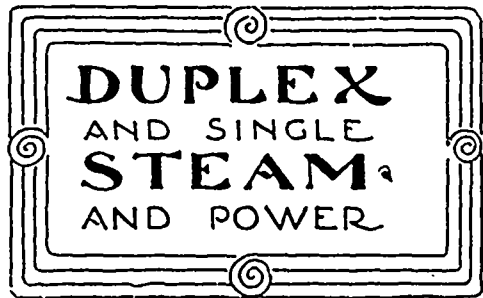
(Signed) W. B. BROWNE & CO.

I also manufacture LANE IMPROVED CIRCULAR SAW MILLS, AUTOMATIC SHINGLE MACHINES, &c. Write and find out all about them to

MADISON WILLIAMS, Successor to PANTON, TATE & CO., PORT PERRY, ONT.

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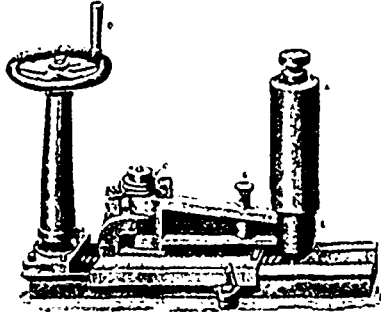
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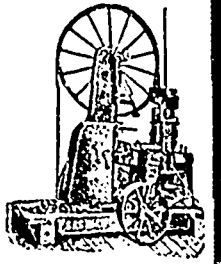
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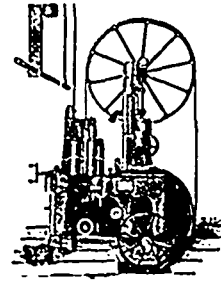
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For a List of the Canadian Saw-Mills using our Band Re-Saws. A number of them are also in use in Canadian Planing Mills and Box Factories.



THIRTY-TWO MERSHON BAND RE-SAWS

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By the proper arrangement of the pipe system and the use of stand pipes with the Ball Nozzle at the top, a lumber yard may be made substantially fire-proof.

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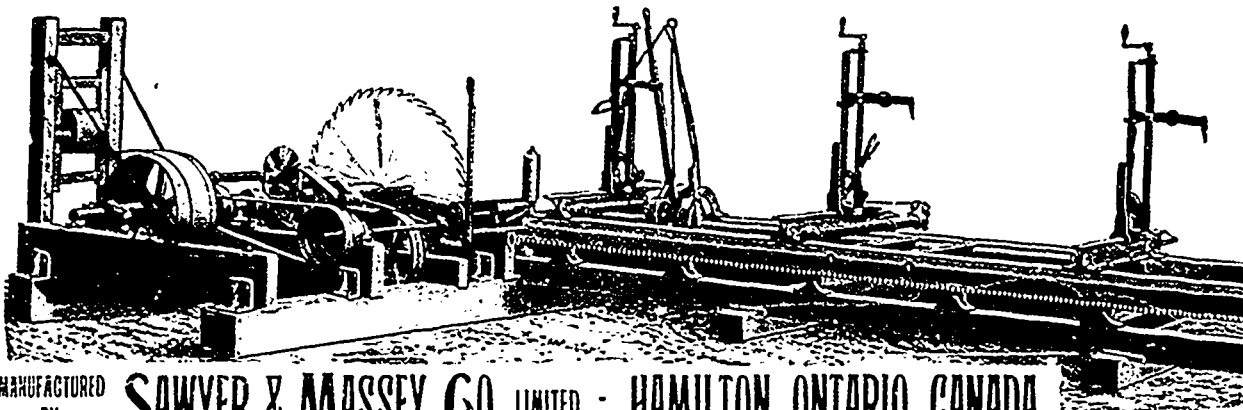


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Threshers, Clover Hullers, Horse Powers and Road-Making Machinery.

