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THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XX.
NUMBER 5.

TORONTO, CANADA, MAY, 1899

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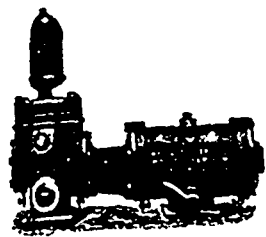
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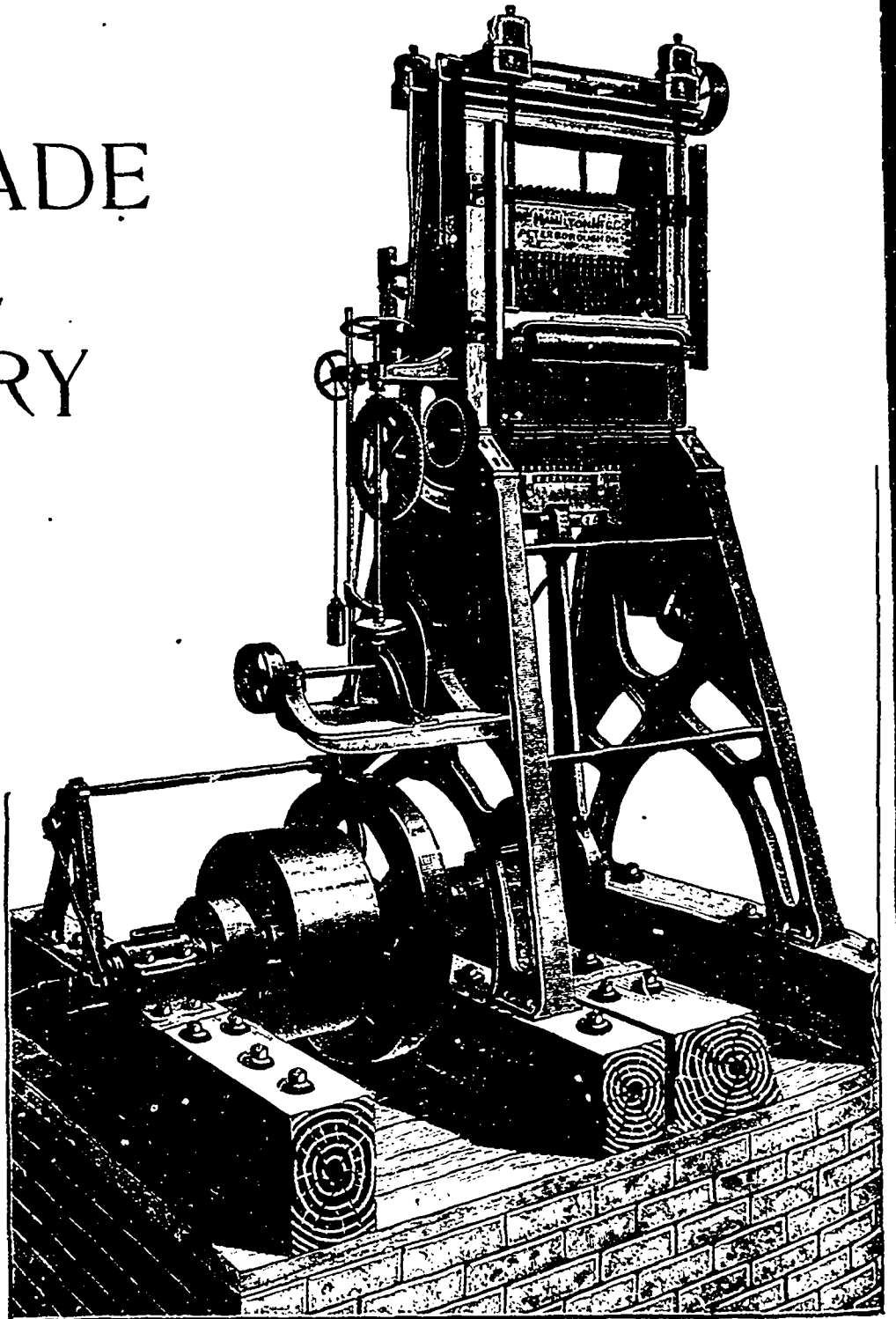
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MILL STREAM, QUE., on I. C. R'y, December 17th, 1894.

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

DEAR SIR,—Driving a 13 gauge saw into frozen hardwood, using a 9 in. 4-ply belt, if it can be done satisfactorily, is a very severe test. Your saws have stood that test better than any I have tried. I have been experimenting with different makes—both home and imported—during the last five years, and give yours the preference. Last order is just to hand and will report on them by and bye.

Yours very truly, JAMES MCKINLAY.

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

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

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

Yours truly, KILGOUR SHIVES.

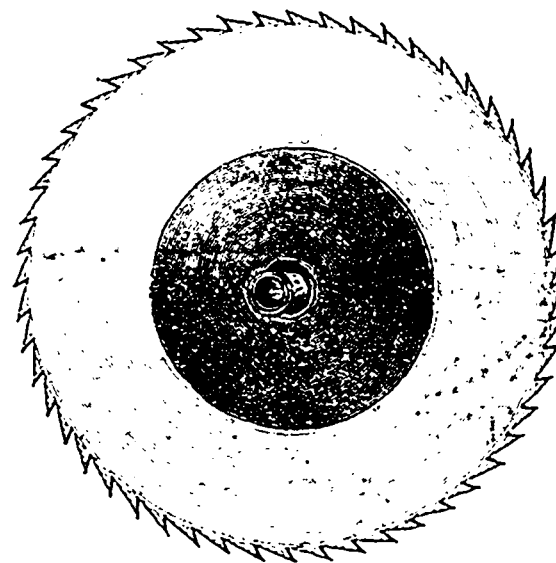
CLAVERING, ONT., May 3rd, 1897.

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

Yours truly, W. G. SIMMIE.

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



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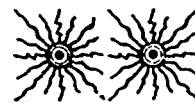
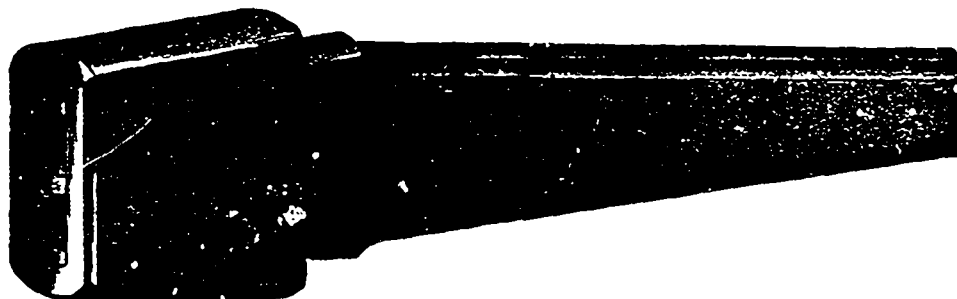


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They are tempered by the Simonds' Patent Process, insuring a perfectly uniform temper throughout the plate, and stand without a rival as the BEST, FASTEST, AND EASIEST-CUTTING SAW KNOWN. A gauge to regulate the clearing teeth is furnished with each saw.

Directions for Setting and Filing are plainly Etched on every Saw. None genuine without our Registered Trade Mark as shown in cut.

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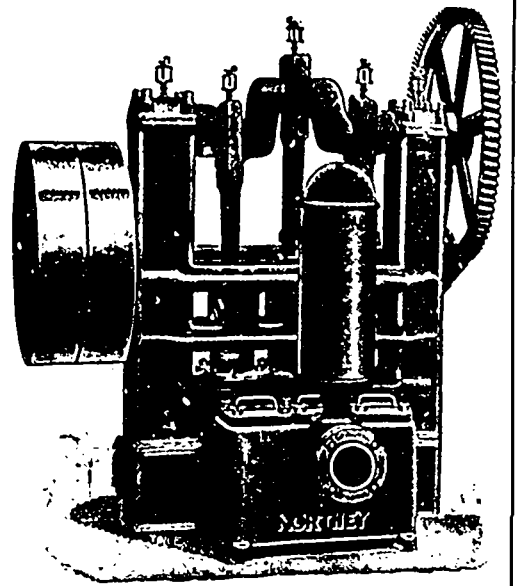
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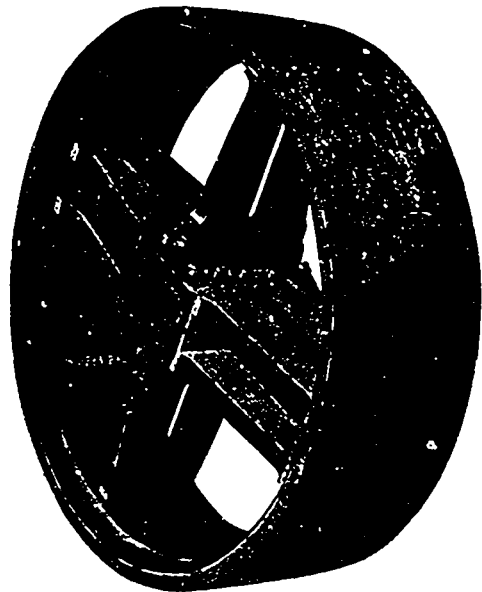
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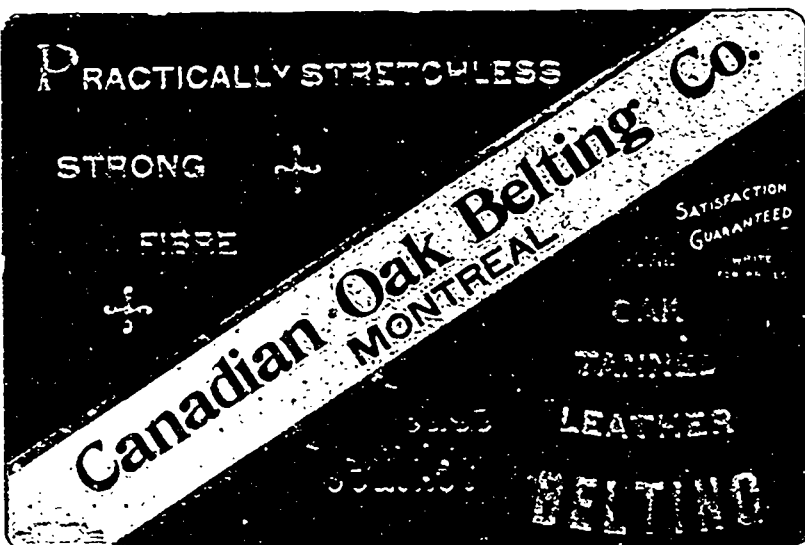
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THE CANADA LUMBERMAN

TORONTO, CANADA, MAY, 1899

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CANADIAN PACIFIC RAILWAY COMPANY'S SAW MILL AT COAL CREEK, B. C.

ONE of the largest saw mills yet built in Canada has recently been completed at Coal Creek, on the Crow's Nest Pass Railway, in the province of British Columbia, for the Canadian Pacific Railway Company. Some illustrations and particulars of its construction are given below.

The main mill building is 60 feet wide and 310 feet long, with a lath and shingle mill annex 41 feet wide by 48 feet long, besides an engine and boiler house 44 by 71 feet. The building of the mill was no easy task, owing to circumstances not usually met with. When the Wm. Hamilton Mfg. Company, of Peterboro, who had the entire contract, sent their men out to commence the erection of the building, nothing was done save the clearing of the site and the placing of some of the timber on the ground. They immediately set to work and got out the whole of the timber, which entailed much labor, as it had all to be taken from the forest near at hand and the trees cut down and hewn to shape. All planking required in the construction had to be whip-sawn, as there was no way of hauling such a large quantity of timber to the mill site, the rails of the Crow's Nest Pass Railway not being laid at that time to within fifty miles of the site of the mill.

The first illustration shows the mill building completely framed, which will give our readers an idea of the dimensions of the mill, which is designed to cut logs 5 to 6 feet in diameter and

desired length to be sawn. The logs are thrown to either side of the mill by means of steam log kickers, and roll down incline to position, ready to be placed on the carriages.

On the left hand side of the mill is a large circular rig, with top and bottom saw mandrils,

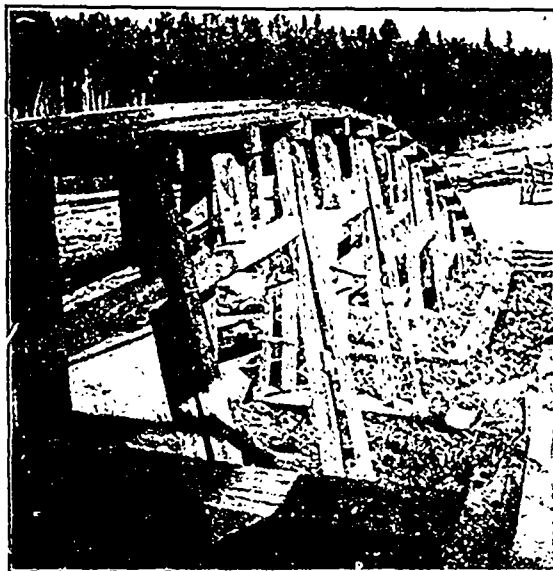


FIG. 2.—VIEW OF JACK LADDER, C.P.R. MILL.

each carrying 60 inch Hoe inserted tooth saws. The carriage for this rig is of the well known Pacific coast type, with screw headblocks, having knees receding 60 inches from the saws, and is capable of taking a log five to six feet in diameter and eighty to ninety feet long. The set works on this carriage is operated by power and is quick and accurate in its action, setting to within a small fraction of an inch. The logs are handled to this carriage by means of two heavy straight line steam canter, each having one vertical and one horizontal cylinder.

After the logs are cut up into the dimensions required, they pass on a line of live rollers which extend to the end of the mill, and long pieces are cut to the desired lengths by steam jump-up saws, of which two are set in between the rollers. If the logs are cut into cants, they are carried across the mill by means of transfer chains to be cut up by an improved Prescott No. 3 band saw mill, having wheels 8 feet in diameter. The carriage on this side has knees receding 54 inches from the saw, and will take logs or cants 40 to 50 feet long. Logs can also be taken on this side from the log deck, and both can'ts and logs are turned by one heavy steam canter of the same size and kind as that on the circular side.

