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Wood-Workers', Manufacturers' and Millers' Gazette

TORONTO, CANADA, NOVEMBER, 1902

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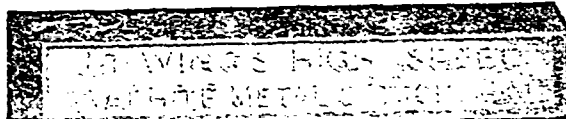
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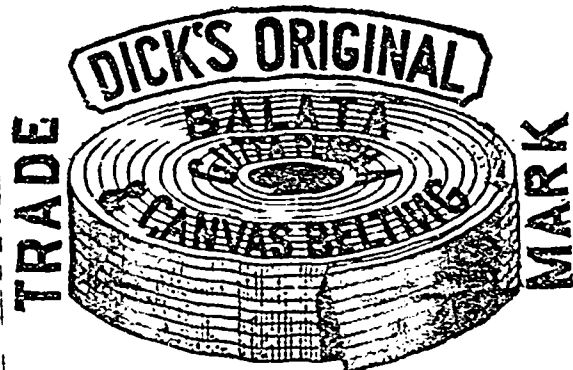
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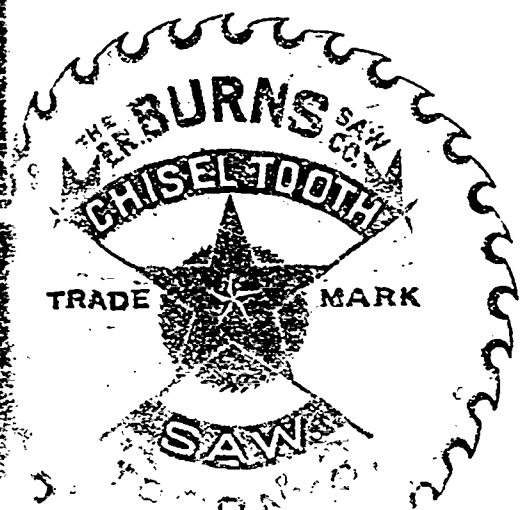
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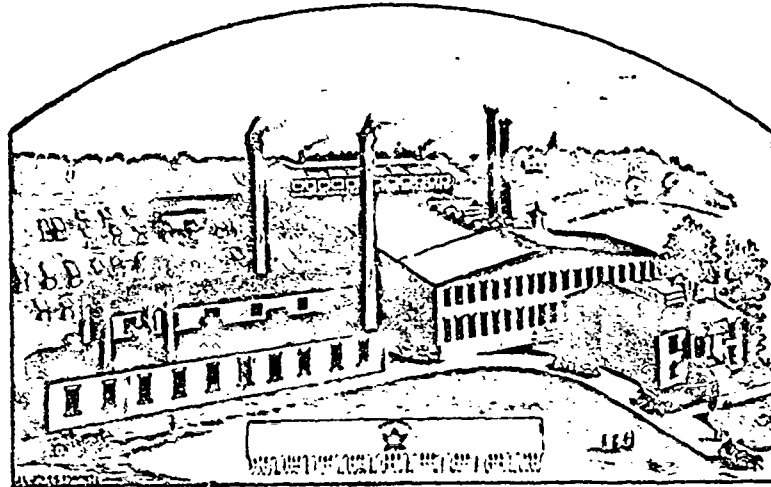
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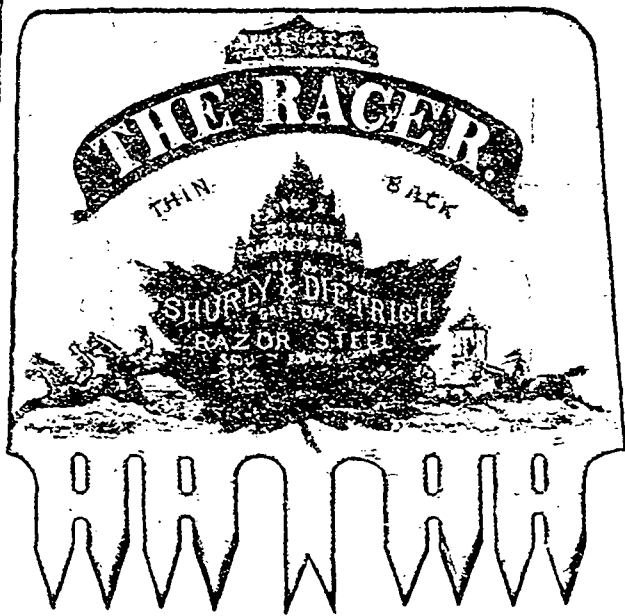
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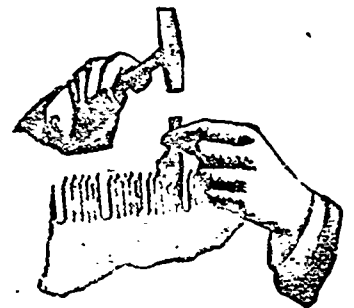
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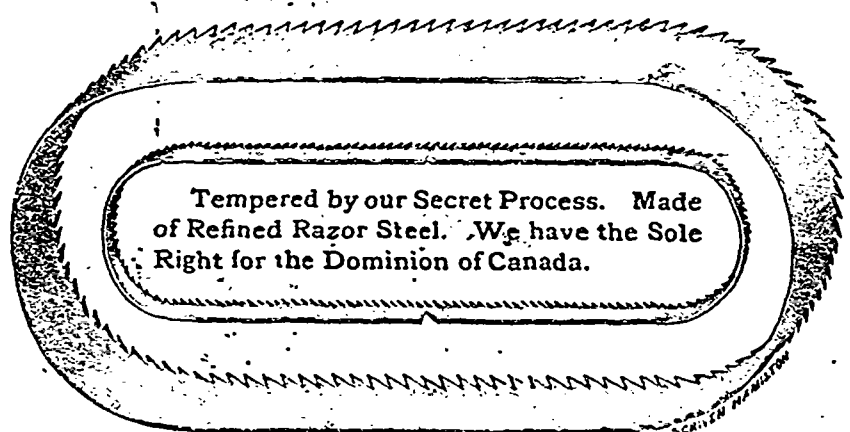
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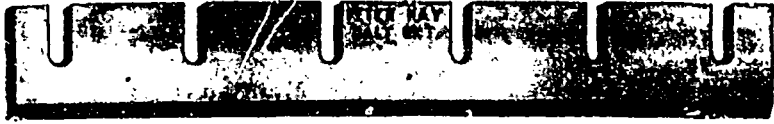
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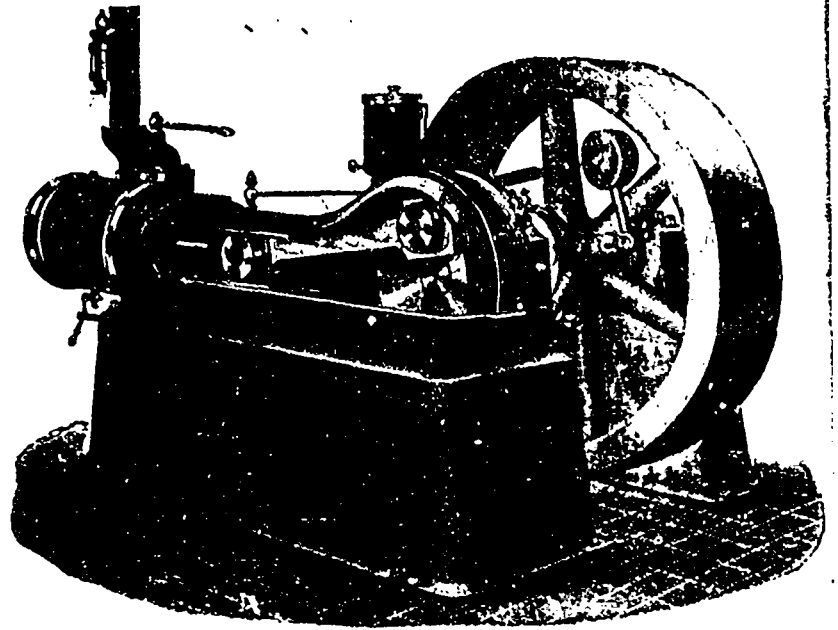
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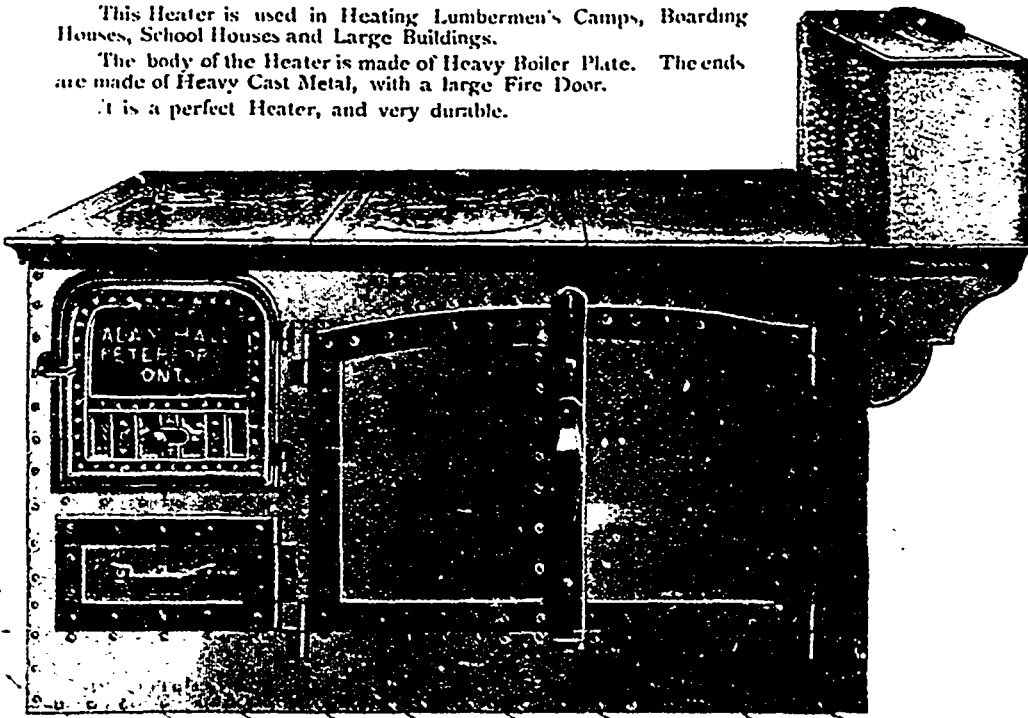
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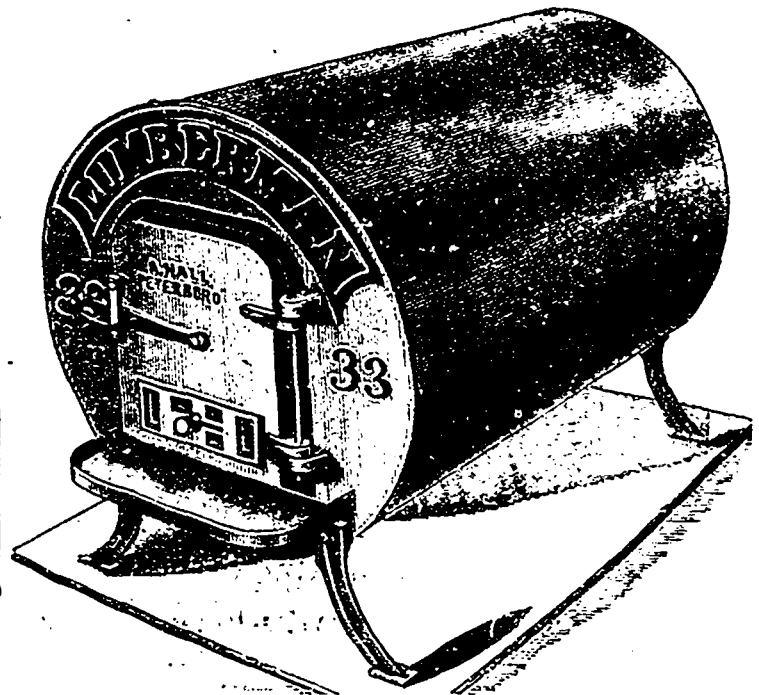
This Heater is used in Heating Lumbermen's Camps, Boarding Houses, School Houses and Large Buildings.

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It is a perfect Heater, and very durable.



Lumbermen's Six Pot Hole Range with Reservoir.



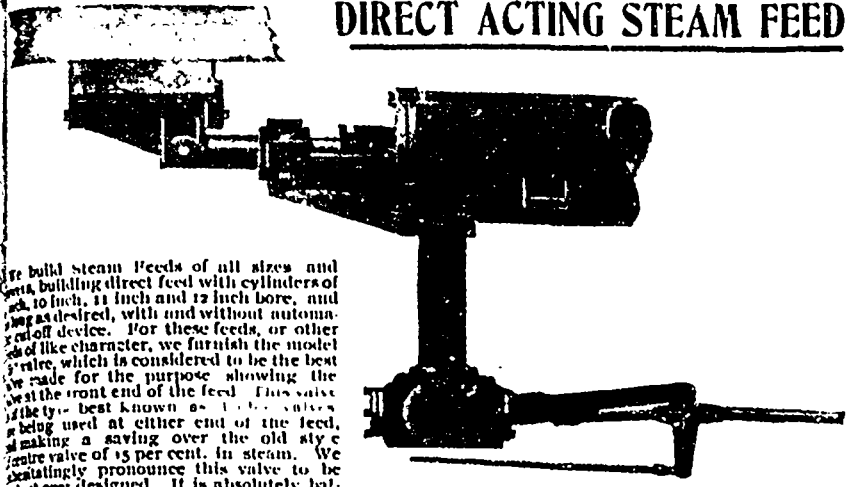
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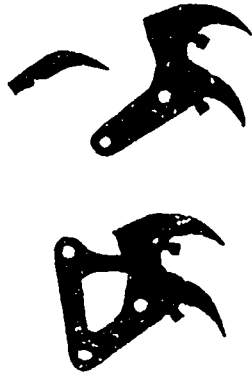


We build steam feeds of all sizes and kinds, building direct feed with cylinders of 10 inch, 11 inch and 12 inch bore, and as long as desired, with and without automatic cut-off device. For these feeds, or other feeds of like character, we furnish the model valve, which is considered to be the best made for the purpose showing the valve at the front end of the feed. This valve is of the best known type, and is being used at either end of the feed, making a saving over the old style of valve of 15 per cent. in steam. We emphatically pronounce this valve to be the best ever designed. It is absolutely balanced, does not stick or kick, has larger steam openings than any other valve made for corresponding sizes of pipe, is economical in the use of steam, and handles the largest and longest feeds, under any pressure, with perfect ease and accuracy. We have also designed a new style of stuffing box which is a great saving in packing, and has an outer support, and is fitted with an oil well, filled with felt or waste which keeps the piston thoroughly lubricated.

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The accompanying cuts fully illustrate our Improved Double-Tooth Dogs with inserted teeth, making the teeth themselves of the finest tool steel. This allows them to be drawn to a slender point that will penetrate without crowding the log or board away from the carriage. The teeth in case of bending or breaking can be replaced in a few moments, and without having to take the whole dog case apart - an operation requiring an hour or more. These Double-Tooth Dogs are controlled by a wrought iron lever that can be bent to suit the operator, and this lever is held by a spring, positively in or out, so that there is no danger of the Dogs pushing out toward the saw. This method of holding the dogs has the merit of being permanent, the ordinary light pawls and connections commonly furnished for this purpose generally lasting but for a few days. Our latest improved carriages are fitted with these dogs.

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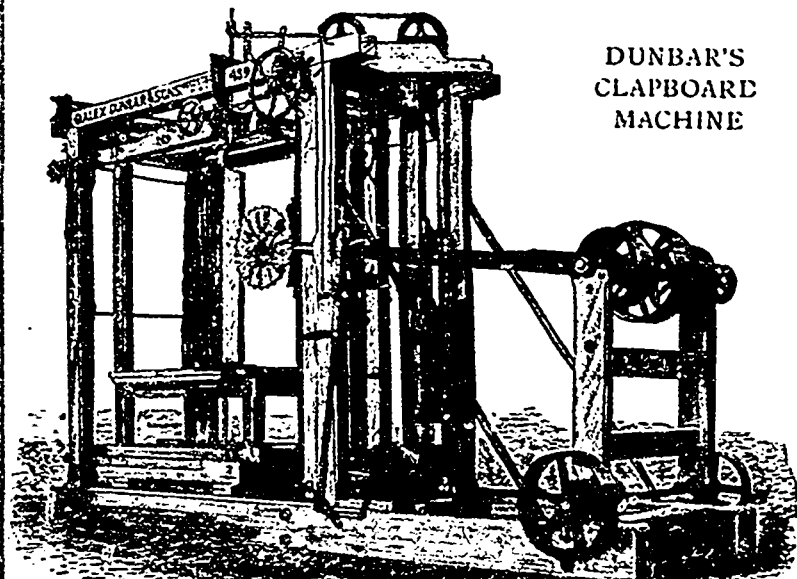
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The Dodge Mfg. Co.,
Toronto, Ont.

Gentlemen,—We beg to say that the Split Friction Clutch Pulley which you furnished this Company is working to our entire satisfaction, and it is with pleasure that we recommend it to any person requiring pulleys of this description.

Yours truly,
[Signed] **The WILSON CARBIDE WORKS CO.**
OF ST. CATHARINES, LIMITED.

The Dodge Mfg. Co., Limited,
Toronto.

Gentlemen.—In reply to yours of the 25th ult., we would say the Dodge Friction Pulleys are by far the best we have ever used. The large friction on five-inch shaft has been in constant use this summer.

Yours truly,
[Signed] **JNO. FISHER & SON,**
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In figuring the cost of a clutch the cost of putting up and of repairment to the working parts must be taken into consideration.

In many clutches this expense amounts to more than the original cost.

In the Dodge Split friction clutch this expense is very nominal.

The Dodge can not only be erected at a less expense than any solid clutch but its subsequent cost for repairs has been found to be one-quarter the cost of a solid clutch.

