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THE CANADIAN LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XX.
NUMBER 4

TORONTO, CANADA, AUGUST, 1899

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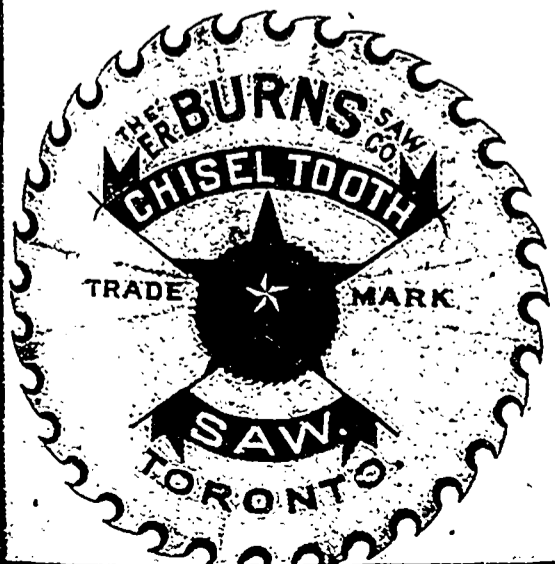
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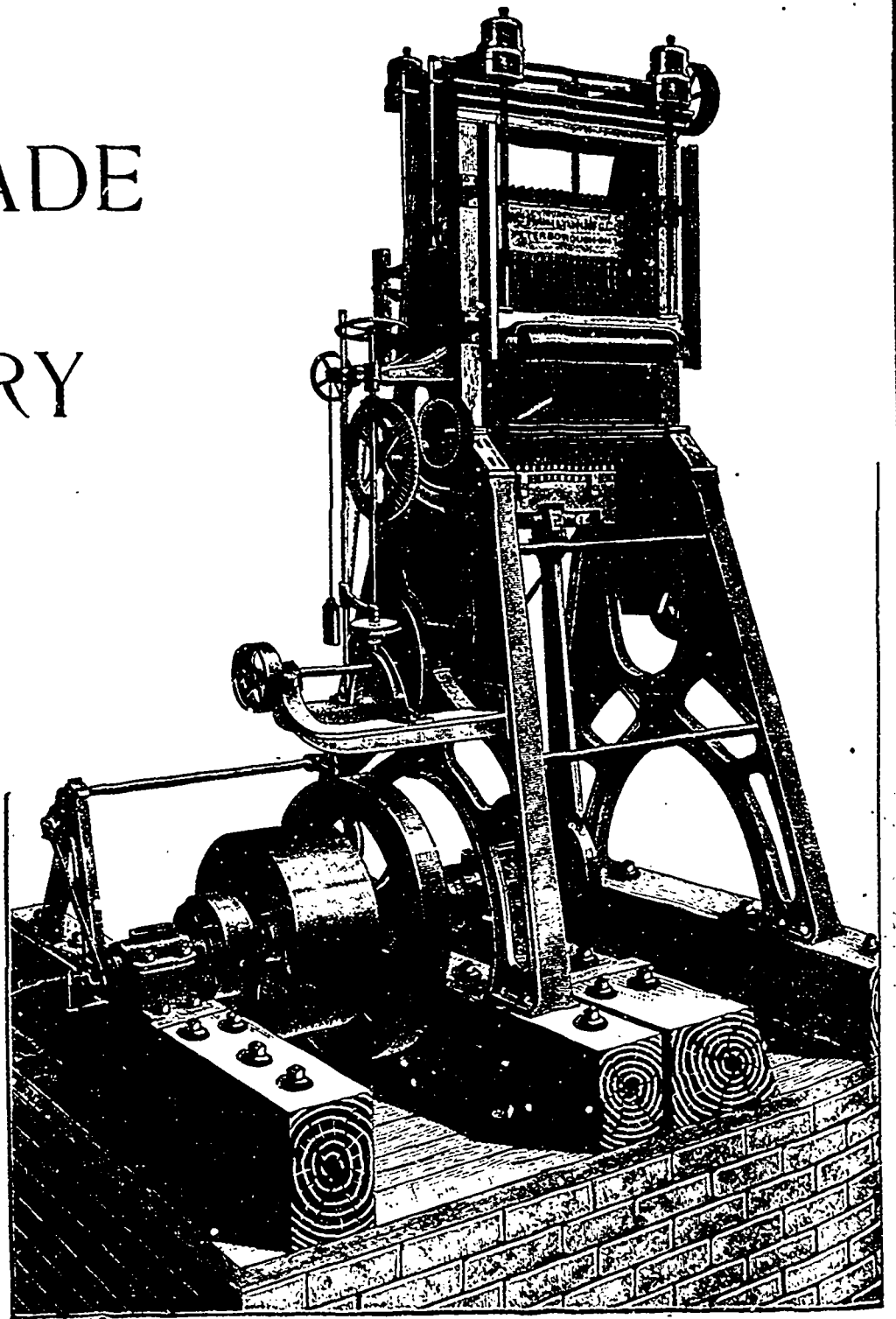
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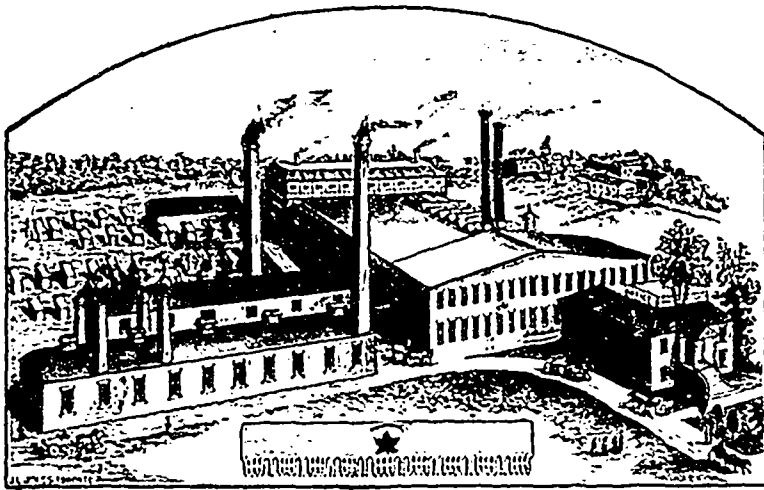
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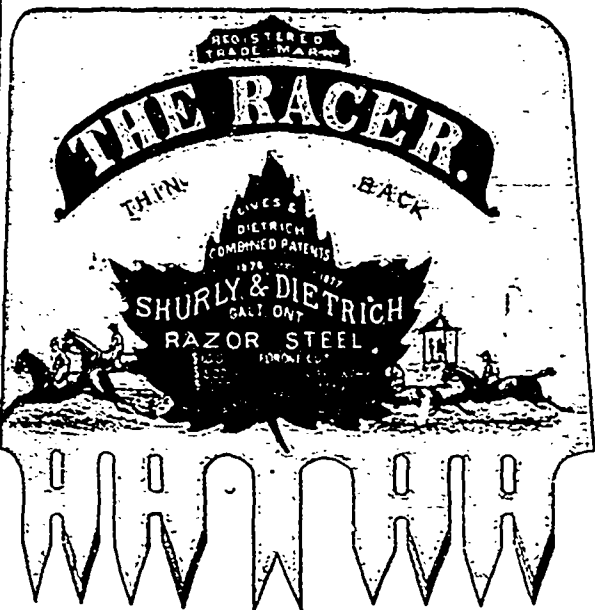
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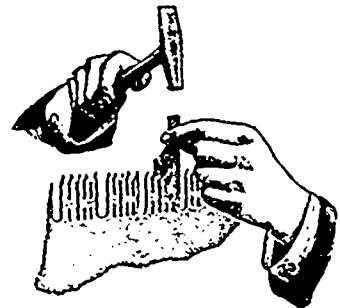