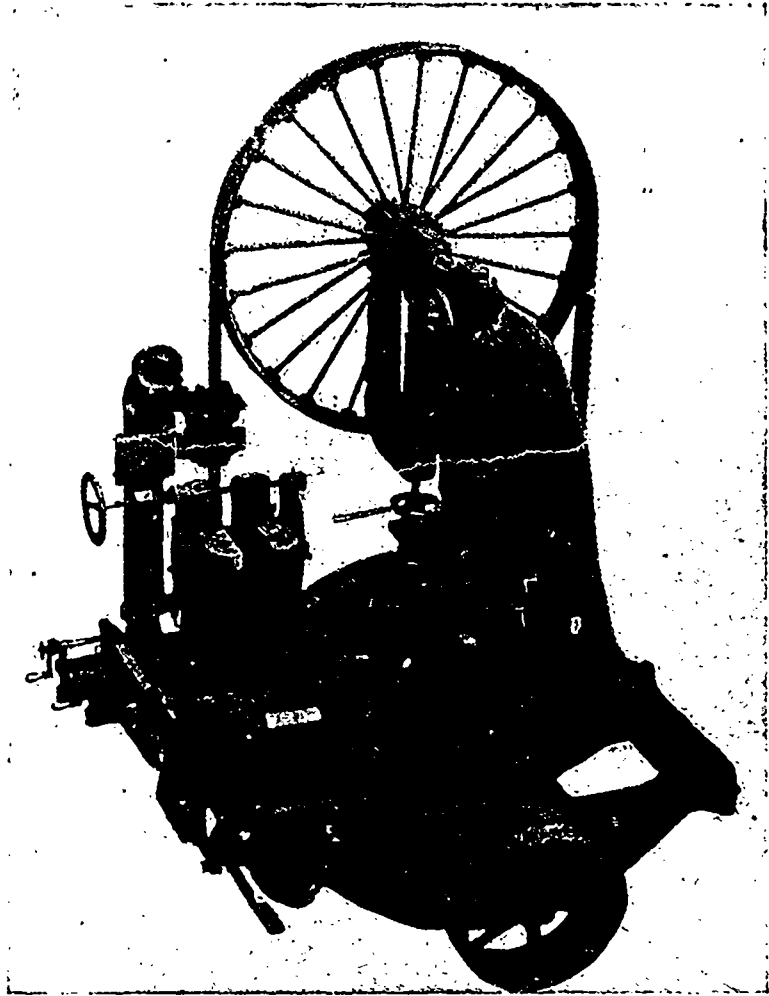
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in the large Saw Mills of to-day, is to use a **Band Mill**, and in connection with it a **Band Re-Saw**. By this means the capacity of the plant is doubled, and with but a slight increase in the cost of operating it. Then in box, furniture and other factories, where there is splitting or re-sawing to be done, a **Band Re-Saw** not only does more work in a given time than any other machine, but works more economically, as it produces a minimum of saw kerf. If you have re-sawing to do, let us hear from you; we will be pleased to give you further information.



The Dixie Hand-Feed Shingle and Box-Board Machine

The Most Desirable Hand-Feed Shingle Machine ever offered.

It possesses all improvements in the way of simplicity, durability, and quick and accurate adjustment. Carriage is made of Bicycle Tubing, light and stiff. Only one Screw Adjustment for changing Tilt, viz., Hand Wheel in front of machine.

The first and every cut with this machine is a Shingle. Turn your slabs and cull lumber into Shingles and Box Boards with the Dixie.

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The Single Screw Adjustment for varying the thickness makes this machine superior for this class of work.

No. 1 Machine, with 36 in. Saw and Collar.