It is the ideal friction clutch.

It is perfect in balance, easy to erect and adjust, and its friction is positive.

No better clutch has ever been made.

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Let us send you the booklet descriptive of this perfect clutch, as well as the booklet "How good people speak of it."

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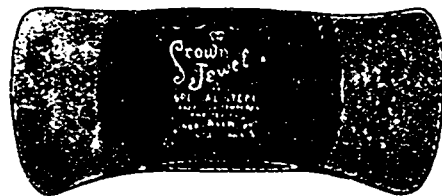
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Engines and Boilers, Complete Saw-Mill Outfits, Shingle, Lath and Edgar Machinery, Wood-Working Machinery of every description.

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THE CANADA LUMBERMAN

VOLUME XXII.
NUMBER 11.

TORONTO, CANADA, NOVEMBER, 1902

TERMS, \$1.00 PER YEAR
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THE TEMISKAMING AND NORTHERN ONTARIO RAILWAY.

Within the past month the Commission appointed by the Ontario Government has awarded the contract for the construction of the Temiskaming and Northern Ontario Railway, an undertaking of great interest to lumbermen and to the public generally. The successful tenderer is Mr. A. R. Macdonell, of Glengarry, who has been engaged in railway construction for a number of years. The portion of the road now placed under contract will extend from North Bay to New Liskeard, a point on Lake Temiskaming distant about 110 miles. The contract is for clearing the right of way, bridging, grading, ballasting and track-laying. It does not include the building of a telegraph line nor the erection of stations. The Commission will furnish the steel rails, which will be 80 pounds to the yard, the fastenings for the same and the steel superstructure for the bridge over the Montreal river. The timber along the right of way is to be manufactured by the contractor into ties, culvert timber, fence posts and telegraph poles, but as there will not be sufficient timber along the right of way for this purpose, a separate contract will be entered into for probably 200,000 ties, which will be sufficient for the first 60 miles of road which are to be completed by the end of next year.

For almost the entire distance the road will pass through an essentially white pine forest, practically none of which has been placed under license. In addition to white pine, however, there is a considerable quantity of spruce, balsam and hardwoods, the latter chiefly birch and maple. About 40 miles from its southern terminus the road will enter the Temagami forest reserve, passing directly through the reserve and reaching what is known as the Temiskaming Land Settlement. Recently there has been a very rapid settlement of this region, until the surveyed land is now largely taken up. The timber in the Temiskaming settlement is varied in character, although spruce predominates. It provides the chief source of revenue for settlers while clearing their lands. It is estimated that the settlers in this district last year disposed of spruce, tamarac and cedar to the value of \$80,000. The E. B. Eddy Company, of Hull, is reported to have purchased 14,000 cords of

pulp wood at an average value of \$2.25 per cord, the other timber going principally to J. R. Booth. This was apart entirely from the operations of lumbermen in the vicinity. It may be explained that two or three townships in the Temiskaming district are under timber

kaming and the Abitibi river spruce and poplar were found in abundance. A few miles north of the Black river, north of the height of land, a clay belt was met with, the timber on which was chiefly spruce and poplar, averaging 12 to 14 inches in diameter, but many of the poplars were 20 inches. Balsam, balm of gilead, and white birch were also found in some quantity.

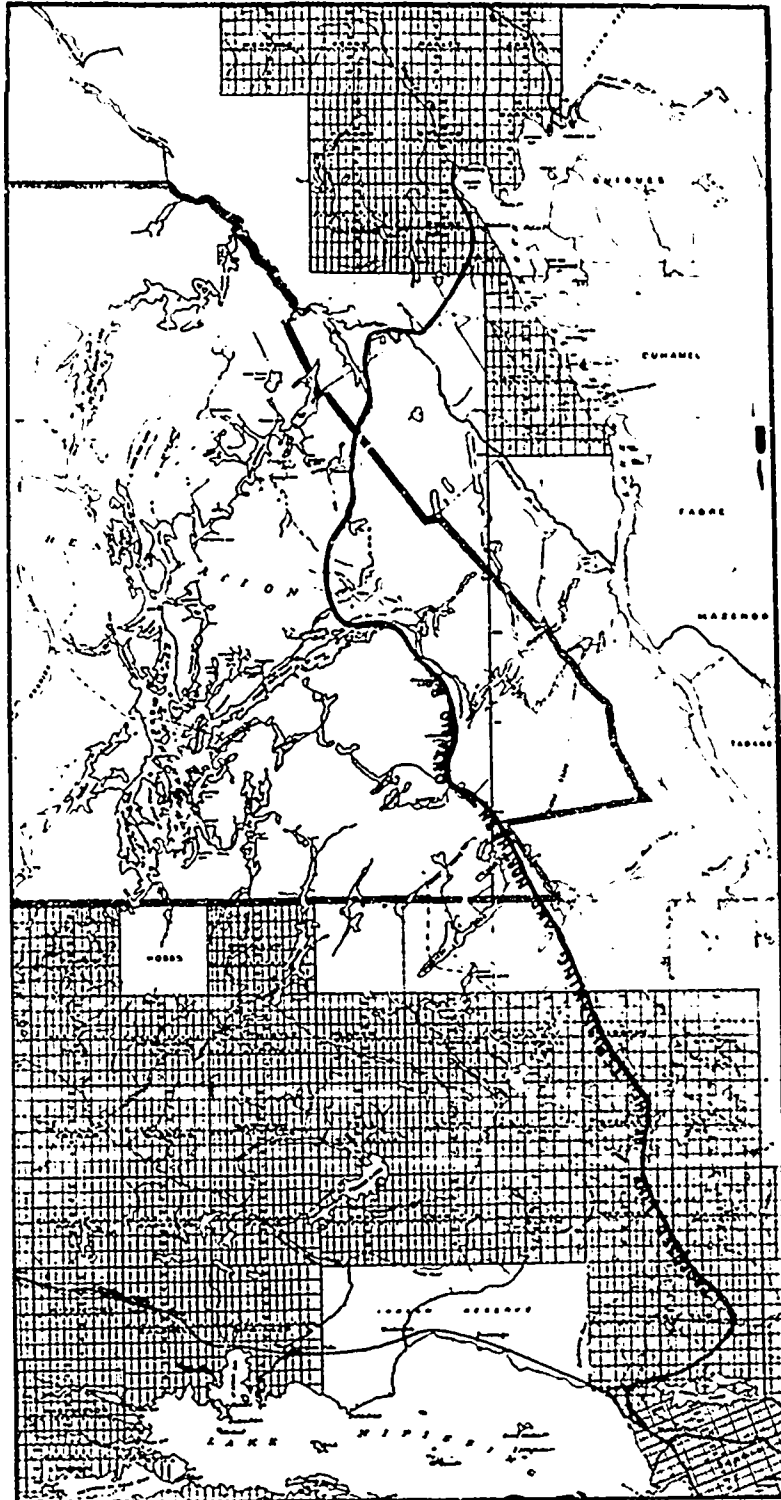
The Commission is understood to be considering the relative advantages of operating the railway by electricity and by steam. It is claimed that, in view of the danger of forest fires resulting from locomotives, the government should adopt electricity. Persons who are familiar with the territory through which the road will pass doubt the practicability of the employment of electricity and state that the location of the road is not the most advantageous for operation in this manner, as it would be necessary to transmit the power a considerable distance. There is no doubt but that every precaution should and will be taken to protect the forests from fire. South of the Land Settlement timber limits extending back five miles from the shore of Lake Temiskaming have been operated for many years, and some of these limits recently changed hands at large figures.

To what extent forest fires are caused by steam locomotives is a debatable question. It is contended in some quarters that steam locomotives carefully screened and kept in proper condition afford little danger of fire. The Canada Atlantic Railway, for instance, runs two hundred miles through a heavily wooded country, and we are informed that during the last six or seven years no fires of any consequence have been attributed to the railway.

A protection which will doubtless be taken with the new line is the clearing of land on each side of the railway for a distance of about 200 feet. The employment of fire rangers should also be resorted to, and as for some distance the road will pass through the Temagami reserve, which is well patrolled by a

staff of fire rangers, we have an assurance that the matter of protection from fire will receive that consideration which it deserves.

The Warton Lumber Company are rebuilding their mill at Barrow Bay, Ont., which was recently destroyed by fire.



ROUTE OF THE TEMISKAMING AND NORTHERN ONTARIO RAILWAY.

license to Ottawa Valley lumbermen, who have operated thereon for some years past.

Eventually, of course, the road will be extended beyond the height of land, where the great spruce territory is reached. A preliminary report by T. B. Speight's surveying party states that in the country between Lake Temis-

LOGGING METHODS IN BRITISH COLUMBIA

The methods employed in logging operations in British Columbia differ in many respects from those in vogue in Eastern Canada. While horses are employed almost exclusively in the east for hauling the logs in the woods, in British

fitable to haul a longer distance. This engine is capable of hauling 10,000 feet of logs at a time. The price of the road engine varies according to the weight and size from \$2,200 to \$3,000. The timber in British Columbia being so



10 x 12 DOUBLE DRUM LOGGING ENGINE AS USED IN BRITISH COLUMBIA.

Columbia steam engines perform this duty to a large extent. By request, we give some particulars regarding the logging engines used for this purpose.

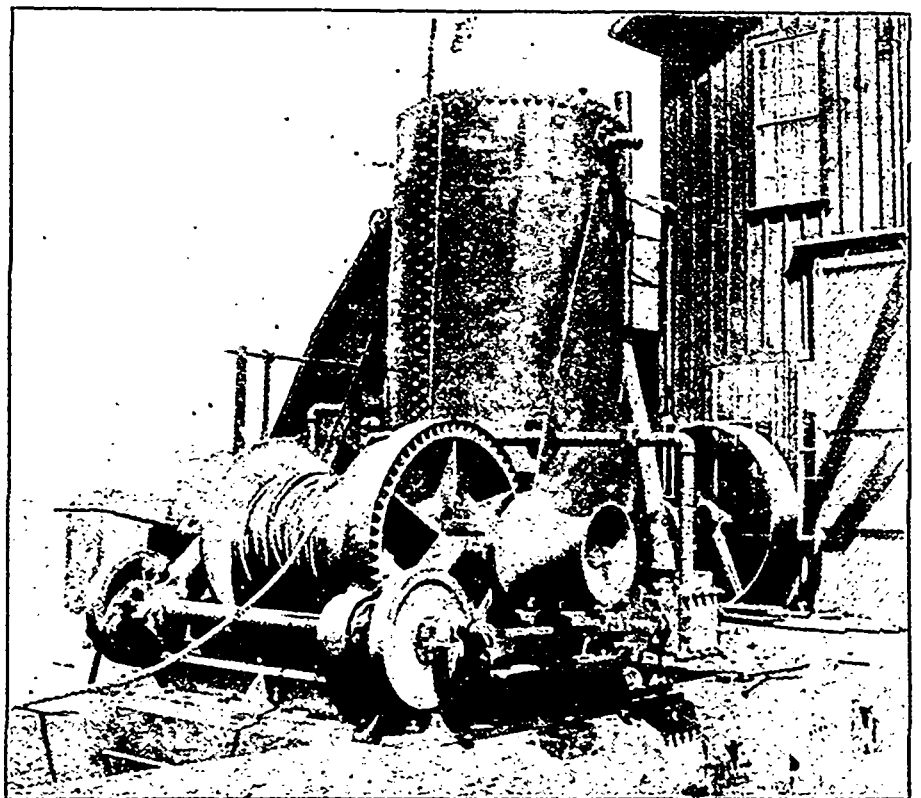
The logging engines which are generally used in British Columbia are operated by steam, and are fastened on to a big sleigh moved about in the woods wherever required under their own steam.

There are two kinds of logging engines. One is called the yarding engine, which is generally put on the main skid road and hauls the trees and logs as they are cut from the bush out onto the main road. The engine hauls the logs out of the woods without making any road for them. For yarding it is customary to use a single drum engine having about 7x10 cylinders, the cylinder usually making six revolutions for one of the drum. In yarding it is not considered advantageous to haul more than 600 feet; it is found to be more profitable to keep the roads up close to the main road.

The engine is bolted on to a sleigh, made of two runners about 18 inches x 24 inches, usually 30 feet long. It is moved through the woods by running out the rope and fastening it to a tree and thus hauling itself up. The 7x10 engine is worth about \$1,500; $\frac{7}{8}$ wire rope is worth about 15 cents per foot, and the blocks are worth about \$20 each.

The other engine is called a road engine and is used for hauling the logs on the main skid road down to the water. It is usually much larger than the yarding engine, with two drums instead of one. The second drum is for the haul back. There is a block made fast at the back end of the haul, one-half inch rope being run through it, and when the load is at the landing the top drum is put in motion and the main line is taken back to the woods. The line used is usually of one inch. An engine of this kind will haul a distance of one mile very satisfactory, but it is doubtful whether it is pro-

heavy and large, difficulty was found at first in getting the engine strong enough, and consequently the operators who first started to use them had considerable trouble on account of breakages. The manufacturers have since studied the difficulties which were experienced



9 x 10 SINGLE DRUM LOGGING ENGINE AS USED IN BRITISH COLUMBIA.

by the loggers, and the machines are now giving splendid satisfaction, and taking the place of horses almost altogether.

Logging engines are manufactured by several Canadian firms, including the William Hamilton Manufacturing Company, of Peterboro, Ont., and the Albion Iron Works Company, of Vancouver, B.C. In sending use the photographs

from which the accompanying illustrations were made the Albion Iron Works Company say:

"We are manufacturing here at the present time a 10" x 12" double cylinder log hauler with main haul drum and haul back drum; this machine is specially built for roading purposes and contains one mile of 1-inch cable. We are also manufacturing two yarding engines, one with double drum 9" x 10" cylinders, the other single drum 9" x 10" cylinders; these machines are capable of handling from half to three-quarters of a mile of $\frac{7}{8}$ inch cable. The single drum machine is worth \$1,650; the double drum 9" x 10" \$2,300, and the double drum 10" x 12" roading engine \$3,000."

THE VICTORIA LUMBER AND MANUFACTURING COMPANY'S METHODS.

Modern methods of logging are employed by the Victoria Lumber and Manufacturing Company, of Chemainus, B.C., the following particulars of which will doubtless be of interest.

Having purchased from Henry Croft and his associates the small mill and mill site then at Chemainus, soon after the Esquima't & Nanaimo railway land grant was made, the Chemainus Lumber & Manufacturing Company entered into negotiations with the E. & N. Ry. Co. for the purchase of all the timber lands contained in their grant. Numerous parties of expert cruisers were at once put in the field, and the E. & N. railway lands from the Koksilah river on the south to the 50th parallel on the north, were thoroughly cruised, and all the lands suitable for logging and containing timber were

selected, and purchased by the company. These lands were not taken up in sections or blocks, but the lines were run just around the timber, taking in no land but what was suitable for logging. The result of such thorough cruising, and the manner in which the lands were selected, is that this company now own one hundred and sixteen thousand acres of the best tim-

ber lands on the Island. This timber lies along the Koksilah and Cowichan rivers, Chemainus river, Nanaimo river, Cameron lake, Comox lake, Campbell river, and other streams and waterways.

A large body of the timber lies adjacent to Chemainus, and into this tract the company have built a standard gauge, well ballasted road, extending from the head of Horse Shoe bay, in a northwesterly direction. This road is about nine miles long, and is now abreast of Ladysmith, and will be extended as the timber becomes cut off. The company do their own logging, and have a large and up-to-date plant in the woods, their power consisting of 12 large donkey engines, two geared locomotives, and one direct connected locomotive on their main line.

In the camps of the V. L. & M. Co. can be seen the latest methods of logging with steam power. Their method is as follows: A cruiser goes out through the woods, noting the lay of the land, the quality of the timber, and how it will have to come out. The cruiser is followed by an engineer, who runs the lines through the timber, taking elevations, etc.; when a suitable route is found the main line is surveyed, graded, and track laid. This main line is built for a distance of two or three miles up into the timber, and from it spurs are built from either side, reaching from the main line to the boundary of the company's land on either side. Where the grades on these spurs permit, the logs are handled on cars down to the main line, in which case landings are built at intervals along the spurs. The tops of these landings are just level with the bunks on the logging trucks. As soon as the spurs are graded, and while the rails are being laid and the landings built, the fallers come in, falling the timber that is to come in over that spur. These are followed by the buckers, who cut the fallen trees up into logs of suitable lengths, then the swampers clear out and get everything ready for hauling. When the landing is completed one of the large donkey engines is brought and placed on one end of the landing securely anchored to convenient trees or stumps; the end of the steel wire rope is taken by a line horse, hauled into the woods, one end of the rope is attached to the log, the signal is given and the log is hauled onto the landing, where it is taken in charge by the loaders, who, using the donkey engine, load it onto the cars. This operation is repeated over and over, until perhaps a radius of 500 or 600 feet is cleared of logs around the landing.

In some cases the lay of the land will not permit of the engines on the landing reaching out far enough to pick up all the timber laying adjacent to the landing, in which case skid roads are built out into the timber, reaching from the landing for perhaps 2,000 to 5,000 feet. At the end of this skid road an engine is stationed, which hauls the logs onto the skid road; the end of the rope attached to the engine on the landing is hauled out to the end of the skid road by means of a haul back line, the rope is attached to the logs hauled in by the yarding donkey, which are made up into a turn of 10 or 15 logs, coupled together by dogs, a signal is given, and the engine on the landing hauls

the logs in on to the landing, where they are loaded onto the cars.

In event of the grade on the spur being too steep for the operation of cars, another system, called "trailing," is used. The ties in the middle of the track are covered with two inch plank, side pieces of 6x6 are placed just inside of each rail, donkey engines are placed at intervals along the road; they haul the logs out of the woods to alongside the road, a geared locomotive starting at the far end of the road takes charge of the logs, which are rolled into the centre of the track, dogged together, and hauled along on the plank between the rails; as the engine passes each donkey the logs they have ready are rolled into the track and attached to the turn; these are finally dragged down to a landing on the main road, where they are loaded onto cars.