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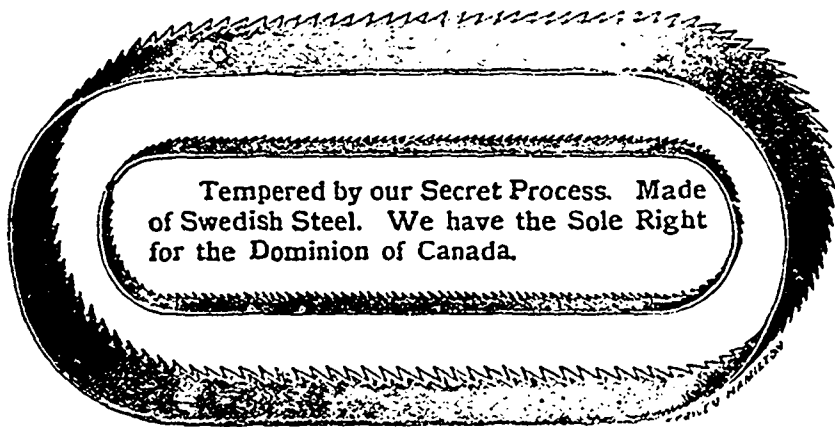
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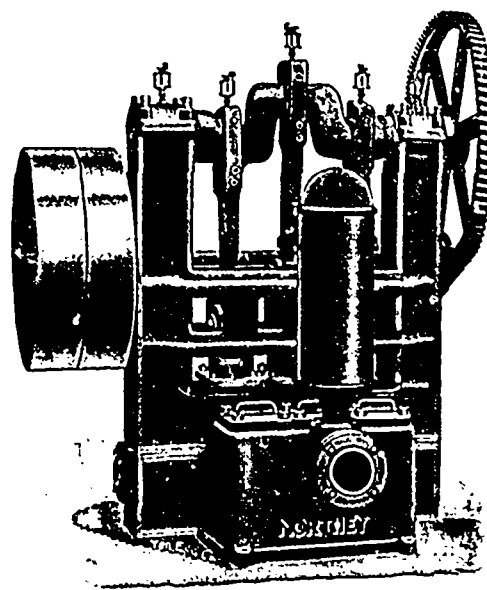
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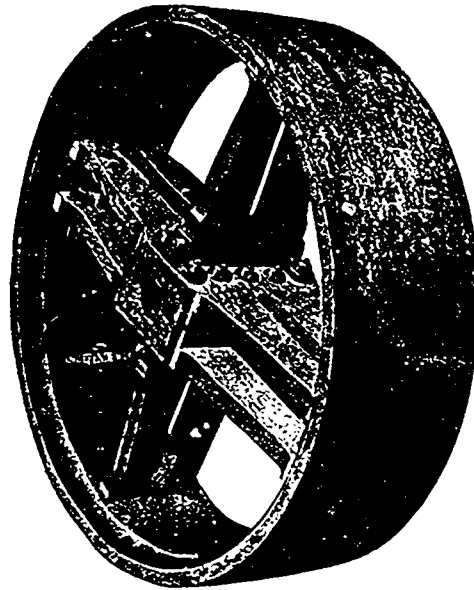
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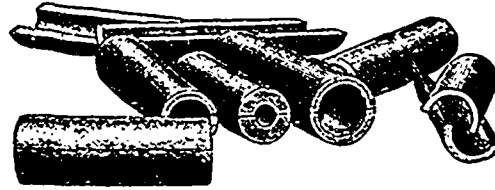
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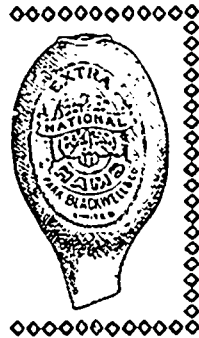
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THE CANADA LUMBERMAN