The feeds of both carriages are the well known Cunningham patent twin engine steam feeds, with drums grooved for wire rope, the one on the circular side having cylinders 14 inches in diameter, and that on the band mill side having cylinders 12 inches in diameter. On this side likewise there is a complete line of live rollers to the end of the mill to carry finished stock out. Should any boards or plank require to be edged from either side, they are transferred to the

edger by means of chains. This edger is the heavy Pacific coast type, and is 60 inches wide, having six 24 inch Hoe saws, all movable. After the boards are edged, they again pass over live rollers to a transfer which conveys them to the trimmer, there to be trimmed and made ready for market. The edgings are dropped from the rollers back of edger on to transfers, which carry them, as well as the slabs, to a set of slash saws to be cut into the proper lengths, and from there they pass into a refuse conveyor which carries them to the lath and shingle mill annex, to be sorted out and cut up into lath and shingles. This annex has its complementary machinery, consisting of cut-off saw, lath mill and bolter, lath trimmer, two Perkins shingle machines, knot saws, packers, and everything to make it complete.

All the refuse from the mill, except the sawdust from circular band mill and edger, is conveyed 150 feet away from the mill by conveyor chains to a steel refuse burner, which is 30 feet diameter and about 100 feet high, brick lined, having an enclosed wire cloth top.

The machinery in this large mill is driven by a pair of heavy Corliss frame slide valve engines, with cylinders 20 inches diameter and 24 inch stroke, coupled, the fly wheel pulley being 10 feet diameter and 50 inch face. Steam is supplied by six steel tubular boilers, 60 inches diameter and 16 feet long, which are complete in all respects, with the usual fixtures and fittings,

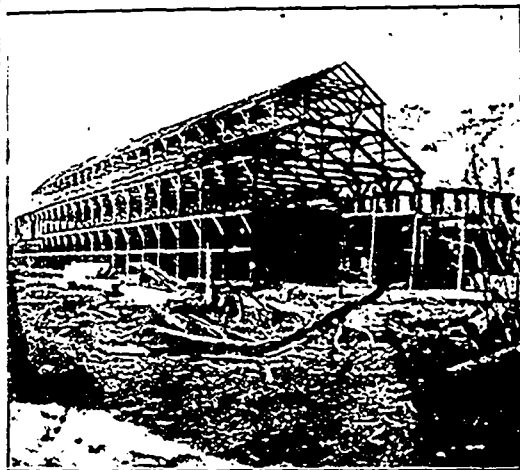


FIG. 1. VIEW OF MILL FRAME, C.P.R. MILL.

80 to 90 feet long, and turn out lumber in first class condition. The logs are hauled to the mill by rail and dumped into the pond formed by the breakwater and dam shown in the accompanying illustration, Fig. 3, the dam being at the lower end.

The jack ladder leading to the mill, and up which the logs are hauled by means of a heavy endless chain, is 120 feet long. When logs enter the mill building they are landed on a series of heavy concave cast iron live rollers, which carry the log to the end of the log deck, which is 100 feet long. Set in between one of the two sections of these rollers is a heavy steam jump-up saw which is used to cut off logs to any

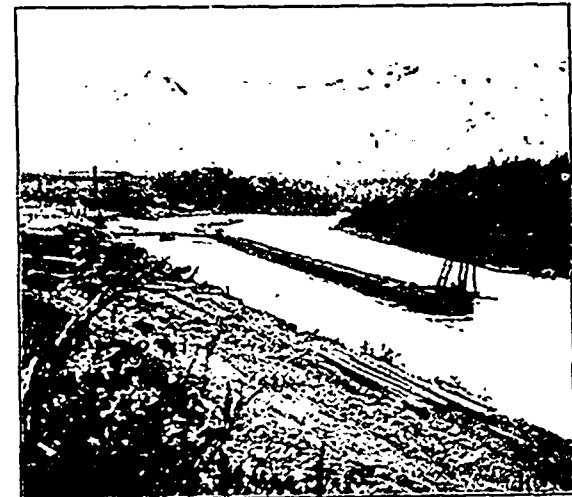


FIG. 3.—VIEW LOOKING DOWN THE RIVER, SHOWING BREAKWATER AND MILL IN THE DISTANCE.

including two smokestacks 54 inches diameter and 75 feet high. The boilers are fed with sawdust from the circular, band mill and edger by the usual system of conveyor chains.

The entire mill was erected and all machinery built by the Wm. Hamilton Manufacturing Company, Limited, of Peterboro, Ont., who have a branch office in Vancouver, B. C., and under the direct supervision of their constructing engineer, Mr. I. N. Kendall.

On the following page will be found illustrations of the camp and the construction gang.

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REQUISITION FOR AN IMPORT DUTY.

THE DOMINION GOVERNMENT AGAIN MEMORIALIZED TO EQUALIZE CONDITIONS IN THE LUMBER TRADE.—THE SITUATION REVIEWED BY WESTERN MANUFACTURERS.—TWO DOLLAR DUTY ON LUMBER IS WANTED.

A deputation from the Lumberman's Association of Ontario waited on the Dominion government on the 8th ultimo, and asked that an import duty be placed on lumber, shingles, and lath, corresponding to the duty on like products



VIEW OF CAMP AT COAL CREEK—C.P.R. MILL.

imported into the United States. The position of the lumbermen was clearly set forth by memorials and statements by Messrs. John Bertram, James Scott, John Waldie, C. Beck, J. E. Murphy, Thos. Conlon, D. C. Cameron, The Sutherland-Innes Company, and P. D. Gordon, the latter representing the British Columbia Lumber and Shingle Manufacturers' Association. Lack of space prevents the publication of the statements in full, but a synopsis of each is given below :

MEMORIAL FROM LUMBERMEN'S ASSOCIATION.

A memorial on behalf of the Lumbermen's Association of Ontario was presented by Mr. John Bertram, the president.



CONSTRUCTION GANG—C.P.R. MILL.

This embodied the various resolutions setting forth the views of the association as expressed at different meetings, and which have already appeared in this journal. The memorial concluded as follows :

We do not come asking for protection against the competitor we are not able to meet, but only for fair play, and in the present keen competition for business do not want to occupy a defenceless position.

The lumbermen of Canada are operating on one of the greatest material resources in the Dominion; incidental to their business they are converting into current merchandise a vast amount of raw material, and while quite willing to enter the markets of the world in free competition, they do not wish their own markets troubled with an irregular and disturbing force. Through the varying demands of commerce lumber may at one time be cheaper in the United States than in

Canada, and vice versa; free and open competition the lumbermen in Canada are willing to abide by, but are averse to carry on a commercial battle with hands tied behind their back. If the Americans are to be at liberty to make a raid over the border on our trade, we want to be able to strike back in the most friendly fashion. As the interests of the Dominion are wide and far-reaching, we must be helpful to each other and stand or fall together. No word of opposition has been heard to our views from the Maritime Provinces or Quebec, and, indeed, they have only a languid interest in the question. They are not liable to attack, like Ontario and British Columbia, who are almost unanimously of the opinion that we should, in self-defence, impose on lumber the same duty as our neighbors.

If a small corner of territory is fearful that they may by carrying out this policy have to pay a little more for their lumber, they can hardly dominate the Dominion, and reasons will be offered to you to show that their fears are ill-grounded. We have no desire whatever to hamper the important work of the High Commissioners, and express our confidence that any agreement they may come to in the pending negotiations our interests will be safeguarded.

MR. SCOTT'S STATEMENT.

Mr. James Scott, of the Georgian Bay Lumber Company, reviewed at some length the conditions existing in the Canadian lumber industry. This industry was admitted to be, next to agriculture, the most important in Canada. To-day the trade in lumber between Canada and the United States stood on a different footing from that on which it stood in years gone by. As far back as 1870 an import duty was imposed by the United States, but the very favorable conditions then prevailing here enabled the Canadian producer to compete with the American producer in his own home market. Those conditions, however, did not now exist. At the present time the cost of production is quite as high, if not higher than, in the United States. The American producer had the advantage of being able to utilize nearly every part of the log at his mill door, and of being able to find at home in a free market ready sale for all the products, including what is to the Canadian an

expensive waste. The Canadian manufacturer had to construct expensive plant for the destruction of such waste, thus losing doubly as compared with the American.

Mr. Scott pointed out that for several years southern pine had displaced white pine for many purposes even in the markets of the United States. It was produced entirely by negro labor and from standing timber which cost the producer merely a nominal sum as compared with the cost of Canadian pine. The American lumbermen had another advantage in cheaper transportation both by rail and water, but particularly by rail, owing to the keenness of competition by rival lines in the United States.

The Canadian lumbermen, Mr. Scott stated, made no objection to the United States duty on Canadian lumber, that being a matter entirely within the right of the United States Government. He admired the spirit which led to the adoption of this course, but had not the same admiration for a condition which gave to the American the control of his own market and permitted him to send to Canada and dump on us the surplus products of his mills. Having a large absorbing market at home, he could afford to sell in Canada at lower prices, and these lower prices determined the prices of the Canadian product.

STATISTICS BY MR. WALDIE.

Mr. Waldie, president of the Victoria Harbor Lumber Company, presented statistics and data showing the conditions that have prevailed during the past four or five years, beginning with the period when the mills of Michigan found the pine trees tributary to their localities along the east coast exhausted. Several manufacturers then removed to the western end of Lake Superior, with the result that the products of mills erected in the district had a disturbing effect upon the trade not only of Western Ontario, but all through the Northern States. The market was glutted and prices sent down below the cost of production. The condition which existed in 1896 was the cause of bringing about the legislation of a pro-

STATEMENT OF LOGS EXPORTED FROM THE GEORGIAN BAY DISTRICT, ONTARIO, TO THE UNITED STATES BY AMERICAN AND CANADIAN LIMIT OWNERS IN 1896, 1897 AND 1898.

	AMERICAN OWNERS.			Total in 3 Years.
	1896.	1897.	1898.	
Holland & Emery, East Tawas.....	41,000,000	19,000,000	.....	60,000,000 feet.*
Wm. Peter, Bay City.....	6,750,000	9,000,000	8,000,000	23,750,000 "
Moore Lumber Company, Detroit.....	11,880,028	.....	.....	11,880,028 " †
Eddy Bros., Bay City.....	22,000,000	12,202,000	12,000,000	46,202,000 "
C. K. Eddy, Bay City.....	5,500,000	.....	.....	5,500,000 "
S. G. M. Gates, Bay City.....	8,292,170	.....	7,222,915	15,515,085 "
Moore, Glover & Company, Bay City.....	.....	.....	1,815,612	1,815,612 "
H. L. Glover, Bay City.....	.....	.....	8,400,000	8,400,000 "
Bliss & VanAuken, Saginaw.....	14,000,000	9,000,000	.....	23,000,000 "
Brownlee & Company, Detroit.....	2,269,610	1,270,000	.....	3,539,610 "
Albert Pack, Alpena.....	12,000,000	8,424,660	.....	20,424,660 "
Theo. Hync.....	3,519,000	.....	.....	3,519,000 "
Turner & Fisher, Bay City.....	35,000,000	17,000,000	21,000,000	73,000,000 "
S. O. Fisher, Bay City.....	.....	.....	5,332,040	5,332,040 "
Delta Lumber Company, Detroit.....	8,000,000	.....	5,000,000	13,000,000 "
Central Lumber Company, Bay City.....	4,500,000	2,500,000	4,668,000	11,668,000 "
Lippincott & Company, Bay City.....	.....	.....	2,214,000	5,368,570 "
Thomas Smith's Sons, Cheboygan.....	4,000,000	.....	1,764,000	5,764,000 "
W. & A. McArthur Company, Cheboygan.....	9,677,000	.....	12,409,000	22,086,000 "
Saginaw Lumber & Shingle Company, Saginaw.....	12,000,000	3,000,000	8,005,000	23,005,000 "
Alger, Smith & Company, Detroit.....	9,000,000	12,500,000	8,833,400	30,333,400 "
Edmund Hall, Detroit.....	14,000,000	8,418,410	10,732,000	33,150,410 "
Hardy Lumber Company, Alpena.....	14,067,892	12,327,630	14,537,000	40,932,522 "
Total by American owners.....	237,455,700	117,797,270	131,932,967	487,185,937 feet.
	CANADIAN OWNERS.			
	1896.	1897.	1898.	Total in 3 Years.
J. & T. Charlton, Lynedoch.....	3,800,000	3,000,000	3,700,000	10,500,000 feet.
Muskoka Mill & Lumber Company, Toronto.....	.....	2,325,190	.....	2,325,190 "
Alex. Barnett, Rensfrew.....	.....	4,000,000	8,991,284	12,991,284 "
Hale & Booth, Ottawa.....	20,266,530	19,000,000	28,000,000	67,266,530 "
Booth & Gordon, Ottawa.....	.....	10,170,000	.....	10,170,000 "
Booth & Shannon, Pembroke.....	.....	6,000,000	.....	6,000,000 "
Munro & Gordon, Pembroke.....	.....	11,000,000	.....	11,000,000 "
Cutler & Savidge, Cutler.....	.....	.....	4,002,144	4,002,144 "
Conger Lumber Company, Toronto.....	.....	.....	14,500,000	14,500,000 "
Parry Sound Lumber Company, Toronto.....	.....	.....	3,639,000	3,639,000 "
Cook Bros. Company, Limited, Toronto.....	.....	14,000,000	5,000,000	19,000,000 "
Peter Wallace, Midland.....	1,253,855	.....	.....	1,253,855 "
J. J. McNeil, Gravenhurst.....	.....	.....	1,302,020	1,302,020 "
Collins Inlet Company, Toronto.....	9,124,424	5,206,479	.....	14,330,903 "
Spanish River Company, Spanish Mills.....	.....	10,000,000	.....	20,000,000 "
Carswell & Francis, Ottawa.....	.....	.....	1,893,290	1,893,290 "
Loveland, Roys & White, Midland.....	.....	.....	4,410,606	4,410,606 "
Playfair & White, Midland.....	.....	.....	15,663,563	15,663,563 "
Total by Canadian owners.....	34,444,809	84,701,669	101,101,907	220,248,385 feet.
" " American ".....	237,455,700	117,797,270	131,932,967	487,185,937 "
	271,900,509	202,498,939	233,034,874	707,434,322 feet.

* Now have mills in Canada. † Limits sold to Canadians. ‡ Limits now cut off.

jective character known as the Dingley Bill. Under this the mills in the Duluth district had a decided advantage, being permitted to exploit the Manitoba, Western Ontario and United States markets, while the Canadian millmen were deprived of the privilege of competing in the United States market.