The company are using a 25 ton "Climax" geared locomotive, trailing over about two miles of road, which runs up and along the side of Mount Brenton.

For collecting the loaded cars from the different landings, spotting the empties, and making up trains, they use a 40 ton "Shay" engine; when this engine has the train made up it is taken in charge by a 60 ton consolidated, eight driver, locomotive, and hauled down to the unloading wharf at the head of Horse Shoe bay, where by means of a crane and a donkey engine the logs are quickly unloaded into the salt water, and are later taken over to the mill. The company employ from 80 to 120 men in the woods, and run their camps all the year around.

The loading of lumber is also done by modern appliances. After the lumber comes from the mill, that which is intended for the different vessels then loading is placed opposite their berths on the dock. The loading of the vessels is done by The Victoria & Vancouver Stevedoring and Contracting Co., Ltd. Most of the loading is done by steam power. A donkey engine on a scow being fastened alongside the vessel, a wire fall is run from the donkey down into the ship's hold, through one of the hatches, whence it is taken out through the ports onto the deck. A chute is laid from the edge of the dock to the ports. The lumber is built into small piles, called loads, on the dock, the wire fall is attached, and it is hauled into the hold of the vessel by means of the donkey engine. The lumber is then stowed solidly into the vessel by expert lumbermen, who have probably spent the best part of their lives working at the stowing of vessels with lumber cargoes. From 30 to 50 men are constantly employed loading vessels at Chemainus.

DRYING BEECH LUMBER.

A subscriber desires to learn of a satisfactory method of drying beech lumber with the least amount of checking. We would be glad to hear from persons who have had any experience in the drying of this class of lumber and to receive suggestions as to the best method. It has been suggested that the crossers upon which the lumber is piled be placed right at the end of the board, but we are not certain that this would prevent checking.

RULES FOR MEASURING LOGS.

We have been asked to give some information as to the customary methods of measuring saw-logs. There are in this country and the United States two recognized rules, known as Scribner's and Doyle's. Scribner's rule is not used very largely, the one in common use being Doyle's, which has been adopted as the standard rule by the Ontario government. The calculation of Doyle's rule is as follows. From the mean diameter of the log inside the bark subtract 4, square one-fourth of the remainder and multiply the product by the length of the log in feet. The result will be the number of feet board measure.

Scribner's rule is made up according to diagrams. On small logs it gives a greater quantity and on large logs a smaller quantity than Doyle's rule. On logs averaging 100 feet per log it is calculated to allow 15 feet per log more than Doyle's rule.

Taking a 16-foot log, it will be found that Scribner's rule gives more than Doyle's on logs up to 28 inches in diameter, and that Doyle's rule gives the greater quantity on logs of larger size. In the case of very large logs the difference between the two rules is considerable, being 208 feet on a log 16 feet long and 4 feet in diameter.

In addition to Scribner's and Doyle's, there are several other rules used to some extent, one being a combination of the above two rules.

The following table shows the contents of a 16 ft. log, as given by Doyle's, Scribner's and the Combined log scales used in different sections of the United States and Canada, showing wherein they differ:

Diameter in Inches.	Doyle Scale.	Scribner Scale.	Combined Doyle and Scribner Scale.
8	16	25	16
9	25	36	25
10	36	49	36
11	49	64	49
12	64	79	64
13	81	97	81
14	100	114	100
15	121	142	121
16	144	159	144
17	169	185	169
18	196	213	196
19	225	240	225
20	256	280	256
21	289	304	289
22	324	334	324
23	359	377	359
24	400	404	400
25	441	459	441
26	484	500	484
27	531	548	530
28	576	582	576
29	625	609	609
30	676	657	657
31	729	710	710
32	784	776	736
33	841	784	784
34	900	800	800
35	961	876	876
36	1024	923	923
37	1089	1039	1039
38	1156	1068	1068
39	1225	1120	1120
40	1296	1204	1204
41	1369	1272	1272
42	1444	1343	1343
43	1521	1396	1396
44	1600	1480	1480
45	1681	1518	1518
46	1764	1587	1587
47	1849	1656	1656
48	1936	1728	1728

Doyle Scale

Scribner Scale

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ADVERTISING RATES ON APPLICATION.

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

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

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WARRANT" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 25 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

THE EXPORT OF PULP WOOD.

The proposition of the Canadian Manufacturers' Association that the Dominion Government should impose an export duty on pulp wood, to which we referred in last issue, is not regarded with favor by Mr. Edwin F. Bishop, who on another page takes up the cudgels against such legislation. It may be that Mr. Bishop is an out-and-out free-trader, but we are inclined to the opinion that his opposition to the export duty on pulp wood has been engendered in part at least by his company's possession of a considerable tract of spruce timber land held in fee simple and thus exempt from the Ontario government regulation prohibiting the export of pulp wood. Recent contracts placed with his company to supply pulp wood for American mills may also have strengthened his views on the subject. Mr. Bishop makes out a fairly good case, but he can scarcely hope to succeed in changing the existing public sentiment in favor of having our raw material manufactured at home.

Mr. Bishop quotes us as saying, as the opinion of an authority, that 60 to 65 per cent. of the pulp manufactured in the United States is made from timber grown in Canada, whereas our statement was that 60 to 65 per cent. of the pulp used to manufacture paper in the United States was from Canadian-grown timber. Thus both Canadian pulp wood and pulp shipped to the United States would be included in the calculation. But if the quantity should be less than estimated above, it is nevertheless much too large to admit of the proper development of the pulp and paper industry of this country. It is cer-

tain that a vast quantity of pulp wood is shipped to the United States from patented lands of which no record is kept, while it is known that the export from Crown lands in Ontario was increasing rapidly up to the time that prohibitory legislation was enacted. It may be, as claimed, that not a single pulp mill in the United States depends entirely upon Canada for its supply of wood, yet mills located at Port Huron, Niagara Falls, Ticonderoga, Glen Falls, Watertown, and other points obtain a very large percentage of their supply from this country.

The prediction of Mr. Bishop that the United States people will utilize other material for the production of pulp is not a new idea, as experiments looking to that end have been conducted for some years past, with the result that no substitute has yet been found which will take the place of spruce in the manufacture of mechanical pulp, nor have the investigations given any promise in that direction.

Mr. Bishop seems to fear that the imposition of a duty on pulp wood might widen the breach between Canada and the United States and result disastrously to Canada. Last year the United States exported to Great Britain, Germany, South America and other countries, paper to the value of \$4,998,333. No doubt much of this paper was manufactured from Canadian pulp wood. Are we to continue to build up the export of the United States by furnishing the raw material for their industries? Looking beyond the pulp and paper trade, it will be found that for the fiscal year ending June 30, 1901, Canada purchased from the United States goods to the value of \$119,306,000, while her exports to the United States for the same period were only \$70,306,000. The balance of trade, however, according to Hon. John Charlton, who is by no means a protectionist, was more heavily in favor of the United States than would be indicated by the figures, for cutting out the commodities that simply pass through Canada and taking into account only those imported from the United States for consumption, and on the other hand omitting coin, bullion, gold dust, etc., and considering only the exports of other Canadian products to the United States, the balance in favor of the latter country in the year mentioned was over \$70,000,000.

Many people appear to forget that there are markets for Canadian products outside of the United States. Great Britain is a large consumer of pulp and paper and each year our exports to that country are increasing. The visit to this country of Mr. Harmsworth with a view to locating extensive pulp and paper mills is an indication of the possible expansion of trade in that direction. It is also significant that the Chicoutimi Pulp Company have entered into a contract with Edward Lloyd, Limited, of London, England, to supply about thirty thousand tons of dry pulp per annum for the next six years.

Mr. Bishop enters a plea for the settler. It is true that the sale of pulp wood is now a very desirable means of revenue while the land is being cleared. The assumption that

there would be no market for pulp wood if an export duty were imposed is surely based on a misconception. The prohibition of the export of pulp wood would doubtless result in the erection of new mills in Canada which would bring competition in the buying of the wood. Look at the results which followed the prohibition of the export of saw logs. There was, if anything, an appreciation in the value of timber; mills that had been idle for years were rebuilt and put into commission; others were removed from Michigan to Ontario; the population of the lumbering settlements was greatly increased, and the country was in many ways immensely benefited. A like condition would no doubt follow an embargo on pulp wood, although it could scarcely be expected that the transformation would be so rapid and complete.

The natural facilities of Canada are so favorable to the manufacture of pulp and paper that no opportunity should be lost to secure for the country all the benefit resulting from the development of such an industry. From St. John, N. B., to the Lake of the Woods, and even in British Columbia, there are numerous water powers splendidly adapted for pulp mills, while the quantity of spruce timber is admitted to be much greater than is possessed by any other country in the world. Then should we not take full advantage of our national heritage by prohibiting the export of pulp timber? Legislation placing an absolute embargo on its export, such as now applies to the Crown lands of Ontario and British Columbia, is to our mind the ideal condition.

Essentially this is not a tariff question, but it becomes so from the fact that the export of wood from private lands cannot be prevented except by the imposition of a prohibitory tax by the Dominion Government. Such a duty would surely eventually prove to be in the interests of the country. Mr. Bishop's statement that Canada is a "notoriously unsafe country" in which to invest capital owing to revolutionary tariff changes is not well founded. How does he account for the recent purchase of extensive areas of timber lands in this country by the International Paper Company, Burgess Sulphite Pulp Company, Stetson, Cutler & Company and other United States corporations?

OUR SHIPPING FACILITIES.

THE announcement that the Canadian Government had concluded arrangements for a direct steamship service between Canada and South Africa was received with great satisfaction by the business men of this country. The eighteenth of October marked the sailing, from Montreal, of the first vessel under this agreement. The "Melville" is announced as the second steamer and will leave Montreal on November 15th, her capacity being 4,391 tons. During the winter months there will be monthly sailings from St. John and Halifax. The export trade of Canada has doubtless suffered in the past from lack of direct steamship communication, and now that this has been provided with South Africa we may expect to greatly increase our exports to that country.

The reports of the Commissioners sent to investigate the trade openings in South Africa emphasize the enormous opportunities for trade on many different lines, not the least important of which is lumber and wood goods. If Canada is to obtain her proper share of the trade it will be necessary to adopt modern methods that will compare with those of older countries. It has been suggested that three or four firms might join hands in sending a representative to exploit the field.

As affecting our export trade, the improvement of the navigation of the St. Lawrence river is an important step. The Minister of Marine and Fisheries has announced that it is proposed to make such improvements as will place Canada in a position to compete successfully with other countries and result in a reduction of the existing high rates of insurance charged on vessels from St. Lawrence ports. A proposition has been made by a Montreal company to light the channel of the St. Lawrence between Montreal and Quebec by electricity. That this would be of inestimable value is indicated by references to the subject which have been made from time to time by the Marine Underwriters Association, the Montreal Board of Trade, and other influential bodies.

RETENTION OF BRITISH TRADE

The lumber trade is prosperous. This prosperity is not of the spasmodic kind, but is the result of a gradual improvement in the commercial conditions of almost the entire world. During late years the lumbermen of Canada have taken advantage of these conditions to extend their trade in Great Britain. It is to be regretted, therefore, that within the past year or two a disposition has been shown by some to sacrifice their connection which they had established in Great Britain in favor of markets nearer home. Many complaints have been made by British importers that it has been impossible to obtain in Canada the stock which they desired for the reason that the mills which they formerly dealt with were catering almost entirely to the United States market. Thus the effect of the abnormal prosperity has been to cause manufacturers to neglect the British trade, established in some cases at considerable cost. It is only natural that a merchant should desire to dispose of his goods in the market which, all things considered, gives him the best returns, but he should also look beyond the present and endeavour to retain that connection which he has established and which he is likely to again desire when less prosperous times shall return. The British buyer is generally of a conservative disposition, and if once his trade is secured there is not likely to be much difficulty in retaining it. It is not courteous or businesslike, therefore, for the Canadian manufacturer or shipper to desert him when he finds that there may be a temporary advantage by doing so. We are glad to learn that some manufacturers recognize this fact and are nursing their British trade steadily and persistently, knowing how intrinsically valuable it will be when it is more difficult to sell lumber than at present.

EDITORIAL NOTES.

Lumbermen have again this year been "hung up" by the scarcity of railroad cars to move their stock, and we may expect a further handicap by the transfer of cars to the coal trade following the settlement of the labor troubles. The man who has much lumber to ship is likely to be more worried thereby than he was by the coal famine.

An important step has been taken by the United States Bureau of Forestry in the establishment of a dendro-chemical laboratory in connection with the Bureau of Chemistry. This laboratory will devote its attention to the study of the chemistry of forest products. The first work to be undertaken is a study of the chemical composition of the wood and bark of the chestnut oak, white oak, red oak, black oak, and western hemlock. In connection with the methods of kiln drying lumber which are now extensively practised, the laboratory has been requested to investigate the effect of dry and moist heat on the physical properties of various woods. The information secured in this investigation will be of practical value to the lumber trade. Plans have also been formulated to test the various woods of the country with a view to learning their adaptability or otherwise for the manufacture of pulp, as well as for paving blocks. In the latter instance the application and effect of wood preservatives will be reported upon.

A BELFAST correspondent of the Timber News tells of a combine of shipbuilders and other timber consumers to purchase their supplies direct from the producing country. He says: "One important fact is certain, and that is that one of our local shipbuilding firms has just sent out their timber buyer to Canada to purchase, it is said, direct on the spot, waney and square white pine and other goods, and if this new move succeeds it will put a big hole in the shipments of the Quebec and Montreal shippers to Ireland and relieve the local importers of the finest and probably the most profitable part of the Belfast trade. It is a deep and very radical move, and nothing to prevent its success can be done, either here or in Canada, so far as we can judge. They have the money, they pay cash on delivery, and have always done so, and they will in consequence be very acceptable buyers to the Canadian manufacturers. This is only the thin end of the wedge, and is sure to have before next spring shipments other imitators."

DESIGN FOR A VERANDAH COLUMN.

A reader writes us as follows: "I am in want of a design for a verandah column, cornice, gutter and rail, also a tower cornice with gutter enclosed. The building is of the balloon type, boarded and sided on the outside, and is to be built in Colonial style. Any information with designs or diagrams will be appreciated."

Ans.—We publish herewith a design for a verandah column, cornice and rail. Fig. 1, which as near as we can understand our correspondent's wants, will prove quite suitable. The section for a tower cornice and gutter,

shown at Fig. 2, will perhaps answer his requirements in that direction. These designs are suited to each other and both are in Colonial style.

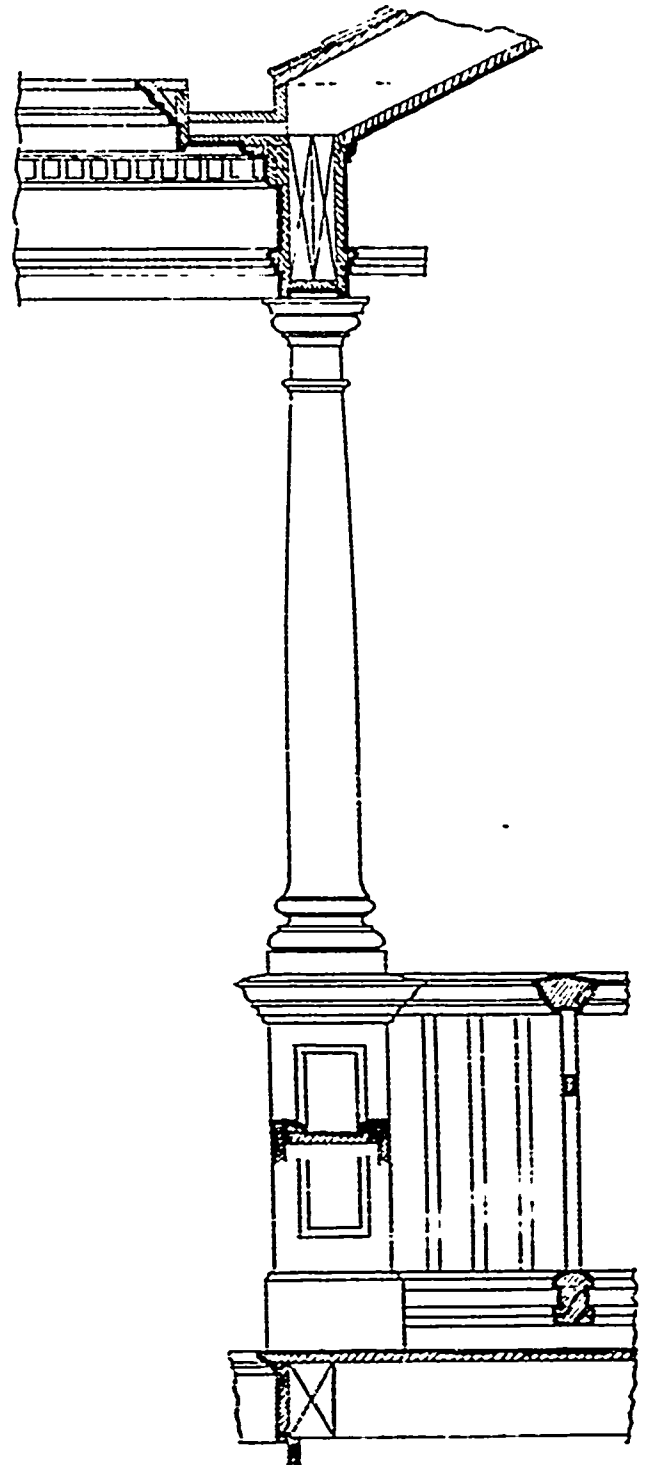


FIG. 1.—VERANDAH COLUMN AND RAIL.