VOLUME XX.
NUMBER 8.

TORONTO, CANADA, AUGUST, 1899

TERMS, \$1.00 PER YEAR.
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A MODERN SAW MILL.

It will be remembered that about one year ago the saw mill of Mr. J. D. Shier at Bracebridge, Ont., was completely destroyed by fire. Mr. Shier at once decided to rebuild, and in the winter of 1898-99 erected the mill shown in the accompanying illustration. This mill is 34 x 72 feet, with wing 26 x 64 feet, three stories high, and separate engine and boiler room. Power is furnished by three large boilers driving a 150 h.p. Waterous engine. In the lower story is situated the shafting, driving pulleys and carriers, and from this story the refuse of the mill is carried to the burner. The second flat contains the mill proper. Being desirous of erecting a mill modern in every respect, Mr. Shier investigated the merits of the recently invented double cutting mill, with the result that one of the Allis Telescopic band mills, as manufactured by the Waterous Co., of Brantford, was installed. It is worthy of note that this mill was the first one of the kind to be installed in Canada, and at that time was the second in operation in America, although other mills have since been put in. Mr. Shier appears to be well satisfied with his decision to put in a double acting mill, and states that he regards it as a model of perfection in saw mill construction. It is substantially built, easily operated, and does its work accurately, while its cutting capacity is very largely in excess of any single cutting mill, as it cuts nearly as much by the reverse motion as is done by the usual single saw. The lumber cut on the reverse motion passes by means of a system of rollers to the rear of the mill, returning to the edger by a carrier chain under log-way and back of band mill.

Situated on the same floor with the band mill are the edger, trimmer, and fath mill. The filing room on the third flat is fitted up with a complete set of band saw filing and fitting tools, the machines being driven by an engine located on the same flat.

Many persons have visited Mr. Shier's mill, and the generally expressed opinion has been that it is one of the most complete and up-to-date mills in Canada, and one with which the owner has reason to be pleased. Its cutting capacity has been tested with nearly all kinds of woods, both hard and soft, the tests having demonstrated that it will cut deals and half-inch boards with equal accuracy. The efficiency of this mill reflects credit on the Waterous company, who furnished nearly all the machinery.

We are pleased to present on this page a portrait of Mr. Shier.

WHY BAND SAWS CRACK.

BEING asked for an opinion as to why band saw blades, especially those narrower than two



MR. J. D. SHIER.

inches, crack, E. C. Atkins & Co., the saw-makers, furnished the following:

There are a great many causes for cracking in band saws. The character of the material may not be satisfactory for the work or the temper

the back guide, and thus throws too much strain on the teeth edge and is apt to crack the saw.

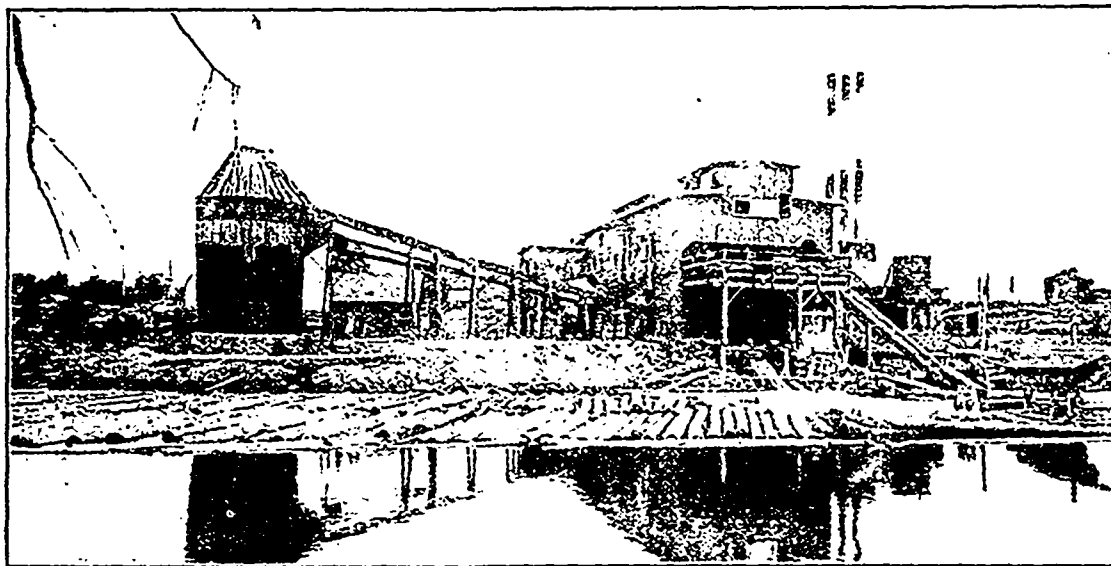
Occasionally the machine is out of line and the wheels out of true, causing the saw to jump and have undue strain at certain points, which is another cause for cracking. The teeth should never be filed with square gullets. The gullets should be rounded off, for if left square they are almost sure to crack. The saw should be perfectly straight and true, should have no twists and should be kept in good order.

In reference to the best device for fixing a rubber or leather strip on the face of a band resaw wheel, we have found that these strips can be fastened on satisfactorily with ordinary shellac varnish, excepting that in warm weather the shellac is apt to become soft and allow the rubber to slip off. We use for our own band saw wheels prepared glue and have the rubber put on very tightly.

TIMBER IN EUROPE.

In countries where lumbering is a recognized industry the total area of timber lands amounts to 2,157,292,132 acres, according to official estimates. Of this total Europe has 716,101,412 acres, Asia 186,200,000, and America, 1,254,990,720.