While the Dingley Bill was looked upon as unfriendly legislation to Canadian interests, Mr. Waldie believed that it would really prove a benefit, as prices to-day were from 10 to 20 per cent. higher than they were one year ago, with the probability that ten of the saw mills on the Georgian Bay that were closed last year (capable of manufacturing 150,000,000 feet) would operate this year. Mr. Waldie contended that owing to the rapid change and developments that take place, past history and experience were not safe guides to follow. In the year 1888 there were not one million feet of saw logs exported from Canada to the United States, while in 1896 there were 272,000,000 feet, in 1897 202,000,000 feet, and in 1898 233,000,000 feet—a total in three years of over 700,000,000 feet of saw logs. During this period the quantity taken off by Americans amounted to 487,185,931 feet, and the quantity sold or taken to American mills by Canadians was 220,248,385 feet.

Ten years ago the product of sawn lumber going from Canada into the United States was to the value of over \$7,500,000, while in 1898 it was less than \$3,000,000. Therefore, while the Americans had free access to the forests of Ontario to supply their sawmills with logs, the quantity and value of the logs taken from Ontario had increased until they exceeded the quantity and value of lumber shipped into the United States from the whole of Ontario, including the Ottawa district. Mr. Waldie presented the accompanying statement of logs exported from the Georgian Bay district in the last three years.

As to the grounds of opposition of the duty on lumber, Mr. Waldie said that the people of Manitoba were in a position to-day which made it unnecessary for special consideration being given to that province to the detriment of the others. There was no argument that could be used to prove that Manitoba should have free lumber that would not apply in favor of Manitoba having free agricultural implements, and no injustice would be done to Manitoba in giving the Georgian Bay lumbermen the advantage of their market and shutting out the Minnesota product.

MR. BECK'S REMARKS.

Mr. Chas. Beck, of Penetanguishene, pointed out as an example of United States competition that before American lumber came in free, our lumbermen had a good trade with the railway companies for Norway pine sills. They were now getting their principal supplies from the Southern States. He cited the rebuilding of Gravenhurst and Midland stations, which were finished with Georgia pine. He did not believe that a duty would increase the price of lumber in the North-west. He had shipped lumber from his Penetanguishene mill, shipping by boat to Fort William and from there west by rail. He found prices in the North-west very good and realized more for his lumber there than in Ontario, notwithstanding the long haul and extra handling at Port Arthur. He believed that instead of prices being advanced as a result of the duty they would more likely be reduced.

THE TRANSPORTATION PROBLEM.

Mr. Thos. Conlon, of Thorold, dealt chiefly with the question of transportation. Cargoes both ways, he said, were a necessity for successful navigation, and this was our greatest drawback in carrying grain from Fort William. Yet during last summer Manitoba bought from Minnesota 38,000,000 feet of lumber, while Canadian vessels were going light, right by Canadian mills that were looking for a market for twice as much lumber as Manitoba consumed. Mr. Conlon said that his brother and himself had a couple of small vessels, carrying grain from Fort William since that port commenced to export it, and never yet had they been able to send a cargo of lumber to Manitoba on account of the C. P. R. rates from Fort William being too high, although they hauled their cars back light. Now, however, the C. P. R. were willing to lower their rates to a fair basis if the Government put a duty on American lumber. Here was an opportunity for the government and the C. P. R. to open up this new trade in lumber with Manitoba. If the C. P. R. would carry lumber on a ten cent rate from Fort William to Winnipeg, the same as with grain, they would open up a profitable trade for themselves, a new market for Ontario lumbermen, and give cheaper lumber to Manitoba, and the only persons hurt would be Mr. Tawney's friends in Minnesota, who were now pouring lumber into Manitoba free of duty, after having shut Canadian lumber out of their market. If we had furnished that 38,000,000 feet last year instead of Minnesota,

Canadian vessels would have earned \$50,000 in freight and the C. P. R. \$100,000 more, instead of hauling back empty cars. Mr. Conlon submitted a list of prices of lumber in Winnipeg, stating that on a ten cent rate he would be prepared to sell several cargoes on that basis.

VIEWS OF MR. D. C. CAMERON.

Mr. Cameron, president of the Rat Portage Lumber Company, submitted a statement to show that an advance in the price of lumber would not result from an import duty. Instead, the price would remain the same, but the trade which was now divided would flow naturally to Canadian manufacturers, giving employment to many thousands of Canadians and increased trade to Canadian merchants and manufacturers. Canadians, he said, were capable of producing lumber as cheaply as their American competitors, if conditions were equal, and having more than a sufficient supply of timber for our consumption, no necessity seemed to exist for allowing foreigners into our markets, without at least contributing something to the revenue of the country. As showing that prices would not be increased to the settlers of Manitoba and the Territories, he stated that Western Ontario contained billions of feet of valuable pine timber, the only natural market for which was Manitoba and the Territories. All the timber west of Lake Superior on Canadian territory is tributary by water to the Canadian Pacific Railway and the proposed Rainy River Railway. The South-Eastern Railway, which touches the Lake of the Woods and then crosses the great Rainy river, traverses the best timber lands remaining in the possession of the government of Ontario, and furnishes an outlet for a supply of timber for our prairies for many years to come. With these easily accessible forests, there could be no possible excuse for fearing a lack of competition by Canadian manufacturers of lumber in the western part of Canada, to say nothing of the supply on the shores of Lake Superior and Georgian Bay. During 1898 about 38,000,000 feet of lumber, besides large quantities of shingles and laths, were admitted free of duty into Manitoba. This lumber was worth, when delivered in Manitoba, about \$15 per thousand. Therefore, the sum of \$540,000 for lumber and about \$60,000 for lath and shingles was paid by Canadians for American product, without any corresponding advantage, while there are mills in Western Ontario, which cost hundreds of thousands of dollars lying idle, and rotting to the ground for want of a market for their products.

The Canadian consumer, Mr. Cameron said, had nothing to gain by having lumber on the free list; on the contrary, he was the loser to the extent of the money which is paid to a foreign country for a product which should rightly be manufactured in Canada. Mr. Cameron read a resolution passed by the Board of Trade of the Rainy River district requesting the Dominion government to impose an import duty on lumber.

THE HARDWOOD INDUSTRY.

Mr. J. E. Murphy, of Hepworth, vice-president of the Ontario Lumberman's Association, referred particularly to the hardwood industry. After reviewing the situation as to the tariff, Mr. Murphy said: In the face of conditions of the lumber trade as they now exist, it would be a wise and popular move on the part of the government of Canada, in my humble opinion, to impose a duty on lumber and shingles coming into this country and place an export duty on pulpwood leaving this country in an unmanufactured state. The Americans, like ourselves, are producers and exporters of hard and soft wood lumber and manufactures of wood. So long as they can use our raw forest product, just so long will they meet us in foreign markets with the manufactured lumber. It will not be many years till their forests will disappear or become depleted of marketable timber. Our supply is practically inexhaustible at the present rate of consumption. The hardwood forests of this country are a splendid asset and once destroyed cannot be reproduced as readily as soft wood or pine. The world's consuming market is hungry for lumber and manufactured wood goods, the latter particularly in hardwoods. These markets are as free to us as to our American competitors. We are as yet a young country in the art of manufacture, but we will improve with age. We are not yet as well able to compete in the foreign markets with our American neighbors as we will be. This is largely due to their greater wealth, their larger home market and their great combines and aggregations of capital which is used in the establishment of huge manufacturing plants to turn out manufactures of wood for the home and foreign markets. In this respect they have become great and conspicuous. It has taken time for them to accomplish this. We will also become great in the art of wood manufacturing, but it will take time, population and capital; all of which we will acquire in time. We have a country possessing all the natural advantages of our neighbors. We are rich beyond measure in our forest possessions, in both hard and soft wood. Let us preserve these forests. Cherry, oak and rock elm have almost entirely disappeared from the forests of Ontario, where these woods were once plentiful. Let us be warned by this fact and protect what we have left. Hardwood forest are not nearly so liable to destruction by forest fire as pine. We cannot readily reproduce them. We will need all we have when we become greater in the arts of manufacture. Foreign enquiries for our lumber and manufactures of wood are daily becoming more and more frequent. We are perhaps a little slow in learning accurately the wants of foreign markets, and becoming liberal caterers thereto, but we will get there in time. True,

the Americans want our high grades of hardwoods, and in many instances the prices they pay warrant our manufacturers in shipping the best lumber to them, notwithstanding the \$2.00 duty. This leaves a very considerable percentage of low grade on the hands of the manufacturer not easily disposed of. The Americans won't have it. We have no home consuming market for it of any consequence, and its grade will not permit its exportation owing to freight being too high. During the past year our American neighbors have enjoyed a free market in the Dominion of Canada for three million dollars' worth of lumber and forest products, while every board they have taken from us has been compelled to pay a duty of from one to two dollars per M. Were we not extensive producers of lumber greatly in excess of our manufacturing requirements, these facts might be more readily overlooked.

In conclusion, let me say to our Canadian legislators that conditions at present existing in regard to lumber tariff are decidedly unfair and, as it were, juggled. We want a lumber tariff to protect our home market similar to that given by the American government to their own lumber producers.

EXPORT OF CANADIAN LOGS.

The following memorandum regarding the export of Canadian logs was submitted by the Sutherland, Innes Co., of Chatham, Ont.:

The most serious problem that is at present confronting the sugar refiners, flour and corn meal millers, salt manufacturers, cement manufacturers, and other users of barrels, is where they are going to get their cooperage stock in years to come, so as to make the barrels required by them.

The forests of Canada are being rapidly denuded of elm, oak, basswood and ash, not so much for manufacturing into cooperage by Canadian millmen, but by jobbers who export the logs to foreign countries, there to be manufactured into staves, hoops and heading. Ten years ago the counties of Essex, Kent, Lambton, Elgin and Huron had apparently boundless forests of virgin hardwoods; to-day it would be difficult to find a solid 200 acres of forest.

What has become of all this timber? Has it been used by the mills in these counties? Our answer is, only to a very limited extent, and while there is over \$2,000,000 invested in mills and 4000 to 5000 men employed annually in these counties at the mills and in the woods getting out timber for these mills, only a tube of the timber has been used by these factories.

What has become of the timber? First, the Dawn tramway in Lambton, then the tramway of the Anchor Company of Detroit in Kent, then the L. E. & D. R. R. through Essex and Kent, have been taking out the finest timber in these counties to the Detroit river, Sydenham and Lake St. Clair for export to mills at Detroit, Wyandotte, Trenton, Mount Clemens, New Baltimore, Fair Haven and Algonac, while the timber along the Lake Erie shore has been taken over to Sandusky and also to Wyandotte and Trenton. Huron has contributed its timber to build up Michigan mills, also to the disadvantage of the Canadian industries.

The market in Canada in the past was not large enough to consume more than a small amount of the manufactured stock, the European market had not got into the way of using Canadian stock, and consequently the only market for the surplus manufactured stock was the United States, protected by a duty of 10% on staves and 35% on hoops and heading. Manufacturers in the United States were and are enabled to pay a higher price for logs than Canadian manufacturers could or can afford, the consequence being that the logs, instead of being manufactured into cooperage material in Canada, have been exported as they came from the woods, to the great loss of the Canadian people.

If we are to develop Canada, let us insist on our logs being turned into the manufactured product before it leaves our shores, build up our own manufacturing industries, keep our young men, the bone and muscle of our country, at home, and distribute the money required to run these factories among our people. There are two ways to do this, either by putting a large export duty on logs and bolts or by prohibiting the export of logs and bolts altogether. The latter we believe the most feasible and one that would do away with any cry of retaliation from our neighbors. Should our neighbors go in for retaliation, they would be the only ones that would get hurt, as the demand for cooperage stock in Canada and for export to Europe is now getting nearly on a par with the production, and it would simply mean that if a higher duty was put on Canadian stock going into the United States than at present exists, the consumers in the United States would either have to pay the increased duty or not get the stock.

We might point out to you that the 35% duty on hoops and heading shuts out this stock entirely from the U.S., and it is only staves on a 10% duty that goes in from Canada.

If the U. S. admits cooperage stock from Canada free, the manufacturers here would be able to compete for logs with U. S. buyers, but as it is, the mills in Canada lie idle half the year, while our finest logs go to keep the U. S. mills running.

Let us therefore all pull together and support the Canadian government that will prohibit the export of logs from Canada entirely.

Resolutions passed by the British Columbia Lumber and Shingle Manufacturers' Association and the Boards of Trade were presented by Mr. P. D. Gordon. These will be found elsewhere.



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ADVERTISING RATES FURNISHED ON APPLICATION

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

Special pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trader 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.

DISCRIMINATION IN MARINE INSURANCE RATES.

LLOYD'S underwriters have discriminated against Canada in the matter of insurance rates. Such was the announcement definitely made within the past month. Mr. E. L. Bond, president of the Marine Underwriters' Association, Montreal, who returned recently from England, states that this course has been decided upon as the result of the losses which the insurance companies have sustained in the St. Lawrence, and that nothing short of great improvements in the route, such as lighting, buoys and signalling, will induce the English companies to reduce the present advanced rates. In comparison with last year, the advance is between twenty and thirty per cent.

This action on the part of the underwriters must seriously affect Canadian shipping interests. Yet we cannot question the right of the insurance companies to make such rates as are commensurate with the risk. The onus is upon the government of this country, who appear to have neglected to carry out such improvements as would have removed any possibility of conditions such as now exist. The improvements may now be undertaken, at no less cost than if carried out five years ago, while for one season at least shippers will suffer from excessive rates. Furthermore, it may be a difficult task to secure the restoration of the old rates even when the St. Lawrence route is improved.

From what can be learned, the discrimination is not confined to St. Lawrence ports, but

includes the ports of New Brunswick and Nova Scotia as well. This is certainly unjust discrimination. Because the navigation of the St. Lawrence is difficult is no reason why the insurance rates on vessels going to St. John, Halifax and other eastern ports should be advanced.

The extra rate charged in summer from St. John, N.B., as compared with Bangor, Maine, is said to be equal to a discrimination of ten shillings per standard on deals. A preference to this extent is given to ships going to ports of the United States, and by a British association. This looks like a reversal of the preferential arrangement.

THE BREACH WIDENING.