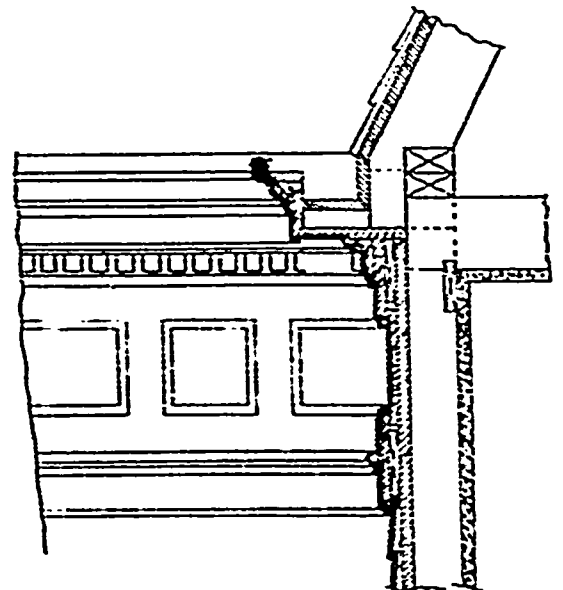


FIG. 2. SECTION OF TOWER CORNICE.

NEW METHOD OF RAFTING LOGS.

The Griffiths Log Rafting Company, Limited, of Victoria, B.C., have invented a new method of rafting saw logs which will appeal to the consideration of lumbermen. A patent on the device, which is herewith illustrated, has been granted in the United States, and application has been made for a patent in Canada. The experiments that have been made with the new method have been very successful, and we are advised that the company have made arrangements with an assurance company to insure logs against loss up to three-quarters of their values which we believe is a new departure in the trade and should make the financial end of a logger's business more easy of finance.

The following description of the method will be of interest:

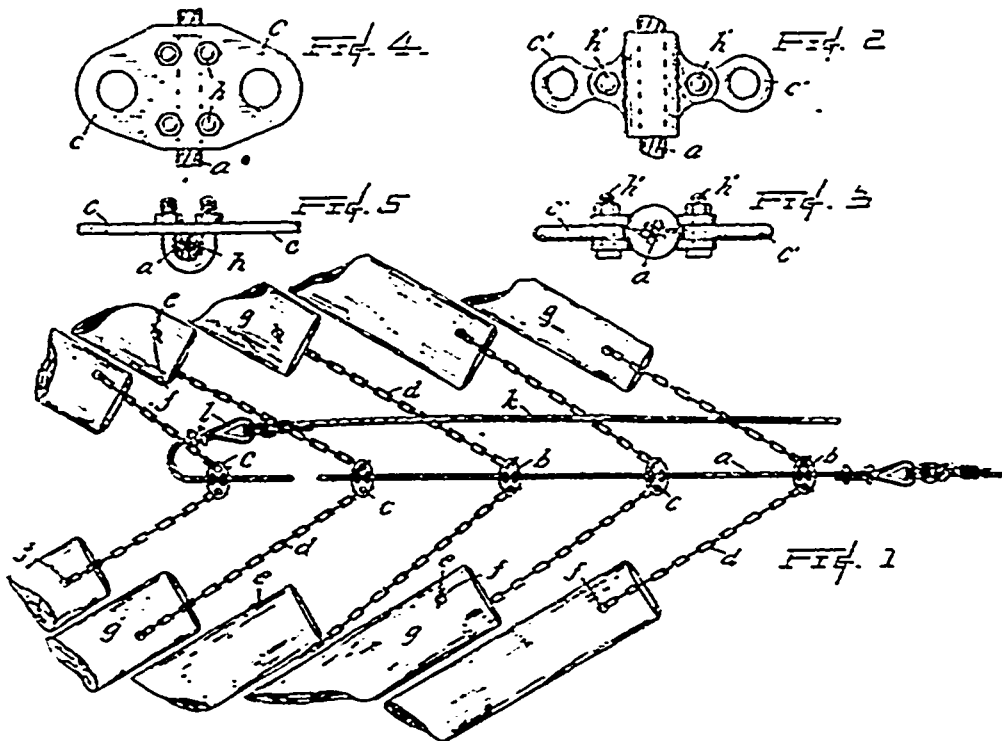
It is common to construct rectangular log rafts where the several logs thereof are confined within enclosing barriers formed of "boom-sticks" tied end to end. These rafts are towed by a hawser bent to the bent of a bridle line, having its ends secured to the boom sticks near the forward corners of the raft. Under the conditions prevailing in rough waters, this manner of constructing and towing rafts is objectionable, inasmuch as they are easily broken up, at considerable loss to the

hawser or of the main draw line, it would be used for towing. Where an unusually long tow is made up, buoyant bodies may advantageously be positioned at intervals along the main line, to prevent the submergence thereof. The main line (a) may, if desired, be made up of a number of logs connected end to end by chains; but cables give the best results in rough waters.

The clip shown in Fig. 4 and 5 is the one generally used, and comprises a single piece of sheet metal secured to the cable by U-bolts (h) as shown. For longer hauls in rough waters, however, it is preferred to use a clip (see Fig. 2 and 3) having a divided sleeve socket provided with internal corrugations corresponding with the lay of the cable strands, so as to equalize the strains thereon. In this last described form the clip wings (c) may advantageously be made separate from the clip body and connected thereto by passing the clamping screws (h) through holes or eyes thereof.

The features of this invention are:

1. The means of rafting logs to be towed, comprising a central longitudinal draw line, lines arranged in pairs along the draw line and adapted to have their outer ends severally secured to logs, and devices for securing the lines to the draw line, for the purpose described.



GRIFFITHS' METHOD OF RAFTING LOGS.

owner, besides the liability of the scattered logs doing great mischief to vessels.

The Griffiths method provides a flexible construction of raft adapted to the roughest bodies of water, and which is so assembled and connected together and with the towing hawser as to reduce the chances of loss to a minimum.

In the accompanying drawings, where like letters of reference indicate corresponding parts in the three views, Fig. 1 is a plan view of a system and apparatus embodying the invention. Fig. 2 is an enlarged plan view of one form of gripping device or clip. Fig. 3 is an end view of the same. Fig. 4 and 5 are, respectively, plan and end views of a modified form of clip.

In these drawings the letter (a) represents a main or draw line, preferably a wire cable, and may be of any suitable length, or number of lengths connected together, according to the quantity of logs rafted.

Attached at intervals along the main line are a number of clips (b) (see Fig. 4 and 5), having two oppositely disposed laterally projecting wings (c), to which are secured lines (d), preferably chains, provided with toggles (e) upon their outer ends, which are passed through holes (f) of the logs (g), and securely engaged therewith, as shown. A hawser (h) is secured to the leading end of line (a), and a supplement line (k) connects the tail end (l) of the main line with the towing vessel, which ordinarily would be slack or loosely upon the raft; but in the event of any breakage, either of the

2. The single line and its connection with a vessel, in combination with means to connect logs or the like to the line: upon both sides thereof, the log connections being disposed in pairs for the purpose set forth.

3. The combination with a central line, clip device adapted to be rigidly secured to the line, two separate chains each detachably secured at one end of the clip device and having a toggle at its opposite end.

4. In combination, a central draw line, connection between each end and a vessel, clips clamped to the central line, two chains each secured at one end to each of the clips, and a toggle upon the outer end of each of the chains.

5. The combination in a log raft with a central line (a) and chains (d) of clips (b) adapted to be rigidly secured to the line and provided with laterally projecting wings (c).

Mr. Hugh Logan gives the following particulars of a recent test of the device:

"I was on board the tug Albion which towed a boom of logs from Port San Juan to Port Townsend, the boom being rafted in the manner known as the Griffiths log raft. We left Port San Juan at 11:30 a. m. on Tuesday, September 2, 1902. There was quite an ocean swell running in San Juan harbor, and on leaving the harbor and rounding the point and entering the Straits of Fuca, a heavy swell from the Pacific Ocean, coupled with an easterly wind and an ebb tide, made a very ugly cross sea. We made good headway in crossing the Straits

to the United States shore until abreast of Pillar Point, when we struck a strong tide rip and a strong southwest wind, together with the ebbing tide. We made no headway on account of the ebb tide, and that morning when we went to the end of the boom to take the towing light off I accompanied the deckhand and walked to the centre of the boom to see how the logs were acting, it being the prevailing opinion amongst towboat captains who have been in the habit of towing logs that the logs would revolve and snap the chain; but I found that when I went to the centre of the boom and watched the action of the logs in this heavy tide-rip, none of the logs revolved, and as a further proof of this I may state the method in which the tail-end light before mentioned was adjusted, namely, a pike pole some four or five feet in length was driven into the last log of the boom and the lantern hung thereon; on taking the lantern off in the morning it was still alight, thus proving to my satisfaction that the logs do not revolve, as, if they did, the last one, being freer than the others, would be the one to revolve. Moreover, if the logs had revolved I would not have been able to get to the centre of the boom, having no caulks in my boots and having no experience in walking on moving logs.

"Pillar Point was reached at 3 a. m., and on account of the state of the weather and the tide, at 9 o'clock the same morning we had lost about two miles.

"At the next flood we arrived about three miles above Freshwater Bay. It was blowing quite hard from the westward, with a heavy sea. We stopped there on account of the ebb tide. I went again that evening in company with the deckhand to adjust the towing-light at the tail end of the boom intact, with the same experience as on the previous occasion.

"We arrived at Port Angeles at 5 a. m. on Thursday, 4th September, and lay there until two hours before the turn of the tide, leaving again at 8 a. m. During our stay at Port Angeles the tug Augusta came in from Port Townsend, from the captain of which vessel our master enquired the state of the weather off Dungeness. The captain of the Augusta advised us not to leave, on account of the heavy seas, which, he stated, "were going clean over him." However, knowing that our vessel and the logs could stand it, we started. Off Dungeness we encountered very heavy seas, and anchored at 5 p. m. on the east side of the spit, to wait for the next tide.

"We left there for Port Townsend at 11 p. m., taking a straight course from Dungeness Lighthouse to Point Wilson (instead of taking a lea course, as is usual), and arriving at Port Townsend at 11 a. m. on the 5th September, without having lost a single log. On our way from Dungeness to Townsend we had a strong southeast wind and a heavy sea.

"I am informed that the Rabboni, towing a boom of logs made up in the ordinary manner, from Callam, and experiencing at or near that point the weather we came through successfully, lost her tow entirely. This matter will be on record; I merely mention it, but cannot vouch for its truth, as I was not aboard the Rabboni.

"The time occupied in towing the boom from Port San Juan to Port Townsend was three days, and we did not delay one moment on account of the state of the weather, the only thing delaying us being the state of the tides. It is my opinion absolutely that the method adopted in this case for rafting the logs is a very great improvement, when rough weather is to be encountered, over the one generally in use; and it is, further, my opinion that by using the Griffiths log raft method of towing it is safe and practicable to tow logs in the Straits of Fuca or similar rough waters at any time or season when the steamboat would herself care to go out. I have no doubt at all that the logs so boomed will hold together, the only point being that weather may be encountered so heavy that the tug herself would have to cut loose from her tow and seek shelter. I would not be afraid to undertake the towing of a similar raft all around Vancouver Island or to San Francisco, provided a powerful tugboat took the tow in charge.

"Referring to the time taken in making this tow, I wish to state that on account of the fastenings to the pointing slipping in the first couple of tiers of logs, it made the logs jam at the forward end, thus forming a blunt or square-nosed boom. I am given to understand that in

ture precautions will be taken to prevent this, and this will be the means of the tow being made in quicker time. To prove this, the tug Resolute, which took the logs from Irondale to Port Gamble, made fast to the point which when we were towing was the tail end, and she made the tow in the usual time."

During the last week of September a second raft was towed between the San Juan and Port Townsend, and again without the loss of a single log.

THE OTTAWA VALLEY.

(Correspondence of the CANADA LUMBERMAN.)

The E. B. Eddy Company has rebuilt its supply depot at Ralph post office which was destroyed by fire. The firm has also stocked its depot at Stubb's Bay on the Dumoine limits. About 45,000 cords of pulp wood will be taken out by the Eddy Company this season. A number of small jobbers are at work and four camps have been established on the Coulonge river.

Mr. J. R. Booth will take out over 10,000 cords of pulp wood on the Dumoine river. This will probably serve as a supply for the new paper and pulp mills he is erecting at the Chaudiere.

The question of establishing a Lumbermen's Exchange in Ottawa is again to the front, but in a problematic form only. The idea is to gather the different firms under one roof so as to facilitate the transaction of business. The Woods building on Queen Street, which is modern and centrally located, is spoken of as a suitable site for the Exchange.

Mr. Woods' business—the manufacture of lumbermen's supplies—has outgrown the present commodious building erected a few years ago, one of the most imposing business establishments in the Capital. He has had plans prepared for a new building, which will be situated on Slater street between Elgin street and the Canal, one block south of the City Hall Square. It will be a six or seven storey building, after the style of the Grand Trunk offices in Montreal, and on completion will represent an expenditure of fully \$80,000. The dimensions will be 90x130 feet. Stone is to be the material used, and the building is to be fireproof and modern in every feature. The plans call for a structure that will be a credit to the commerce of the city.

Work was started last week on the much-talked-of saw mill near Ottawa. It was the original intention to have it built on the site of the old Conroy mill at Deschenes, Que., and operated by a syndicate, firms mentioned in this connection being Fraser & Company, Robert Hurdman and Shepard & Morse. A satisfactory arrangement for railway rates could not be made, however, and a second scheme was advanced, namely, to establish the mill on the Ontario side of the Ottawa river on the site of the old Skead mill. This dropped through also and for a similar reason. The mill as actually built will stand on the Quebec side about a mile above Deschenes Rapids, and about seven miles from Ottawa. It will be built not by a syndicate but by one firm, Fraser & Company having the project in hand. All the timber has been taken out and this material will be forwarded to the mill site at once. Present expectations look to the completion of the work by the early summer at the latest.

The equipment of the new Fraser mill will be modern in the strict sense of the term, and the machinery will represent the latest ideas of American and Canadian experts. Steam is to be the motive power, and provision will be made for the disposal of the sawdust and refuse as fuel.

As regards the handling of logs in the river, the site is even a better one than that of the old Conroy mill at Deschenes village, a mile distant. A buoy-like formation will give the Fraser logs ample protection from the rapid current and rapids which proved a source of trouble at the Conroy mill.

Railway connection will be provided by the Pontiac steam line recently completed from Aymer to Hull and placed under the Canadian Pacific's control. The estimated cost of the mill and site and equipment is \$200,000. Next year's logs are now ready.

Mr. E. Stewart, Dominion Superintendent of Forestry, who has just returned from an official trip to British Columbia and the North-West Territories and Manitoba, granted your correspondent the privilege of an interview. The Pacific Province, Mr. Stewart believes, has a great future in lumbering. Its possibilities for pulp and paper

making, however, are limited, as the spruce is of such large dimensions that it is manufactured into board lumber.

The demand from the eastern plains, with the influx of settlers, has been an active one during the year and promises to increase with the settlement of the prairies. Mr. Stewart has recommended the Government to set aside as a forest reserve three townships near Kamloops, B. C. They are situated in a dry belt, and the action is being taken with a view to conserving the moisture. Forest fires in the Kootenay district did considerable damage, but the Government tract along the Canadian Pacific Railway, which was protected by rangers, escaped. Mr. Stewart travelled on foot and by canoe through portions of the Mackenzie Basin and Peace River countries. He found poplar, white and black spruce, larch and hemlock. One of the great needs of these districts for the development of the timber resources is the railway. All the rivers run towards Hudson's Bay, and hence none are available for the transportation of logs south. Tree planting on the plains of the Territories and Manitoba was pronounced by the Superintendent a success. Nurseries which were established some time ago at Indian Head and Brandon will next spring supply the farmers with over 1,000,000 saplings for purposes of transplanting. A similar nursery is to be established at Virden.

OTTAWA, Oct. 23rd, 1902.

THE SAGINAW VALLEY LUMBER TRADE.

(From Our Travelling Representative.)

Bay City, Mich., Oct. 20, 1902.—Gradually the Saginaw Valley lumber industry has shifted until now the interests of Bay City and Saginaw are practically identical, as far as timber is concerned, with Canada. The cutting down of the Michigan forests drove their lumbermen to the Canadian shores of Lake Huron and the Georgian Bay. Lumber mills are fast disappearing in the Valley.

In a second-hand shop window in Water street in Bay City I saw an engraving representing the Saginaw river as it appeared in 1890—just twelve years ago. The river teamed with tugs, towing great rafts of logs, steamers with barges and vessels of all description. The banks of the river for miles were the none continuous piling ground for lumber; the hum of the saw mill was heard from the mouth of the Saginaw river way up past Saginaw city, a distance of twenty miles. Now, the piling grounds are nearly deserted, the prohibition of logs from Canada having closed many of the mills. True, the lumber comes in large quantities, but it is principally milled in Canada. The men who formerly held timber limits in Michigan and Wisconsin now hold an interest in Ontario limits or are connected with companies who are extensive buyers of Canadian lumber.

The Saginaw Valley, although it has lost its old-time lumber prestige, has seized upon her great natural resources of salt, coal, sugar, chicory, alkali, etc. Most of the former lumber mills manufactured salt, and many of those mills now running utilize their waste steam to produce the article in paying quantities. It is to the manufacturers in the valley that is due in a measure the salvation of the Saginaw river, the largest river in the state. Such wide awake and progressive firms as Wickes Bros., Morley Bros., Saginaw Lumber & Salt Co., W. B. Mershon Co., Mershon, Schutte, Parker & Co., of Saginaw city, M. Garland Co., E. B. Foss & Co., the Industrial Works, and others in Bay City were not satisfied with local trade. They are typical American business men and are pushing out into the world's markets. They are now making a successful bid for a portion of the \$150,000,000 worth of American goods imported into Canada each year, despite the duty.

The Wickes Bros. and Morley Bros. can outfit and equip lumbermen in supplies, tools, etc. The W. B. Mershon Company's band saws are noted the world over. They are now placing some large orders for Australia, South Africa and Great Britain.

In the great lumber yards of the Edward Hines Company at Chicago there are several travelling cranes and derricks for unloading lumber. These were made at the Industrial Works, Bay City. The Hines concern is noted for improved methods and their handling of

lumber and timber is a marvel. Much of this is due to the McGarry patent piler, which is also used extensively by the largest concerns in the Saginaw Valley.

Many of the old Valley lumber companies are now going into the beet-root sugar industry. Several large wooden-ware and box shoo factories in Saginaw and Bay City will yet reach out to the Canadian and foreign markets.

