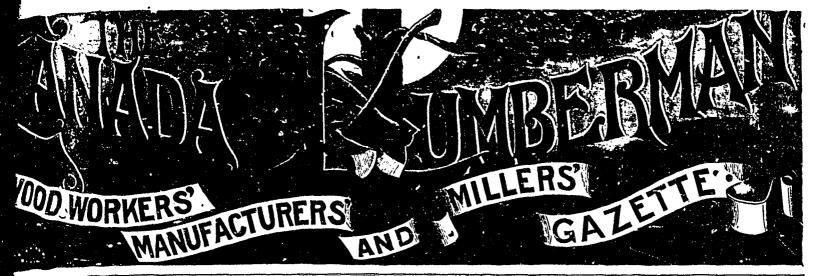
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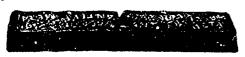
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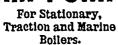
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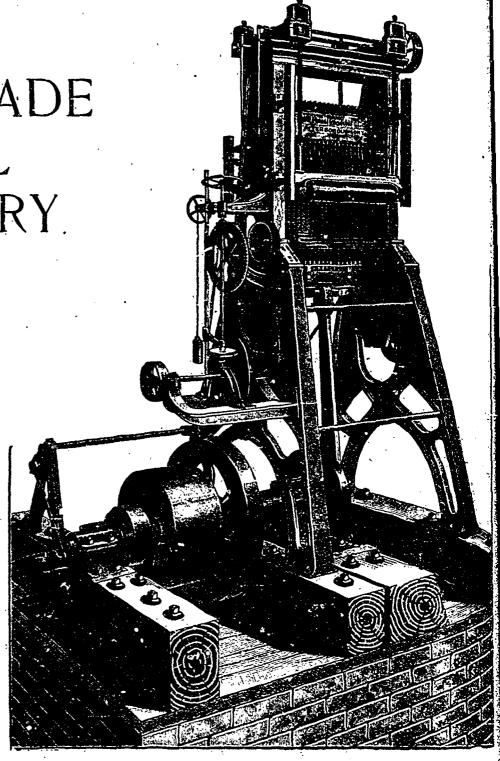
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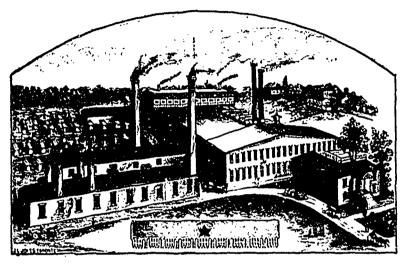
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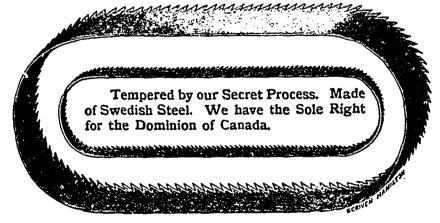
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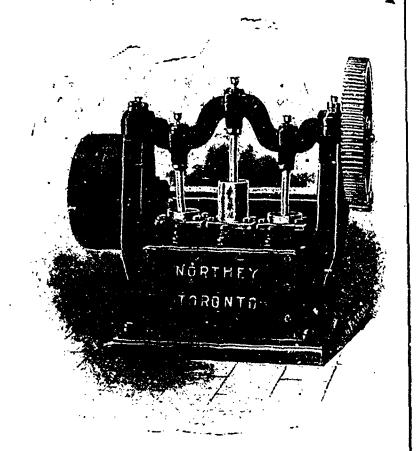
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TORONTO, CANADA, DECEMBER, 1900

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PORTATION OF LUMBER BY MEANS OF SL'"CES.

of the most intenting features in conwith the lumber business in the vicinity shoro, N.S., is the method by which lumransported from the mountains and hills coast. Sluices a constructed of plank y rough lumber using two-inch plank bottom and one or one and one-half inch the sides. The sluices are usually about es wide and 7 inches deep, being cleated every three feet. They have an incline varies according to the lay of the land, in being perhaps one inch to the rod at rest, and in other places ten inches to the d often steeper.

sluice turns and twists about the hills, g mother earth wherever possible, or defying her close embrace, leaps into space

er chasms and valleys with

w years ago the writer, heeling from Acadia Mines rsboro, suddenly saw bem, down a long, broad, ep valley, what seemed gigantic spider web deftly rom ridge to ridge, and nough apparently to waft breezes. A cautious and approach proved most inng in results. The skeleucture of round and rough nd poles, ingeniously framlted and spiked together, aloft to nearly 150 feet ad, supported far up there the breezes which gently it a strip of wooden which here and there

acrops of water upon the wayfarer beneath azed in wonder at the innocent cob-web holding aloft a thread of water, which ast on its surface thousands of feet of lumbhour of the day, from its home in the reof those blue hills to the decks of vessels by the sea shore many miles away.

illustration given with this article is of one e fairy structures in the neighborhood of ing Brook, on the Moose River, and is point 135 feet in height. Last spring torn down and rebuilt, and in the summer 1000 feet of lumber passed over it. It is ed and braced that it can resist great wind e, and is an example of the skill and inrequired in modern lumbering. nd sediment from the streams of water into these sluices soon fill up all cracks ake the troughs very water-tight. Someas in the case of the Canaan sluice, which miles long, no feeders are necessary, but small streams are led into the sluice at ient points on the line, supplying any deficiency which may be made by leakage. At the head of the sluice the deals are simply placed in the stream of water flowing down the trough, and left to their own sweet will in finding their way to the foot of the mountains or to the sea shore, as the sluice may lead them to. Of course, the precaution has to be taken that no jams occur, and if the deals went singly this would very easily happen, owing to the varying grades and the different depths of water and speed.

On a suddenly increased incline the water flows very swifty and thins out greatly, so that a deal behind could easily mount upon one in front, causing a jam. To guard against this the deals are tacked together, butt to butt in piles of some dozen or more, usually with five-link chains. Two-inch nails are attached to the end links of the chains, and the work of tacking the deals together is slight. Occasionally fath and



TRESTLE SUPPORTING LUMBER SLUICE OVER HUMMING BROOK, N. S.

ordinary nails are used to make the connection. Arriving at the wharf, or destination, the lumber falls from the carrier on its proper pile, and in some cases has been thrust directly from the mouth of the sluice to the deck of the vessel, while the water falls shorter and goes down between the deck and the wharf. The chains are loosened easily by means of a claw pry two or three feet in length, and as they accumulate are loaded into a wagon and hauled up into the woods again.

A sluice used at River Hebert by Mr. Kelley, though quite a long one, has such a uniform grade that no tacking is necessary. When the sluice is tasked to its full capacity, boards may be loaded on top of the deals and ont down. These carriers are often very long, the longest near here being the one at Moose River, which is 6½ miles in length. The Canaan sluice is 4 miles, another at Lakeland is 3 miles, and the Elderkin sluice, down shore, is a shorter one. The Moose River sluice has been operated for 6 or 7 years, which is about their lease of life,

renewing usually being necessary at expiration of that time. They are often over a hundred feet high, and again may tunnel beneath an intersecting lumber road or highway.

It is most interesting to watch the stream of we'ver beneath one flitting swiftly past, bearing presently on its surface from around a neighboring curve a single deal which passes silently and in a moment tops a rise and flips from sight. Then a string of deals may follow, with joined hands as it were, by reason of their connecting links, and they, with equal celerity and silence, swirl past and downwards without a sound save the gentle swish of water and an occasional nudge to the side planks. Of course, the route must be watched, for a jam soon multiplies, and they are not entirely avoidable. Shelters are built here and there for the men along the sluice, and these are nothing if not

picturesque, as they perch high upon the end of a long trestle, but once the sluice is built and in operation the mill is almost equal to being located at the wharf, the expenditure for transportation being limited to the care of the line and its watching, and amounting to perhaps 25 cents per thousand feet of lumber.

A. B. P.

AN ELECTRIC PLANING MILL.

A writer in Barrel and Box expresses his pleasure in inspecting a planing mill plant which was electrically driven from stem to stern. Every planer along the line, he says, had a motor right on the planer counter shaft of such size as the individual ma-

chine required, and there was no shafting in sight whatever, except these little short counters which go along with, and are essentially parts of the machine. There were eleven motors in this place, each swing crosscut saw had its little individual motor, which was set on an overhead beam and belted directly to the counter shaft at the upper end of the swing frame, and over in one corner was the grinding machinery, which also had its little individual motor. All through the place it was impressive of the statement made in the first of the series of articles, that it seemed as if electricity would crowd the heavy belts and long strings of line shafting to the wall + lay them in the fence corners-for this plant had a general appearance of not having any machinery of this kind about it. The power for the plant was supplied from the engine room of the saw mill, which was some distance away, and it was doing its work silently and unobtrusively.

THE CANADA LUMBERMAN (weekly and monthly) One Dollar per year.

PROSPECTS FOR LOGGING OPERATIONS

Information from all parts of the Dominion.—Scarcity of Labor in Many Districts, and Wages Generally High. Output of Logs Likely to be Less than Last Winter.

OGGING operations for this winter being well under way, opinions were solicited from several lumbermen as to the conditions which have existed in the woods and the prospects for the season's work. By the kindness of those from whom enquiry was made, we are permitted to publish below letters from nearly every section of the Dominion:

ALEXANDRIA, ONT., Nov. 19th.—We would say the amount of timber expected to come out in the castern section will be about the same amount as usual. The advance in prices of all kinds of goods, and of wages, will raise the cost of logs about 25 per cent. over that of former years, which, we hope, will be offset by an equal advance in the price of lumber.

Macpherson & Schell.

PETERBOROUGH, ONT., Nov. 14th. - We expect the saw logging industries in this locality to yield about the same output as in the past year. In our camps we expect to cut about 12,000,000 feet. The fine weather this fall has been well taken advantage of in clearing up creeks and dumping grounds and in creek repairs. Labor is offering freely, but at an increase in rates over last season. Supplies generally are plentiful and at about last year's prices, excepting bacon, which is considerably

THE DICKSON Co.

ROCKLAND, ONT., Nov. 12th .- At present we cannot give you information that can be relied upon as to the intake of saw logs for the coming winter, so much depends on the nature of the winter we may have. Men's wages are excessively high, and the cost of logs will even be greater than the very high cost of last season. Fewer men are in the woods, and with the most favorable winter the crop will be somewhat short of last season. The full measure of the shortness will depend on the character of the winter.

W. C. EDWARDS & Co.

OTTAWA, ONT., Nov. 12th. - Logging operations are about in the same condition as one year ago. Labor is much more unsettled and wages much higher, being fully 20 to 25 per cent. above last year. The same may be said of provisions and supplies in the main, but not every article. Pork is worth fully 30 per cent. more, also sugar, beef, butter, in fact almost everything but flour, which remains about the same. Hay and oats have not advanced nearly so much as pork. I think the production for the winter will be fully as great as last winter and likely more. ST. ANTHONY LUMBER CO.