In Europe the acreage of timber lands with the percentage to the whole is as follows: Portugal, 1,163,841 acres, 5.25 per cent. of total area; Belgium, 1,243,507 acres, 17.08 per cent.; Greece, 2,025,400 acres, 12.60 per cent.; Switzerland, 2,259,018 acres, 20.12 per cent.; United Kingdom, 2,095,000 acres, 4 per cent.; Bulgaria, 3,291,100 acres, 12 per cent.; Turkey, 3,500,000 acres, 8.93 per cent.; Roumania, 4,942,000 acres, 15.22 per cent.; Servia, 5,763,163 acres, 48 per cent.; Italy, 10,131,235 acres, 14.31 per cent.; Spain, 16,354,941 acres, 13.03 per cent.; Hungary, 18,777,771 acres, 23.52 per cent.; Norway, 19,288,626 acres, 24.53 per cent.; France, 23,466,450 acres, 17.92 per cent.; Austria, 24,172,360 acres, 32.58 per cent.; Germany, 34,347,000 acres, 25.70 per cent.; Sweden, 44,480,000 acres, 40.65 per cent.; Russia, 498,200,000 acres, 37.15 per cent.



MR. J. D. SHIER'S NEW SAW MILL AT BRACEBRIDGE, ONT.

may be too hard or too soft. The teeth may be case-hardened from the use of the emery wheel, or the saw may be case-hardened on the side from the bearings of the guide. The very slightest case hardening is almost sure to crack a saw.

It is very necessary that narrow band saws have plenty of set, as they are almost sure to crack if run with a narrow set. Sometimes the guide stretches the back if the saw is run too loose on the wheels and is allowed to run against

The British Columbia shingle manufacturers have a wise clause in their price lists as to the thickness of their shingles. It runs as follows: Sawn thicknesses are understood and are subject to whatever slight shrinkage may occur in drying. The mills get all the underweights.

THE FRENCH MARKET FOR AMERICAN OAK.

It is well known that in consequence of the almost universal use of oak parquet flooring in France, the consumption of oak for this purpose is exceedingly large, and the trade shows continued signs of progression. Up till a few years back the forests of Austria-Hungary and Sclavonia were the principal sources of supply of the oak used for this purpose, the shipments being made principally through the ports of Trieste and Fiume. The wood, both in quality and color, being of that yellow tint dear to the French contractor, is admirably suited to the purpose, and the home-grown French oak, although always used to a large extent, being of a harder nature, could not compete with it, bearing in mind that in this country it is the custom for the builder or carpenter who lays the floor to guarantee it for ten years.

To this day much of the wood shipped from these forests is of the very finest quality, notably that which comes into France under the auspices of La Societe d'Importation de Chene and two or three other leading importers who from long experience know exactly what is wanted for this market, and take care to send nothing else. But the price is high, and in the nature of things competition was to be expected sooner or later, and it is therefore not to be wondered at that during the last few years a determined effort has been made by the London dealers to capture a portion of this large market for the magnificent oak production of the United States. Much of the wood grown is in character very suitable for the French parquet floor trade, and although perhaps in color it is rather too red for the liking of the connoisseur, this is in practice not proved to be an insurmountable object, and for the last few years the competition offered by the American to the Austrian wood has been gradually increasing, until to-day it is recognized by the shippers of the latter as a very serious rival.

The Timber Trades Journal, of London, than which there is no more competent authority, is of the opinion that there is room for a very considerable increase in this trade, and that it rests entirely with the shippers in the United States to bring this about by getting into closer touch with buyers at the British metropolis, and very properly urges the point that it is worse than useless to send anything but wood which in every respect suited to the market.

This journal says: "In the first place, the wood must be of first quality and free from sap. Let it be understood once and for all that sap-wood will not be used here for this purpose, and besides that, the greatest care must be used to send only wood which is free from knots and which has been properly dried and seasoned. The other point to which we would direct shippers' attention is the sawing, which must be carefully done, as any departure from the standard thickness entails extra and unnecessary work on this side, which is greatly resented. The standard sizes for thickness are 27, 35, 41 and 54 millimeters on boards 6 inches and upwards wide, lengths 6 feet to 9 feet and upwards. At the present moment the size 27 millimeters has been a little overdone, and the others are in better request. As to prices, good stuff is now fetching about 130 francs, c. i. f. Havre, per cubic meter—35 English cubic feet. The duty, charges and transport to Paris cost about 30 francs, making the price 160 francs, landed in the capital; but

the business is generally done c. i. f. to the seaport, buyers paying freight and deducting from invoice.

"The Austrain wood is at the present time fetching about ten per cent. better prices, and it enjoys a distinct advantage in being shipped by the direct regular line of steamers, Fiume Rouen, which is in many respects a cheaper port than Havre; in fact, these oak planks could be delivered in Paris something like ten francs per cubic meter cheaper through the latter port. We think this is worth the attention of some enterprising firm of shipowners."

The article quoted touches on but one of the uses for oak in France. A great deal of it is employed for furniture, interior decoration, cabinet work, etc., while the trade in oak stairs is in itself a very large business capable of great development.

With commendable enterprise the Journal puts its Paris office entirely at the disposition of American shippers who are anxious to share in this large trade, and states that it will be pleased to give any further information which they may require, or even to put them in communication with responsible agents and sellers in that country.—The Tradesman.

QUARTER-SAWING OAK WITH A CIRCULAR SAW MILL.

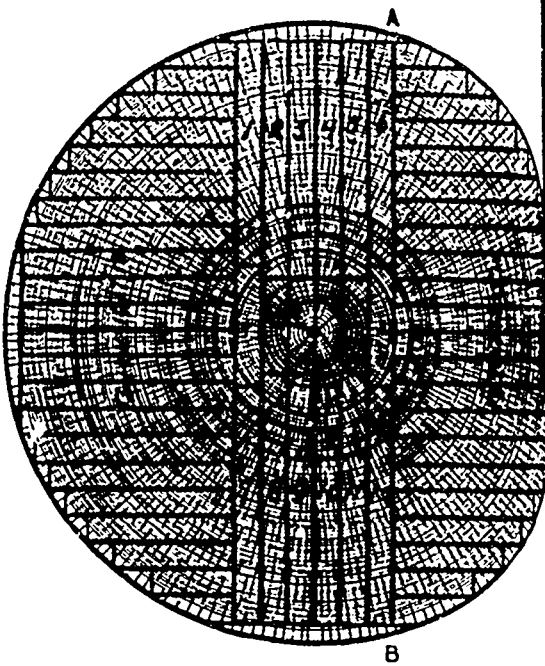
THE high prices that are now being paid all over the country for quarter-sawed oak make it particularly desirable that some plan be devised by which the saw mill man who is not specially fitted up for this class of work should be enabled to get some of the benefit of these gilt-edged prices.