The Saginaw Valley is the garden of Michigan. Whilst raising profitable crops of sugar beets above there may be plenty of coal and salt below any man's farm. Over 11,000,000 pounds of granulated sugar was manufactured by one company last year, whilst the coal mines are running full blast and new ones opening out every month. I personally inspected several of these mines and saw how what lumber mills as were running could manufacture salt with their waste steam. With these, the ship-yards, the chemical works, and the men of push who are not satisfied with local trade, the Saginaw Valley still teems with enterprise and industries to take the place of the vanished lumber business.

EXPORT OF PILING.

We have been asked to state the restrictions placed on the export of piling from the province of Ontario. It is learned that the Government has recently given a ruling that in character piling is not different from saw logs, and that accordingly its exportation from the province is prevented by the legislation enacted about three years ago.

PERSONAL.

Mr. F. M. Anderson, lumberman, of St. Martins, N. B., is a candidate for a seat in the Provincial Legislature.

The death is reported of Mr. Robert McLeod, for a number of years in the lumber business at Black River, N. B.

The death occurred recently of Mr. P. S. Hoe, of the firm of R. Hoe & Company, saw manufacturers, New York city.

It is rumored that Mr. W. C. Edwards, M. P. for Russell, will be appointed to the Senate in succession to Senator Clemow.

The CANADA LUMBERMAN had a pleasant call from Col. T. Tollerfield, representing Messrs. Mansell, Morgan & Feel, of Gloster, Miss. The Colonel will spend some time in Canada with the purpose of purchasing stock required to fill large contracts.

Mr. Wm. J. Macaulay, one of the principal shareholders in the Victoria Lumbering and Manufacturing Company, of Chemainus, B. C., died recently at his residence in Victoria. Deceased has been prominent in the Pacific coast lumber trade for years, and was formerly in the same line in Orillia, Ontario.

Mr. George H. Perley, lumber merchant, of Ottawa, has been chosen to represent the Conservatives of Argenteuil county in the approaching by-election. Mr. Perley has for a number of years past conducted large lumbering operations in the Ottawa valley, and now has mills at Calumet, Que.

A wedding which interested lumber circles took place in Toronto on October 5th, when Mr. Joseph Ormsby Oliver, son of Mr. Joseph Oliver, president of the Oliver Lumber Company, and Alderman for Ward No. 2, took as his bride Miss Hannah Jones, daughter of Mr. John Jones, street commissioner of Toronto. Rev. Dr. Milligan, pastor of St. Andrews Presbyterian church, officiated. The honeymoon was spent in the Eastern States.

The CANADA LUMBERMAN was favored with a call recently from Mr. R. H. Campbell, of Ottawa, assistant secretary and treasurer of the Canadian Forestry Association. Mr. Campbell is one of the younger generation who recognizes the necessity of perpetuating as far as possible our forest wealth. In his official capacity he has done most effective work for the Association, which he reports to be increasing in membership. Steps will be taken immediately towards perfecting arrangements for the next annual convention, which should and doubtless will be the most successful yet held.

THE GORDON HOLLOW BLAST GRATE.

This grate, an illustration of which is here given, is used very extensively by saw mills, hoop mills, stave mills and heading factories in the United States. The manufacturers claim that it makes the hottest fire of any device in existence. It burns wet, green or frozen sawdust or other refuse readily, producing as good results with such fuel as a draft grate gives with dry wood. It develops every ounce of power a boiler is capable of generating, regardless of the weather. It is exceedingly durable, outlasting from three to five draft grates.

This grate is far from being an experiment. It has been on the market since 1889, and there are two thousand sets in daily use.

In the States the manufacturer sells with the following written understanding: "If thirty days' trial does not demonstrate the grate to be a profitable investment, you may return it at our expense."

This not only absolutely protects the purchaser, but

MUSKEGON'S GREAT INDUSTRY.

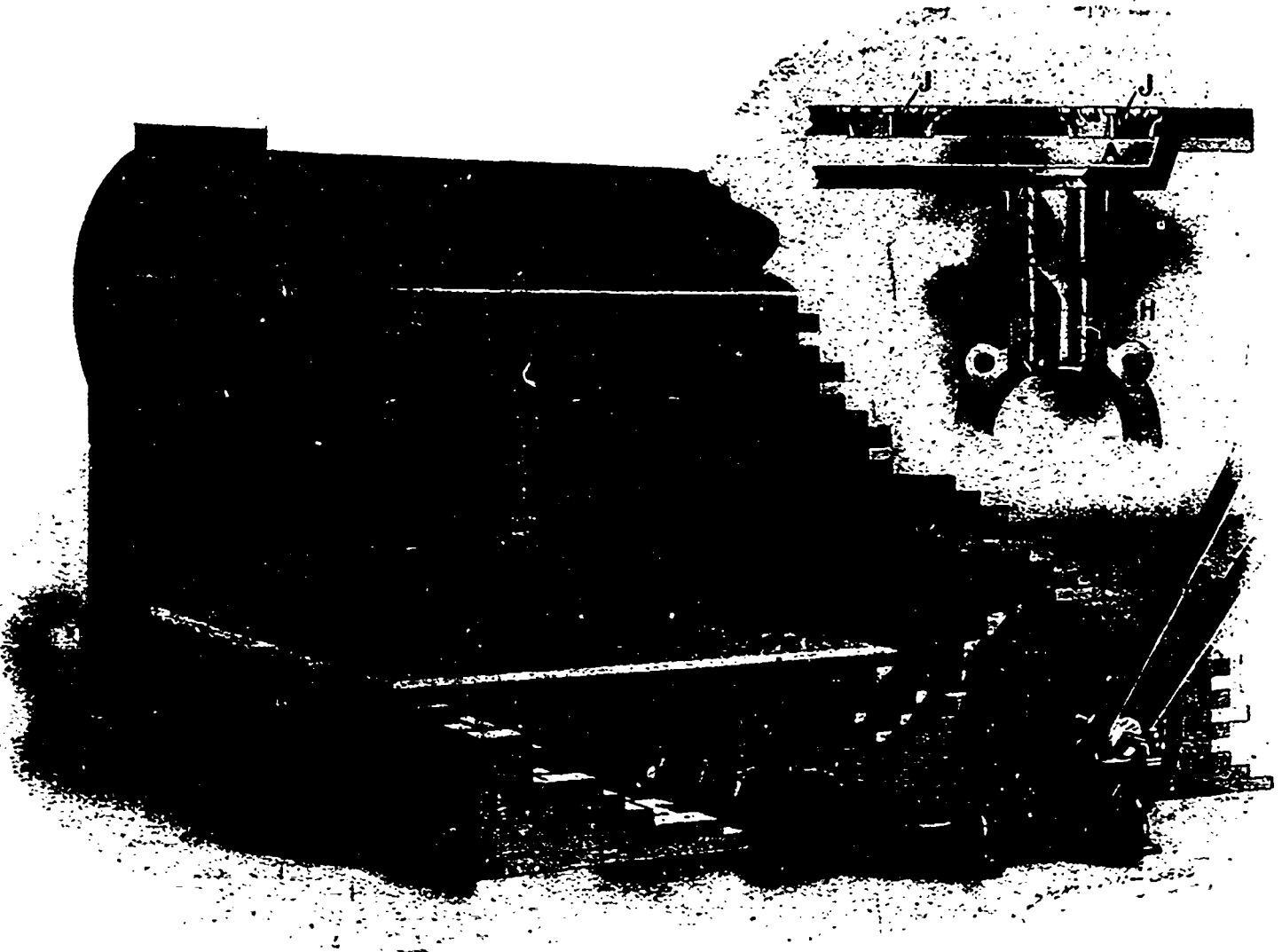
A visit to the immense machine shops of the Rodgers Iron Manufacturing Company in Muskegon, Mich., shows a regular hive of industry. In their special lines they are making the best of modern machinery for saw mills. They are now going into the Canadian field for business, fully realizing that Canada will absorb a great many of the United States mills. This company make a small lath mill to cut 40,000 laths per day and a small "bolter" to go with it. A larger one cuts "pickets" and "bolts." The No. 1 large lath mill will cut all the lath made in the biggest mill extant. This has an attachment for cutting pickets and is a really admirable machine.

The company make a lath binder and trimmer to go with these machines--made on new approved and scientific principles. A rotary fire-wood cutting machine is also one of the best on the market. It will cut fire-wood out of edgings or slabs up to 6 inches thick and 18 inches wide.

also manufacture all kinds of saw mill machinery and will be glad to hear from all interested in progressive up-to-date machinery.

The announcement of J. T. Wing & Company, Detroit, Mich., appears on the front cover page of this issue. This company make a specialty of the manufacture of high grade graphite metal. They claim that owing to the presence of graphite, which acts as a self-lubricant, much less oil is required than when other metals are used. They solicit a trial order from lumbermen.

Extensive factory additions have been commenced by Alex. Dunbar & Sons, of Woodstock, N. B. They proposed to build new machine shop, blacksmith shop and foundry, and to convert the old machine shop into a wood-working factory. The new machine shop will be equipped with a 75 horse power engine of their own manufacture. The firm have orders on hand for 44



THE GORDON HOLLOW BLAST GRATE.

strikingly illustrates the manufacturer's unlimited faith in the grate.

Our representative failed to learn whether they sell on the same liberal basis in Canada, but this information, and any other that may be desired, can be promptly obtained by addressing the sole manufacturers, the Gordon Hollow Blast Grate Co., Greenville, Michigan. This company also manufacture the celebrated "Tower" 2 and 3 saw edgers, "Tower Extra" 3 saw edgers, and "Tower" one-man 2-saw trimmers. In fact, they claim to be the largest manufacturers of blast grates, edgers and trimmers in the world.

We suggest that such of our readers as are interested write for their Catalogue D.

The firm of Douglas & Ross has recently been formed at Vancouver, B.C., to combine real estate, insurance, mining and timber. Mr. C. S. Douglas is well known in real estate circles, while Mr. H. G. Ross is a prominent business man and identified with the lumber trade.

One of the special features in this plant is the "Jumbo edger" with rift saw attachment, a machine first put on the market by this company. It is used principally for cutting "cants" into lumber. The use of this machine will, it is claimed, increase the capacity of any mill 20,000 feet per day. It is likewise an edger for edging lumber to any width--made in all sizes to suit any description of mill. The material used in these machines is of the very best, and the workmen are all expert in their special lines.

Their "cant" or "tie" machine will make "cants" from 4 to 12 inches thick, and railroad ties of all standard sizes. It takes but two men to run it, and has a capacity of 2,000 logs per day, cutting them perfectly straight. In operating this machine the different thicknesses can be gauged without stopping the machine the logs going through all day in a steady stream. It is designed to cut small or short logs and is specially useful to box manufacturers for cutting up small rough logs in which there is much available lumber not generally utilized. The Rodgers Iron Manufacturing Company

shingle machines. It is understood to be their intention to make some new lines of saw mill machinery, including stock gang saws, and a new shingle machine especially adapted to the large timber of British Columbia.

One of Saginaw's great industries are the works of W. B. Mershon & Company situated on the east side of the city. They make a specialty of band saws and band-sawing tools and machinery. They are making extended improvements and additions to their extensive works. Special machines for the manufacture of screws and bolts, all electrically driven, are in operation in their machine shop. One hundred men are kept busy in this shop at the band re-saws and pony band log mill. The different shops are veritable hives of industry. Three railroad companies have tracks through the works and the docking facilities are ample. Mr. E. C. Mershon is the business head of the machinery establishment, and by his keen business foresight and aptitude has built up a special reputation.

THE NEWS

-S. Stevens has sold his saw mill at Fort William, Ont., to A. H. Dale.

-J. Doak has installed a shingle machine in his mill at Doaktown, N. B.

-At West Selkirk, Man., William Robinson is just completing a new saw mill.

-J.W. Shannon & Company, saw-millers, Prince Albert, N.W.T., are reported to have sold out.

-The saw mill of Cruise Bros. & Ritchie at Emo, Ont., has been sold to G. E. Campbell & Company.

-The lumber business Arnell & Company, Port Stanley, Ont., has been transferred to William Robinson.

-Prescott Holman and Charles Johnson, of Truro, N.S., have purchased a wood-working factory at Shubenacadie.

-John Fenderson & Company, lumber and shingle manufacturers, Sayabec, Que., have applied for a charter of incorporation.

-An examination of candidates to be licensed as saw-log cutters was held by the Ontario Government at Rat Portage on October 10th.

-The firm of Smith & McDonald, of the Otter saw mill, Langely, B. C., has been dissolved, and the business will be continued by William McDonald.

-The Muskoka Wood Manufacturing Company have almost completed the erection of their buildings on the old Whaley mill site at Huntsville, Ont.

-The Dundas Company, of New Westminster, B.C., has been formed to take over the lumber business of L.T. Dundas. The capital of the company is \$25,000.

-The Victoria Harbor Lumber Company have moved into their new office building at Victoria Harbor, Ont. The building is a handsome and substantial structure.

-J. S. Emerson, of Vancouver, B. C., who is interested in logging operations on the coast, has invented a log-pushing locomotive which he intends to test on his limits.

-James McGregor, of Cheboygan, Mich., is constructing a large refuse burner for the Huron Lumber Company's mill at Spanish River, Ont. It is 100 feet high and 30 feet in diameter.

-Senator G. G. King is building an addition to his saw mill at Chipman, N. B., and in future will manufacture doors, sashes etc. The new building is 85 x 35 feet and three storeys high.

-Incorporation has been granted to the Pacific Coast Lumber Company, Limited, of Vancouver, B.C., with a capital of \$500,000. The manager is Mr. J. G. Scott, late of New Westminster.

-J. R. Eaton, of Orillia, Ont., has just installed in his planing mill an improved matcher weighing between five and six tons, which will greatly increase his facilities for turning out flooring and other matched lumber.

-Louis de Rossier, who recently returned to Vancouver from the Yukon, reports the discovery of an extensive belt of fine cedar timber near the coast, and 150 miles further north of the supposed northern limit of cedar.

-The Kilgour Shives Lumber Company, Limited, have had plans prepared for a modern saw mill to be built at Campbellton, N.B. It is learned that the contracts for machinery and other equipment have not yet been placed.

-The amalgamation is reported of McNab & Ryan, Leach & Company and Park & Mitchell, lumber manufacturers in the Kootenay district of British Columbia. The combination will be known as the East Kootenay Lumber Company.

-Alex. Fraser & Sons of Ottawa, have purchased from Ritchie Bros., of Aylmer, Que., one hundred acres of land at the head of Lake Deschenes, the purpose being to erect thereon a modern saw mill. The work of construction will likely be carried out this winter, so as to commence sawing operations next spring.

-J. J. Willson has bought out the interest of John

Eaton in the Kean saw mill at Fesserton, Ont. The new proprietors are enlarging the mill and installing a new engine. It is the intention to manufacture lumber, hoops and staves for export.

It is understood that Donald Fraser & Sons intend to remove their saw mill now located at Cabano, Que., to Fredericton, N.B., where it is intended to erect a large modern mill. This mill will be operated in addition to the Aberdeen mills.

The Lake Rosseau Lumber Company has been incorporated, with head office in Toronto and a capital stock of \$40,000. The directors are G. W. Boake, G.E. Rowan, and Edith Lackie, Toronto; W.F. Boake, Downsview; and A. Boyd, Bracebridge.

-The John Harrison & Sons Company, of Owen Sound, Ont., have purchased the saw mill of C. H. Wuthun at Warton. They will remove it to Owen Sound, where it will be used to cut ties for the C.P.R., for which they have a five year contract.

-A. Cushing & Company, of St. John, N. B., have this fall shipped about 100 carloads of mill refuse, slabs and edgings, in 4-foot lengths, to towns in Massachusetts to be used as fuel. A market for this refuse was doubtless created by the coal strike.

An automatic shingle jointer for either dimension or random shingles has been invented by J.D. Caldwell, of Vancouver, B.C. Three of these machines have been installed in the new mill of the Hastings Shingle Manufacturing Company and are said to be proving very successful.

-The North-East Wood-Working Company has been formed to acquire the wood-working business formerly carried on by A.C. Mabee at St. John, N.B. The capital of the company is \$20,000, the applicants for incorporation being R. G. Haley, Kenneth Haley, J.F. Gregory, W.H. Murray and H.W. Cross.

-C. P. Easton & Company have registered their business at Quebec. The firm is composed of I. B., William E., and Frederick Easton, of Albany, N. Y., and it is the intention to carry on the manufacture of lumber, pulp and pulp wood in the province of Quebec. Timber limits for that purpose were recently purchased.

-Theodore Ludgate has again visited Vancouver. It is reported there that he has plans well advanced for the building of a large saw mill, probably on Dead Man's Island. Recently he put through a deal for the purchase of timber limits up the coast, and of course the timber from these limits must be manufactured within the province.

-The old Moore & McDowall saw mill at Prince Albert, N.W.T., has been purchased by American capitalists, who intend to conduct extensive lumbering operations in the vicinity. A company of Rosthern capitalists are reported to have purchased the Shannon saw mills at Prince Albert and to contemplate making extensive improvements thereto.

-G. G. Gladman, whose saw-mill at Westport, near Parry Sound, was recently destroyed by fire, has decided to rebuild on a larger scale. He has purchased the machinery in the "Little Mill" of the William Peter Estate at Parry Sound, which will be removed to Carling. Mr. Gladman will equip his mill with band and gang saws and all modern improvements.

-The Goderich Lumber Company contemplate enlarging their plant at Goderich, Ont., to double its present capacity. In connection with the proposed enlargement a scheme for the sheltering of logs outside the harbor is also under consideration. The plan is to place a stretch of piling at right angle with the main pier and to shelter the logs behind this, bringing them into the harbor in small quantities as needed.