OTTAWA, Nov. 10th.-Regarding logging operations, we do not think that they will be quite as extensive as last year, owing to the fact that men are so hard to obtain. We know of several operations which are being carried on with not much more than half the complement of men required, and this seems to be the general complaint in every section. Then again, the cost of labor and supplies is going to be the means of putting a number of the smaller operations out of business, as they are going to find it much harder to obtain both men and provisions, the former of which only can be had on a strictly cash basis, as the men are very independent now and will go where they can get the best wages and best attention. Assuming that we have good weather, we think that the output will be fairly large, but we do not know that it will exceed last year s cut, especially in this section, as another difficulty has arisen which will prevent two or three parties taking out as large a supply of logs as they did last year, and that is the fact that two or three of the mills have been burned. There is going to be considerable difficulty experienced in the cutting of the logs.
"Ottawa Valley Manufacturer."

THREE RIVERS, QUE., Nov. 13th .- From what I can make out now I think the cut this winter in our district (weather favorable) will be, viz, logs, pine and spruce, fit tor sawing into deals, planks and boards, about same; pulp wood logs, spruce, fully one-third more. The cost will be 12 to 15 per cent. greater than last winter.

ALEX. BAPTIST.

CHARLEMAGNE, QUE., Nov. 17 .- We expect to get out our usual supply of logs this winter, 250 to 300 thousand pieces. No firms in this district have increased their operations. The weather has been very favorable for cutting and skidding, but men are scarce and all supplies dearer. The cost of gelting out logs this coming season will be 25 or 30 per cent. more than last year.

CHARLEMAGNE & LAC OUARRAU LUMBER CO.

QUEBEC, Nov. 13th -It is too early yet to say how far weather conditions will affect our output. The labor question is a very important factor, for wages have gone up very considerably and laborers are scarce. Another difficulty which has to be confronted is the scarcity of suitable horses. The cost of supplies will not materially affect the output where markets are good and labor available at reasonable prices. Our view of the situation is that labor being scarce and a large portion of this labor devoted to the production of wood to be converted into pulp, the cut of logs to be sawn into lumber will be considerably reduced, probably to the extent of 10 to 15 per cent. These remarks apply altogether to the crop of spruce logs in the Province of Quebec.

KING BROTHERS.

AMHERST, N. S., Nov. 20th .- Regarding the output of logs from this province for the coming winter, our opinion is that the quantity taken out for the regular stationary mills will be about the same as last year. The portable mills, however, will not likely get out over sixty or seventy per cent. of last year's cut.

RHODES, CURRY & Co.

YARMOUTH, N. S., Nov. 15th .- The cut of logs for sawing is affected by the kind of weather we have in January, February and March. If we have a fair amount of cold and snow, cold to freeze the swamps over and snow to faciliate hauling logs to the river margin, we will have average cut here.

PARKER, EAKINS & Co.

BEAR RIVER, N.S., Nov. 13th .- The outlook for the coming season is about as usual, and the result of the winter's work will depend entirely upon the supply of snow. Last winter was scarcely an average cut owing to the unfavourable winter, but with reasonable good weather there will be a moderate increase over last year's output. The quantity carried over from this year will be the smallest in the last 20 years, and the demand is good.

WOLFVILLE, N. S., Nov. 19th.—Regarding lumbering prospects for the coming season, would say, first, that supplies are about the same price as last year; beans, pork and fish are somewhat higher. Labor has advanced slightly. Our logging season usually being very short. we seldom have any snow hauling until the latter part of January, and even if the coming winter should be a favorable one, it is doubtful, on account of many small properties being worked out, if any more logs will be taken out this year than last.

S. P. BENJANIN.

LOWER STEWIACKE, N. S., Nov. 15th.-Up to the present time here the weather has been exceptionally mild and also rainy-so much so that lumbering operations in the forest are very much retarded. Supplies are high and labor is higher. I regard the latter item as the worst feature in our business, since labor is both scarce and dear. The production of logs in this section is certain to be smaller than usual this winter, from several causes: First, the scarcity and dearness of labor; secondly, lumber is getting cut away and is not so plentiful as formerly; then again the foreign outlook is not so promising in respect to prices as at this date

last year. On account of e Sliuwiess vide Scotia, last winter, our I ibermen ein prices did not realize high patits, and many for lower rates, labor being arce and ky n encouragement is not prese for large open knowing, of course, what ke t of a winterly If as unfavorable as last, it vill be better to b operating, especially if any hance for total In Nova Scotia, the larger tators bue wh any case proposi business going, but are not more than an average cut, it even that and again, a smaller class of operators who re mills, buying up small tracts of timber and a ing the same into deals. These people this not nearly so much in evide ce. Ther cute without much loss to themse ves, and aredige of instances. Hence, all indications poer u production of lumber here, even under the able circumstances. The foreign makes available stock on hand, are not moving is to contracting, thinking prices too high. Own backward about going into the woods, for prices, and it will soon be too late to cath el cut, even should the European buyers takeled

St. George, N.B., Nov. 12th - We thinkiles ber on our river (Magaguadavie) will be smile Jour Deads

ST. JOHN, N. B., Nov. 12111.-At presentilen for successful logging operations are por, & unfavorable, wages excessively high and an ingly scarce, while supplies of all kinds are light with favorable weather, logging operation at to be less than last year.

ANDRE CUSETE

Dura

SHEILA, N. B., Nov. 16 .- As far as we as judge there will be about the same quantity of in this district as last season. Labor is same cost more than last year, and the weather his favorable—too much rain all fall; these cases i logging more expensive than last season, and a a tendency to reduce the output.

TRACADIE LEE

CHATHAM, N. B., Nov. 19th. - The weather a so far this season have been favorable for kgr ations, but it is too early to make any prefixing winter. The stock wintering here has not sale up, but so far as we can judge, it will be about as last year. The preparations for logging twenty per cent. less than last season, but it favorable weather this may be slightly dec only slightly, as men are very scarce, and mye twenty per cent. over last year's rates. Thepre visions is generally higher, and the outsit season's European markets is not bright.

SHEDIAC, N. B., Nov. 21st .- I can hand to opinion as to the quantity of lumber this district duce for next season's shipment, but it sees pretty generally conceded that the high prepast year will not be maintained during thems hence my opinion is that operators will be pi same extent as last winter-we at least shill id as heavily. Labor is at least 15 per could he last year, supplies somewhat higher, and then this part of the province not encouraging at per yarding logs.

Brandon, Man., Nov. 17th. We are well the camps and intend sending ... two hooleds winter. We are counting on taking out about feet this year, 4,000,000 feet fr. reach am out 7,000,000 feet last year, so u see ne ma crease our output by 1,000,000 sent are looking very favorable there being # of writing a nice fall of snow, which will commence logging at once. W think the se average us about the same as ast year. 00 point will be somewhat scarce. The lumber is district has been very slow for the last thus owing to the shortage of crops and bad rote

aband about 4.000. hope it will be all gramive, as Mare

THE HANK

d April are our best . MANUFACTURING CO.

ILLE, ONT., NOV. 24. ame scale in this diare scarce and way al output in this see caused serious del antity of logs will to seat out.

Logging operations are t as they were last year, ogh, which may reduce

feet from last year's

n our yard by the time

The weather of late with the camp work. all through, it does that at present look as if

HUNTS THE LUMBER COMPANY.

DN, MAN., Nov. 13th Owing to the poor crop pent small demand for lumber, stocks in the tery beavy, and in our opinion logging operabe considerably current this season. Sales of eslow at present. The weather has been fine nily, when we had a general freeze up, with es snow, and so far as the weather is cone conditions could not be more favorable for a on's work. The labor question may also make rence in the volume of business done in the Wages are high, from \$20 to \$45 per month d, which price, of course, includes board.

HIGHES & LONG.

ever, B. C., Nov. 19 In reply to your enquiry logging operations in British Columbia for this kyou probably aiready know, the great bulk ging on this coast is done during the summer be winter season being so rainy that work in s cannot very well be carried on to advantage. helast few years, however, a number of the go mills, in fact all of them, have been taking logs altogether by machinery, so that they have to carry on work in weather in which teams ot wark to any advantage. The mills which n thus equipped have been able during the last sto secure a more steady supply of logs the year The mills generally plan to have a considerck of logs in the water at the beginning of season, so that with what they can get out he winter they will have sufficient to keep running gagain. At the present time, and during all there has been a plentiful supply of logs, and prospects indicate that enough logging will be winter to keep those mills well supplied which ficient orders to keep them running. Loggers' ed cost of supplies are about the same as during two or three years. We have just had a fell of rinches of snow, which is quite unusual bace at of the year. This will retard, rather than help the woods, as it has fallen on soft ground. I that the cargo mills in British Columbia, as hose on Puget Sound and in California, are short ratthe present time. This condition has preering the last two or three months. I may also t the British Columbia mills are considerably pped on account of no lumber carrying ships med in British Columbia, making it difficult to bartere.

H. H. SPICER.

HIPBUILDING IN BRITISH COLUMBIA.

following letter, on the important subject of shipin Butish Columbia, appears in a recent issue of rs-Adventiser, of Vancouver. The writer is supernt of the Moody vide Land and Saw Mi.. Company: The recent and much needed agitation by our of Trade and business men generally, of the quesplacing suitable sceamers on the Vancouverly route, calls up the somewhat larger and more important subject—that of ship-building Pronoce. It is doubital, however, if the necessary for such work can be secured at the present time ivate sources only, and this being the case, it is strable that our Provincial Government should ancial aid to the enterprise, to just what extent shat particular way can be left to future consider-The general way, towever, for such aid to be exis by giving a certain sum per ton register for ng vessels, and so much per mile for distance ed during the first two or three years of a ship's

It is doubtful if there is another seaport, either in Canada or the United States, of the importance of Vanconver, that has not more or less of a locally owned fleet. That a number of vessels, built and owned in and overated from this port, would be a great advantage to all classes of our citizens, can scarcely be questioned. Bemg somewhat interested in shipping, I have had occasion to note the many disadvantages the port labors under, owing in a great measure to the fact that we have no vessels of our own. I will just give one illustration. A great many of the vessels loaded in British Columbia with lumber are owned either in San Francisco or Puget Sound-the owners in many cases being closely allied with the owners of the Sound mills. The natural result follows, and every American ship-owner does his utmost to have his ships go to Puget Sound, and in order to do this many owners grossly exaggerate the difficulties of coming to Burrard Inlet, and actually state in the Charter Party that if the ship goes to Burrard Inlet, the freight will be 60 cents per thousand feet more than if loaded in Puget Sound. In many cases our mills cannot possibly afford to pay the 60 cents extra, and the vessels go to the Sound-our people lose the orders and many times are compelled to close their mills, which, of course, affects every man with whom they have business rela-

I mention lumber carriers particularly, as for the present lumber is the principal export; but it is only a question of time when this discrimination against the port will spread to all other freight, both in and out. Let both the Provincial and Dominion Governments give their aid to ship-building, and the whole Dominion will benefit by it. I trust that persons more competent to handle the subject (to say nothing of the governments) than I, will take it up and give it their earnest attention.