IN trade relations, Canada and the United States appear to be getting further apart. The negotiations by the High Commission having, practically, ended in naught, the people of this country are showing a desire for legislation on the basis of "Canada for Canadians." Never in the history of the country has so much interest centred in the lumber trade. Three weeks ago a deputation representing the Lumbermen's Association of Ontario waited upon the Dominion government and requested that the tariff be amended by placing an import duty of two dollars on lumber, 30 cents on shingles and 25 cents on lath. A strong case was presented, as will be observed by reference to abstracts, appearing elsewhere, from papers presented for the consideration of the government.

Opponents of the imposition of such a duty have endeavored to make capital out of the fact that very few of the Ottawa valley lumbermen were present at the conference. It has been said that they refused to join the deputation. On the contrary, they were not invited, not being members of the Lumbermen's Association, which the deputation represented. The Premier, in reply to the deputation, admitted the justice of their demands, but before committing himself, expressed a wish to hear from other interests concerned.

No opposition to the proposed duty is anticipated save from the consumers in Manitoba and the Northwest, and it would seem that there is little ground for objections even from this source. There is sufficient competition in the lumbering business in Canada to prevent prices being advanced beyond that figure which would give a fair margin of profit to the manufacturer, and when prices fall below that basis, labor must suffer as a consequence.

The case of the deputation has been greatly strengthened by a promise of the C.P.R. that if an import duty should be imposed freight rates on lumber between Fort William and Winnipeg would be reduced, thus permitting the Georgian Bay lumbermen to supply the lumber which is now obtained from Minnesota. With such an arrangement, the probability of any advance in the price of lumber is very remote, and with this objection removed, the Dominion government will surely accede to the demands of the lumbermen, and thus place the trade in Canada on an equal footing with that of the United States.

Hon. Don. M. Dickenson has made the statement that the Secretary of the Treasury purposes prohibiting the importation of Canadian lumber

into the United States. This is not generally believed, as the Dingley bill provides for additional duty as a retaliatory measure, but does not give power to prohibit exclusively. Even if such action were taken, the United States would eventually be the greatest sufferer. As far as Canada is concerned, it would only stimulate the growth of wood-working establishments and pulp mills, and, while for a time our lumber manufacturers might be somewhat handicapped, trade would soon adjust itself to the changed conditions, and the building up of the industry upon proper lines would be the result.

PROBABLE ADVANCE IN LUMBER FREIGHT RATES.

THE CANADA LUMBERMAN has learned, from a reliable source, that the Canadian railroads are considering the question of advancing the freight rates on lumber, and that, while no decision has as yet been reached, there is a strong probability that some steps in that direction will be taken very shortly. It is not known what advance is proposed, but the railway authorities perhaps have in mind the restoration of the rates to the same basis as before the reduction was made a few years ago.

This information will no doubt be received with much surprise by the lumber trade, coming, as it does, at a time when efforts are being made to secure a reduction in the freight rate on hardwood lumber, thus placing it on an equality with pine. In the new schedule, if such is decided upon, we understand this inequality will be removed, but in a way which will not be acceptable to lumbermen. The rate on hardwoods will not be lowered, but on the other hand may be advanced, and pine lumber brought up to the same rate.

As far as can be learned, the railway authorities have singled out lumber as the commodity which could most easily carry the burden of additional freight rates. For what reason it is impossible for anyone conversant with the trade to imagine, but it is perhaps due to ignorance as to the actual conditions existing in the lumber trade. This supposition is strengthened by a remark made to the writer by a representative of one of the railways. It was to the effect that the lumbermen were particularly prosperous, and were accumulating great wealth—an envious position, which the lumbermen, unfortunately, do not occupy. Many of the hardwood manufacturers in Ontario, who would be most seriously affected by increased freight rates, owing to their dependence upon the railways, have in the last few years secured returns from their seasonal operations altogether inadequate in relation to the risk outlay of money, and amount of labor involved. The high price of logs, waste timber, and low price of lumber have prevented even the shrewdest mill man from making more than an average profit. What the lumber trade asks is, that instead of freight rates being advanced, the railways should assist in the development of the hardwood industry by giving lower rates, and thus permitting waste timber to be marketed and utilized in the manufacture of woodenware and other goods, instead of being burnt as fuel, as at present. By the adoption of this policy, the railways, the lumbermen, and the country generally would be benefitted.

So far as western Ontario is concerned, the

railways have not experienced vessel competition in the past, and hence they have pursued the policy generally exercised where monopolies exist. In all probability, however, the St. Lawrence canals will this season be deepened to fourteen feet. Lumber shipments from the Georgian Bay district to Montreal and the Eastern States will then be made largely by water, and the pine manufacturers will, to a great extent, be independent of the railroads. For this reason, if for no other, the railroads should encourage the hardwood trade, and give as liberal freight rates as possible.

The statement is made that the C. P. R. will probably offer more equitable rates to Winnipeg in the near future. This is what the lumbermen of Northwestern Ontario have wanted for some time, but not until a competing railway was in course of construction was there any hope of securing it. In the meantime, trade which legitimately belonged to Canadians went to the United States, as instance the importation last year into Manitoba from Minnesota of thirty-eight million feet of lumber.

Any attempt on the part of the railroads to advance rates on lumber will meet with a just but bitter opposition from the trade, and, if carried to a termination, must result in restricting the business of the railways and crippling the lumbering industry of this country.

EDITORIAL NOTES.

The importance to lumbermen of the Manitoba market is well illustrated by statistics of population which have just been prepared. According to the census of 1891 the population was then 152,000, while at the present time it is about 260,000, an increase in eight years of 108,000. In the next few years there is every probability of a still greater proportionate increase, due to the fact that the advantages of the western country are becoming more widely known abroad.

LUMBERMEN, we believe, considering the hazardous nature of their business field, are quite as successful as those engaged in other lines of industry. In taking a retrospect of the last two years, one is impressed with the few instances of financial embarrassment in lumber circles, and more particularly among the larger concerns. There have been, and always will be, some failures, either from unavoidable circumstances or from injudicious management. Perhaps the most common mistake made by the smaller manufacturers is to cut their stock at random, without properly enquiring into and studying the then existing and probable future requirements of the market. In this way much money has been lost. Instances could be cited where manufacturers have been unable to dispose of their lumber because of being cut to irregular and undesirable sizes, while it would have met with ready sale if greater attention had been given to its manufacture. Another certain advantage to manufacturers is publicity—let buyers know what you have to offer. From a representative of the CANADA LUMBERMAN who recently visited the Eastern States many enquiries were made as to where lumber, shingles and lath could be obtained in Canada, what mills could ship by water, and other particulars. This fact alone

proves the wisdom and benefit of placing before probable buyers, through the medium of the CANADA LUMBERMAN, particulars of stock for sale.

LUMBERMEN and the public generally are awaiting with much curiosity the final report of the Ontario Forestry Commission, which is now nearing completion. This Commission, as most of our readers know, is composed of Messrs. John Bertram, president of the Collins Inlet Lumber Company; E. W. Rathbun, president of the Rathbun Company; Thos. Southworth, chief of the Ontario Forestry Department; J. B. McWilliams, crown timber superintendent; and A. Kirkwood, chief of Sales and Free Grants, Crown Lands Department. Judging by the personnel of the Commission, by the preliminary report submitted a year or so ago, and by the admitted necessity of adopting some practical system of forestry, a volume of information and recommendations of much value will be placed before the government, and will, we believe, form the basis of the future policy of the Ontario government with respect to the preservation and cutting of timber. The Commission will, it is believed, again recommend the extension of the fire ranging system, and also that the cutting of logs be restricted to trees of not less than twelve inches in diameter. The report will be of interest to lumbermen, and will aid in removing the erroneous opinion that the principles of scientific forestry are opposed to the interests of lumbermen.

AN OFFICIAL LOG SCALE.

The National Hardwood Lumber Association, which has members in nearly every hardwood market in the United States, has promulgated a scale for the measurement of logs, designed to accomplish, as far as possible, uniformity in that respect. The scale adopted is of use to all manufacturers of hardwood lumber, and is presented herewith.

Length in Feet.

	12	14	16	18	20	22	24
10	27	32	36	41	46	50	54
11	37	43	49	55	61	67	71
12	48	56	64	72	80	88	96
13	61	71	81	91	101	111	122
14	76	88	100	112	125	137	150
15	91	106	121	136	151	166	181
16	108	126	144	162	180	198	216
17	126	144	169	190	211	232	254
18	147	171	196	220	244	269	294
19	169	197	225	253	280	309	338
20	192	224	256	288	320	352	384
21	217	253	289	325	361	397	433
22	243	283	324	364	404	445	486
23	271	313	359	406	452	496	541
24	300	350	400	450	500	550	600
25	331	386	441	496	550	605	662
26	363	433	494	544	605	665	726
27	397	463	530	596	661	726	791
28	438	507	582	651	725	800	873
29	487	533	609	685	761	838	914
30	535	575	657	739	821	901	986
31	582	622	710	797	888	976	1065
32	631	641	736	828	920	1012	1104
33	683	656	751	852	950	1058	1176
34	730	700	800	900	1000	1100	1200
35	787	766	876	985	1095	1204	1314
36	842	807	923	1038	1152	1268	1380
37	897	901	1029	1158	1287	1415	1544
38	961	984	1068	1201	1335	1465	1602
39	1020	1020	1120	1260	1400	1540	1680
40	1083	1083	1204	1354	1505	1655	1806
41	1154	1113	1272	1431	1590	1749	1908
42	1220	1175	1343	1511	1679	1846	2014
43	1296	1222	1396	1571	1745	1918	2072
44	1370	1265	1460	1665	1850	2035	2220

The above rule is a combination of the Doyle and Scribner rules. The Doyle rule is used on all logs 27 inches and under in diameter, and the Scribner rule is used on all logs 28 inches and over in diameter.

ONTARIO TIMBER LANDS.

FROM the report of the Commissioner of Crown Lands of the Province of Ontario, it is learned that the revenue from woods and forests for the year ended December 31st, 1898, amounted to \$981,186.45. Of this, \$159,698.74 was on account of bonuses, and \$65,053.37 on account of ground rent, leaving the net revenue from timber dues \$756,434.34. This is a decrease as compared with the previous year of \$345,953.63. Of this, \$325,620.22 is in crown dues and \$31,220.16 in bonuses, while there is an increase in ground rents of \$10,886.75. It is explained that the revenue from timber dues for the year 1897 was abnormally large, the sales of lumber having been stimulated by the desire to reach the American market before the \$2 import duty took effect.

The Commissioner states that the Department obtained information from its rangers and the lumbermen as to the probable cut of logs for export in the winter of 1897-1898, these figures indicating that from 156 to 160 million feet would be cut. The actual quantity of logs taken out for export is shown to have been, in round figures, 211 millions, or 51 millions more than was anticipated by the Department. It is a fact which attests the accuracy of the Department's estimate that the parties who were cutting for export at the time the estimate was made exported only 15 millions more than was anticipated, the balance of the excess, 36 millions, arising through Canadians who had always sawn in Canada being induced to sell for export.

The effect of the prohibition of the export of saw logs has been to materially reduce the cut of the past winter, and it is estimated that there will be from 160 to 200 million feet less taken out than last winter. The exports this year will probably not be more than 40 to 50 millions, made up of some 15 millions cut on the areas excepted from the prohibitory regulations, and quantities cut under authority of last year's licenses which were stuck in the streams and in the bush. When the report was submitted it was thought that there would be 50 million feet taken out last winter by parties who formerly exported. These 50 millions will have to be sawn in Canada, either at the existing mills or at others to be erected.

The Ontario lumbermen, the report states, have come to regard the position with a feeling that the future is with us in respect to raw materials. We possess large quantities of white pine, which is daily growing more valuable, and it would appear from information in possession of the Department that the Hudson's Bay slope—a few years ago regarded as being destitute of timber of commercial worth has immense forests of spruce, which timber is daily increasing in value, and it may be that that region will in the end prove our most valuable timber possession. Bearing this in mind and remembering the ability of our merchants to exploit markets afar when those near at home are denied us, the people of Ontario need not fear any stagnation of their timber industries.

Following is a comparative statement for two years of the principal kinds of timber cut on Crown lands:

	1897.	1898
Pine saw logs.....	477,716,448	544,457,139 feet B.M.
Other saw logs.....	8,758,716	8,224,442 "
Boom and dimension timber, pine.....	26,084,717	25,740,222 "
" " " other.....	706,860	1,157,222 "
Square timber, white pine.....	1,977,400	1,459,631 cubic feet.
" " " birch, ash, oak, elm, etc.....	28,000	18,786 "
Cedar.....	254,144	161,860 lineal feet.
Railway ties.....	278,055	1,152,213 pieces.
Telegraph poles.....	593	7,980 "
Stave and shingle bolts.....	1,466	1,895 cords.
Pulp wood.....	46,332	16,448 "

CANADIAN EXPORTS AND IMPORTS.

The trade and navigation returns of the Dominion of Canada, as issued by the Department at Ottawa, contain interesting statistics of the imports and exports of various products, from which the following are compiled :

The total value of exports from Canada for the year ended June 30th, 1898, was \$164,152,683, and of imports \$140,323,053, against \$137,950,253 and \$119,218,609 respectively for the preceding year. Of the total exports last year, Great Britain took goods to the value of \$93,065,019, the United States to the value of \$34,361,795, Germany \$1,419,096, and France \$1,015,612.

EXPORTS.