The idea that oak timber cannot be quarter-sawed profitably with a circular saw mill, and without the use of special dogs to hold the quarters, seems to have got generally fixed in the minds of circular saw mill men. While there can be no doubt that the band mill is the best mill for this kind of work, and the duplex dogs are necessary when it is desired to make all the quarter-sawed lumber there is in the log, we have proven from our own experience that we can get 50 to 60 per cent. of the cut of the log, in a fine grade of quarter-sawed lumber, with no loss of timber, and with very little loss of time, with a double circular mill. Moreover, that portion of the lumber which will not pass as quarter-sawed lumber will cure better in this trying southern climate, and be more satisfactory, than if plain-sawed the usual way. Our plan may not be original, but we do not remember to have seen it published, and on that account we send you a drawing showing it, thinking it might benefit some one.

At the outset, no logs should be quarter-sawed, by any plan, out of a stock of large and small logs, that are less than twenty-six inches, or at the least twenty-four inches in diameter. While a fair average width of quarter-sawed can be got by this plan by using logs a little smaller, it would make the average widths of the plain-sawed firsts and seconds run too narrow. The primary object in quarter-sawed oak is not to bring the edge of the grain to the surface of the board, as it is in what is called rift-sawing in pine, but is to bring into view the peculiar glistening figure which comes from cutting the medullary ray or grain that runs from the center to

the circumference of the log. Cutting this ray nearly or quite parallel with its line of direction will show the figure large, and as the angle of the saw cut becomes more obtuse the smaller the figure will show until it disappears entirely. And herein lies one feature of this great beauty of quartered oak. The variations of figure are almost endless. It would be almost impossible to pick out two boards figured just alike, and to find one board figured alike from end to end is not an easy thing to do. Any method of sawing oak that will get lumber which shows this figure is quarter sawing, no matter whether it is done by the orthodox way of opening and quartering the log and edging a bevel piece off each board or not. The drawing shows about the proportions of a twenty-six-inch log cut as we are now doing.

We first slab the log lightly on three sides, working the log down small enough one way so the lower saw will reach through from A to B. We then split the log at A and B, and let the portion at the right in the drawing back on the



CROSS SECTION OF LOG IN DANIELS' SYSTEM OF QUARTER-SAWING.

log deck. This piece is not slabbed in the beginning, although it can be done if preferred. We do not, as it saves the time of one turning. We then cut off wide boards as long as the figure shows wide enough on the top and bottom edges; we take out the heart, or any portion that does not show the desired figure, with the edger; we turn what is left down on the flat side and saw it up, after which the piece lying on the deck is turned on the flat side and sawed up in the same way. We have no market for oak scantling or we would make a piece from each edge of these flat pieces, and not narrow strips as shown.

The numbered pieces in the drawing will usually show the figure, but the amount will vary in different logs. If a piece should not show the figure it is not lost, but makes desirable plain-sawed lumber, inasmuch as it does not check in seasoning and keeps its place better when put into work. Of course, a top saw is absolutely necessary in quarter-sawing with a circular mill, but no special dogs or devices are necessary by this method. We have tried all the various plans, and we doubt very much if we should work on any other plan than this, even if we had a band mill.—Howard Daniels, in Dixie.

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MR. JAMES M. MACOUN.

It is with much pleasure that we present the accompanying portrait of Mr. James M. Macoun, Assistant Naturalist of the Geological Survey of Canada, and who is in charge of the Canadian forestry exhibit for the Paris Exposition. Mr. Macoun has been connected with the Geological Survey since 1883. During the past sixteen years he has travelled over much of the unexplored portions of Canada from Labrador and Hudson Bay and the northern wooded country to British Columbia. During these years he has paid particular attention to the forests and possible forest products of the regions traversed. His acquaintance with these little known regions



MR. JAMES M. MACOUN,
Superintendent of Canadian Forestry Exhibit for Paris Exposition.

and the interest he has always taken in all matters pertaining to forestry were his chief recommendations for the position to which he has been appointed. We feel assured that no effort will be spared by Mr. Macoun to make a display creditable to Canada. Mr. Macoun was the Canadian Commissioner during the recent Behring Sea seal investigations, and represented Canada at the Washington conference in 1898.

QUESTIONS AS TO INSPECTION.

A READER of the CANADA LUMBERMAN asks: "Is a board that will work up more than one-half good a mill cull, even if it has a show of heart in it?"

Another lumberman has submitted the following questions: "(1) In log run, can a buyer measure out the defects; if so, to what extent? (2) If there are two or more splits in the end of a board, can a buyer measure them out; if so, in what grade? (3) In purchasing a lot of elm logs "log run," can the hearts be measured out if they are not sawed out? (4) Should it be necessary to give the manufacturer orders to saw the hearts out? (5) Are there any persons appointed by the government or by the Lumbermen's Association for the inspection, grading and measuring of lumber?"

We would be pleased to receive from our readers answers to any or all of the above questions.

Steps are being taken to oppose the application recently made to the government of British Columbia for the lease of timber limits exceeding many thousands of acres on the north fork of Kettle river. It is contended that the syndicate, far from proposing to operate sawmills, simply requires a grant for speculative purposes.