J. G. Woons.

MOODYVILLE, Nov. 17th, 1900.

LOG RUN OR CULLS?

A peculiar controversy has arisen between a buyer and seller of lumber and has been brought to our attention.

A dealer bought of a manufacturer a certain lut of lumber "log run." The National inspection rules defines "log run" as "the full run of the log mill culls out." The buyer had not seen the lumber when he made the contract and when the lumber came to be delivered it was found that almost every board was missawn and badly missawn. The rules say that all badly missawn lumber shall be classed as " culls," the word " culls" evidently having reference to shipping culls. Now, the question arises, is the dealer bound to take the lumber as log run?

It seems to us that he is not. When a dealer buys lumber "log run" he takes his chances as to the quality of the logs, but he is entitled to have the manufacturer use ordinary diligence to properly prepare the lumber for market. No matter how poor the quality of the logs, if the dealer had contracted log run, and the manufacturer had properly manufactured the logs into lumber, the dealer would have been compelled to take it, even had it been all culls. When, however, the lumber is made all culls through the negligence of the manufacturer, or his inability to properly manufacture it, then the dealer cannot be compelled to take the lumber as log run.

The rules say that log run is the full run of the log mill culls out. To our way of thinking, that does not only mean the full number of feet in the log, but also the proportion of high grade s ock which the logs would produce with reasonable care in the manufacture. When, however, the buyer fails to receive the proportion of high grade stock which is in the log, either because it has been selected out by the manufacturer or because through negligence on the part of the manufacturer the highgrade stock is reduced to cull, the buyer is not getting the full run of the log.

In a certain lot of logs, if reasonably well manufactured, there are a certain number of feet of firsts and seconds, a certain number of feet of common and a certain number of feet of culls, the value of all being, say, \$5,000. When through gross negligence on the part of the manufacturer the logs produce nothing but culls, valued at, say, \$3,000, then the buyer is falling \$2,000 short of getting that which is his due.

The case will probably be decided in the courts, and we believe the foregoing position will be sustained .-Hardwood Record.

BRITISH COLUMBIA LUMBER SHIPMEN'TS.

The following vessels sailed from British Columbia ports, lumber laden, for foreign destinations, up to October 31st, 1900:

Vessel.	Sailed	From.	For	Carge ft
Latona	jan. 9	Moodyville.	Valparaiso	788, 319
Alter	Jan. 19	. Hastings	. Philadelpia	1,030,625
Fred J. Wood	lan. za	. Lequimalt	Santa Rosalia	14 440
Antologasta	Feb. 18	Chemainus	Antologasia	8 0,454
Creekman	Mar. to.	Hastings	U. K	1,009,195
Star of France	. Mar. 20 .		Sydney	1,150,103
Silo	Mar. 31	Chemainus .	Ŭ K	1,116,308
Adderly	April 's.	. Moodyville	.Sydney	1,080,349
Renee Rickmers.	MAY. 31	. do	.U. K	1.820.016
Glenalvon .	May 11	Jo	London	1,872,368
Caesarea	April 27	Hastings	. <u>y .</u> K	1,031,450
Bandaneira	May	do	. Nobe	787,705
Glenesslin	May 15	Chemainus	Cape Town	1,475,978
Peru	. June 14	do	Cork	1,800,382
Arnold	June 4	. Moodyville .	Newcostle First	1,035 547
Onaway	June 26	Port Moody.	Adelaide	687,151
Dehance	lune is	Conwichan .	Santa Rosala.	170,133
Drummuir .	June 17	Chemainus	Me bourne	1,508,649
Lakemba	June 21	do	Ingiani	720,732 800.068
Senator	June 29.	Moodyville	Callag.	1,074,518
John D. Tallant	June to.	.llastings	Guayaquil .	327,995
Emilie. John Smith	July 31	N Westmines	U. K. · Naganaki	1,393,217
Tartar	July 7	Hastings	Hong Kong	449103
Corona	July 10	Chemainus	Santa Rosal.a	76,701
Garihaldi	· July 33	. Moodyville	Callan	410 075
James Drummor	nd.Aug. 11.	.Chemaicus	.Sydnev	1.164.711
Marie	Aug. 20	Moodyville	London	1,312,375
Thist'e	Aug. 19 .	. Moodyville	Freemantle	042,043
Retha	Aug. 6	Mostuville	Valuaraiso	880,405
Lymam D. Foste	r. Aug. 11	Chemainus	Australia	887,133
Elwell	Aug. 8	. վօ .	.Cape Town	,099,524
Hesper	Aug. 24	. do Mondaville	Melbourne	79.1050
I. B. Thomas	. Aug. 29.	Chemainus	A-lelaide	3,443,462
Nymphe	.Sept. 27	Chemainus	U. K	1,028,205
Louisiana	Sept. 14.	Hastings	Melbourne	1,1:0,949
Lindfield	Sept 28	Hastings	London	1,500,302
Almiral Tegetth	of Sept. 10	Chemainus	Antologasta	706,025
Marion Chilcott	Sept. 20.	Chemainus	.Adelaide	1,400,654
Definit	. Sept. so	Cowichen	Sydney	0 7,501
James H. Bruce	Sept8	Chemainus	Sy nev	502,728
Expansion	Sept. 27	Cowichan	Santa Rosalia.	132,011
Wilhelmine	Oct. 24	Hastings	South Africa	1,379,305
Ivv	Oct. 24	Hastings	Shanghai.	267,430
Sea King	Oct. 24	Moodyville	Sydney	1.107,485
Hawaiian Isles .	.Uct. 23	Chemainus	Melbourne	1,929 442
Republic	Oct. 31	do	Melbourne.	808.81.7
Condor	Oct. 8	Moodyville	W C. of S A.	89,658
Olympia	Oct. 17	. Victoria	Japan	63,975
raul Kickmers.	Loading .	mastings	W.C. of S. A	
Pallas	. do	do	Continent.	•••
Rufus E. Wood.	. do	Chemainus	Melbourne	
J. B. Brown.	do	!	do	
Elizabeth Nic't'r	. uo	N. Westmiter	Sbanzbai	• • • •
			For Valparaiso Philadelpia Callao Santa Rosalia Antiofagasia U. K. Sydney U. K. Sydney U. K. London U. K. London U. K. Cape Town Coke Sydney Newcastle, Erg Adelaide. Santa Rosalia He bourne He bourne Houuri London U. K. Nagasaki Hong Kong Santa Rosala Sydney London London London Ficemantle Sydney Valparaiso Australia London Australia London Australia London Sydney Valparaiso Australia London Melbourne Sylney Synney Syn	

TRADE ENQUIRIES.

Mr. C. A. Duff Miller, Agent General for New Brunswick, 17 Leather Market, London, Eng., has received a communication from a Glasgow merchant who wishes to represent a Canadian pulp manufacturer.

The secretary of the Canadian Manufacturers' Association, Toronto, is in receipt of a communication from the Imperial Institute, asking for the names of manufacturers of wooden handles. The name of a large firm in Manchester is furnished as desirous of buying these in large quantities, and as Canada has direct steamship service to Manchester, the prices would be quoted at a very reasonable rate. Along with the request came three samples of the sort of handles required, so that any manufacturers interested can call at the office of the Manufacturers' Association, Board of Trade building, and be able to place exact figures for the supply of these goods. The secretary is also in receipt of an enquiry for manufacturers of hardwood blocks for flooring.

A Glasgow firm of timber importers desire to be placed in communication with Canadian firms in a position to supply quantities of boxwood. Name and address at office of CANADA LUMBERMAN.

A manufacturing firm using large quantities of dimension hardwood timber invites communications from Canadian manufacturers. Particulars from Mr. Harrison Watson, Imperial Institute, London, Eng.

HARD TO BEAT.

Mr. E. Todd, Brantford, Ont., in renewing his subscription, writes: "You will have to hustle next year if you expect to beat this year's LUMBERMAN."

It is rumored that a pulp mill will be established a Nanaimo, B. C.



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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 touchin, these interests, discussing these topics editorially and inviting fr e discu sion by others.

Especial pains are taken to secure the latest and most trustworthy mare ket quotations from various soints throughout the world, so as to afford to the trane in Canada i formation on which it can rely in its operations.

the trace in Canada i formation an which it can rely in its operations. Special correspondents in Irealities of importance p esent an accurate report in a only of prices and the condition of the mark t, 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 t ade or in anyway 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 inter at are particularly represted, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advantage will avenue or great attention and libral territories. We

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. Announce sents of this character will be subject to a discount of 25 per cent. It ordered for four successive issues or longer.

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

THE LABOR PROBLEM.

THE difficulties which confront the lumber manufacturer in respect to labor are showing no indications of relief. Lugging operators in many instances are unable to obtain a sufficient number of men for work in the woods, and the production of logs during the coming winter promises to be reduced on this account. Some dissatisfaction is also reported as to the class of labor obtainable.

The demand for labor is such that employees are often indifferent and do not discharge their duties as fa thfully as when employment was less plentiful. These conditions must affect the cost of producing lumber.

The opinion was recently advanced in these columns that current prices are not out of proportion to the cost of producing lumber. In a recent issue the American Lumberman takes up this question ar 1 gives some striking examples of the increase the wages of those engaged in lumbering opera. . s. Taking the wages paid by a large lumber manufacturer in Duluth, the increase this year as compared with 1896 is about 30 per cent., as the following table shows:

CLASSES OF LABOR	*89K	1900	INCREASE.			
Pilers	\$1.62	\$2.00	23	per	cent	
Graders	. 1.37	2.00		•••	4.6	
Setters	1.75	2.00	14	• •	**	
Clearing gangs	1.75	2.12 1/2	2 i	"	"	
Common laborers	1.25	1.62 3/2	30	"	"	

The increase in the wages of woodsmen have

been much greater, and show an increase as compared with four years ago of nearly 85 per cent. The comparison is as follows:

CLASSES OF LABOR	1900	INCREASE.			
Teamsters	\$16.00	\$30.00 to	88 per cent.		
Swampers	13.00	28.00 to	32.00	1115	**
Choppers		28.00 to	32.00	100	44
Sawyers		28.00 to	32.00	100	16
Graders	13.00	28.00 to	32.00	115	44
Laying iron	13.28	28.00 to	32.00	110	**
Chore boys	12.00	20.00 to	26.00	76	44
Blacksmiths	35.00	50.00 to	60.00	43	"
Cooks	45.00	50.00 to	60.00	11	44

We believe that in Canada there has been an almost corresponding advance in the wages of the employees of the lumber trade. This advance cannot be disregarded by manufacturers, who must of necessity secure for their product a price sufficient to cover the increased cost of production. The consumer who believes that by waiting he will be able to purchase his supply of lumber at lower prices will probably find that he has been laboring under a delusion.