A progressive saw-mill machinery concern is the M. Garland Company, of Bay City, Mich. Their steel cable conveyors are noted all over the continent. Amongst the machinery made at their immense works are band mills, re-saw and circular mills, saw-mill carriages, steam niggers, edgers, trimmers and slab slashers, Kline steam log loaders, center decks, cant flippers, rotary steam feed valves, seacum feed cut-off saws, heading staves and box board machines, stove jointers, equalizers, self-feed rip saws, lath mills and bolters, combined and separate fuel feeders, haul-up

machinery, live rolls, shafting, pulleys, etc. Whilst they have plenty of imitators of their patents, they claim perfection and originality, and make immediate delivery.

The new saw mill of the International Lumber Company at Sault Ste. Marie, Ont., was opened on October 6th, with a force of 100 men. It is one of the many industries controlled by the Clergue syndicate. The mill is fitted up with all the latest improvements and runs with steam. The logs will be conveyed by slides to a clipper, where they will be cut up and then taken to the dry room, where they can then be dropped directly into cars which will be run beneath. The lumber will then be taken to where it is required. To overcome the difficulty of frost in the winter the water in the channel that has been dredged from the bay to the mill will be kept warm by a system of steam pipes, enabling the mill to run as well in winter as in summer.

-Mr. R. A. Estey, of Fredericton, N. B., is making some improvements to his mill. An incandescent electric light plant will be installed to light the mill, and a feed pump to supply the boilers. The water for this purpose will in future be obtained direct from the river instead of, as before, from the city waterworks. Mr. Estey has in previous years mostly cut spruce deals for the British market, but having allowed his supply of logs to run down during the period of lower prices in Great Britain, he was not in a position to resume operations when the market revived. This is one reason why this year finds him running full time on hemlock deals and hemlock boards for the United States market. The boards are dressed on one side, 12, 14, 16, 18 and 20 feet in length, and in width from 6 inches up. The timber is obtained from the farmers up the river.

LUMBERING IN NEWFOUNDLAND.

Mr. D. C. Craig, a veteran lumberman of Toronto, has recently returned from a trip to Newfoundland, in the interests of a company who had obtained an option on 250 square miles of timber land in that colony. This land is expected to yield 100,000,000 feet, half being white pine. The option is understood to be \$60,000, which may be considered a very reasonable figure. Mr. Craig states that there are quantities of white pine, spruce, and fir timber on the Island. The fir corresponds to the Ontario balsam. Until recently no crown dues were exacted by the Government, but a ground tax of \$2 per square mile was imposed. Under a new act, however, purchasers are obliged to pay in addition to the ground rent crown dues of 50 cents per mile. This new act also provides that purchasers must establish within a year of the date of purchase a saw mill and begin manufacture. There are quite a number of mills in operation, a few of them, as for example that of the Murray Company, Limited, being of large capacity. These mills cut mostly deals and scantling for the British, United States and West India markets. A large timber area is owned by Mr. R. G. Reid, the well known contractor, from whom permits to cut may be obtained on payment of 75 cents per thousand feet manufactured. The shipping facilities are good. Most of the mills are located near to the water and load directly on the vessel. In some cases where it is impossible for ships to reach the mill, lighters have to be employed. Some of the mills ship by rail over the Reid system. Wages are very much lower than in the Dominion, averaging only from \$12 to \$15 per month, while supplies can be secured at reasonable figures from Prince Edward Island and other points. Mr. Craig is of the opinion that there are profitable openings to be found for lumbermen in Newfoundland.

WOOD PULP ~ DEPARTMENT

THE EXPORTATION OF PULP WOOD.

PORT ARTHUR, ONT., Oct. 10th, 1902.

Editor CANADA LUMBERMAN:

DEAR SIR,—I note in your monthly edition an article on the proposed export duty on pulpwood, which it has been suggested by some visionary and impracticable people should be \$4 a cord. Unfortunately, absolutely exact data of the quantity exported cannot be obtained, but the statement in your article that 60 to 65 per cent. of pulp manufactured in the United States is made from timber grown in Canada is so absolutely untrue that I am confident that any casual investigation made by you would have shown that not 10 per cent. of the pulp made in the United States is evolved from Canadian spruce. For instance, the only mills in the United States that are to-day obtaining their raw material from Canada are the few scattered along the international boundary from Port Huron to some points down the St. Lawrence, and of all the wood crossing that line 99 per cent. goes from the province of Quebec. By the recent absolute embargo on the exportation of spruce for pulp wood purposes from the province of Ontario, its sale was practically stopped, the only exception being a few scattered farmers, settlers, and one or two small companies like ourselves, who own their lands in fee simple, and have no Canadian market, and therefore are obliged to sell to the United States mills. If you would stop to consider the numerous productions of pulp and paper in the United States from a great many materials aside from spruce, you would quickly appreciate the fact that Canadian wood is a very small factor. The bulk of the American mills are so far from the international boundary that the mere question of freight-rates debars them from the purchase of Canadian wood.

Another fact, which seems to prevail in Canada, is the utter ignorance of the reserves the American mills have to draw on. So true is this that I would like to be advised of the existence of a single mill in America which has been built with a view of relying upon Canadian wood. There is such a general misapprehension of forest conditions in the United States, of the large number of acres still uncut, of the modern scientific and seemingly successful re-forestation in some states, that the usual Canadian attitude is one of utter intolerance towards the idea that any other country possesses any substantial amount of spruce except the Dominion of Canada. On the contrary, Minnesota possesses vast tracts of virgin spruce and Wisconsin has so much left that our company cannot ship to Green Bay and compete with local prices. Maine and New York and Michigan are still supplied with spruce and at least four other states have much of it.

Another element which cannot be overlooked is the fact that Americans are the most fertile devisers of substitutes of any people alive, and that the moment spruce becomes too costly they will utilize other raw

materials and in a short time manufacture an equally perfect product. Just at present there seems to be a mania for export duty on pulpwood, as if this was the only tariff issue between the two countries. Your suggestion that Canada "should disregard entirely all retaliatory measures which may be temporarily put into force by the United States" is the old idea that some day or other the tail will be able to wag the dog. Up to date this has not been possible and it is not likely it ever will be.

Under the Dingley bill the imposing of an export duty, however great or small, on pulpwood, would involve the imposing of a corresponding duty on manufactured pulp, and 50 per cent. of the Canadian product now goes to the United States alone.

The building up of industries in Canada is a most admirable policy, and one in which we are greatly interested, but we wish to protest against any such absurd ideas as

1st. The imposition of any export duty on anything whatever. It is a game two can play at. It also belongs to the dark ages.

2nd. The selection of pulpwood as a mark by which to fatten the pocket-books of a beggarly dozen of manufacturers.

The United States has had enough experience in the way of enriching a few manufacturers at the expense of the many to serve as a solemn warning. As a general thing the public does not want libraries, but bread and meat if they can get them.

Another matter of no small importance is the fact that Canada has for years held out inducements to settlers to take up Crown lands and assured them that they could sell enough pulp wood to support themselves until the land was cleared. If this export duty is imposed either these deluded individuals must accept a miserable pittance for their wood or use it as fire-wood. It should be borne in mind that with the exception of a few widely separated localities there is no market in Canada for this raw material. The farmer or the pulp wood company (and of the latter there are very few) are entirely justified in their desire to sell in the highest market. The idea that this prohibition would force American mills out of existence or compel them to move to Canada is childish. Every recent incorporation of a pulp and paper mill in Canada, in which American capital was largely involved, has been done with a view to exporting to European countries or, if at all, only incidentally to the United States. These concerns have been few in number and located at points on or adjacent to tide-water. The private land owners in the immediate vicinity of these concerns are not able to sell to them a single cord, because a large concern owning their own concessions can cut their own pulpwood cheaper.

In the money markets of the world Canada is a

notoriously unsafe country in which to invest capital, and if it does not make revolutionary tariff changes very often, it constantly threatens them, and an illogical policy agitates for them. The policy of "Canada for the Canadians" is all very well, but when it practically means "Canada for only a few Canadians" the issue will be how far the few can benefit the many. By fair treatment of capital so it will be able to figure on the continuance of existing conditions for a reasonable number of years in advance, it is only a matter of time when her natural resources will be fully developed, and developed so thoroughly and legitimately that any artificial propagation would have been a most serious mistake. For instance, how would Canada enjoy an export duty imposed by the United States of \$4 a ton on anthracite coal. In view of present conditions it ought to appreciate what this would mean, and, while I do not believe in any spirit of retaliation, it is usually the bigger dog that can retaliate the hardest. Canadian manufacturers, as well as those in the United States, are to-day enjoying such prosperity that a careful student of affairs is almost inclined to tremble. The New World is rapidly to use a slang expression, "putting the Old World out of business," and of this progress Canada is getting its proper share. The surplus of American capital is rapidly being transferred to this side, not only in the way of the rush into the North-West wheat lands, but in the way of enormous factories and the heaviest kinds of investments. There never was a time when there should be wise men at the head of Canadian affairs, thoroughly determined to let well enough alone.

Very truly yours,

EDWIN F. BISHOP,

Manager Lake Superior Timber Company.

VISIT FROM A BRITISH CAPITALIST.

Much benefit may accrue to Canada as a result of the recent visit to this country of Mr. William Harmsworth, of London, England. Mr. Harmsworth, is a brother and partner of Mr. Alfred C. Harmsworth, of the London Daily Mail. The special object of his visit was to investigate the timber resources of Canada with a view to the establishment here of pulp and paper mills which would ensure a permanent supply of paper for the various publications in which Harmsworth Bros. are interested. The supply has in the past been obtained largely from Norway and Sweden.

Mr. Harmsworth visited the provinces of Ontario, Quebec and New Brunswick, and it is understood that he was favorably impressed with the extent and quality of spruce available for pulp purposes, as well as with the number of suitable water powers. From his remarks the impression was obtained that they will locate in Canada, although it is improbable that a decision will be reached for some time. Two or three locations are being considered.

The extent of the proposed operations of this company are little less than wonderful. It is the intention to control the manufacture of paper from the raw material to the finished product. Timber limits will be purchased, pulp and paper mills erected, and vessels constructed or purchased for carrying the pulp across the Atlantic. It is learned that 1,000,000 tons of paper per week will be required. This will mean immense expenditure in mills and equipment and labor to produce such a large quantity of paper.

One of the difficulties in securing a location is the

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

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CHEMISTS AND MILL EXPERTS
SULPHITE PULP MILLS

Drewsen Acid System

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Richards-Drewsen Chip Separator

Herreshoff Pyrites Furnace

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

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NEW YORK

necessary that shipments should be made the year round. It is understood to be the intention of Harmsworth Bros. to operate their timber limits with a view to reproduction, and they may even go so far as to resort to replanting.

PULP NOTES.

It has been rumored that Cushing & Company, of John, N. B., contemplate building a new pulp mill at Fairville.

Joseph Kilgour, of Kilgour Bros., Toronto, was in Ottawa recently looking for a site upon which to build a paper mill.

John Fenderson & Company, Sayabec, Que., now applying for incorporation, ask for permission to carry on a pulp and lumber business.

The Chicoutimi Pulp Company are making extensive additions to their pulp mill at Chicoutimi, Que., by which the capacity will be more than doubled.

A report is current that a Mr. Norden is making arrangements for the establishment of a large colony of Finlanders at Portage a l'Ours, on the banks of the

Ashwanmouhouan river, 38 miles north of Roberval, Que. Large pulp mills at this point are spoken of.

The Chicoutimi Pulp Company, of Chicoutimi, Que., expect to have their new pulpmill completed next spring. It will have a capacity of 100 tons of dry mechanical spruce pulp per day, all of which will be exported to England under a contract with Edward Lloyd, Limited, of London, until 1908.

Irving R. Todd and H. F. Dowst, of Calais, Me., have been incorporated as the Eastern Pulp Mill Company, the purpose being to build a mill at Baring, N. B., for preparing wood so as to be suitable for pulp mills. The proposed mill will be 95x25 feet exclusive of boiler room, and will give employment to about 25 men.

An American syndicate has taken active steps towards the establishment of pulp and paper mills at Bella Coola, B. C. The site of the mills will be within four miles of the village. Philip Jacobson, of Bella Coola, states that the settlers have agreed to grant the company all the timber on their lands upon condition that the industry be established at the point mentioned, and that the Government has offered the company the privilege of leasing 125 square miles of timber limits on which there is a large quantity of spruce and cottonwood.

An English party, consisting of M. Graham Lloyd, of

the Sydney Mail and Sydney Morning Herald, A. B. Craig, a prominent woollen merchant of London, H. L. Trueman, a wealthy banker and broker, L. P. Andrews, a noted English pulp expert, and C. W. Sawbridge, a solicitor, are making an inspection of the property of the Sturgeon Falls Pulp & Paper Company at Sturgeon Falls, Ont., in which they are interested. Their visit is in connection with the proposed expenditure of about \$2,000,000 in increasing the pulp and paper plant of the company. The timber limits of the company are being explored, and should they reach the expectations of these gentlemen there is little doubt but that the proposed expenditure will be undertaken.

The Refined Wood Company has been incorporated under the laws of the State of New Jersey, with a capital of \$1,000,000. The company will manufacture wood pulp lumber under the patents of F. E. Keyes, who has just returned from Germany, where his refined wood lumber is being manufactured. Under the patents it is intended to so incorporate and unite the fibres of wood pulp and similar fibres that they can be formed into boards of any desired thickness and of a size limited only by convenience in handling. Refined wood, it is claimed by the inventor, may be of the density of the finest pine or of the hardest mahogany and take as soft a finish; it may be bent or curved in any direction and will not change in shape.

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Saw Sharpening Wheels
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Quick, Cool, Strong, Durable.
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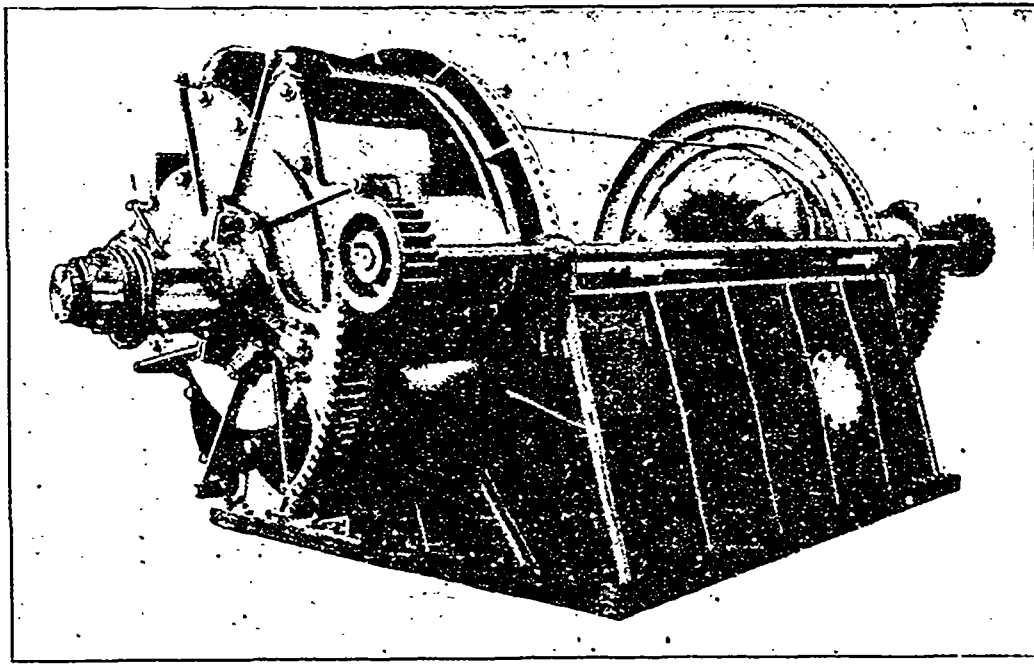
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OPEN FLUME TURBINE PLANTS

For use under moderate heads where local conditions permit its adoption, there is probably no more satisfactory setting for horizontal wheels in pairs than the draft chest with central discharge, placed in an open flume.

The first cost is moderate.

The flow of water is unobstructed and ample, and as a result speed regulation is easy.



Pair of 36 Inch Wheels, Mounted on Draft Chest with Top Removed.

We are now engaged in building a 10,000 H.P. Wheel Plant, each pair of wheels being of the general type shown above, arranged for direct connection to Wood Pulp Grinders. Send us particulars for estimate, or write for catalogue and information.

Direct connection to Pulp Grinders or other machinery may be arranged with facility.

Wheels are readily removed and replaced.

We have several styles of cases for use in open flumes, either steel plate or cast iron construction as may be required, or cast iron sides with steel plate top as shown in the engraving.

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

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

SAW MILL MACHINERY.

When travelling through Michigan our representative called upon the firm of Wickes Bros., of Saginaw, well known as manufacturers of saw-mill machinery. Wickes Bros. started operations in Saginaw in the year 1860, at which time the Saginaw Valley and tributary country was covered with dense forest of the finest cork pine, and lumbering was practically the only industry. They commenced building a line of heavy saw mill engines and other saw mill machinery, which found favor with the saw mill operators, not only of Saginaw and its immediate vicinity but throughout the entire State. Among the first machines they turned out were several of the old-fashioned gang saws with wooden framing, light parts and slow motion such as were generally in use at that date and which would produce but a very small percentage of the amount of lumber cut by one of the gangs of to-day. Realizing the disadvantages of the machine as then constructed, they designed, patent-

vince of Canada; Newfoundland and the countries beyond the seas. Among recent shipments was one of a gang sawmill for the United States Navy Ship Yard at Manila, Phillipine Islands, and one of a gang sawmill for Havre, France.

It is not to be inferred that the Wickes gang is the only product of these shops; they build also a complete line of saw mill machinery, including heavy duty slide valve engines, log haul-up rigs, log kickers and loaders, log turners or niggers, carriages, band mills, circular mills, live rolls, edgers, trimmers, slashers, lath machinery, etc. Their boiler shops are among the finest in the country and turn out a product that is second to none. Among other users may be noted the new Beet Sugar Factory at Dresden, Ontario, where there are some 1,500 horse power of Wickes' vertical water tube boilers.