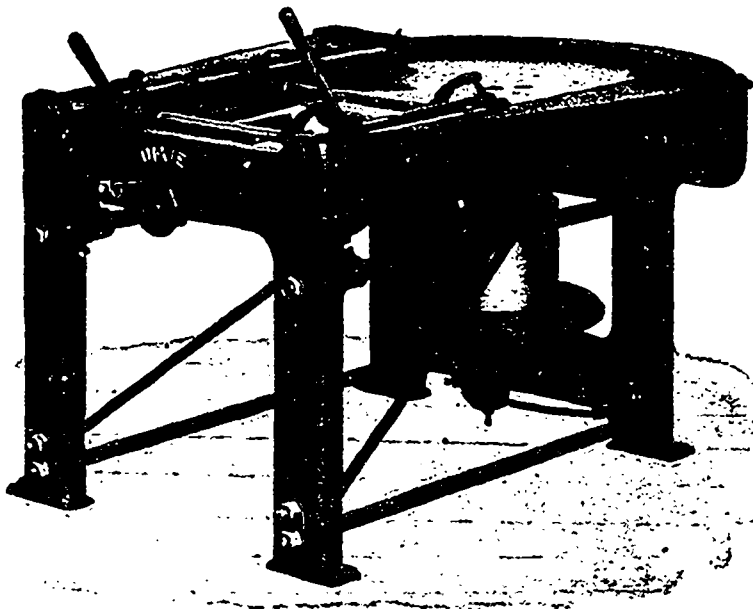
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No. 4 Shingle and Box Board Machine, taking Bolts 24 1/4 in. long, with 42 in. Saw and Collar.

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We make a Specialty of Steam-Acting Saw Mill Machinery.

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—Detachable Chain, for Short Runs and Light Work; Giant Detachable Chain for Heavier Work; Steel Welded Chain for Longer Runs and Heavier Work; Steel Cable Conveyor for Longest Runs and Heaviest Work.

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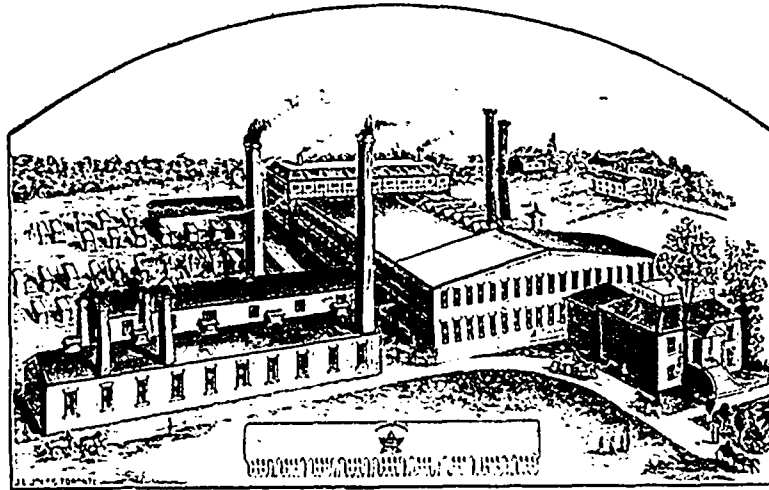
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**MAPLE LEAF
 SAW WORKS**



**Shurly &
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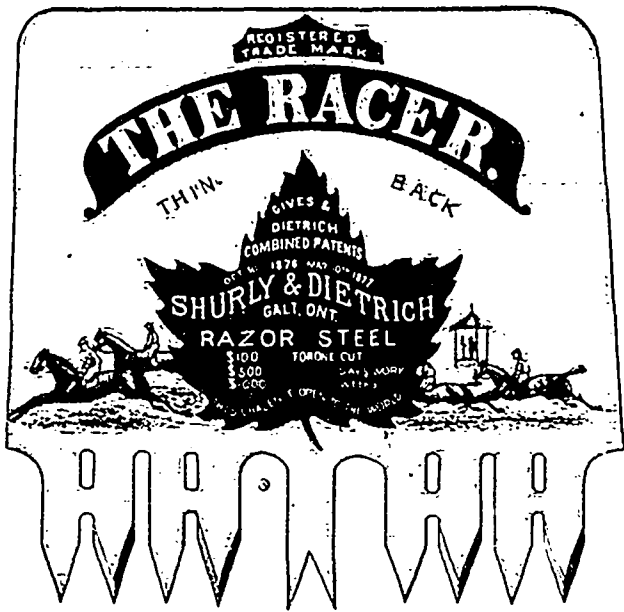
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 Save Labor Save Gumming
 Save Time Save Files

This Saw Stands Without a Rival

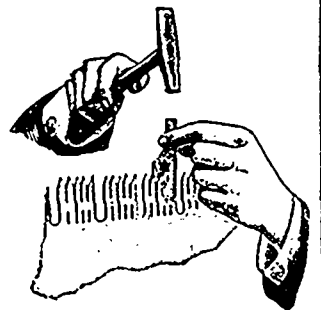
AND IS THE
FASTEST CUTTING SAW IN THE WORLD!