THE OUTLOOK.

As the exponent of the lumber industry, the CANADA LUMBERMAN has felt an interest in the election campaign which recently closed in the United States, and we must confess to a feeling of satisfaction with the result. No doubt the prosperty which the country has enjoyed during the past three yeas was a strong factor in determining the result. The business interests are now assured that there will be no change in the policy of the Government for four years at least. The immediate result will be the carrying out of plans which were temporarily deferred, while the commercial industries will continue to expand.

Although a political campaign in Canada does not affect the business interests in the same degree as in the United States, yet it is a cause for congratulation that in this country also we are now reasonably certain of a settled policy for another tour years. Tariff regulations are not likely to undergo material change, and manufacturers will be in a position to plan their undertakings accordingly.

THE lumber trade has perhaps felt a greater interest in the recent election across the border than anyother branch of industry, as some 500,000,000 feet of the lumber product of Canada is annually marketed in the United States. A prospective glance shows the outlook for the lumber industry of this country to be rather bright. Lumber is still a large factor in building operations. These will soon be terminated for this year, but we anticipate that the spring of 1901 will be the beginning of an active building season. In the city of Toronto the number of vacant houses has greatly diminished within the past year, and the demand is such that new residences must be huilt to accommodate the rapidly growing population. The holding of a Dominion Exhibition in Toronto next year is likely to cause the erection of buildings on the Exhibition grounds to cost in the neighborhood of \$200,000, while the proposed palace hotel on King street is expected to call for an expenditure of nearly \$1,000,000. In Ottawa building operations next year promise to be on an extensive scale, as, in addition to the regular building, many structures destroyed by the Ottawa-Hull fire last spring are yet to be replaced. A considerable volume of building is likely to be done in the city of Montreal, not to speak of the extensive harbor improvements

which are under way in that city, R the conditions in these three citin situation in the smaller cities and long the country, and that we shall to healthful revival of building opening year.

THE consumption of lumber for mind purposes is likely to increase. Funita plements are two of the main branched facture in which lumber is employed, and these are in a most prosperous tooling addition to a steadily increasing house the export of these articles is income shown by the official returns issued by partment of Trade and Commerce.

So much for the home consumption I dition which will characterize the type are less certain. It is not improbable United States will take from this const year fully as much, if not more lumber, the season now closing. So with the market. And it is probable that otheria countries will increase their imports ha ada, partly as a result of our exhibit of products at the Paris Exposition. The African Republic will eventually be a by porter of lumber, but the country will at become sufficiently settled to permit of ba ports in 1901.

Lumber manufacturers may, we that into the future with some degree of us that, with a moderate output, all the manufactured will find a market, and the business will realize a fair margin of prote of the things to be guarded against is an sive production.

EDITORIAL NOTES.

To the lumber fraternity the Camadia MAN extends its greetings upon the ama festive season.

HERE is a trade barometer: "The parties of the part of wood pulp exported from the Doors Canada to Great Britain during the tel year was almost twice as great as due preceding year." The Scandinavian mad ers are gradually losing ground in the market, because of the superior qualing adian pulp.

New blood from lumber circles has been duced into the Dominion parliament by the tion of Mr. J. T. Schell, of Alexandra, Ox, Mr. Gibson, jr., of Marysville, N. B. II gentleman put into their parliamentance same keen foresight and telling energy the characterized their business operations al bermen, we may expect to see the mart di impress upon the work of the ninth Refer of Canada. Is it too much to predict to position of the long-looked-for import United States lumber?

THE Great Northern Railway has bend pleted. The road runs from Quebec by Hawkesbury, connecting with the Both a system, over which it has running pinis Parry Sound. It passes through the night bered country on the upper reaches of these that flow from Quebec into the St. Les and furnishes a continuous line between orgian Bay and o. water at Quebec. The d is of much important of the pulp industry, mills are located. Many points through which masses, including masses, i

THE suggestion recently made in these columns trailroads might be employed to a much later extent in the near future for the transfeation of logs from the woods to the mills is ectically illustrated in some parts of the United lets. It is learned that in Michigan and some her states where i few years ago logs ere lated to the point of manufacture, railroads are wised for this purpose. It is also significant a strong syndicate is planning to ship by 1,000,000,000,000 feet of logs from the Rainy ver country to Stillwater, Minnesota.

We are again reminded of the one great want the lumber trade in Canada by the receipt of fulle booklet giving the rules for the grading pine and hemlock lumber as adopted by the mbermen's Associations of the Mississippi d Wisconsin valleys. A glance at the rules ows that they have been prepared with more an ordinary care. The general instructions intended to cover points upon which opinions elikely to differ, while to make the rules more plicit several examples of each grade are given. pese rules apply to 95 per cent. of all the white ne and Norway lumber manufactured in the ississippi and Wisconsin valleys. It is to be gretted that in the matter of uniform grading lumber, Canadian manufacturers have not own as much progress as their confreres in Un ed States. One has but co examine the fere, stock sheets as sent out by manufacrers to at once be convinced of the great necesof the adoption of some such rules. No two ills grade their number in the same manner.

DAMAGES FOR ACCIDENT.

Blow vs. Lundon and Petrolia Barrel Comny came up in the Divisional Court at pronto, before Mr. Justice Falconbridge, on otion by defendants to set aside verdict of jury djudgment of Mr. Justice Meredith, and for witial. The case was an action for damages ian and by statute for injuries sustained by amiff, who while employed by defendents and ting under the directions of one Weir, his perior, and removing waste near a circular win motion, had his left arm cut off. The sintiff alleged negligence on the part of defendits in leaving the saw unguarded, and in not lying a proper mode of ingress to and egress omit. The jury did not agree upon an anter to the first question, which was whether feir gave the direction to plaintiff, which plain-I says he did, to approach the saw by a certain ay, and as to the second, found that the saw as unreasonably dangerous, because not prorly covered, and that plaintiff was entitled to 00 damages. I. was contended for detendis that the jury not agreeing to a general rdict, and in the absence of a finding that feir had given a.. Improper order, that plaintiff ould not succeed. Held, that the jury havefound in effect that the saw was not securely guarded, and that by reason of the defendants' neglect to guard it the plaintiff was injured, and that their finding involves a finding that plaintiff was properly where he was when the accident happened, and the motion should therefore be, and is, dismissed with costs.

LOGGING MAHOGANY.

The following somewhat lengthy description of the mode of of logging mahogany is taken from Self Culture. It is worth reading:

"The mahogany hunter is the most important and best paid laborer in the service, for upon his skill and activity largely depends the success of the season. Ma'ogany trees do not grow in clusters, but are scattered promiscuously through the forests, and hidden in a dense grow of underbush, vines and creepers, and it requires a skillful and experienced woodsmen to find them. No progress can be made in a tropical forest without the aid of a machete, for the way must be cut step by step. The mahogany is one of the largest and tallest of trees, and the hunter, seeking the highest ground, climbs to the top of the tallest tree and surveys the surrounding country. His practiced eye soon detects the mahogany by its peculiar foliage, and he counts the trees within the scope of his vision, notes directions and distances, and then, descending, cuts a narrow trail to each tree, which he carefully blazes and marks, especially if there is a rival hunter in the vicinity. The axemen follow the hunter, and after them come the sawyers and hewers.

"To fell a large mahogany tree is one day's task for two men. On account of the wide spurs which project from the trunk at its base, scaffolds must be erected and the tree cut off above the spurs, which leaves a stump from ten to fifteen feet in height-a sheer wasce of the very best part of the tree, and one which American ingenuity would certainly devise some means to prevent. While the work of felling and hewing is in progress other gangs are busy making roads and bridges over which the logs may be hauled to the river. One wide 'truck pass,' as it is called, is made through the center of the district occupied by the works, and branch roads are opened through this main avenue to each tree. The truck employed are clumsy and antiquated affa., which no American would think of using; the axles and boxes are imported from England, while the other parts are made upon the ground. The wheels are of solid wood, made by sawing on he end of a log and fitting iron boxes in he center, no spokes or tires being used. New wheels are in constant requisition, and repairs cause frequent and expensive delays. Most of the trucking is done at night by torchlights of pitch pine. The oxen are fed on the leaves and twigs of the bread-nut tree, which gives them more strength and power of endurance than any other obtainable food. The trucking being done in the dry season, the logs are collected on the bank of the river and made ready for the floods. On the longest rivers these begin in June and July, and on others in October and November. The logs are turned adrift and when they reach tide water are caught by means of booms. Indian loggers, usually Caribs, follow the logs down the river in order to release those which are caught by obstacles.

No little judgment and experience are required to determine at what exact stage of the flood the logs should be set adrift. Should the waters rise to what is called 'topgallant flood' before the logs reach the boom, many at them would be carried over the banks and left high and dry in canebreaks and thickets, or covered up by sand and rubbish. From the boom the logs are rafted to the embarcadero and 'manufactured' for shipment.

"Mahogany trees give them from two to five logs each, measuring from 10 to 18 feet in length and from 20 to 44 inches in diameter after being hewed. The manufacturing process consists in sawing off the log ends which have been bruised and splintered in transit down the river, and in relining and rehewing the logs by skillful workmen, who give them a smooth and even surface. The logs are then measured, rolled back into the water at the mouth of the river, and made into rafts, to be taken to the vessels anchored outside the bar."

LACING A BELT.

A writer in The Engineer suggests a new method of preparing the ends of the belt lacing, concerning which he says: Every one who has to lac belts knows how difficult it is to push the soft ends of the lace through the belt, unless the holes are much larger than they should be. majority of men use either a nail or the point of a file to aid in this work, but this is cumbersome, and, too, a nail of the proper size or a file is not always on hand. There are metal tipped laces and also metal tips on the market, which are adapted to cover the end of the lace and thus make it stiff enough to be pushed through the holes in the belt, but I believe my method is superior to either of those already mentioned, inasmuch as it is more of a time saver. My method consists in holding the tapered ends of the lace leather over a lighted match until the leather becomes charred, when it will be found to be quite hard, and plenty stiff enough to be pushed through the holes in the belt without breaking. Care should be taken not to char the leather too much, otherwise it will become brittle. A little experimenting will enable the work to be done just right.