Turning to statistics of timber products, we find that the total exports for the year under review were \$27,043,072, against \$31,432,294 for 1897. The following figures show the value of exports of timber products for the last two years :

Article.	Year ended June 30, 1897	Year ended June 30, 1898
Pine deals.....	\$ 3,313,357	\$3,885,448
Spruce and other deals.....	7,094,485	7,918,366
Battens.....	24,594	20,350
Planks and boards.....	10,832,185	5,625,391
Deal ends.....	638,193	641,068
Laths.....	471,341	343,378
Palings.....	8,403	14,851
Pickets.....	35,532	18,052
Joists.....	23,531	5,229
Scantling.....	414,443	241,044
Staves.....	699,431	401,583
Other lumber.....	317,415	257,603
Shingles.....	1,201,562	994,438
Pine and cedar shingle bolts.....	623	636
Cedar and tamarack posts.....	54,537	23,415
Sleepers and railroad ties.....	229,780	101,191
Stave bolts.....	38,634	20,811
Box shooks.....	56,435	101,787
Other shooks.....	24,201	18,768
Ash timber, square.....	41,991	34,290
Birch.....	194,180	143,623
Elm.....	170,689	222,529
Maple.....	3,280	2,095
Oak.....	540,288	740,502
Red pine.....	52,439	62,011
White pine timber.....	1,352,669	1,674,074
Other timber.....	38,677	39,955
Logs for shingle bolts.....	4,280	645
Elm logs.....	77,978	53,784
Hemlock logs.....	13,790	4,030
Oak.....	4,066	2,517
Pine.....	1,832,352	1,616,671
Spruce.....	107,073	33,885
Other.....	90,843	89,450
Lath wood.....		700
Firewood.....	173,921	140,897
Stark for tanning.....	112,154	103,057
Rosewood.....	41,656	37,944
Hickory.....	1,718	437
Knees and futtocks.....	8,972	14,175
Pulp wood.....	711,152	912,041
Match blocks.....	37,584	15,892
Masts and spars.....	2,926	2,488
Piling.....	72,850	135,154
Hop poles.....	929	665
Hoop poles.....	3,639	1,180
Telegraph poles.....	40,038	20,759
Other poles.....	16,626	13,522
Other articles of the forest.....	104,195	87,523
Total exports of forest products.....	\$31,432,294	\$27,043,072

In addition to the above exports of timber products, manufactures of wood were exported during the two years as follows :

	1897	1898
Doors, sashes and blinds.....	\$ 285,161	\$ 324,610
Matches and match splints.....	151,276	195,775
Household furniture.....	127,752	248,317
Barrels.....	30,238	29,054
Mouldings, trimmings, etc.....	16,201	14,915
Pails, tubs and other woodenware.....	13,150	20,171
Spool wood and spools.....	86,238	77,704
Wood pulp.....	741,939	1,210,923
Other manufactures.....	257,026	296,201
Total exports of wood manufactures.....	\$1,509,001	\$2,417,674

The figures below give the value of the exports of deals, boards, etc., to some of the principal importing countries :

PINE DEALS.—Great Britain, \$3,788,571 ; Ar-

gentina, \$18,000 ; Belgium, \$4,373 ; France, \$1,227 ; Portugal, \$2,386.

SPRUCE DEALS.—Great Britain, \$7,094,801 ; United States, \$310,308 ; France, \$1,259,753 ; Spain, \$86,516 ; Brazil, \$51,110 ; Australia, \$133,994 ; Holland, \$18,636 ; Portugal, \$26,515 ; British Africa, \$12,627 ; Belgium, \$11,495.

LATHS. United States, \$336,634 ; Australia, \$4,102.

PLANKS AND BOARDS. Great Britain, \$1,074,519 ; United States, \$3,706,887 ; Argentina, \$202,585 ; Australia, \$153,024 ; South West Indies, \$95,902 ; China, \$54,795 ; France, \$29,342 ; Japan, \$39,102 ; Spanish possessions in Africa, \$26,868 ; Uruguay, \$16,461 ; St. Pierre, \$18,375 ; British Africa, \$16,420 ; Belgium, \$13,211 ; Germany, \$20,044 ; Chili, \$12,565 ; Holland, \$14,004 ; Maderia, \$10,462.

SCANTLING.—Great Britain, \$121,373 ; United States, \$64,746 ; Argentina, \$39,970 ; Spanish possessions in Africa, \$11,473.

STANDARD STAVES.—United States, \$31,251 ; Australia, \$1,469. Other staves and headings, United States, \$305,288 ; Great Britain, \$57,237.

SHINGLES.—United States, \$973,807 ; British West Indies, \$18,287.

BOX SHOOKS.—Great Britain, \$75,381 ; United States, \$19,780.

PULP WOOD.—United States, \$876,690 ; Great Britain, \$34,772.

IMPORTS.

The imports of forest products into Canada during the year ended June 30th, 1898, represented in value about \$3,000,000, and included the following : Oak, \$484,782 ; pitch pine, \$295,748 ; fence posts and railroad ties, \$68,286 ; logs and round manufactured timber, \$136,918 ; cherry, chestnut, gumwood, hickory and whitewood, \$227,280 ; mahogany, \$42,292 ; sawed or split boards, planks and deals not further manufactured than dressed on one side only, \$384,767 ; timber or lumber, hewn or sawed, squared or sided, \$462,363 ; walnut, \$56,049 ; Spanish cedar, \$9,228 ; sycamore, \$1,782 ; white ash, \$12,783 ; African teak, black heart, ebony, lignum vitæ and red cedar, \$7,082 ; spruce clapboards, \$1,432 ; laths, \$8,450 ; shingles, \$19,772 ; staves, \$27,740 ; ivory nuts, \$19,793 ; hubs for wheels, posts and like blocks \$9,082 ; hickory spokes, \$73,864 ; hickory sawn to shape for spokes of wheels, \$19,906 ; hickory billets, \$1,470 ; fellows of hickory wood, \$23,438 ; shovel handles, \$16,275 ; sawed boards, planks, etc., planed or dressed and tongued and grooved (duty 25%), \$39,357 ; veneers of wood, not over 3/32 of an inch in thickness (duty 7 1/2%), \$60,026 ; woodenware, pails, tubs, etc. (duty 20%), \$17,766 ; general manufactures of wood, \$304,820.

Geo. E. Corbett, of Lequille, N.S., recently shipped a quantity of maple strips to Boston, to be used in the flooring of horse stalls.

When a representative of the CANADA LUMBERMAN met Mr. J. E. Murphy, of Hepworth, in Toronto last week, he had just returned from a business trip to the North-west. Mr. Murphy remarked that in Winnipeg, and in fact throughout Manitoba and the North-west, they were experiencing a veritable boom. There was a vast amount of building under way, and almost a famine in some grades of lumber.

A BOOK FOR LUMBERMEN.

"The Adirondack Spruce"—a study of the forest in Ne-ha-sa-ne Park (Adirondacks), by Gifford Pinchot—The Critic Co., New York.

If any further proof were needed that the scientific foresters were not mere theorists, but were working along lines that might profitably be adopted by all lumbermen, the little book bearing the above title furnishes it.

Commissioned by Dr. Webb to provide working plans for his 30,000 acres forest in the Adirondack mountains, Mr. Pinchot, Chief of the Forestry Division at Washington, at once proceeded to make a thorough examination of the park. The spruce trees down to a diameter of two inches were counted on 1046 acres, and from these different lots average tables of yield and annual growth were compiled. In the introduction to the book he says: "The owners and operators of spruce lands in the Eastern United States will find within the covers of this little book a collection of facts and figures which is intended first of all to be of practical use. That he has succeeded in his object is beyond doubt. Although designed for spruce operators in the Northern States, much of its contents will prove of great value to Canadian pine lumbermen as well.

As a sample of the method of work we have just space to refer to one example among many given in the book: "A man owns 30,000 acres which yield on an average 3500 board feet per acre of spruce ten inches and over in diameter. To what limit will it be most profitable in the long run to cut, how much can he cut annually if he wishes to obtain a sustained annual yield, and how soon can he return to the portion cut over the first year and cut the same amount of timber above the same diameter limits as at first ?

"Look in Yield Table 1, column 3, for the amount nearest 3500 board feet. 3480 in line 3 is the closest figure. All the desired information will be obtained on this line in the three tables.

"If the diameter limit is ten inches, the total stand is 30,000 x 3500—105,000,000 board feet ; the same yield can be obtained in thirty-seven years (Yield Table 1, column 1) ; the area lumbered annually will be 30,000—37—811 acres, the annual cut will be 105,000,000—37—2,837,838 board feet.

"If the diameter limit is twelve inches, the average stand per acre is about 3000 feet (Yield Table 2, column 2), the total stand is 30,000 x 3000—90,000,000 ; the same yield can be obtained in twenty-five years (Yield Table 2, column 1), the area lumbered annually will be 30,000—25—1200 acres ; the annual cut will be 90,000,000—3,600,000 board feet.

"If the diameter limit is fourteen inches, the average stand per acre is about 2000 board feet (Yield Table 3, column 2,) the total stand is 30,000 x 2000—60,000,000 board feet ; the same yield can be obtained in twenty years (Yield Table 3, column 1) ; the area lumbered annually will be 30,000—20—1500 acres ; the annual cut will be 60,000,000—20—3,000,000.

"By comparing these results it appears that it will be most profitable to cut to twelve inches, since the annual cut is then the largest. The area lumbered annually is about four hundred acres greater than if ten inches were the limit, but the annual cut is about 500,000 board feet larger. Lumbering under these conditions would nevertheless be profitable, inasmuch as the average stand per acre for trees twelve inches and over in diameter is about 3000 board feet." This is given as indicating the practical nature of the book throughout.

WOULD NOT BE WITHOUT IT.

Messrs. Cook & Greiz, Dashwood, Ont., in renewing their subscription to the CANADA LUMBERMAN, write: "We would not be without your journal, as we consider it a valuable paper for millmen."

We acknowledge receipt of the twenty-sixth annual special issue of the Timber Trades Journal, published by Messrs. Wm. Rider & Sons, Manchester House, Aldergate street, London, E. C. This issue contains upwards of three hundred pages, in which the trade of Great Britain, Sweden, Norway, Finland, Russia, Germany, Canada and the United States is ably reviewed. The home section is accompanied by the portraits of prominent timber importers.

CORRESPONDENCE

THE NATIONAL HARDWOOD LUMBER ASSOCIATION.

Mr. W. A. Bennett, of Cincinnati, Ohio, president of National Hardwood Lumber Association, has sent the CANADA LUMBERMAN copy of a letter which he is sending members of the association. The letter reads as follows:

It is my earnest desire to have you feel that the success of our cause is in your hands and the future of our organization depends entirely on what you and your individual and personal efforts make of it. We are growing as any just and righteous cause must and eventually, yet I want to say this, it is not wise to depend on the officers and directors to make a success without the personal assistance of the membership.

The press has been of untold value to us and offers good offices to us on all occasions, which should be appreciated by business in their line, and I am glad to see some of you are repaying them, while others are not. I am glad to see you are getting more business than you can attend to without advertising. This is no excuse, in fact, this is the best time to advertise and pick your trade, allowing for old time slow paying customers to be educated by the efforts of your competitors and getting hold thereby of a trade who discount their bills. This is not a newspaper advertising letter, but it is one on the Golden Rule plan. "You scratch my back and I will scratch yours."

I want each member in the association to procure at least one member within the next thirty days, and send me a check for \$3.00 in for same. In that way, our members will be doubled. Don't stop on this."

HARDWOOD INSPECTION RULES.

The following letters in reference to the adoption of standard inspection rules for lumber have come to hand since our April issue was printed:

CINCINNATI, OHIO, MARCH 27TH, 1899.

DEAR SIR,—I am glad to see that you are pushing the matter of uniform inspection in the line of a circular letter. In answer to your question, which is as follows, "Do you consider that the adoption of standard inspection rules would be in the interest of the lumber trade of Ontario?" My answer is this, what applies to Ontario would apply to any lumber manufacturing section in the western hemisphere. The same kinds of lumber are found in Ontario that are found in Michigan and Wisconsin, and it is a good thing for that section of the country that orders on your territory, why should it not be a good thing for Ontario?

Q. "In what way, if any, has the absence of such rules been a disadvantage to the lumber trade in the West?"

A. That question practically answers itself. In the past, there has been no uniform system of rules, each market having its own ways and means of doing business, and unless an inspector was thoroughly acquainted with the local markets, he could not apply the rules in an intelligent way.

Q. "Could rules be compiled which would serve all sections of the province and apply to export as well as domestic trade? If not, why not?"

A. They certainly could be, and it only requires united effort to accomplish this purpose.

Q. "How, in your opinion, could the adoption of uniform rules be best accomplished?"

A. In answer to this, I would say along lines as laid down by the National Hardwood Lumber Association, which, of course, can be improved on, yet they are certainly of such a character that will be entering wedge to the accomplishment of this fact, and of which you are probably not thoroughly informed. We have appointed inspectors of all kinds of hardwood lumber. They are to meet in Congress at the Association meeting to be held at Charlevoix, Mich., July 13th, and no change in any rule can be made without their sanction. If Canada sends a representation, and a competent inspector would be recommended, or more than one competent inspector, say two, they will receive the recognition and appointment in the same manner as those that have been appointed from the United States.

Q. "Would you be willing to co-operate in a movement to secure standard rules?"

In answering this question, I would say certainly any fair-minded legitimate business man would see the point in a minute. We have no trouble with this class of people nor any trouble in this line so far as that matter goes. The move in this respect seems to be unanimous.

It would seem to me that you have about covered the field in your questions, and comment further is unnecessary. I am indeed glad to see you have taken the interest manifested, and your paper deserves recognition among all intelligent lumbermen throughout the country.

W. A. BENNETT,

President National Hardwood Lumber Association.

KLOCK, ONT., APRIL 3RD, 1899.

DEAR SIR,—With respect to the adoption of national rules for the inspection of lumber I will answer as follows:

1. I do not think so. The present system is quite satisfactory.
2. I do not think the absence of such rules has been a disadvantage to the seller.
3. Possibly rules could be applied which would serve all sections of the province. At present, however, we have very little trouble with lumber we sell to exporters.
4. Never have given the matter any consideration.
5. Prefer to let the matter remain as it is at present.

It would be very difficult to get men as inspectors who understood other branches of the trade, such as managing men, shipping and sometimes office work. This scheme would work very well with a large firm who could employ an inspector steadily in the yard. As far as we are concerned, we make it a point to have inspection at the mill and allow no claims after. We think disputes more frequently arise through people being careless in describing their stock, and the small mill men are very often taken advantage of, as the majority of them are not posted themselves.

We have had practically no trouble with parties to whom we have sold for export. We have always employed an experienced cutter, and we know most of the large mill owners on the Ottawa do the same, and very seldom have any trouble over the grading of their lumber.

Yours truly,

R. H. KLOCK & Co.

FROM THE BRITISH COLUMBIA MANUFACTURERS.

Following is a copy of the memorial presented to the Dominion government by Mr. P. D. Gordon on behalf of the British Columbia Lumber and Shingle Manufacturers' Association:

Sir: The subject of import duty on lumber and shingles continues to be an issue of practical importance with us, and for the purpose of discussing this, a conference was held this day between manufacturers and the District Members of the Dominion Parliament. As a result the following resolution was passed:—

"Resolved, that the Dominion Government be again asked to impose an import duty on lumber and shingles similar to the import duty imposed on these articles by the United States."