Its Superiority consists in its Excellent Temper. It is made of "Razor Steel," which is the finest ever used in the manufacture of Saws. We have the sole control of this steel. It is tempered by our secret process, which process gives a keener cutting edge and a toughness to the steel which no other process can approach.

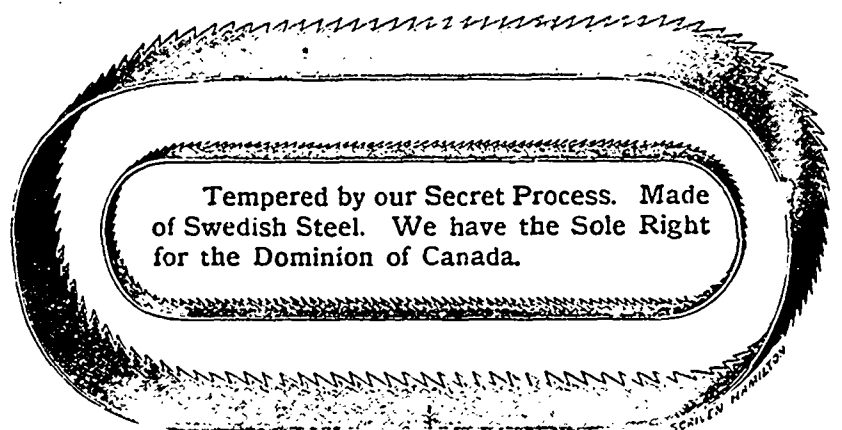
Maple Leaf Saw Set

MANUFACTURED BY
SHURLY & DIETRICH, Galt, Ont.

Directions —Place the set on the point of tooth, as shown in the accompanying cut, and strike a very light blow with a tack hammer. If you require more set, file the teeth with more bevel.
 If you follow directions you cannot make a mistake. Be sure and not strike too hard a blow, and it will set the hardest saw. On receipt of 40 cents we will send one by mail.



We are the only manufacturers in the world who export Saws in large quantities to the United States.



Tempered by our Secret Process. Made of Swedish Steel. We have the Sole Right for the Dominion of Canada.

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HIGH GRADE BAND SAWS

of All Widths and Lengths.

These Saws are made of Refined Swedish Steel imported direct, and tempered by our Secret Process; for Fine Finish and Temper are not excelled.