TREATMENT OF RUBBER BELTS.

To obtain the full value from a rubber belt, it is essential to buy the best belt, provide pulleys of ample diameter and face, avoid excessive strain, distribute the strain over the wnole width of the belt as equally as possible, have the fastenings made so that they will not pull out the ends of the belt, and avoid having the belt exposed to excessive heat or to grease or dirt. You can greatly increase the service and life of a belt by applying with a brush a composition made with equal parts c' red lead, black lead, French yellow and litharge mixed with boiled linseed oil and japan, enough to make it dry quickly. duce a finely polished surface. This will pro-A coat of the same composition may be applied if the rubber gets peeled from the surface of the belt. Animal oils, grease and castor oil are injurious to rubber belts and should not be used, the composition mentioned above being all that is necessary. Belts to be adjusted to the pulley should have the ends cut square and true, and be cut shorterthan the distance around the pulley by an 1/8 to 1/4-inch tor every foot when measured with a tape; a steel tape is the best. They should be stretched as tightly as possible, and with wide belts this can be done best by the use of clamps secured firmly to each end of the belt. There is no danger of breaking, as a belt of good quality, 6 inches wide and 3-ply thick, will stand a direct strain of 5,000 pounds. - Steam Engineering.

Mr. A. F. Bury Austin, the well known lumber merchant, of Montreal, left for British Columbia on November 19th, on an extended business trip. Upon his return he will be pleased to receive enquiries for all kinds of material in his line.

000,000 to 1

NOTES FROM THE EASTERN PROVINCES.

[Correspondence of the CAHADA LUMBERMAN.]

A new company has been formed in Fredericton, N.B., for the manufacture chiefly of lumbermen's supplies, including peavies, hames, cant dogs, boot caulks, table blocks, all kinds of drop forgings, wire nails, hay pitchers, etc. The name of the concern is the McFarlane-Neill Mfg. Co., and it starts out under particularly advantageous circumstances. The firm has acquired the fine plant of the late Walter McFarlane, which was so successfully run by him up to his death, and since then with continued success by Mrs. McFarlane. This plant consists partly of a large brick building in St. Marys, just opposite Fredericton, fully equipped with engines and the best machinery. This old concern has a first-class name among the lumbermen and a good connection with them. Their peavies have for years been shipped all over the Maritime provinces and central and western Canada. One customer alone in Quebec has bought over \$5,000 worth of peavies. The personnel of the new company is as follows: Mrs. W. McFarlane, Jas. S. Neill, E. Byron Winslow, F. T. Morrison and N. A. Tweedale, the latter being manager. Mr. Jas. S. Neill is well known among lumbermen, having, in Fredericton, one of the best hardware stores in New Brunswick, from which he has shipped large quantities of lumbermen's supplies. For years he has manufactured boot caulks in a little factory at Nashwaaksis, for which he has found a large market. New equipment is at once to be added to this factory on account of increased output. The concern is the only one in Canada which manufactures the celebrated wrought band and solid eye peavy. For this they hold the Canadian patent, which was taken out by the inventor, the late Walter McFarlane, who made a good thing out of it and sold the United States patent to a Bangor firm. They also manufacture the malleable band peavy such as is made by Upper Canadian firms. To give a slight idea of the extent of this business it may be mentioned that in this factory upwards of 90 carloads of lumber are sawn into peavy handles each year. This lumber is hauled to the factory in the rough log, and there sawn and split in order to get the green of the log.

Thos. Robinson, a well-known mill owner, died a few days ago at his home in Lower St. Mary's, N.B. For many years he successfully can the saw mill which he recently leased to Alderman McKendrick.

The Robb Engineering Company, of Amherst, N. S., secured the order a few days ago for a large and heavy portable saw mill, with engine and boiler and all appurtenances complete, to be shipped to the Pacific coast. It is destined to the Chilliwack valley in British Columbia. The freight on this purchase will be between \$800 and \$1,000. This mill has been bought by Clifford Paterson and some other lumber operators of this county who have organized to carry on a big lumber industry in the west. The men to man the mill will probably accompany it across the continent.

C. Pickard, of Sackville, has a portable mill at Brooklyn, some miles distant on the Cape Tormentine Railroad, and cuts from one to one and a haif million feet of spruce a year, which goes to the English market-

Jas Smith, of Sackville, has lately been turning out between 10 and 15 thousand pairs of moccasins in a season. These are oil tanned. He has been steadily refusing orders for some time, as the capacity of his factory is not equal to the demand. He employs 35 hands and does a huge trade in these lumbermen's goods.

P. R. Ayer & Company, Limited, in the same town, make enormous quantities of tumbermen's harness, which is now then specially. Their factory is the largest of the kind in the Maritime provinces and one of the best in

Jas. F. Sherry has opened up in Memramcock in the manufacture of lumbermen's shoe pocks, moccasins and larrigans. He is employing about 20 hands and makes a good article. His specialty is shoe packs. Next year he hopes to have about 50 hands at work.

A. E. Wry & Co., Sackville, are manufacturing lumbermen's harness, and showed THE LUMBERMAN'S representative substantial orders from well known lumbermen ann dealers from the north.

Chas. Dickenson, the larrigan manufacturer in Woodstock, whose advertisement is seen elsewhere in this issue, has a pair of shoe packs in his possession which were worn from Cape Town to Preturia and back by the Rev. Mr. Late, who accompanied the first contingent. They are neither worn through or ripped in any part, but show many deep scratches and cuts from the rocks.

The second largest larrigan factory in Canada is in Parrsboro, and lumbermen throughout eastern Canada know the name of J. S. Henderson so well that they will be interested in a short description of his business. It is but a few years since he began to manufacture on anything approaching a large scale, but already his business is enormous and he now employs about seventyfive hands and turns out 32 dozen pair a day of shoe packs and larrigans, not including moccasins. Mr Henderson has his own tannery in connection which he has been running for many years and makes up all his own leather, so he knows exactly what goes into his goods. His larrigans and shoe packs all have the rivet through the vamp and quarter on each side; this, he claims, is an absolute essential to lasting quality, and it looks most reasonable. Some makes are without this important feature. A large addition was recently added to the factory, and another spring further additions will go up. Mr. Henderson last February sold in one order, to a Montreal firm, 26,000 pairs. He has sent large shipments to Winnipeg and British Columbia. His advertisement may be seen in this issue, and THE LUMBER-MAN trusts that soon Mr. Henderson will occupy no second position in Canada. T. E. Henderson, of Parrsboro, is the inventor of the Henderson patent larrigan which is gaining such a good reputation. A pair of these is on exhibition in his shoe store window, made to the order of Chaplain Lane, of the first contingent, for presentation to the Prince of Wales.

PARRSBORO'S LUMBER INDUSTRY.

It may not be generally known that Parrsboro ships one-quarter of the entire lumber output of Nova Scotia, but there are many interesting things to be learned of this progressive and always busy little town, which is harbored so securely on the northern shore of the beautiful Minas Basin. At an early date THE LUMBERMAN hopes to publish some interesting sketches and descriptions of the town and vicinity relative to the lumber industry, but at present a few items will give the trend of recent events in this connection. Backed by a great lumber district, intersected with splendid carrying facilities, fronted by much good shipping conveniences and peopled by men who know their business, Parrsboro has been doing, and will continue to do a heavy export trade. The town is growing and growing well as the years go by.

The Newville Lumber Co., whose mill is 10 miles from Parrsboro, on the Cumberland railroad, have been cutting about 4,500,000 feet. The mill is equipped with a gang, edger, trimmer, lath, planer and other machines. About 700,000 feet of this cut is of pine. They stream drive largely to the mill. The office of the firm is in Paresboro, in charge of Mr. McAloney, who greatly admires THE LUMBERMAN. They sell largely to Malcolm Mackay and ship much to the United States; Stetson, Cutler & Co. handling most of this. The firm is composed of W. W. Black, N. A. Rhodes, N. Curry, C. A. and J. B. Lusby, and George A. Fowler. These men are from Amherst. with the exception of Mr. Fowler, who is now in Newoundland as manager of the Exploits Lumber Company Captain Nordby, of Parrsboro, agent for George McKean, of St. John, shipped about 12,320,000 feet this

D. A. Huntley, manufacturer and shipper, has a mill on the wharf in which he cuts about 1,000,000 feet a year-As he does a good deal of vessel building he uses it for getting out deck planks, etc. He is just now building a 500 ton barque. He has another mill at Canaan, 10 miles north east of Parrsboro; he cuts about 1,000,000 deals a year. He has also stave, shingle, and heading He sells principally to George McKean and machines. B. L. Tucker.

Geo. W. Day, of Parrsboro, at present Mayor of the town, has a portable mill at Canaan, and cut about 2,500,000 feet of deals, boards and scantling last year-Mr. Day knows the lumber business thoroughly in all its features, and has been very successful.

The Moose River Lumber Company has been organized during the past month at Parrsboro, and will now carry on a large business. The gentlemen interested in this concern are Messrs. B. L. Tucker and Newton Pugsley. of that town. They have bought a property consisting of 12,000 acres of well wooded land lying about east of Parrsboro on the northern shore of the Basin of Minas.

This property has been cutting from feet for years. They expect to cui hat much it using portable mills and doing considerable stress Mr. Tucker, as buyer and shippe of lumber 20,000,000 feet last year, shipping t un West Ba English market. He does not up to the A market.

Chas. J. Willis & Company, of kville, N. a shipped some 40 cargoes of lumber ice April 1 er was due there on the 15th of Nov nber, which take away 1,5000,000 more-the ast of the shipments. This firm ships from ("e Tormenia fax, Shediac, Pugwash, Grindste · Island and points. In 1900 they shipped over , million la Atherton leaves this office early in : cember torn England.

The barkentine Florence B. Edg. .. , loaded with 000 feet of lumber, for Cape Town, sailed recent Parrsboro, N. S. Nearly all of this is to be used pairing the mines and railways wrecked in South The commander of the vessel is Cat am J. N. Ki was but a few weeks ago married to Mis Ge Stehelin, of New France, near Weymouth, KS accompanied her husband on the trip. Mrs. Kayil is the well-known lumber operator at New France

Nov. 18th, 1900.

QUESTIONS AND ANSWERS

"C. B.", Halifax writes: I have two lives of ing to be driven from one electric motor. Canin belts off it, or will I have to belt from one line of the to another?

ANS .- If you have room to put your motor between two lines, it would be best to belt direct from it to line, the belts driving each way from a special pelo ing two crowns. This method has the adranta the one in which a pulley is used at each end of the of reducing the strains on the bearings aed frame, so of giving freer access to the motor for inspection cleaning.