We addressed the Government on this subject a little over a year ago, a copy of which communication is attached. The history that our trade has since recorded has served to convince us even more that the tariff laws, as now existing, subject us to unfair competition from the United States. The returns from the various Collectors of Customs show that large quantities of the products of the forest have been admitted free of duty into British Columbia, the North-west Territories, Manitoba and Ontario, while our exports are restricted by unfriendly legislation.

We submit that the manufacture of lumber and shingles in our own country necessarily contributes much to the revenue, directly and indirectly, and also provides a means of support to population, while if these articles are admitted free, the revenue is lost, no population is supported, and we venture to assert that the consumer is not materially benefited.

Apparently it was felt by the Government three or four years ago that the settlers in Manitoba and the North-west needed what assistance could be given them. Among other advantages they have had is free lumber and shingles. May we remind you that the necessity for this, if it ever existed, has surely been lessened by several years of bountiful harvests and prosperity; at the same time we feel that we can fairly claim that, should an import duty be imposed, the competition we have experienced from Ontario manufacturers in the past, and which we may expect will be increased in the future, is sufficiently keen to prevent any advance in prices on our part. A very slight study of the question will convince anyone that the markets where our products find a natural outlet are always keenly contested by Canadian manufacturers. What we really most want and what we hope to gain by an import duty being imposed, is an enlargement of our market.

We have in this province, as you will be aware, plenty

of timber of well known and well tested economic value. We have cherished the idea long, in the face of continued adversity, and we still continue to cherish it, that the trade here is capable of large development. As provinces of a great and growing Dominion, we are steadily drawing closer together and getting more inter-dependent on each other for such supplies and articles of daily use that one province naturally produces and the other lacks.

We feel that the imposition of an import duty would be of general benefit, not only to the trade, but to the people, and that it would not inflict the least hardships on any one section.

May we again urge on the Government, through you, that the wishes of our trade, as voiced by the various provinces, receive your practical consideration during the coming session of Parliament.

JOHN HENDRY, Chairman.
E. H. HEAPS, Secretary.

NEW METHOD OF GRANTING TIMBER LANDS.

THE government of Nova Scotia passed an Act at the last session permitting the Department of Crown Lands to lease timber lands instead of granting them absolutely in fee simple as hitherto. It is understood to be the intention of the Government to substitute leasing for absolute grants in respect of timber lands very generally in the future. The provisions of the act are as follows:

Instead of issuing grants as heretofore under the provisions of section 7, of chapter 8, of the Revised Statutes of Nova Scotia, the Governor-in-Council may issue permits to parties desirous of obtaining timber lands within the Province, which said permit shall be in the nature of a lease of said lands for the purpose of cutting and removing timber only, and may be for a period of not more than twenty years, subject, however, to renewal for a further period of twenty years at the expiration of the first period, providing all payments in respect of such lease or permit have been made at the time of the application for such renewal.

Such leases and permits may be issued at a price not less than forty cents per acre for a term of twenty years, provided, however, that if more than one application is made for a lease of any area of timber land in the province, the Attorney-General and Commissioner of Crown Lands may, after due public notice thereof, on a given day hour and place to be fully set forth in such public notice, put up the leasing of said lands to public competition, whereupon the lease shall be issued of such timber to the person offering the highest sum per acre therefor.

Persons holding a lease of timberlands shall be entitled to cut all the timber therefrom not less than 10 inches in diameter, and remove the same, and for the purpose of carrying on the cutting and hauling of such timber may erect upon said lands houses, mill, shanties or camps, provided that the erection of such buildings and occupation thereof for a period of twenty years shall not afford any preemption for an absolute grant of such land, but at the expiration of the lease such buildings may be removed from the premises by the lessee, or, if not removed within ninety days from the expiration of the lease, said buildings shall become vested in Her Majesty the Queen.

In case of leases permitting the cutting of timber of less size than 10 inches in diameter and not less than five inches in diameter, the rental shall be not less than fifty cents per acre.

The Governor-in-Council is authorized and empowered to make a lease of Crown Lands upon terms other than is provided in this Act, in cases where the land proposed to be leased are of inferior quality, and the party proposing to lease the same is prepared to spend money in the development of said land, or in the erection of mills and machinery for the manufacture of pulp or other wood products.

The Governor-in-Council may lease to any person, firm or corporation the privilege of erecting dams, sluices, etc., on any stream for the purpose of floating timber down such stream, and the amount to be paid for such right or privilege shall be fixed by the Attorney General and Commissioner of Crown Lands, subject to the approval and revision of the Governor-in-Council.

The Governor-in-Council is hereby authorized and empowered to obtain by purchase at a rate not exceeding twenty-five cents per acre any land heretofore granted for lumbering purposes. Such land may be reconveyed by regular deed from the owners thereof to Her Majesty the Queen. Such deeds shall be duly recorded in the office of the Registrar of Deeds in the county where such lands lie, and thereupon such lands shall become actually re-vested in Her Majesty the Queen the same as if they had never been granted, and shall be subject to be disposed of as now provided by law, including this Act.

TRADE NOTES.

The Toronto office of the J. C. McLaren Belling Company has been removed from Bay street to 60 Colborne street. Mr. A. D. McArthur continues as manager.

The attention of our readers is directed to the advertisement in this issue of Messrs. Boynton & Company, manufacturers of embossed and turned wood work. This company are said to be the largest manufacturers and to carry the largest stock in this line on the continent. They will be pleased to furnish one of their catalogues to any reader of the LUMBERMAN who may make request on a postal card. This company have already a considerable trade in Canada, and are desirous of increasing it.

THE NEWS.

—M. Mansfield is operating a new portable saw mill at Kinmount, Ont.

—A new saw mill firm at Trout Creek, Ont., is Burk, Buckel & Bechtler.

—W. W. Carter, of Fesserton, Ont., is placing a band saw in his mill there.

—Shortreed Bros., of Hillsdale, Ont., have just put in a new shingle machine.

—J. McCutcheon has bought out the lumber yard of A. Clarke at Glenboro, Man.

—Robinson & Co. have purchased the lumber stock of Riley & Wells at West Selkirk, Man.

—Joseph Choche, of Gracefield, Que., has lately made extensive improvements to his saw mill.

—The Thompson Company will erect a sawmill at Katrine, Ont., with a daily capacity of 30,000 feet.

—Rider & Kitchener have purchased a site at Lindsay, Ont., for their proposed veneer and excelsior factory.

—The death is announced of John Wilson, formerly a millwright in the Royal City mills, New Westminster, B. C.

—Peter Phillips has purchased the planing mill on Pacific ave., Toronto Junction, formerly owned by John Stewart.

—Innes, Hemeon & Co., of Liverpool, N. S., intend building a large steam rotary saw mill in Bristol, opposite that town.

—H. Walters & Sons, axe manufacturers, of Hull, Que., have doubled the capacity of their factory, and in future 150 axes per day will be turned out.

—Humphrey Bowser, of Dorchester, N. B., intends building a sash and door factory, and engaging in the manufacture of sash and doors on an extensive scale.

—The President of the United States has prepared a proclamation setting apart 136,000 acres of land on the south side of Lake Tahoe, California, as a forestry reserve.

—The Dominion Bung Company is a new concern in Toronto, manufacturing spiles, taps, compressed and cut bungs, tap ends, etc. They use southern whitewood to a large extent.

—The Ontario Government have decided that the \$50,000 appropriated for reforestry will be used in the townships of Palmerston, Barrie, Clarendon, and Abinger, in the counties of Addington and Frontenac.

—Andrew Price has severed his connection with the firm of S. H. White & Co., of Sussex, N. B., and it is said will engage in lumbering operations on his own account in the northern part of New Brunswick.

—The well known saw manufacturers, Shurley & Dietrich, of Galt, Ont., have purchased property adjoining their factory and intend erecting a large building for the incorporation of their works now located at St. Catharines.

—The Royal City Planing Mills Co., of Vancouver, B. C., recently shipped to the Harbor Commissioners at Montreal some fine specimens of Douglas fir. The timber was 36 x 36 inches square, 60 feet long, and 14 x 16 inches tapered, 76 feet long.

—Extensive alterations are being made to the saw mill of the Columbia Lumber Co., at Golden, B. C. Additional machinery and motive power have been put in, necessitating the building of an addition to the mill. The company propose to erect a new office building in Golden.

—The estates of James McLaren and Ross Bros., at Buckingham, Quebec, are each building burners to dispose of their saw mill refuse. Chas. Kushick's steam mill at same place is in operation, and W. H. Kelly's mill is being overhauled preparatory to making a start.

—Workmen are now engaged preparing the site for the calcium carbide factory to be built adjoining the mill of the Bronson & Weston Lumber Co., in Ottawa. Part of the old saw mill, including two gang saws and a band saw, will be torn away to make room for the new building.

—The shingle mill of McLaren & McLaurin, at East Templeton, Que., commenced work for the season a fortnight ago. New additions have been made to the saw mill and boiler house, and a good season is anticipated. Another new saw mill has been built on the Blanche river, near Templeton, by Mr. Perkins.

—The High Commissioner for Canada, London, England, has received an enquiry from a firm of manufacturers of wooden shoes in Belgium who wish to import Canadian basswood suitable for their shoes. The timber must be white, soft and easy to split. Glasgow and London firms desire to secure an agency for Canadian pulp.

—The annual meeting of the St. John River Log Driving Company was held at Fredericton, N. B., on April 5th, when directors were elected as follows: W. H. Murray, St. John, president; J. Fraser Gregory, St. John, secretary-treasurer; A. J. Beveridge, Andover; F. H. Hale, Woodstock; R. A. Estey, Fredericton; H. Hillyard, St. John.

—The Algonquin Milling Company, Ltd., of Algonquin, Ont., has been granted an Ontario charter, to carry on business as grist-millers and saw-millers, and to manufacture cheese boxes, lumber, shingles and other products

of wood. M. H. Bissell, R. A. McLellan, and James Bissell, of Brockville, and C. H. Bissell and J. B. Bissell, of Yeoman, are provisional directors.

—The Timber Inspector for British Columbia gives the following statement of timber and cordwood cut during the eleven months ended November 30th, 1898, (not including that from Dominion lands, nor from the Esquimalt and Nanaimo railway lands): On crown lands, 70,755,866 feet; on timber leasehold, 42,181,178 feet; on private property, 11,598,614 feet; total, 124,535,658 feet.

—A deputation of lumbermen, including Angus McLeod, of Bracebridge, W. J. Sheppard, of Waubushene, T. Sheppard, of Orillia, T. Irwin, of Peterboro, and A. McCormack, of Orillia, recently asked the Commissioner of Crown Lands for a rebate of between \$3,000 and \$4,000, claimed to have been paid as overcharged timber dues. It appears that the Sheppard-Irwin Lumber Company paid dues, as customary, upon the cut of logs as estimated by the cullers, but in manufacturing the amount of lumber proved to be less than was claimed.

—The Rathbun Company, of Deseronto, have this spring made extensive improvements to some of their mills. At the Lindsay mill a new 100 h.p. boiler from the Polson Company, Toronto, has been put in, together with a twin-engine rope feed plant, designed to operate a new circular saw carriage and frame, supplied by The Wm. Hamilton Manufacturing Co., of Peterboro. The old boiler will be used exclusively to supply steam to the twin-engine operating the rope feed. The spring drive of logs will not arrive at the mill before the 1st of June, but a supply of logs has been purchased from farmers to keep the mill running until that date. The local manager, Mr. G. H. M. Baker, states that from 85 to 100 men will be employed during the season, and that the mill will run day and night for at least three months. At the Deseronto mill a cement foundation 15 inches thick has been placed under one of the Wickes gang saws. All the slash tables have been rebuilt, and a new slab transfer put in. About 125 men will be employed at this mill.

CASUALTIES.

—P. J. Sullivan had one of his arms cut off by a buzz saw while working in Farrell's mill at Low, Que.

—James Yale had three fingers completely severed by coming in contact with an edging saw in the mill of N. S. Lusty & Sons at Rodney, Ont.

—Duncan Campbell, employed in J. S. Findlay's saw mill at Owen Sound, Ont., was struck on the head by a board which flew from the saw, and died from the injuries received.

—John Batley, proprietor of a saw mill at McKellar, Ont., went down to the mouth of the Seguin river to take the stoplogs out of the dam. While thus engaged he was precipitated into the water just above the dam and drowned.

PERSONAL.

Mr. C. S. Ayer, until recently bookkeeper with T. B. Calhoun, Moncton, N. B., has removed to Bangor, Maine, to accept a position with F. W. Ayer & Co., lumber merchants.

Mr. F. W. Jones, assistant manager at Winnipeg for the C. P. R., has tendered his resignation, to accept the appointment as secretary-treasurer of the Columbia River Lumber Company, of Golden, B. C.

It is with pleasure that we note that Lieut. C. M. Dobell, of the Royal Welsh Fusiliers, and a son of Hon. R. R. Dobell, timber merchant, of Quebec, has been given brevet rank of major and promoted to the rank of captain in recognition of his services during the occupation of Crete. Brevet promotion is not given in the army to officers under the rank of captain.

The CANADA LUMBERMAN received a pleasant call a fortnight ago from Mr. C. H. O. Houghton, travelling representative for Geo. D. Perry, wholesale dealer in mahogany, cedar and veneers, Chelsea, Mass. Mr. Houghton visits Canada three or four times each year, calling upon the piano manufacturers and other users of veneers. He went over to Buffalo on the 15th inst., to participate in the ceremonies in connection with the Hoo-Hoo Concatenation.

In the annual special issue of the Timber Trades Journal, we observe a portrait of Mr. James Davidson, of the wood-working firm of Davidson & Thackray, of Ottawa. Of Mr. Davidson our contemporary says: Mr. Davidson was born in the city of Ottawa forty years ago, and when only eleven years of age commenced work in a shingle mill. In 1874, when Mr. R. Thackray started in the sash, door and blind business, Mr. Davidson threw in his lot with him. They then manufactured by hand power. In 1877 Mr. Davidson came to England, and he is proud of the honor of being one of the first to introduce Canadian doors to the English people. He remained in England seven years, making Liverpool his headquarters, and amongst the timber merchants of that city he made many friends. He returned to Canada in 1885 and, shortly after, the firm purchased their present premises, which is situated in the heart of Ottawa. The factory is one of the most up-to-date establishments in the Dominion. Mr. Davidson is an alderman in the city, and is chairman of the Board of Works. In the last municipal election he had the great honor of being returned by the largest vote ever polled by an Aldermanic candidate in the history of the City of Ottawa. His business and his civic duties by no means debar him from his love for sport.