Some years ago when co-incident with the exhaustion of the cork pine preserve, Michigan mills began to close through lack of timber, Wickes Bros. started a business, which has since grown to very considerable proportions, by purchasing abandoned saw mill outfits. As a rule they were bought cheap and sold at a correspondingly low figure, and many of them are set up in Canada and earning money day after day for their owners. The firm now operate very extensively in this line, purchasing and selling all kinds of abandoned plants and maintaining large sales warehouses at Saginaw, Mich., Pittsburg, Pa., and Jersey City, N. J. They issue monthly a list of second hand machinery on hand in their various warehouses and will mail this list to any one on application.

They are located near to the great lumber producing section of Canada, have had a long acquaintance with Canadian trade, and understand its

needs thoroughly. They are, therefore, well equipped to care for Canadian orders.

TRADE NOTES.

The Winnipeg Machinery & Supply Company are installing a saw mill plant at Bowsman, Man., for Caverly & Sons.

A circular from the Tanite Company, Stroudsburg, Pa., calls attention to the many excellent qualities of the emery wheels offered by this company.

A little booklet called "At Home" gives small half-tone glimpses of the plant of the American Blower Company, of Detroit, Mich., who make a specialty of dry kilns.

The Meaford Manufacturing Company, of Meaford, Ont., have installed a two-room "Standard" moist air dry kiln, built by the Standard Dry Kiln Company, Indianapolis, Ind.

The M. Garland Company, Bay City, Mich., have just shipped another of their improved band mill carriages for the Meadow Mountain Lumber Co., Newport, Tenn.

The Eau Claire Supply Company, Eau Claire, Wis., have sent us a copy of their catalogue B referring to their lumbermen's sleds.

The Baden Machinery Manufacturing Company, Limited, of Baden, Ont., has been incorporated, to

manufacture engines and boilers. Charles Hood and Oliver Master are interested. The capital is \$40,000.

"Electric Locomotives for Surface Haulage" is the title of a catalogue issued jointly by the Westinghouse Electric and Manufacturing Company, of Pittsburg, Pa., and the Baldwin Locomotive Works, of Philadelphia.

James W. Woods, manufacturer of lumbermen's supplies, Ottawa, is having plans prepared for a new building, his present premises being too small for his extensive business. The new building will be commenced this fall and must be completed by August 1st, 1903.

Messrs. Joshua Oldham & Sons, the well known manufacturers of gang, circular and band saws, New York City, are sending out to the lumber trade a novelty in the form of a pocket lumber scale. It is conveniently arranged and enclosed in an aluminum case. On the front of the case is the announcement of the firm and on the back a view of their extensive works.

A large business is gradually being built up by the Owen Sound Iron Works Company, of Owen Sound, Ont. This company have just decided upon the erection of new works of an extensive character. The main building, to be known as the machine shop, will be 300 feet long and about 50 feet wide. There will also be a pattern shop and metal storage building each 40 feet long, and a boiler shop 100x40 feet. The company make a specialty of saw-milling machinery.

Mowry & Sons, of Gravenhurst, Ont., have recently issued an illustrated catalogue of their manufactures, which include saw and shingle mill machinery and supplies, steam engines, boilers, etc. Some of their specialties are automatic saw sharpeners, log jacks, log decks, log loaders, steam niggers, steam feeds, steam edger transfers, steam jump saws, slab slashers, "Boss" shingle machines, knife jointers and splitters. Persons about to build new mills or to remodel existing plants should write for a copy of their catalogue.

The Fairbanks Company, Craig street, Montreal, have concluded arrangements with the Dodge Manufacturing Company of Toronto for their general agency for Montreal and vicinity. An entirely new stock of Dodge standard pulleys has been put in, as well as various stocks of Dodge transmission goods, including ball and socket hangers, flange and grim death couplings, safety collars, improved self-oiling bearings, all types, etc. All of these standard lines will be carried in stock at the Fairbanks Company's warerooms, for immediate shipment at factory prices.



WORKS OF WICKES BROS., SAGINAW, MICH.

ed and built the first iron frame gang saw-mill ever used in America, applying to the sash an oscillation movement which presented the saws to the cant in such manner as to result in an easy cut, and freed them entirely on the up-stroke. The result, our representative was told, was an enormous increase in the quality and quantity of the output, and from that day to this Wickes gangs have held their position among the best machines of the kind made. Their builders cheerfully acknowledge that the suggestions they receive from their customers are among their most valuable aids in improving their machines and adapting them to the ever-changing and more exacting requirements of the trade. With a vast number of customers and with a highly skilled engineering staff and perfect shop equipment at their command, it is easy to understand how is that the Wickes gang maintains its pre-eminent position.

Wickes gangs are made only at the shops of Wickes Bros., Saginaw, Michigan. They have no representatives, either resident or travelling, nor is any concern in Canada authorized to build or vend Wickes gangs. The trade of the company is widely distributed, covering nearly every State in the Union, nearly every Pro-

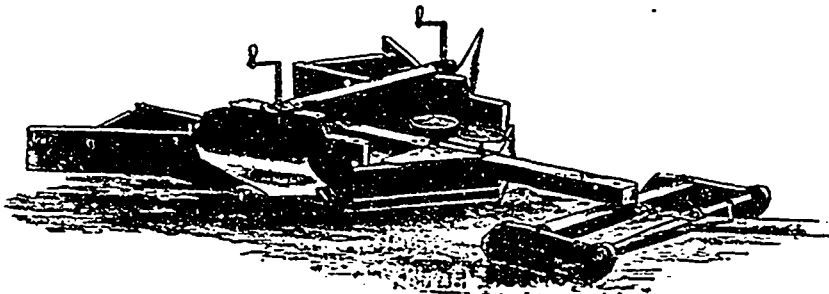
Recording Thermometers for Dry Kilns, Hot Rooms, etc.



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HELIOS-UPTON CO.
PEABODY, MASS.

THE BRAZEL PATENT SNOW PLOUGH AND ROAD MAKER



For use in snow and ice roads. Saves sleighs and harness. Encoorsed by all lumbermen who have used them. Cuts six inches wider than sleighs. Rolls snow clear of track. Cuts off knolls, fills up holes. Levels roads perfectly, prevents sleighs from sluing. Cuts off dirt and manure, leaving it on bank. Ploughs up, rolls out, and pushes clear 12 inches of loose snow each time machine passes over road.

An attachment for extra team behind machine can be furnished when required. Made all widths.

The Wilkinson Plough Co., Limited, Toronto, control the rights of manufacture and sale. Write for price and description.

The Wilkinson Plough Co., Limited, Toronto.

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

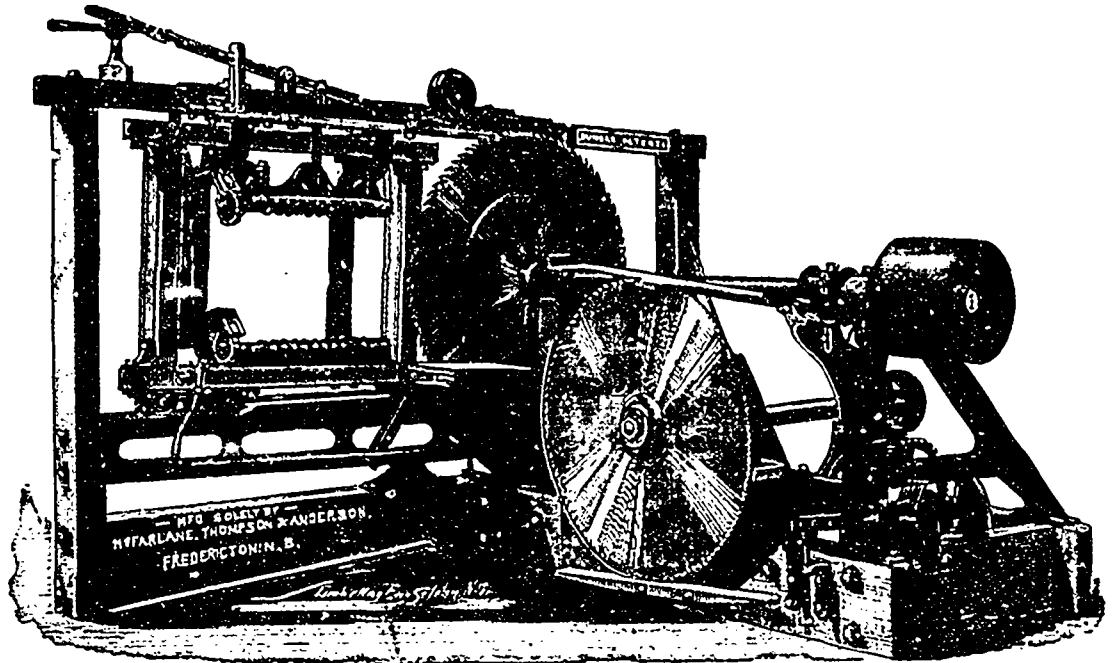
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Manufacturers of the only original

PATENTED DUNBAR SHINGLE MACHINE

And Sole Proprietors of the said patent

Universally admitted
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machine on the
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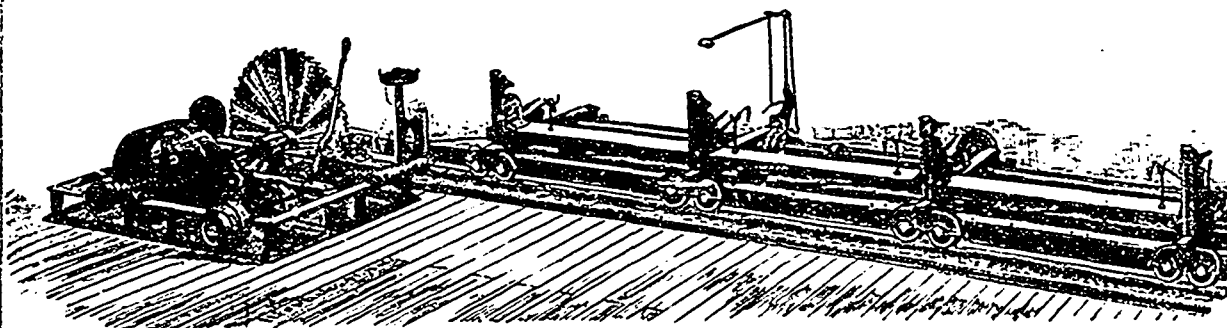
PATENT DUNBAR SHINGLE MACHINE.

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

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

“When all the rest fail, or are down for repairs, or are cutting shims, the
McFarlane, Thompson and Anderson **DUNBAR SHINGLE MACHINE**

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



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

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

Our prices are right.

Kindly allow us to quote before purchasing.

For further particulars address

**McFarlane,
Thompson &
Anderson,**

Fredericton, N. B.

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

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

THE METIS LUMBER COMPANY.

CHICAGO'S LUMBER KING.

Edward Hines has been called the "Young Napoleon" in the Chicago lumber industry. He started as a tally boy at \$4 a week, and the other day one of his deals involved \$400,000. The Edward Hines Lumber Company is one of the largest in volume of business transacted in the whole world. The extensive yards, offices and mills are located south of Blue Island avenue on Lincoln street, one of the show sights of Chicago.

This concern own and maintain a mile and a half of dock frontage, with double track capacity for 220 cars. They have 15 large lake steamers operating among their extensive timber locations. In Wisconsin and Michigan they own exclusively 500 million feet of standing pine, and at their Chicago plant alone they have a storage capacity of 75 million feet. Their two planing mills take care of 700,000 feet of lumber in ten hours. The S. K. Martin Lumber Company and the

I. Stephenson Lumber Company have been absorbed by the Edward Hines Company, making four of the largest Chicago companies which have been consolidated with the latter company.

A visit to the yards of the company shows a "beehive" of industry representing over two millions of money invested. The latest improved machinery, including the McGarry patent safety lumber piler, is used entirely in these yards.

A SAFETY LUMBER HOIST.

One of the most interesting sights in Chicago is the rapid manner in which immense quantities of lumber are piled. This is done by an invention of Mr. John A. McGarry, the yard manager of the Edward Hines Company. It is not only a rapid and safe piler, but a lowering machine. It combines absolute safety to any required height, durability, economy, utility and simplicity. Mr. McGarry has also a patent adjustable

swivel pulley for the bottom of the pile, a patent self-acting tongs. The whole outfit is cheap and will save its cost over hand labor in one or two weeks. The largest concerns in the United States use this piler.

INQUIRY FOR WILLOW TREES.

F. Westbury & Son, 183 Great Dover Street, London, are seeking a certain class of willow trees. They would be glad if some Canadian lumbermen would send them a sample bundle of leaves taken from the species available, with some details as to height and girth and approximate cost per tree c. & f. London. They state that as soon as they see the leaves they will know whether business is practicable.

Boyd, Caldwell & Company, Limited, has been incorporated, with a capital of \$200,000, to carry on the lumber and woollen business of Boyd, Caldwell & Company at Appleton and Lanark, Ont.

ANNOUNCEMENT

We have established a Land Department in connection with our main Chicago offices, with resident agents at our branch places, Houston Bros., Cairo, Ill., Memphis, Tenn., Vicksburg, Miss., Columbus, Miss., and Bigbee, Miss.

We are offering for sale six different tracts each in solid bodies of virgin White Oak timber standing thick, with a sprinkling of Red Oak, Cypress, Ash, Hickory and Gum, thrifty growth, the way nature produced it without depredation, advantageously located for milling or manufacturing purposes, having both railroad and water transportation facilities. Prices very reasonable. Write us for particulars.

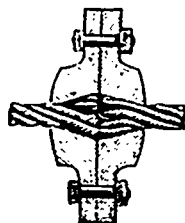
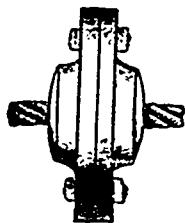
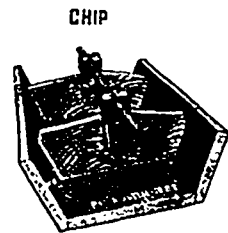
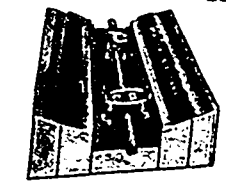
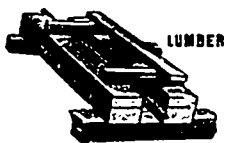
We sell rich Delta and Tombigbee River Valley land, alluvial soil, from which the timber has been removed, desirable for agricultural investment, colonizing purposes or stock farms. We employ settlers in connection with our logging and milling operations. Write us for maps and description.

We manufacture Hardwood Lumber, Yellow Pine and Cypress and will quote you on a basis of stumpage value, cost of manufacturing and handling bill, straight or mixed car lots; direct shipments from either of our sawmills bearing the lowest freight rate to point of delivery. Write us for prices.

GEO. T. HOUSTON & CO.,

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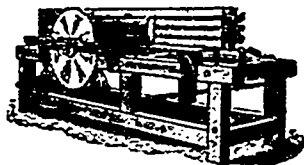
Band and Circular Mills, Band Re-Saws, Edgers, Trimmers, Lath Machinery, Slab Slashers,



Kline Steam Log Decks and Loaders Steam Feeds Steam Niggers Conveyors for all Purposes

The M. Garland Co.

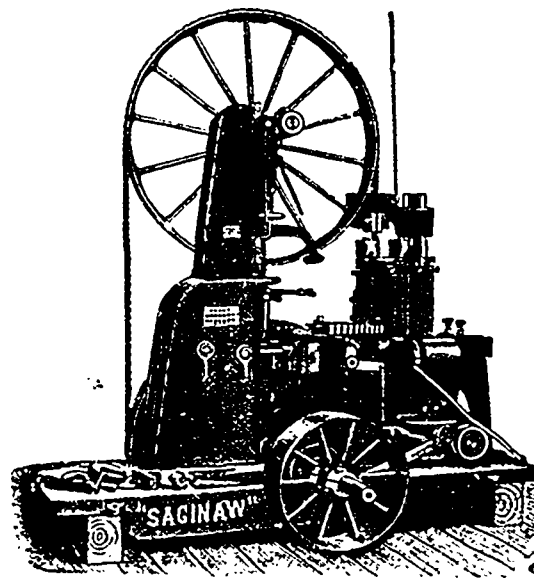
Bay City, Mich., U. S. A. Manufacturers of High Grade Saw Mill and Conveying Machinery



Saw Mill Architects

750 MERSHON BAND RE-SAWS

IN DAILY USE.



SAGINAW BAND RE-SAW.

Buy Direct and Get the Genuine

W. B. MERSHON & CO

SAGINAW, MICH., U.S.A.

LUMBERING TOOLS.

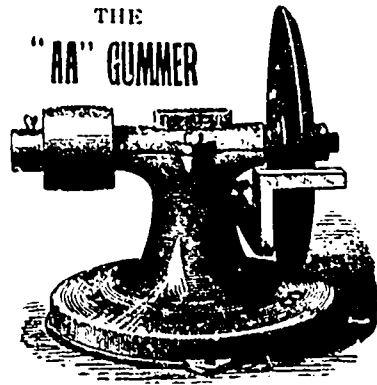
A great industry in Saginaw, Mich., is that of Forey Bros., occupying two blocks of that city with their own railway and docking facilities. Our representative was shown over the works of this concern, where are manufactured the celebrated "Blue Line" lumbering tools, also mill supplies of every description, including special harness for lumbermen's use. A patent equalizing trace is a feature of the latter. In their foundry are four immense steam hammers at work. Lumber cant dogs, cant hooks, pikes, etc., are hand-forged—much superior to the weaker drop-forging. Three hundred horse-power of pressure is used to place the steel pike in the "peavey," the handles being of maple and hickory. Our represen-

tative was shown a car-load of seven-foot handles for shipment to Montgomery, Alabama, for southern pine operations. The company also manufacture skidding tongs, cold chutes or repair links, chain grab hooks and chain round hooks, swamp and loading hooks, in which a special quality of steel is used.

The Woodstock Lumber & Manufacturing Company, Limited, of Woodstock, N. B., is applying for incorporation.