"Engineer" says: We are putting a new of in our mill, for which we will have to get a newbeld fifty feet long. As I want to get the very bester possible out of it, please advise me which sidel she next the pulley.

ANS.-If your belt is to be single, you should re flesh or grain side out, because the outside of the bets passing around the pulleys is subject to more or less extension strain, over and above the strain due of the load it is driving; whereas the inside of the bet goes over the pulley is to a certain extent coeffe obviously, the flesh side being of a more soft and si nature than the hair side, is more suited to take in tension strain. If the belt is double, both side to grain, the hair sides being glued together, so 3 have no choice in the matter.

SNEEZE WOOD.

Among its many peculiarities South Africa include " sneeze-wood " tree, which takes its name freete that one caunot cut it with a saw without speciagia fine dust has exactly the effect of snuff. Even is the the wood it will sometimes cause sneezing. No worm or barnacle will touch it. It is very biner w taste, and its specific gravity is heavier than water color is light brown, the grain very close and bud. a nice looking wood, and takes a good polish. For work, piers or jetties it is a useful timber, lasing at while under water. - The Building News.

PERSONAL.

Mr. Joseph Botsford, foreman in the planks Graham, Horne & Company at Fort William, 024 stricken with paralysis last month and died a keri thereafter.

The marriage of Mr. J. Quincy Adams, of Kre Ont., inspector for the British-Canadian Timber Manufacturing Company, of London, Eng., should been chronicled in last issue. The lady of his de was Miss Maud Minerva, daughter of Nr. W.E.R. of Harriston, and the event took place at St. Go church at Harriston, Rev. J. Hirst Ross officialing Mr. and Mrs. Adams we extend our congrain

NEWS.

cLaren Eim, Que. saw mill ho

are remodelling their mill at

en completed at Templeton, . Greene. nd Smith is 6 dang a sash and door factory at

on, N. B. erson Bros., . . . millers, Boundary Falls, B. C.,

ned busines rsaw mill ha ocen established by Oliver Bros. ord, N. W. 1.

Eastman Lun. .. Company are repairing their at Racine, Qu.

d Dickie, of Surwiacke, N. S., is building a large mill at Liscombe Mills.

McLean & Company have built a large addieir planing mul at Windsor, Ont.

des Pedwell expects to commence the erection mill at Lion > Head, Ont., early in the spring. erland, Innes & Company, of Chatham, Ont., blishing a stave and heading mill at Castleford.

w mill, pulp man and stave factory are among the itions expected by the citizens of Beaver Mills,

kie & McGrath, of Tusket, N. S., are desirous of ganumber of portable mills to saw hardwood

Chippewa Lumber Company, of Southampton, e extending their planing mill and sash and door

liam Millions, of Carleton Place, Ont., has gone foundland to superintend the erection of a large

Patterson, of Millstream, N. B., has purchased a tract near Grand Falls, which he will log during bing winter.

illiamson & Crombie, of Kingsbury, Que., expect rate their saw mill throughout the winter, having ed for a supply of logs.

A. Patterson, of Apohaqui, N. B., has purchased w mill of the Stevens Lumber Company at Salmon N. B., the consideration being about \$15,000.

he Hastings Shingle Manufacturing Company, of urer, B. C., are operating their shingle mill night by. They have installed a new lath machine.

en for the lumber woods in the Lake of the Woods ct are scarce. The Rat Portage Lumber Company dvenising for teamsters, road-makers, axemen, etc.

in English firm have sent a representative to idatolocate a site for a furniture factory. It is ned that the factory will be located at Amprior,

The Rat Portage Lumber Company are opening a er yard at Portage la Prairie, Man. It will be er the management of A. Stevens, formerly of rus River.

Price Bros., of Quebec, are building a large saw mill L. Catharines Cove, near Tadoussac, Que., which is ected to be in operation next spring. Mr. Charlton be the manager.

The saw factory of William Chaplin, at St. Cathar-Ont., was completely destroyed by fire early in mber. Mr. Chaplin's loss is estimated at \$75,000, is only partially covered by insurance.

Mr. Batton, of Wingham, purposes building a factory lanitowaning, Ont., for the manufacture of broom ties and other wood specialties for foreign markets.
may also go into the manufacture of furniture.

L. VanDusen, of Ottawa, an employee of the E. B. y Company, has evented and patented a new match thine, said to be apable of making from blocks of d 1,000 gross of four kinds of matches in ten hours.

Extensive lumber yards have been established in wa by W. H. M. Auliffe. They are situated on annia street, ha. 1 piling capacity of over 1,000,000 and are equipy I with drying and storing facilities. Fire attempts, ... been made recently to effect the metion, by fire, of Messrs. Schurman, Lefurgy &

e, which con... offices and large quantities of

dressed and manufactured lumber, narrowly escaped. No reason for the action has yet been found.

-Clifford Patterson, and other lumber operators, of Cumberland County, N. S., intend building a large steam mill in the Chilliwacs Valley, British Columbia. The machinery is being built by the Robb Engineering Com-

-It is said that the owners of the McLaren mills at Barnet, B. C., have under consideration the building of several lumber schooners at their mill this winter. This step has been suggested by the excessive freight rates

-An order in council has been passed permitting the Pigeon River Lumber Company, incorporated under the laws of the state of Wisconsin, to carry on the business of manufacturing lumber in Ontario. Herman Finger, of Fort William, Ont., is attorney for the com-

-The Rat Portage Lumber Company have opened a new retail lumber yard in Winnipeg. It is located on Point Douglas, close to the site of their proposed saw mill, and is in charge of J. M. Chrisholm, who for some years has been manager of the retail lumber business of Dick, Banning & Company.

-It is probable that a large saw mill will be built next spring on the site of the old Conroy mill at Deschenes, Que. The gentlemen interested are Messrs. I. B. Fraser and John Bryson, of Ottawa. The site for the mill is an excellent one, there being large piling grounds and good facilities for the shipping of lumber and the handling of logs in the river.

-Davidson & Thackray have entered into the first contract with the Pontiac & Pacific Junction Railway, the Ottawa and Gatineau Valley Railway, and the Interprovincial Bridge Company to carry lumber across the new bridge between Ottawa and Hull. The contract calls from 400 to 600 car loads a year. The lumber will be brought from Quyon and Fort Coulonge to the firm's planing mill in Ottawa.

-What is said to be the largest perfect plank ever turned out by a saw mill was manufactured by a California redwood mill not long ago. The plank is 2 inches thick, 6 feet wide and 17 feet long. It was cut by a band saw, and is perfect and without a flaw. Much larger pieces of redwood in the form of planks have been produced, but they were not perfect specimens.

-Rumors have been current for some time that the Pacific coast lumber manufacturers had organized under the name of the Associated Lumber Manufacturers of the Pacific coast. The proposed organization, it is said, is to be divided into two branches, an export branch and domestic branch. The territory to be covered includes British Columbia, Oregon, Washington and California.

-The mill of the Longford Lumber Company at Gravenhurst, Ont., was closed on October 31st, the company, as usual, giving the employees a dance and supper. The employees took advantage of the occasion to present their foreman, Mr. F. L. McNab, with a handsome gold watch and chain, together with an illuminated address expressive of the good feeling which has existed between the foreman and the employees during the past three years.

-The Chemainus Lumber & Manufacturing Company, of Victoria, B. C., have given out the following list of vessels under charter by the company to hold lumber: A 380 ton American schooner, now in port; Hawaiian barque Fort George, to load for Sydney, left Honolulu for Chemainus on October 20th; the Great Admiral, to load for Sydney; the Antofagasta, now en route to load at Chemainus; the St. James, now loading; the Roland, now on the way from Newcastie to Chemainus; and a German vessel and another British ship.

-Great improvements have been made to the mill of the North Pacific Lumber Company at Barnet, B. C., which is now under the management of J. M. Poitras. The circular saw has been replaced by one to-foot band mill and one 8-foot band mill for resawing. There are four Berlin machines and one timber planer 24x30 ft., built especially for this mill. The smoke stack is of immense size; the lower 40 ft. has a water jacket in which the refuse of the mill is burned. The capacity of the dry kiln is 250,000 feet of lumber. The shipping facilities are excellent, an ocean wharf 500x500 feet per mitting of vessels loading from three sides. A loading shed on the railroad track is 66x100 feet.

-An important deal was recently completed at Vancouver by which the Buse mill at Hastings was purchased by the William Tytler Lumber Company. The Buse mill was owned by some Minneapolis parties, J. J. Banfield being their local representative. The mill itself is of small capacity, but the site is an excellent one, with deep water wharfage for ocean vessels at low tide. It is stated that English capitalists are interested in the purchase, and that it is the intention to erect an export mill of large capacity.

From Kingston, N. B., the manager of the Merchants' Bank of Habfax sends some interesting particulars about matters on the Northumberland Strait: "Trade here, which is principally in lumber, has been very good this year. All the mills on the Richibucto and Buctouche rivers have been very busy during the summer, and prices have been high. Shipments of deals to England have been larger than usual, and the "boom" in Cape Breton has increased our coastal trade." To a similar effect writes the manager of the Union Bank of Halifax at Annapolis, N. S.: "In reply to your enquiry I would say that our lumber exports have been more active than for many years past, and business generally has been fairly good in this section."

The new saw mill of Edmund Hall at Sarnia, Ont., is nearly completed, although work on the tramways and docks will probably not be commenced until next spring. The mill is located about 1,000 feet from the shore of Sarnia bay. It is the present intention to make an island of the space immediately surrounding the mill, with a causeway and tram connecting it with the Grand Trunk railway, the main line of which runs parallel with the bay shore line. The equipment of the mill consists of two band saws, one gang saw, lath mill, and shingle mill. Power will be furnished by seven 16-foot boilers, supplying two engines of approximately 500 h.p. each, and smaller engines as occasion demands. There will be a private lighting system and an independent system of fire protection.

CASUALTIES.

-While working in Nichols & Kennedy's sash and door factory at Omemee, John Watson had the thumb sawn off his right hand.

-- Patrick Flannigan, a logger, was instantly killed in Forbe's logging camp, near Vancouver, B.C., by a branch of a tree falling upon him.

-George Milton, who operated an edger at Drader's mill at Chatham, Ont., was almost instantly killed by being struck by a board thrown am the saw.



S. K. C.

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GENERATORS MOTORS TRANSFORMERS

Always a large stock of various sizes on hand.

All kinds of supplies in stock

WRITE US YOUR REQUIREMENTS

ESTIMATES PROMPTLY FURNISHED

WOOD PULP ~9 ©~ DEPARTMENT

THE SAULT STE. MARIE PULP MILLS.