Mr. L. G. Littlejohn, a member of the colonial firm of Scott, Henderson & Co., Sydney, N. S. W., was in Toronto last month. His visit to this country was to stimulate trade between Canada and her sister colony. Speaking of the trade from the United States to Australia, he stated that doors manufactured in the United States of Canadian lumber were quoted by the manufacturer at a lower price on board vessel at New York than by the Canadian mill owner at his own siding, notwithstanding that the United States manufacturer had to pay a duty of \$2 per thousand feet upon the lumber which he used.

THE recent foreign visitors to Canada included Mr. L. R. Babbitt, of Babbitt Bros., wholesale merchants, Buenos Ayres, South America, his purpose being to arrange for shipments of Canadian lumber. Mr. Babbitt states that the Argentine Republic offers a good market for Canadian timber products, and that last year that country imported 48,000,000 feet of white pine, 68,000,000 feet of spruce, and 88,000,000 feet of pitch pine. The Argentine Republic is probably the most highly protected country in the world. It has no timber of any account, yet some 200,000,000 feet of North American lumber imported last year had to pay a high tax. The freight, he says, from Portland, Boston and other ports averages about \$9.50 a thousand, so that, with the original cost added, the lumber is laid down in the yards at Buenos Ayres at a fancy figure. The lumber retails from \$40 to \$80 per thousand feet, according to grade.

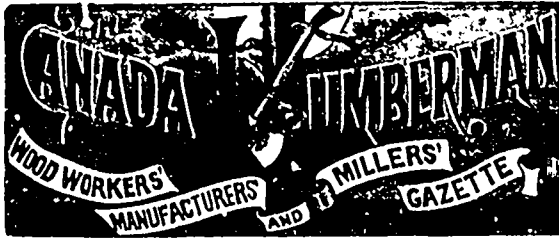
A WELCOME visitor to Toronto a few days ago was Mr. Donald Podmore, member of the firm of Sieveking, Podmore & Co., timber importers, of London, Eng. Mr. Podmore visited the chief lumber producing centres of Eastern Canada for the purpose of arranging for increased shipments from this country in future. Speaking of trade matters he said: "There is an unlimited market for Canadian lumber in England. We can use all you can send us, because we no longer cut hardwoods in England, and we have no soft woods. The factory laws now require that the floors be constructed of hardwood, in order to insure protection against fire, which has often been caused by splintered floors. English merchants are expecting to see a great development of the transportation facilities between Canada and the old land, and they hope that the proposed fast steamship line will soon be an accomplished fact. The British tradespeople have been very careless about their foreign commerce of late years, but they are now awakening to the fact that trade is slipping away from them. The imports of the United Kingdom have been increasing rapidly, while the exports have been decreasing. The merchants will in future seek further openings for their goods, in order to maintain their commercial supremacy over foreign competitors. British capital would be freely invested in Canada if the moneyed classes

over there could be made to realize what a grand country this is. Money is cheap in the old country, but it will not be invested here until the financial public becomes satisfied of the safety of the field. English shareholders in colonial concerns have often been swindled, and do not show great anxiety to continue the experience."

IN discussing the improvement in vessel freights this season as compared with recent years, a Canadian lumberman spoke as follows: "We are getting better freight rates now than have been paid in several years. The heavy demands of the iron and steel companies for ore has been a feature of the season, and a great drawback to the vessel owners in meeting this demand has been the contract made by American vessel owners early in the spring to carry ore from the head of the lakes throughout the season for 65 cents. The ruling price now is about an even dollar. This contract, of course, does not affect Canadian vessel owners, who are not greatly interested in the ore trade, except in the small business carried on between Lake Superior and Deseronto. We who are engaged in the lumber transportation business are beginning to realize the splendid effect of the government's regulations regarding the cutting of Canadian lumber in Ontario. Now any Canadian vessel can take a cargo from a Georgian Bay port to Buffalo, and the business is a new one for Canadian boats. Formerly the trade all went to United States bottoms trading between United States ports. The rates have also increased from 30 cents, which was paid on traffic to Georgian Bay last year, to 60 cents, which is paid this year. The lumber rate last year from Georgian Bay to Buffalo or Tonawanda was \$1 25 per thousand, and it has grown to \$2 already this season. The giving of this trade into the hands of Canadian owners has proved a great boon to us. Another cause to which I ascribe the demand for boats is that a large amount of tonnage left the lakes last season. Some thirty odd vessels, of an average of 2,000 tons capacity each, left the fresh water for the salt, and this reduced the local offerings of tonnage to quite a considerable extent. The boats having passed the rapids could not get back if they wished to."

NEW HARDWOOD FIRM.

Messrs. Wm. Cooke, of St. Catharines, and A. A. Scott, of Toronto, have just formed a partnership and purchased the stave, heading and hoop mill of George Neibergall & Son at McGregor, Ont. The purchase embodies a large quantity of standing timber, including elm, basswood, white and red oak, sycamore, whitewood, birch and soft maple. It is said that this firm are now owners of more hardwood timber than any other firm in Western Ontario. They will manufacture all kinds of hardwood timber, staves, hoops and heading, and will export quite extensively to the British market. The mill is situated on two lines of railways, the Michigan Central and Detroit River and Lake Erie Railways, thus affording excellent shipping facilities. At present sixty hands are employed. Mr. Scott has removed his family to McGregor, where he will give his personal attention to the business. As both Mr. Cooke and Mr. Scott are practical men, we bespeak for the new firm a prosperous career.



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

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

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

Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

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

SENTIMENT ON THE LOG QUESTION.

There was a time in the history of Canada when the people were willing to give concessions to the United States for the privilege of marketing lumber in that country. They placed too low a price upon their forest wealth, and were satisfied to allow the timber to be cut down and taken to the United States for the building up of industries there, while at the same time paying a duty of one dollar per thousand feet on all Canadian lumber exported to that country. Later there came about a greater appreciation of the value of our timber possessions, and the people demanded nothing short of reciprocity in logs and lumber. This was not conceded, and consequently the exportation of logs from Ontario was prohibited. The result of the working of this restrictive clause has been to cause a new light to dawn upon the people of Canada, and to-day we find public sentiment strongly in favor of husbanding our timber resources and disallowing the exportation of logs and pulp wood under any conditions.