P. PAYETTE & CO.

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



10 inch Swing;
\$4.50 Net Cash, 14
inch Swing, \$5.40
Net Cash.
Emery Wheel
not included.
Grinding Ma-
chines, Saw
Gummers, Dia-
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THE
TANITE CO.
Stroudsburg,
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To Those Who Carry Insurance on Lumber

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

For information apply direct to our home office,

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Canadian Agents :-: Prices Reduced
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RE-OPENED FOR ORDERS
Blyth Handle Works
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MANUFACTURERS OF . . .
Tool Handles
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LUMBER CAMP SUPPLIES A SPECIALTY
White Rock Maple and second Growth
Rock Elm Furnished to the Trade . . .
Catalog on Application. E. LIVINGSTONE, Prop.

OILS

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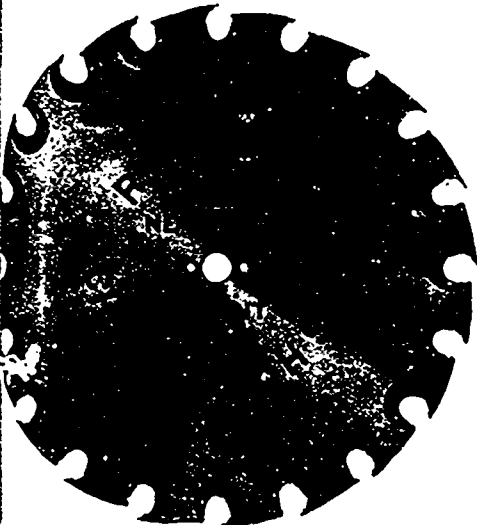
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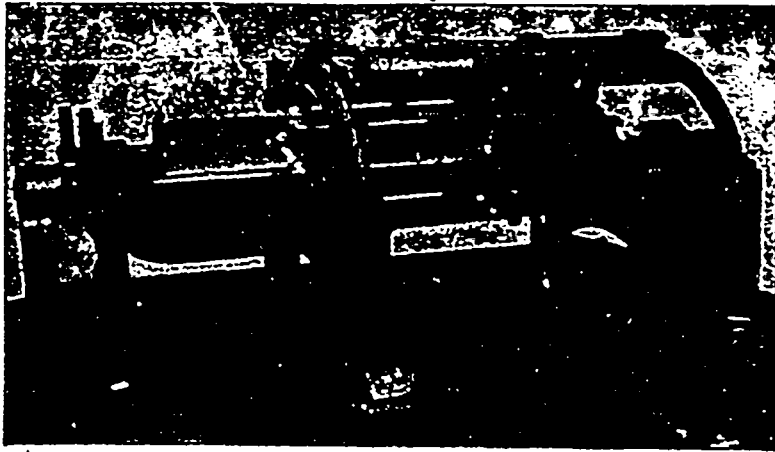
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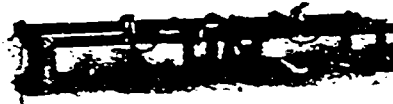


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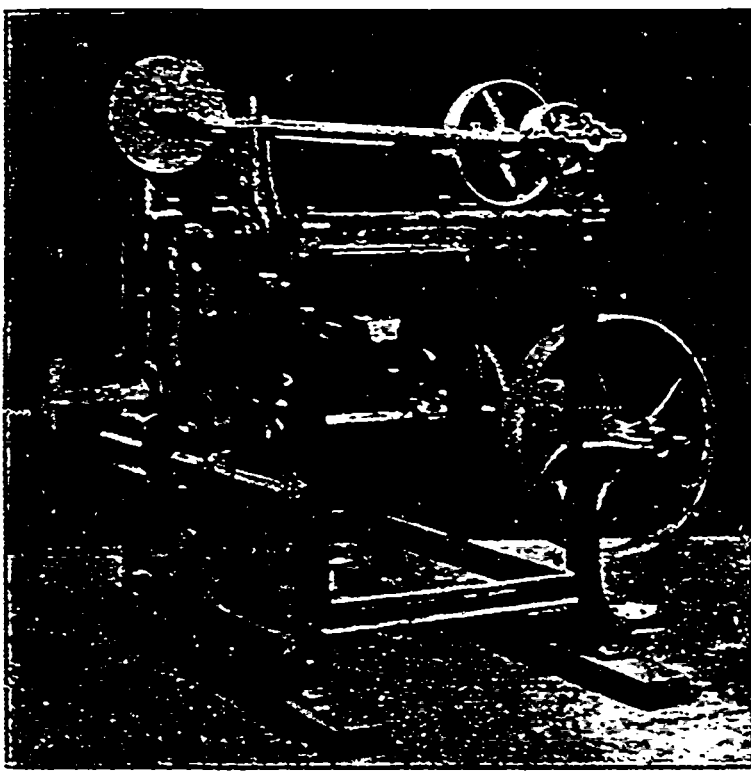
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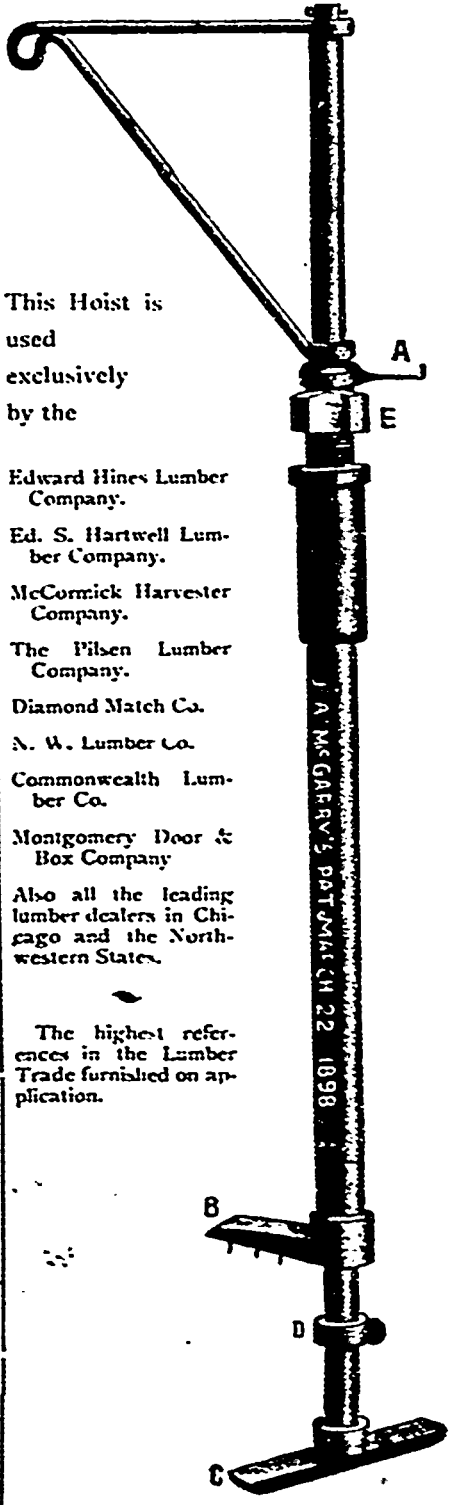
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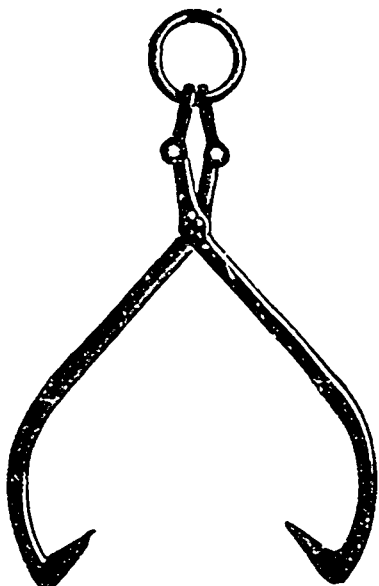
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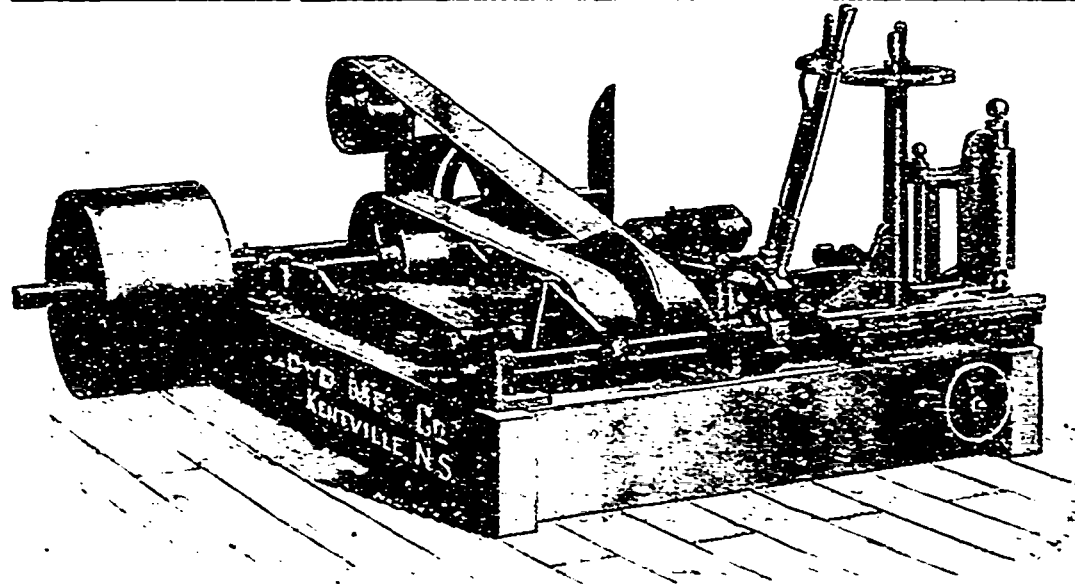
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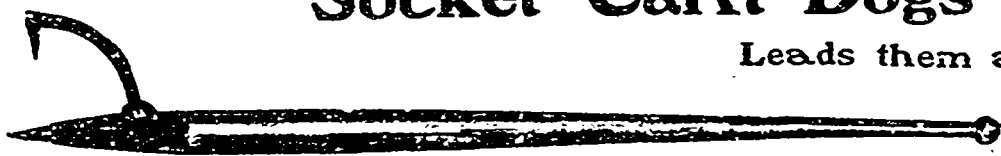
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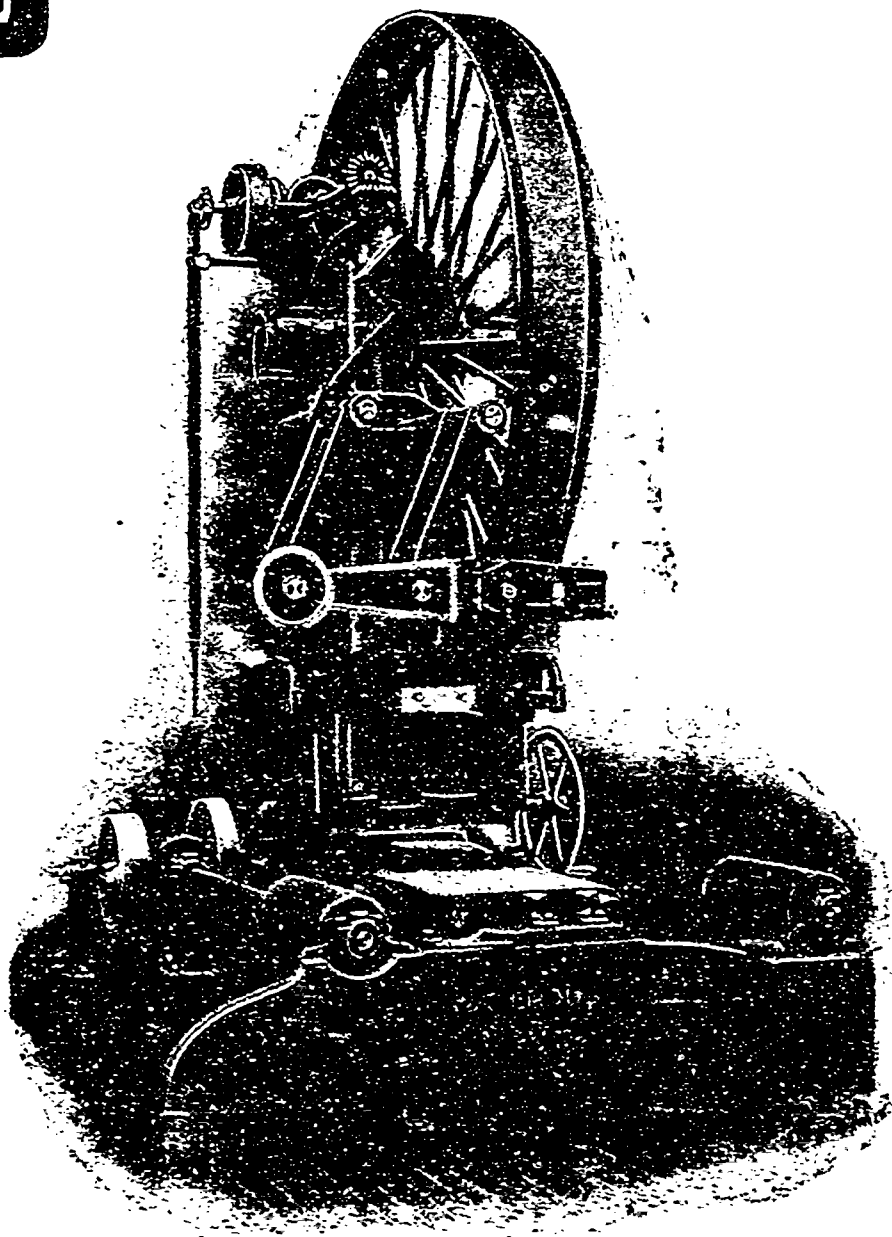
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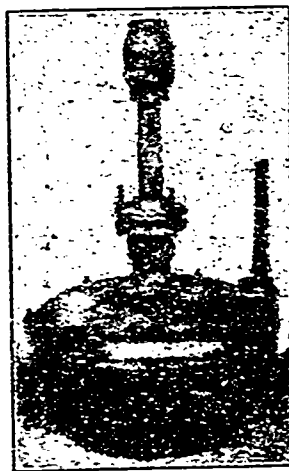
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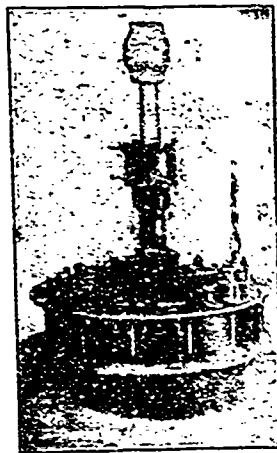
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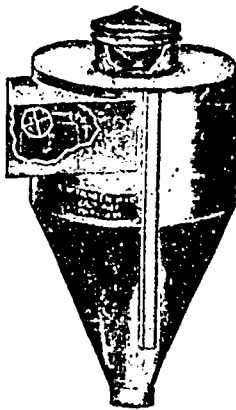
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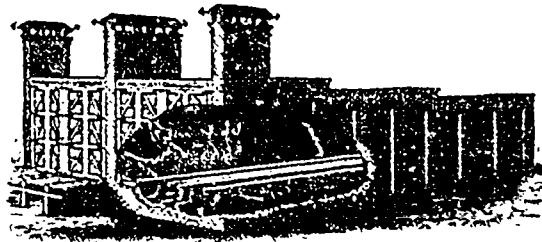
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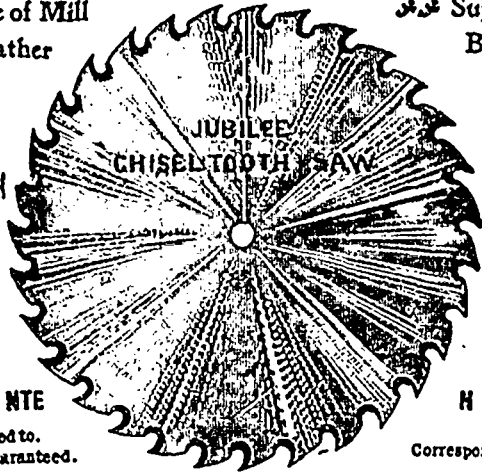


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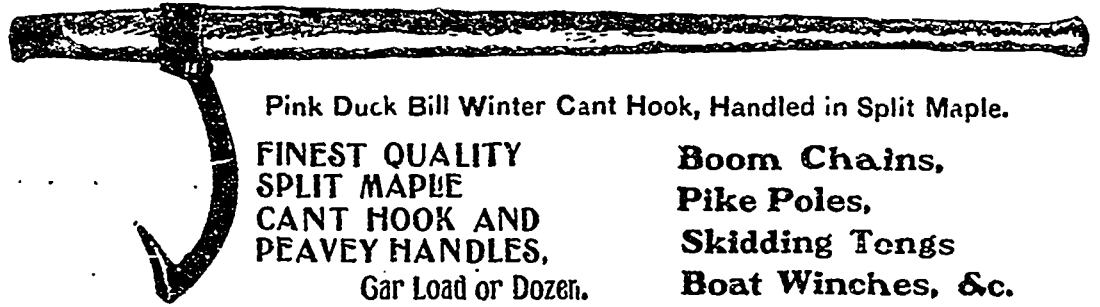
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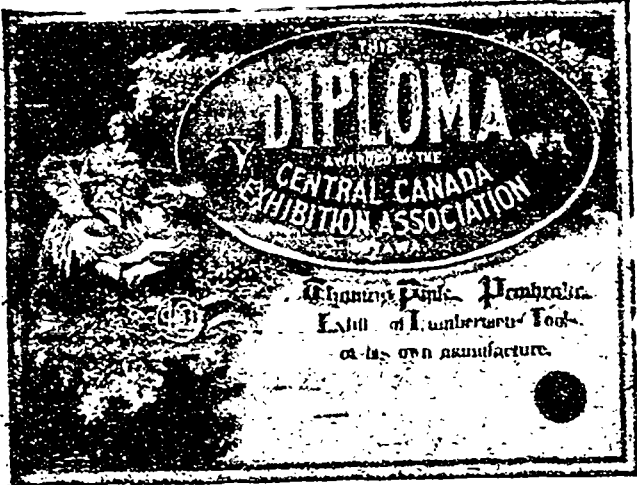
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