WOOD PULP DEPARTMENT

THE PROCESS OF MANUFACTURING MECHANICAL WOOD PULP.*

By W. A. HARE.

(Continued from April Issue.)

METHOD OF CLEANING SCREENS.—It is important that the screen plates should be kept clean. When it is found that it is difficult to get the stock to pass through, the plates should be examined, and if gummed up or clogged, they can be cleaned as follows: Wet the plates thoroughly with paraffine or coal oil, and with a beater, made out of an old piece of felt, beat or whip the plates. The oil dissolves the pitch and gum, and the beater will free the cuts of whatever is there. Whip the plates afterwards with water, and, if properly done, the plates will regain their capacity. When the stock is not ground well, being either full of slivers or uneven in grain, it is difficult to get the screen to pass it sufficiently fast. The wet machine tender has constantly to scrape the screen plates, removing the larger pieces which stop up the slits. There is no remedy for this but more care in grinding. By putting a centre board nearly the whole length of the screen and supplying the stock at one end, allowing it to flow down one side, around the end of the board, and up the other side, the screen will, to a great measure, clear itself, and therefore will require less attention.

ARRANGEMENT.—The general arrangement is to have one screen for each wet machine, to which it is connected direct. There is an advantage in having another pass trough, into which the screens discharge, and from which the wet machines are supplied. In the case of an accident to a screen, or if it should require cleaning, it is evident that with one trough the wet machine cannot run. If, however, the wet machine is supplied from a second trough, it can get its stock from the other screens, and the output is kept up. Suppose, for example, No. 1 wet machine breaks down, and also No. 3 screen is changing plates, or otherwise cut out; by means of the two troughs No. 2 wet machine can be supplied from No. 1 screen, with the result that only one set is inactive, whereas in the other case two complete sets would be idle. The extra pine trough does not cost much, and may in this way save many times its cost in increased output. There are, perhaps, some objections to this method, but they all can be easily met. It will be found necessary to set the line of screens somewhat higher than the wet machine floor, to allow passage room under the second trough. In an existing mill this would be out of the question, but in designing a new plant it offers no serious difficulty. If found necessary, an extra screen could be installed, which will serve as a spare one in case of accident, or can be connected in when the stock is coming heavier than usual. With an easy load on the screen it does better work and requires hardly any attention from the wet machine man. If the capacity is limited or the supply of stock irregular, it must be constantly looked after, and at a time when the man can least spare the time.

WET PRESSING.

DESCRIPTION OF WET MACHINE.—Fig. 11 is an illustration of a wet machine manufactured by the Jencks Machine Company. It is a very good machine in design and workmanship. The main frame is cast iron of the usual web and flange construction. The standards are bolted to the main frame and reinforced by tension rods, which can be removed when necessary. The lower press roll is of hardwood turned up true. The top press roll is made of cast iron, turned and polished, and is very heavy. The usual hand wheels and pressure springs are employed to give sufficient pressure to the felt as it passes between the two press rolls. These screws also serve to lift the top roll, when necessary, by means of the forged links shown in cut. The doctor, or knife, is slung from the top roll bearings, and is furnished with a steel blade, a spring for throwing it out of contact with the roll, and a handle for operating it. Small wood rolls are provided to direct the felt in its path, the front one being a stretch roll by which the slack is taken up, giving it the right tension. The two rolls shown close together, one above the other, in the cut, are the squeeze rolls, whose duty is to remove some of the water from the felt after it leaves the beater. The top roll is the felt guide roll, by which the felt is kept running in the centre of the machine. The back roll of all is the couch roll, which is made of iron covered with 3/4-inch of soft India rubber. Some makers still use the wooden couch roll, wrapped with felt, but the rubber roll is much cleaner, neater, requires no attention or cleaning, and does better work all round. It is supplied with this machine when desired. The duty of this roll is to pick up the pulp on the felt from the cylinder mould. To keep the felt clean and able to carry the supply of stock, a beater and spray pipe are provided. The beater consists of a shaft carrying three short-armed spiders connected by hardwood strips. In revolving, the strips strike the felt on one side, while the spray washes it from the other. This not only cleans the felt, but whips up the hair on its surface, increasing its carrying capacity. A suction box

* Paper read before the Engineering Society of the School of Practical Science, Toronto, and published by permission.

is provided for extracting as much of the water from the felt and pulp as possible before it passes between the press rolls. The box extends the whole width of the felt, and is tightly closed up, except the top, where it is perforated with small holes. A pipe connects this box with the draft tube of the water wheels, or to a power-driven suction pump. As the felt passes over the box the water is sucked down into it, leaving the felt much drier. In large mills where there are many wet machines running, it is by far the best method to connect the suction or draft boxes with a power-driven suction pump, as any considerable amount of air let into the draft tubes of the water wheels means a loss of head, which is very expensive when it means a decreased output. The vat is made of 3-inch pine bolted together, and provided with sprays as usual. The cylinder mould, which revolves in the vat, consists of a number of brass spiders mounted on a shaft, and covered with brass wire cloth. It is driven by contact with the couch roll. The felt, in its path, passes the stretch roll in front of the machine, goes down under the two rolls near the floor, up past the beater and cleaning sprays, through the squeeze rolls and back under the couch roll. From here it passes over the guide roll, past the suction box and through the large press rolls, and so back to the stretch roll in front.

Fig. 12 shows the interior of the Chicoutimi Pulp Company's wet machine room. This is the usual arrangement of wet machines in either large or small mills. The machines are driven from a main shaft supported by the roof trusses. In the right foreground is shown the hydraulic press, which is used to force some of the water from the pulp. The screens and pulp trough are placed back of the wet machines. There are eight wet machines installed in this mill, handling about 90 tons of wet pulp per day.

OPERATION.—The pulp and water, as it comes from the screen, passes to the vat of the wet machine. In this vat revolves the cylinder mould. The vat and mould are so designed that the water cannot flow out of the vat until it has passed through the meshes of the wire covering on the mould; or in other words, the outlet of the vat is led from the inside of the mould. The pulp, being in suspension in the water, cannot pass through, and is spread in a thin layer over the surface of the mould, which, by its revolution, carries the pulp up under the couch roll, and in connection with the running felt. The pulp, on contact with the felt, fastens itself thereon, leaving the wire com-

and allowing the roll to make one revolution, the sheet falls free in his hands. The other method is by use of a doctor and knife, such as is shown in Fig. 11. The machine hand, in this case, simply presses on the handle, which brings the knife against the roll, severing the pulp. The sheet unrolls as before, and is thrown on the table and folded. The first method has many objections to it, aside from the difficulty of cutting a straight edge. A

When the stuff pump is driven from the grinder shaft, the variations in its speed may cause considerable difficulty in keeping the water level constant. No trouble will be found in doing this if the variations in the speed of the stuff pump are small. When the wire of the cylinder mould gets dirty or gummed up, its capacity is limited considerably. It may be cleaned by rubbing with coal oil and playing upon it with a spray of water. Situated



FIG. 11—STANDARD 72-INCH WET MACHINE.

workman, if he is in any way nervous, is apt to stick the pin into the felt, which completely ruins it.

When the pulp is coming very fast and is allowed to roll up too thick, the workman may not be able to drive the pin across the roll at one sweep. On making a second attempt the roll has advanced, and there is great danger of his dropping the pin over the roll. It is now certain to pass between the press rolls, cutting a hole in the felt and ruining the fibre of the under roll. Numbers of felts have been needlessly spoiled in this manner, as the injury could

close to the wire gauze is a brass pipe into which have been drilled a number of fine holes. It is supplied by the low pressure system before mentioned. The spray is allowed to play upon the wire of the cylinder mould, keeping it comparatively clean.

The life of a felt varies considerably with the treatment it has received and the quality of its manufacture. The gray Canadian felt is a better one to carry the stock, and will last longer than the white American ones. When a felt is new, the carrying capacity, at a speed of 50 feet per minute, is about 5½ tons dry per 24 hours, and will



FIG. 12—VIEW OF PORTION OF WET MACHINE ROOM, CHICOUTIMI PULP COMPANY.

paratively clean. By the motion of the felt the pulp is carried over the machine, and, after going over the suction box, where a certain amount of the water is drawn off, it passes between the large press rolls. These rolls being very heavy, and also being pressed together by the powerful springs, force out much of the water. The pulp on coming through leaves the felt and sticks to the top roll, where it is allowed to accumulate by the addition of a number of layers. When it has arrived at a proper thickness, it is cut off. There are two methods of removing the pulp from the top roll. One is by means of a short sharp-pointed pin made of hardwood. The operator sticks the point of the pin under the pulp, and by a quick motion across the face of the roll cuts a gash in pulp the whole width of the machine. By grasping the lower edge

have been prevented by the use of a knife. With the doctor the heaviest layers can be cut off as easily as the lighter ones. The knife is apt to crinkle up the edge of the sheet, but this disadvantage is partly offset by the straight edge obtained. The sheet is folded so that there are no edges showing from the outside, making, when folded, a bundle about 24" x 18" x 8 layers thick. The sheet from a 16-inch roll will be 50 inches wide, the length depending on the width of the machine. The standard width adopted by most builders of wet machines is 72 inches, which is large enough. If larger than this there would be difficulty in throwing the sheet.

The pulp vat at the back of the machine is provided with inlet and discharge valves or gates, by which the wet machine man can regulate the level of the water in it.

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sometimes exceed this output under favorable circumstances. The usual daily capacity of the felt is about 5 tons of dry pulp per day. The output will fall below this, however, when the felt is worn.

HANDLING PULP.—When the pulp is cut from the wet machine roll, it is thrown on a table placed behind the operator, upon which it is folded. This table is made of heavy boards, and is about 7 feet 8 inches long by 3 feet 6 inches wide. When the sheet is thrown, a portion of it is folded in, to give the operator a better hold. This makes the sheet taken from a 16-inch roll to be about 3 feet 6 inches wide by 6 feet long. The extra length in the table is for the purpose of piling the pulp on until it is taken to the hydraulic presses.

Though it seems to be the general practice to erect the

hydraulic press in the wet machine room, an advantage might be gained, especially if the output of the mill exceeds 20 tons dry per day, by placing the hydraulic press, baling press, together with their pumps, etc., in a room by themselves. If this method is adopted, a very convenient way of carrying the wet pulp from the wet machine tables to the tables in the hydraulic press room is by means of a small trolley running back of the line of tables at the wet machines, and sufficiently near to them to allow the pulp to be easily transferred to the trolley. If the mill were an exceptionally large one, making it difficult to keep the long line of tables clear, a cheap cable drive could be installed for moving the loaded trolley. By arranging a small lever and grip, so that the trolley could be easily started by throwing the lever to the

right, and reversed by making a similar movement to the left, the carrying of a large amount of pulp would present no serious difficulties.

(To be Continued.)

It is stated that a company has been formed by Mr. John Mather, of Ottawa, to erect pulp and paper mills on Tunnel Island, near Rat Portage, Ont.

It is rumored that several newspaper publishers in the United States are considering the question of building pulp and paper mills in the vicinity of Ottawa, Ont. Mr. J. L. Whitcomb, of New York, has been in Ottawa recently, and will probably recommend the location of a large mill at Britannia.