While twelve months ago the Lumbermen's Association unanimously declared itself in favor of reciprocity in forest products with the United States, we doubt if such a measure would now be favorably received, while the public generally are beyond question opposed to giving the Americans our timber at any price. Recent developments have shown that our timber products are wanted in nearly every part of the civilized world, that we are practically in-

dependent of the United States for a lumber market, and that there is a great future for the lumber trade of Canada. What the public desires is the establishment of box and door factories, planing mills, and other wood-working industries on the Georgian Bay and in other parts of the Dominion which will give employment to our people and result in building up a great commercial and manufacturing country. The growing feeling is that this can be accomplished only by husbanding our resources and protecting the interests of Canadian citizens.

The Michigan lumbermen who purchased timber limits in Ontario have filed a bill of damages against the Ontario government, claiming the sum of \$936,500. The chief ground for the claim is the loss sustained by the compulsory shutting down of their mills in Michigan, by being deprived of the logs hitherto secured in Ontario under Crown license. The Ontario government have granted to these lumbermen permission to sue for damages, and the decision of the courts will be awaited with much interest. Should it be decided that these lumbermen are entitled to be recompensed on account of the position in which they have been placed by the Ontario legislation, we believe the people will back up the government in paying the amount of damages fixed upon, rather than submit to the removal of the manufacturing clause.

Our contemporary, the American Lumberman, does not seem to be well versed on the various stages of the Canadian-American situation with respect to the exportation of logs. That journal maintains that the manufacturing clause was omitted from the regulations governing the sale of Ontario limits in the year 1892 with a view to encouraging competition from Michigan lumbermen, and in the hope of obtaining higher prices for the limits. Having disposed of the limits without any restriction as to where the timber should be manufactured, the editor claims that the government of Ontario has now violated the contract. We would ask our contemporary to study the exact facts. In the summer of 1890 the Ontario government held a sale of timber limits, the regulations of which contained the manufacturing clause. In the fall of the same year the Blaine-Macdonald agreement was signed on behalf of the governments of the two countries, by which the duty on Canadian lumber was reduced from two dollars to one dollar per thousand in exchange for the abolition by Canada of the export duty on logs. It will thus be seen that before the sale of 1892, at which the Michigan lumbermen purchased large tracts of timber limits, the question of the exportation of the logs had already been settled. The above conditions remained until 1894, when lumber was declared free by the Wilson Bill. In 1897 the Dingley Bill restored the duty on all kinds of lumber to two dollars, thus violating the agreement which had been entered into between the two countries. Anticipating that the Dominion government would take steps to place Canadian owners of timber limits on an equal footing with American owners, the United States government sought to prevent this by placing in the Dingley Bill what is known as the retaliatory clause, with which our readers are familiar. This barrier was effectually overcome by the legislation of the Ontario government.

No further arguments are necessary to con-

vince any intelligent person that the violation of contract was on the part of the United States government, and not the Dominion or Ontario governments. It is to the United States Congress that the Michigan lumbermen who feel aggrieved should look for redress, as through its action they find themselves in their present position.

THE CANADIAN FORESTRY EXHIBIT AT PARIS.

THOUGH less than one thousand square feet of space has been allotted to Canada at the Paris Exposition, we understand that well-directed steps are being taken to make the Canadian exhibit as complete and attractive as possible. Nearly every industry will be represented, but we are pleased to learn that it is the intention to give special attention to the forestry exhibit. In British Columbia, Manitoba, Ontario and Quebec the provincial governments have undertaken to collect the necessary specimens for a complete representation of the woods of these provinces, while the entire exhibit is under the supervision of an official of the Dominion government.

While all the usual features of such an exhibit will be retained—sections of trees, square timber, deals, pulp wood, etc.—it is understood that a special effort is being made to secure material which may lead to an extension of trade in lines now only partially developed, or to the opening up of new industries. That there is an extensive field for development in this direction is demonstrated almost daily by enquiries received by Canadian firms from European houses. To make this portion of the exhibit complete, the co-operation of those interested in the lumber business is essential, and it is hoped that manufacturers will accept this intimation and not wait for a personal solicitation before contributing to the exhibit. Material can only be procured from the manufacturers, and in some special lines those charged with the collection of specimens may have difficulty in informing themselves of the mills from which such material can be procured, or may indeed in some cases be quite ignorant of the existence of establishments manufacturing goods which would go a long way towards increasing the value and interest of the exhibit. This applies particularly to new methods of utilizing waste and small stuff from large saw mills, and to hardwoods, such as maple, birch, ash, basswood, etc. As the exhibit will include all such material as is shipped in a condition short of a completely manufactured article, hardwood specimens especially will be shown in a great variety of forms, although the bulk of the exhibit will, of course, consist of coniferous woods. No doubt pulp and products of pulp will form an interesting part of the display.

Ample wall space will, we understand, make it possible to show a large number of photographs illustrating lumbering operations in the woods, on the rivers, and at the mills. For these the government will be largely dependent upon those actively engaged in the business. These views will go far towards making the exhibit attractive, and will give it an individuality that would otherwise be lacking. The fine collection of photographs of native trees framed in their own woods which was sent by the Geological Survey to the World's Fair at Chicago will again be used, and

will be supplemented by photographs of exceptionally large trees if they can be procured.

The government will prepare a bulletin for distribution at the exhibition. This will contain information of interest to purchasers and consumers of forest products and to those who may contemplate investing capital in Canada. Much benefit is almost certain to accrue to Canada from a creditable display of native woods and products.

CANADIAN LUMBER AND PULP.

Upon the return of commercial prosperity to Canada, after several years of depression and unprofitable trade, it is natural to give some thought to a study of the conditions existing in the lumber business and allied industries, and to the prospects for the future.