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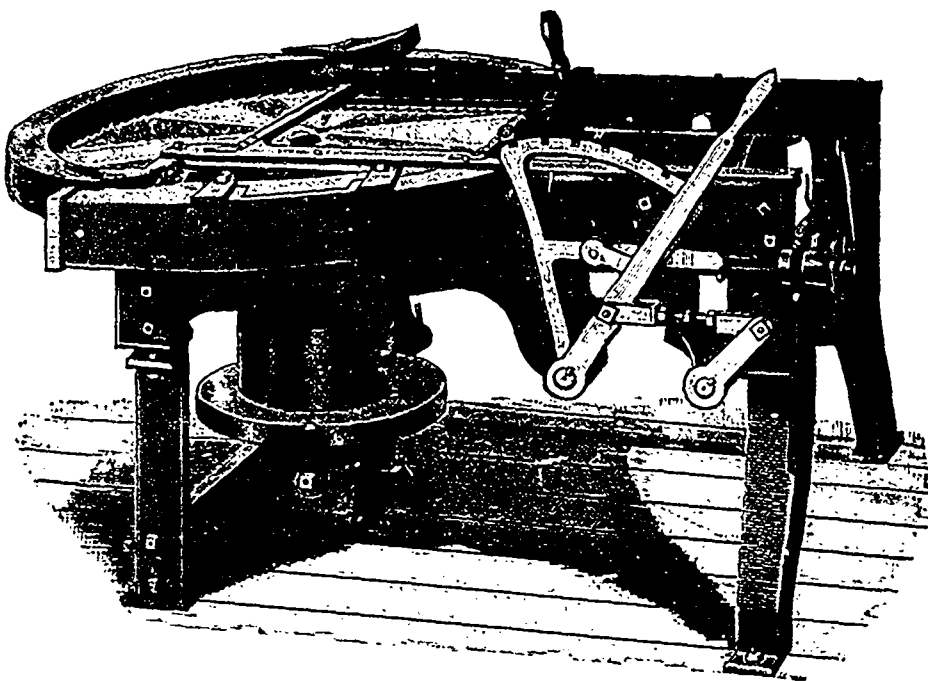
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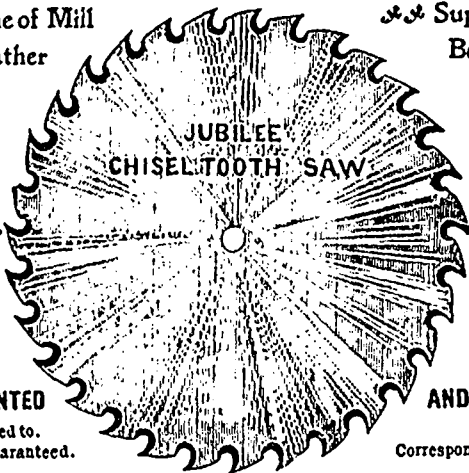
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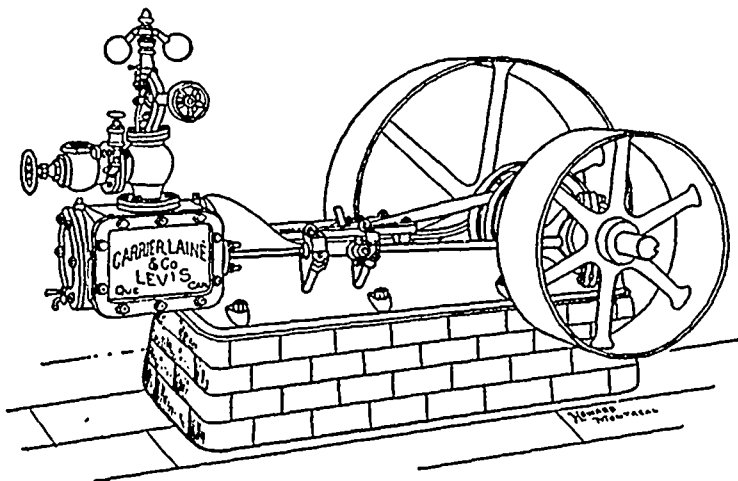
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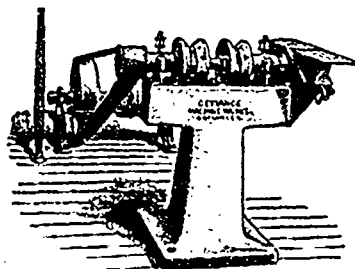
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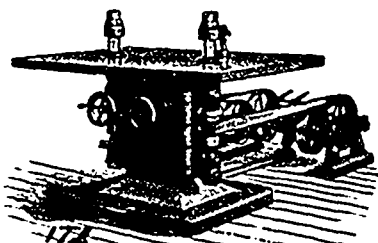
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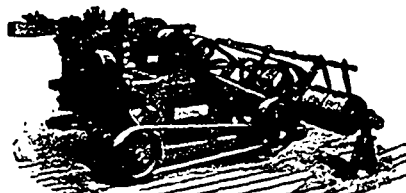
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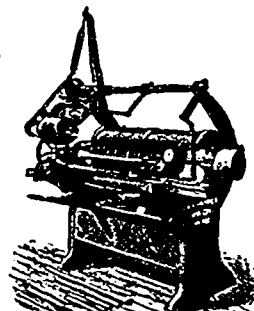
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