In a previous issue we outlined the steps which led to the establishment of the great pulp mills of the Sault Ste. Marie Pulp and Paper Company at Sault Ste. Marie, Ont. In this number we present illustrations of the mills, and give some particulars of the extensive industries which have been established.

Two of the mills, shown in the first illustration, manufacture mechanical pulp. Their cost of construction was in the neighborhood of \$2,000,000, and they give employment to 500 men, while 400 others are engaged in the forest getting out spruce logs. The mills are operated day and night and the value of the annual production is about \$1,000,000. No. 1 mill is 600 feet long and 80 feet wide, and No. 2 800 x 100 feet. In is estimated that the power required to run the mills is 14,000 horse power. The company have established a reserve supply of raw material and of the finished product, in order to meet the possible contingency of an accident entailing a delay in operation. This consists of about 30,000 cords of spruce logs and about 1,000 tons of wood pulp.

These mills being completed, the manufacture of sulphite pulp next engaged the attention of the manager, Mr. F. H. Clergue. The great drawback to the economical manufacture of sulphite pulp was the high price of sulphur, the chief source of supply being the Sicily mines. Mr. Clergue, however, set about to discover a means of getting a supply of sulphur. He went to Sudbury and noticed that sulphuric acid gas to the value of \$2,000 a day was being allowed to escape during he process of roasting nickel ore, large quantities of which exist in the Sudbury district.

The outcome was that Mr. Clergue discovered a method to get sulphurous acid gas out of the pyrrhotite, and the erection of a sulphite mill was immediately decided upon, and is now nearing completion. It is 176 feet long, 68 feet wide, and 116 feet longh. At the southern end there is an annex for the acid department 46 by 42 feet, surmounted by a stately tower. The height of this tower from the ground is 130 feet. The sulphite mill has been built of structural steel and native stone. It will turn out sufficient chemical pulp to treat the product of the two wood pulp nulls, and in addition will produce daily 75 tons of clear, bleached sulphite fibre. The latter brings \$75 a ton, and the annual output represents a value of over \$2,000,000. The same number of hands will be given employment as in the ground wood pulp mills, viz., 500.

Two huge digesters, 54 feet in height by 17 feet in diameter, and built of 11-4 inch steel, are being placed in the sulphite building. The foundations of masonry under each will be capable of sustaining 750 tons, and will rest on solid rock.

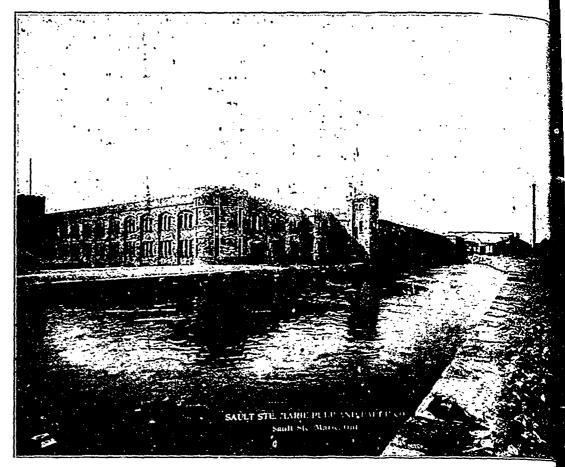
The question of a supply of sulphur—naving been disposed of, Mr. Clergue turned his attention to other discoveries. It was found that the residue left after the sul-

phur had been removed from the ore contained nickel and iron in a perfect state of harmony, and when fused into a metal-it produced an alloy of nickel steel. This discovery resulted in the construction of reduction works and a ferro-nickel plant. The works consist of a building 104x54 feet, containing an ore crushing plant with a capacity of 500 tons per day, and a second building 158x88 feet containing the roasters.

glass pump into limewater, which is theo sugar bleaching the sulphite pulp.

So large a quantity of nickel ore is required to be the reduction works that the sulph e mill is easy utilize it all, and a surplus of subdiurous forces a therefore, undisposed of. To allow his to escape on a great loss, and so a means was devised of comes the gas into liquid sulphuric acid, which is in great mand for the purposes of ore refining, and for use it a arts. It is proposed to manufacture the acid and deviate it in tanks to the trade for use in making sulphite play to per cent. less than sulphur can be obtained for the Sicily.

The nickel ore or pyrrhotite having been freel to sulphur, will be delivered to 100 electrical furnices die tons a day, where it will be turned out in the forge ferro-nickel pig. The intention is then to refine a nickel steel. There are a splendid foundry, rather



PULP MILLS NOS. 1 AND 2.

To remove the copper from the nickeliferous pyrrhotite, alkah works were established. They are equipped with 120 electrical machines for treating salt by the Rhodin process. Sodium is used for separating the copper from the nickel, but there is the chlorine still to be considered. This is converted by the aid of chlorine gas and lime into bleaching powder, a substance used for bleaching woollens, cloths and fabrics. The chlorine gas, instead of being allowed to escape, is forced by a shop, pattern shop, carpenter shop and laborator, The are equipped with plant and appliances of the extendern character. The foundry building is tho feet length by 100 feet in width, but a new foundry building 15 160x75 feet is in course of erection. The machine was 150x80 feet, operated by electric power

is 160x80 feet, operated by electric power Extensive works are still contemplated. At Moore Point, three miles west of the present group of address will be located huge blast furnaces and works for manufacture of Bessemer steel. In these works on 5,000 operators will be given constant employment.

6~ SPECIAL NOTICE ~9

We have inaugurated a STOCK REDUCING SALE for October, November and December, and will quote reduced prices on all inquiries recent for shipment during time named.

We have a complete stock in all kinds, grades and dimensions, one to two years old, Bone Dry Hardwood Lumber, Yellow Pine and Cypres kiln dried Maple Flooring, plain and quartered White and Red Oak Flooring, Surfaced Lumber, Wagon and Dimension Stock, and can ship straight or mixed car lots, quick delivery.

We have numerous stocks, last year's cut, piled in connection with saw mills in the country that we propose to close out and will quote yet on a basis of lumber made, dried and delivered from the stump to your factory (no yarding expense). Besides we are offering special prices a Quarter Sawed Forked Leaf strictly White Oak, all one kind and color, well manufactured, band sawed, principally large figure, good widths abone dry, including Quarter Sawed Red Oak, uniform color, quality and grade.

Inquiries solicited.

GEO. T. HOUSTON & CO

Main Office: CHICAGO, ILL.
Cor. 22nd St. and Center Ave.

PULP NOTES

American capitan are said to be considering the establishment of a pulp will at Buckingham, Que.

Hanta & Hutch on Bros., of Huntsville, Ont., want to purchase 5,000 cord of spruce and hemlock pulp wood.

The Royal Paper Mills Company, of East Angus, Que., is building a dam and intends erecting another pulp will at an early date.

The steamer Novlen has been chartered by the Cushing

A scheme is said to be under way, in which Glasgow parties are interested, to remodel and put into operation the pulp mill built some years ago at Alberni, B. C. The capital of the proposed company is fixed at £100,000. An English capitalist residing in Victoria, B. C., is interesting himself in the undertaking.

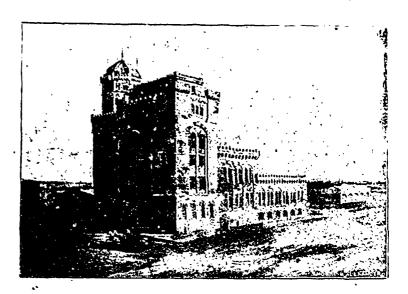
The Lake St. John district, in the province of Quebec, is attracting considerable attention from pulp mill projectors. Mr. Worden, representing a large firm from Christiana, and Messrs. Ghysrul and VonBruysel, representing a Belgian

Messrs. Edmund de Vialder & Herman Cortuet, of Brussels, are shareholders in the Belgo-Canadian Pulp and Paper Corporation, which intends building pulp and paper mills at Shawinigan Falls, on the St. Maurice river, Que. Mr. J. N. Greenshields, Q. C., of Montreal, recently visited Belgium and France in connection with the enterprise. He states that over one million dollars is to be put into the undertaking by the Belgian capitalists. It is expected that the output will be marketed largely in Belgium.

Another efficient substitute for pulp wood in paper making



GRINDERS IN NO. 1, PULP MILL-SAULT STE. MARIE PULP & PAPER COMPANY.



SULPHITE PULP MILL-SAULT STE. MARIE PULP & PAPER COMPANY.

Sulphite Fibre Company to take a cargo of pulp from St. John, N. B., to Great Britain.

The Chicoutini 1 alp Company, of Chicoutini, Que., purpose increasing their plant. The present capacity is 100 tons of palp a day. Thus will be increased to 300 tons. It is said that the company will produce 150 tons daily of dry pulp for the French market, for which purpose special machinery will be installed.

syndicate, have been looking over the limits and water powers with a view to the establishment of pulp and paper milis.

The Dominion Industrial Company is applying for a Dominion charter, to manufacture pulp wood, pulp and paper, and to acquire the business of the Cookshire Mili Company, at Cookshire, Que. The capital is to be \$200,000 and the head office at Sherbrooke. R. H. Pope, M. P., of Cookshire, and F. P. Buck, of Sherbrooke, are directors of the company.

has been discovered in the southern saw palmetto, which hitherto has been considered merely a troublesome undergrowth to remove in clearing land. A paper plant has now been established at Pensacola, Fla., relying entirely upon this material for its supply and very successfully. The palmetto is very hardy and can be cut to the ground each year with the assurance that it will be just as abundant the following season. It remains to be seen whether as a valuable product of the soil it will retain the thriftiness which is supposed to belong merely to useless plants.

P. PAYETTE & CO.

Penetanguishene, Ont.

Manufacturers of . . .

Saw MILL MACHINERY, MARINE ENGINES, BOILERS, IRON AND BRASS CASTINGS, LTC.

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Chas. H. Vogel

MILLARCHIECT AND ENGINEER

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Let us have your address and we will send you a copy of our new 1900 Turbine Catalogue, also circulars of the Port Henry Grinder, etc.

THE JENCKES MACHINE CO.

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market, Mr.

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TRADE NOTES.

We are advised by Mr. Feeny, manager of the Ottawa Saw Works Company, that the company s new works will be put in operation in about a fortnight.

The Truro Foundry & Machine Company, of Truro, N.S., recently shipped a steam rotary mill, with trimmer and haul-up, to Rutledge & Sample, Salmon River, N.S.

The Jenckes Machine Company, of Sherbrooke, Quenhave found it necessary to increase their accommodation. When the addittion now under way is completed their foundry will be 200x80 feet.

We have received from Messrs. J. E. Rhoads & Sons, of Philadelphia, a handsomely printed and illustrated catalogue of one hundred pages, descriptive of their leather belting and factory fire extinguishing appliances, etc.