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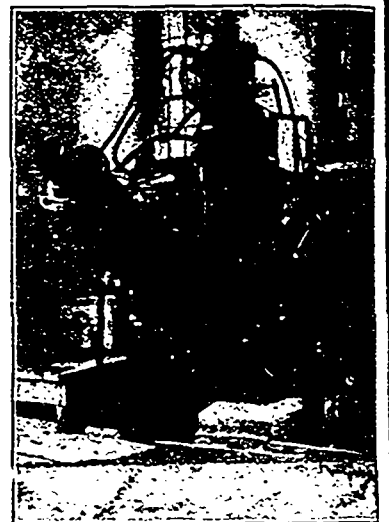
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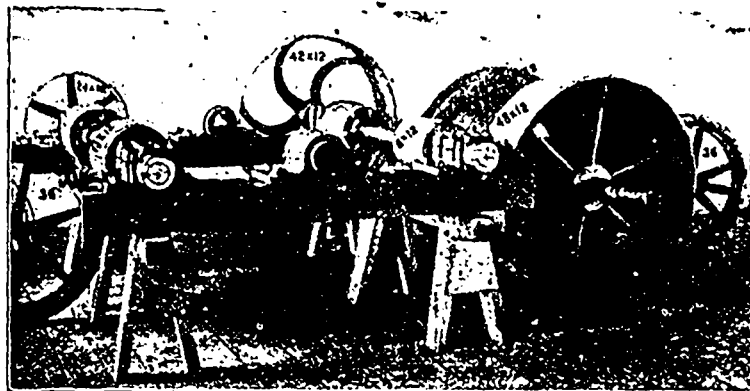
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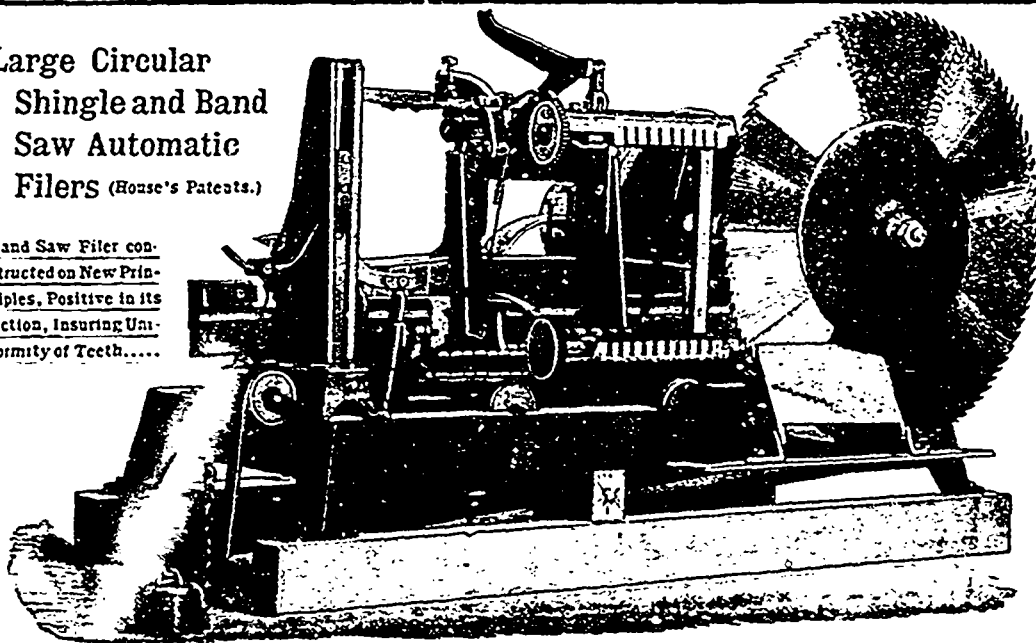
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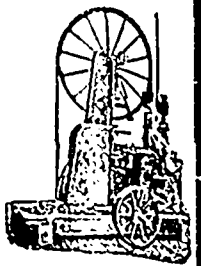
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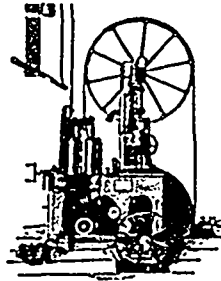
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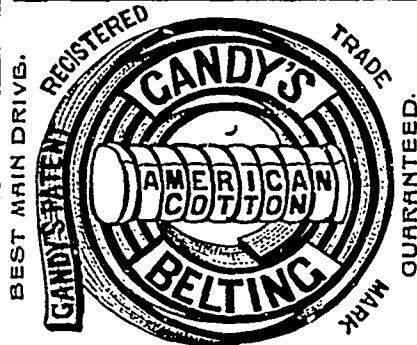
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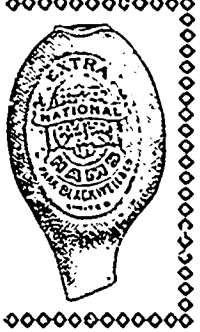
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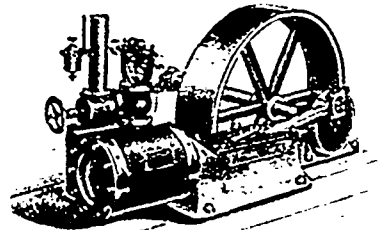
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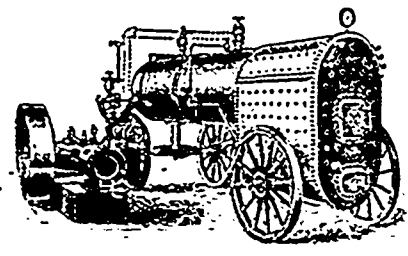
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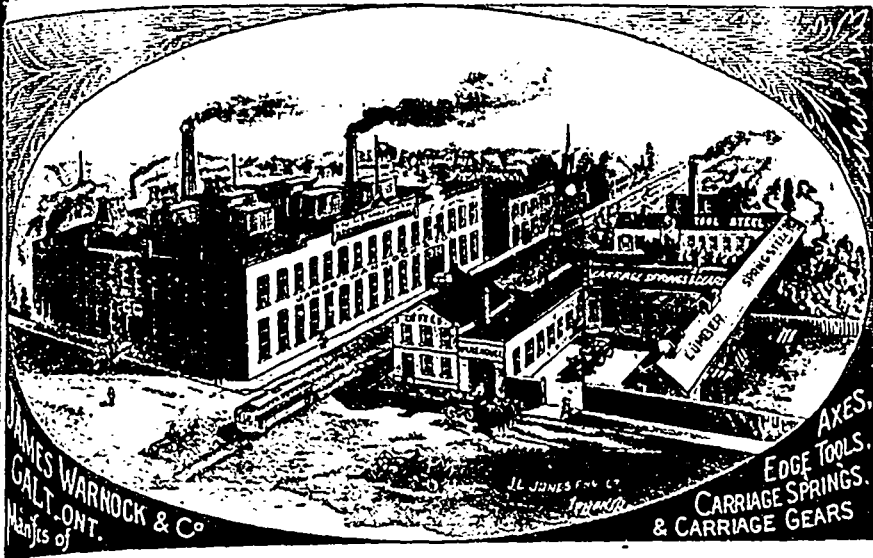
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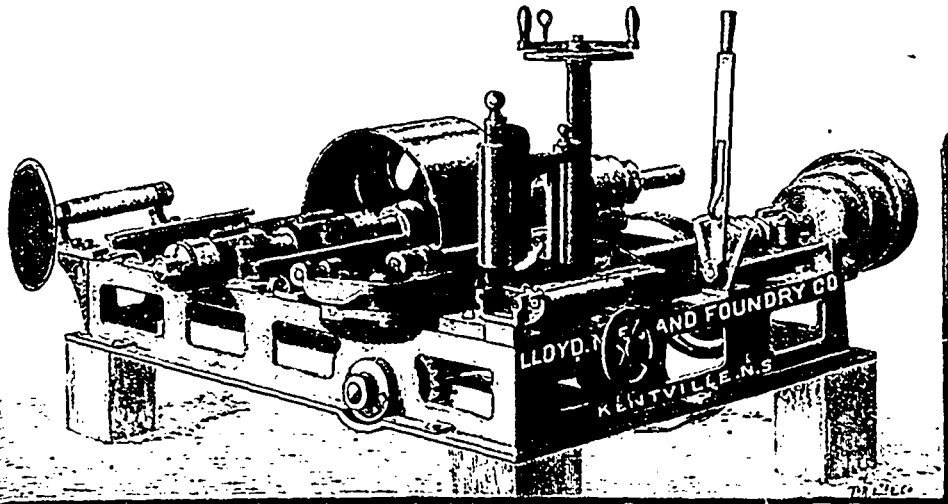
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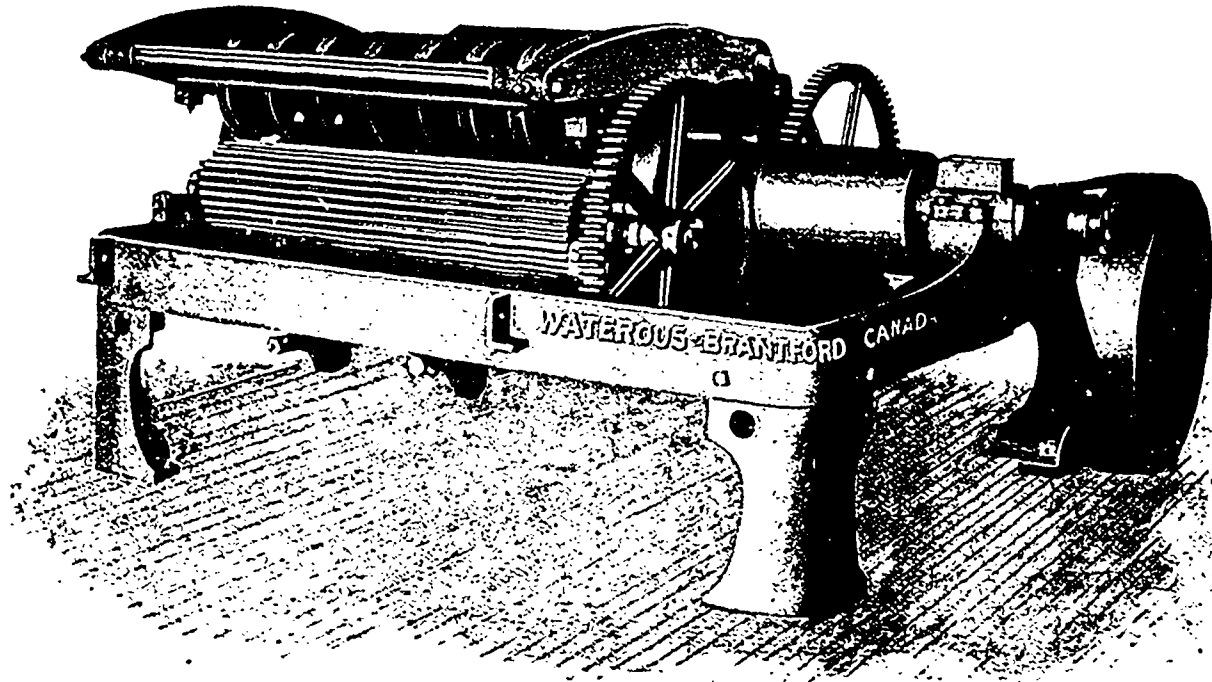
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The Light Champion Edger has strong box frame cast in one piece, supported with four legs. Mandrel, 2 7-16 steel, supported on two long bearings.

No. 1 Champion has two Saws, one movable; range between Saws from 1 3/4 to 22 inches.

No. 2 Champion has three Saws, two movable; range between stationary and first movable Saw, 1 3/4 to 18 3/4 inches, and between movable Saws 4 inches.

Both are provided with front tables, with 4 1/2" rolls and guide, movable with lever up to 4 inches inside of stationary Saw.

The Heavy Champion Edger shown in illustration has heavy box frame supported on six legs. 2 7/8 steel mandrel supported in three bearings of ample proportion, reducing the pressure to the square inch of wearing surface to a minimum, permitting the greatest speed.

The Pulley is carried between two heavy bearings cast in one solid box-shaped frame.

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No. 3 Heavy Champion has 3 Saws, 2 movable; range between stationary and movable Saws 1 3/4 to 24 3/4", and third Saw 4" from second.

No. 4 Champion range is 1 3/4" to 28 3/4", and third Saw 4" from second.

No. 5 Champion range is 1 3/4" to 36 3/4", and third Saw 4" from second.

A fourth Saw can be added to these Heavy Edgers, reducing the extreme opening 4".

The Extra Heavy Champion Edger has a box frame in appearance much the same as the Heavy Edger.

No. 6 Champion has 3 7-16 mandrel, with 5 Saws—2 stationary, 3 movable—divided press rolls, for two men to edge at once; two movable guides on front table. Greatest width between first and second Saws, 34 inches.

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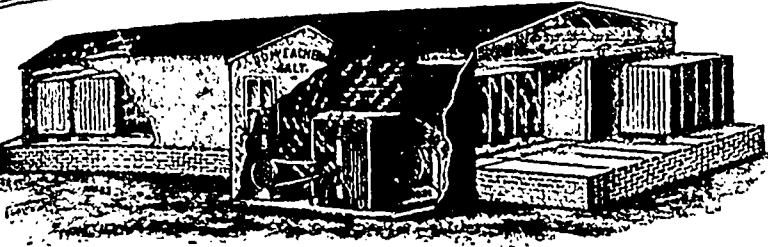
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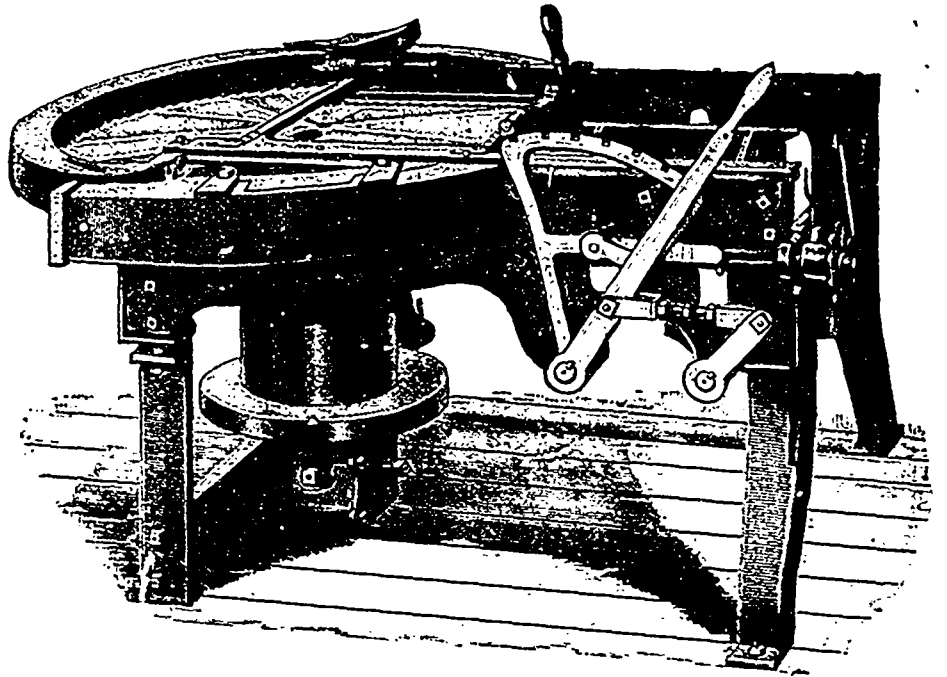
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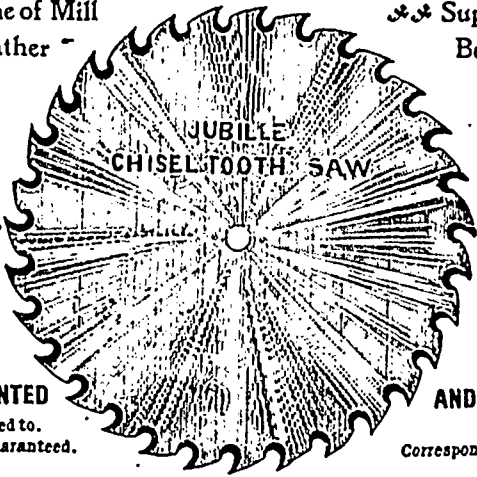
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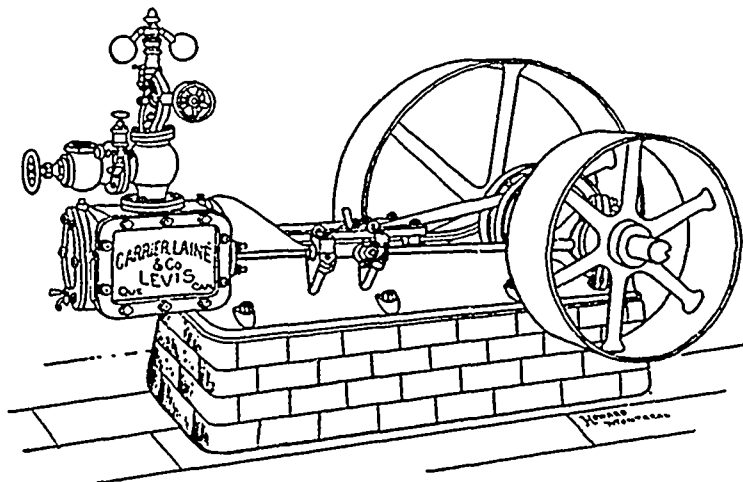
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