Messrs. W. B. Mershon & Co., Saginaw, Michigan, make an annoucement in the advertisement pages of this number regarding their celebrated band resaws. They report trade to be satisfactory, one of their most recent sules in Can-da being one of their style F band log mills to Messrs. Firstbrook Bros., of Toronto.

About fifty men will be employed in the new factory erected by Mr. J. W. Woods, the well known manufacturer of lumbermen's supplies, Queen street, Ottawa. The building is about completed, and operations will be started an a full scale by December 1st. An electric motor is being installed to operate the sewing, cutting, binding and button hole machines. The new structure, one of the most imposing in Ottawa, is a four storey one, thoroughly fireproof. The basement has been arranged for the safe storage of goods. Mr. Woods intends making a considerable increase in his manufacturing department.

Messrs. Campbell Bros., of St. John, N.B., advise us that during the past year they have done an exceptionally large trade in axes. They have received some encouraging testimonials on their last season's goods, and report that lumbermen are asking for their axes to a greater extent than ever before. Their hand made single and double bitted axes seem to be great favorites with the choppers, who appreciate a good axe better than anything else.

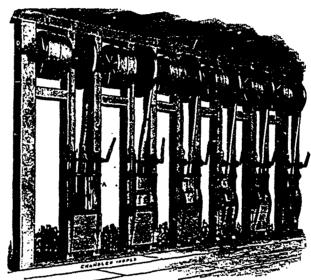
Messrs. Campbell Bros. are now operating their factory to its full capacity, with an increased number of employees, and expect that their output of axes this season will be 50 per cent. greater than last year.

Elsewhere in this issue will be found the advertisement of the Blyth Handle & Turning Works, situated at Blyth, Ont., of which Mr. E. Livingstone is proprietor. Blyth is situated on the G.T.R., but shipment on the C.P.R. can be made from Wingham, or by boat from Goderich. Fire destroyed Mr. Livingstone's plant a few years ago. Since that time he has built his present factory and thoroughly equipped it with the most modern machinery 'necessary for the manufacture of all kinds and sizes of tool handles. Being situated in a district where second growth elm, suitable for handles, is to be had, he made a practical test of its adaptability for this purpose. It proved perfectly satis-

factory, making the best handle in the Livingstone expects to do a large expension paying particular attention to lumbermen'

A most enjoyable evening was spent by the James Warnock Co. and their employable occasion of their second annual dination of the tool shop, presided, the vice-chair being the tool shop, presided, the fact that the vice-chair being the tool shop, presided, the shops, a condition that the shops, a probably did not exist in any other the tools works. The chairman referred to the shops, a condition that the probably did not exist in any other the tools works. The chairman referred to the shops, a condition that the shops, a condition that the probably did not exist in any other the tools works. The chairman referred to the shops, a condition that the shops are shops and the shops are shops and the shops are shops and the shops are shops are shops are shops are shops are shops are shops

The Best Excelsior Machine in the World



When two or more knives are run with one belt, all must stop when the belt is stopped to set bits or from any other cause. Our Machine has a belt for each knife, hence but one knife stops at a time. This great advantage should not be overlooked by purchasers. Time is money. Our Machine cuts more excelsior in a given time than any other machine. Get our circulars and prices.

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Mr. O'Hara. ector of Crown Lands, Agnes Beauce, ing his subscription to the CANADA Que., when re Allow me to congratulate you on LUNBERMAN, "

cal" articles that have appeared in ring the past twelve months."

A DOUBLE-CUTTING SAW.

Mr. J. F. McRae and Mr. Chatles Hamilton, foreman and filer respectively for the Rat Portage Lumber Company, of Rat Portage, Ont., have for some time been experimenting on a double-toothed saw, running on an old type of a Prescott band mill. As a result, they have

satisfied themselves that they can operate the saw on this mill to advantage, and effect a considerable saving. We understand that they intend installing the saws for next season's cut. McRae claims that on account of having a top guide on the mill, it is an advantage over the telescope mill meaning the same and advantage over the telescopic mill, masmuch as sawyers will not keep the

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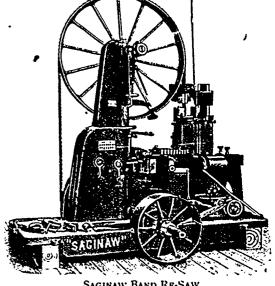
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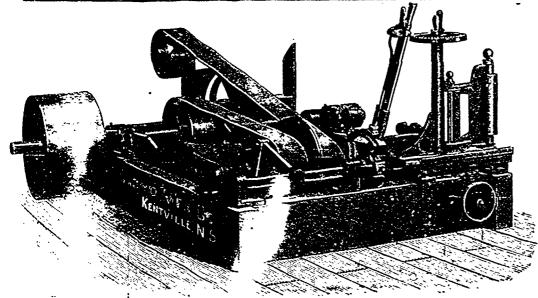
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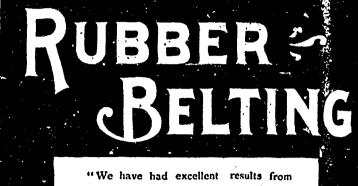
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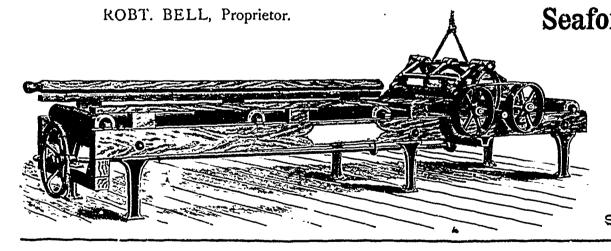
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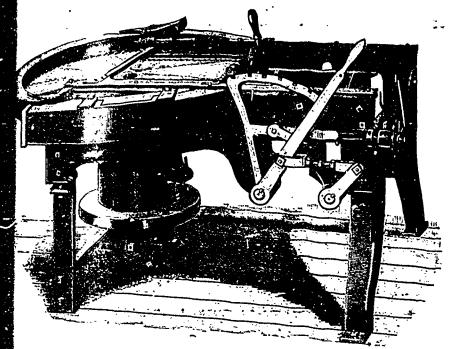
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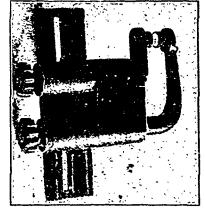
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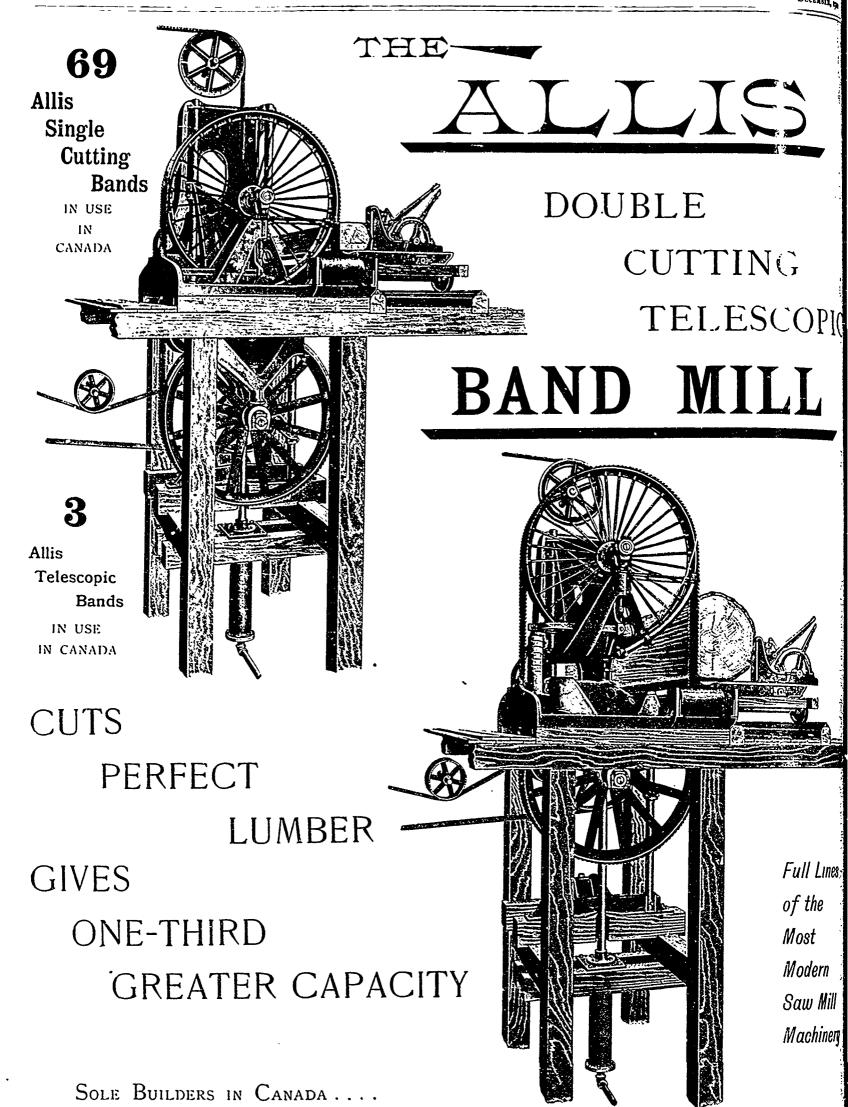
They've never gone back on us, and are guaranteed equally faithful to all purchasers. The ame catalogue that describes these Turbines, and gives their tabled powers under various heads, ontains interesting matter on Saw Mills, Lath and Shingle Mills, Pulleys, Gears, Hangers, Etc.

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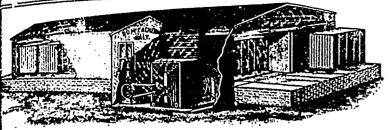
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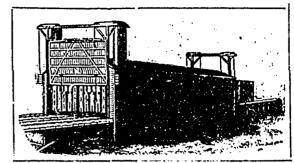
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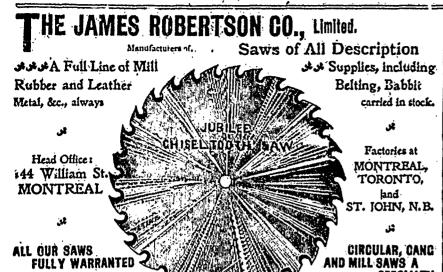
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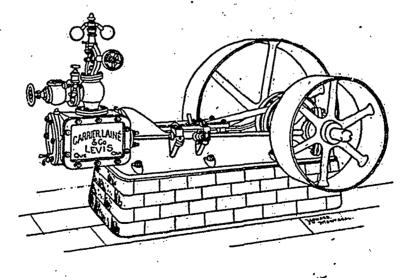
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