The present is a time when nearly all manufacturers find their accommodation and facilities taxed to the utmost to supply the demand for goods, and in many instances their capacity is being increased in order to handle the business insight. In Western Canada building operations have been retarded by a scarcity of brick and other materials, while in Ontario and Quebec, where more structural iron and steel enter into the construction of buildings, great difficulty is being met with in obtaining the necessary supply. There is a veritable "boom," but one devoid of speculation and resulting largely from a growing development of our natural resources.

In what relation to this general improvement in commerce do we find the lumber trade? Reports from lumbermen in every section of the Dominion give a most decisive and satisfactory answer to this question. Of the many industries of the Dominion none have shown greater improvement within the past twelve months than that of lumber. It is not, perhaps, in a condition equally prosperous with some other lines of commerce, but it must be remembered that in the years of depression few other industries suffered to the same extent. The present healthy revival is the more remarkable in view of the discrimination against Canadian lumber shipped to the United States. Any lumber thus shut out of that country has been marketed locally or in other foreign countries, and at prices which have netted more to the manufacturer than when there was free lumber.

Without being too optimistic, we venture the opinion that the future of Canada as a timber supplying country is one of the brightest. No one who gives the question any consideration can but fail to arrive at the conclusion that our timber resources are bound to go a long way towards making us a great manufacturing nation. True, we have always possessed the timber, but it is in the evidences of development that we find encouragement and ground for our contentions.

We believe that more British timber merchants have this year visited Canada than ever before. They have come solely with the object of acquainting themselves with the manufacturing methods in vogue in this country, and of increasing, if possible, their purchases of Canadian timber products. They have met the Canadian manufacturers more than half way, and have given them every encouragement and assistance looking to the extension of trade with the mother country. There is an almost incredible desire on

the part of European importers and manufacturing firms to learn more of the Canadian trade, apparently due to some extent to a feeling in favor of trading with a British colony. As an illustration, we might point to the large number of foreign merchants who have recently become subscribers to this journal.

The future of the pulp industry is quite as promising as that of lumber; in some respects the outlook is even more hopeful, inasmuch as no other country in the world possesses such an abundance of raw material and suitable water powers for the manufacture of pulp. These advantages are gradually becoming recognized, and foreign capitalists are showing more faith in Canadian enterprises.

Just how many pulp mill projects are under way and contemplated in Canada at the present time it is difficult to say. We should judge that there are more than a dozen that are likely to be carried out immediately, including those at Keewatin, Hawkesbury, Sturgeon Falls and Frankford, in Ontario; at Shawenegen, Calumet, Dufferin Falls and the Lake St. John district, in Quebec; at Tobique Narrows, Salmon River and Mispic, in New Brunswick. Some of these enterprises are very extensive in character, involving an expenditure of over one million dollars.

It is with pleasure that we learn of a contemplated visit to Canada next month of a number of the leading British paper makers for the purpose of inspecting our pulp mills. The tour is to last one month, and arrangements are being made to entertain the party in a royal manner. The suggestion has been made that the provincial governments should assist in entertaining our British friends by giving excursions through some of the best spruce belts. The opportunity is one which should not be allowed to pass unimproved. That it would be of advantage to the province is certain.

The growth of the pulp wood industry is said to be enhancing the value of spruce lands. When we consider the recent purchase by Mr. Lionais of pulp wood property in Quebec, valued at over one and three-quarter million dollars, this is not to be wondered at.

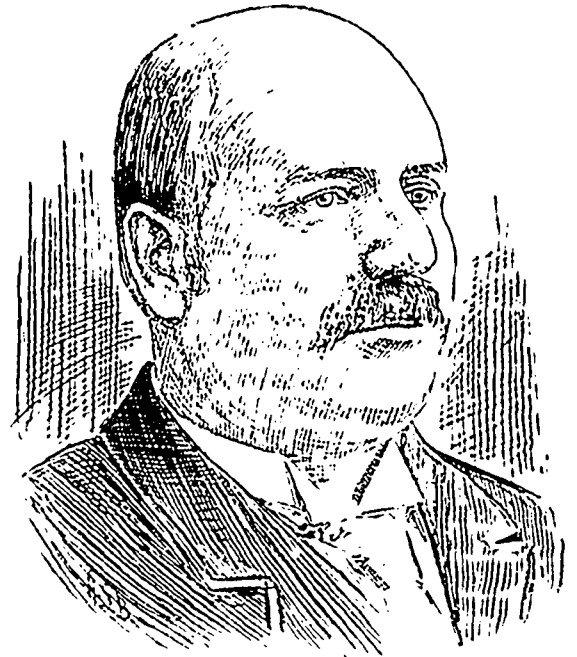
WOOD PULP IN FRANCE.

The importation of wood pulp into France continues to increase, though not at a very great rate. The latest figures available are those for the four months ended April 30 last, and for that period the importations of mechanical pulp into France reached a total of 27,980 1/5 tons, as compared with 27,124 9/10 tons in the same period of last year, and 20,293 1/2 tons in the first four months of 1897. The import of chemical pulp is just about half that of the mechanical sorts, reaching, in the period under notice, 14,125 4/5 tons, against 13,265 tons last year, and 12,589 1/5 tons in 1897. The exportation of pulp is comparatively trifling, only amounting in the four months of this year to 157 1/10 tons of mechanical and 100 4/5 tons of chemical; in 1898 the figures were, mechanical, 10 3/5 tons; chemical, 168 9/10 tons; and in 1897, mechanical, 67 3/10 tons; chemical, 126 1/10 tons.

Seasoning timber by electricity promises wonderful results. It is claimed that twenty-five cubic feet can be treated at the cost of only one cent. Timber thus treated will not absorb dampness and does not decay. The treatment requires only from five to eight hours.

THE LATE HON. WM. B. IVES.

Hon. W. B. Ives, M. P. for Sherbrooke, Que., breathed his last in St. Luke's Hospital in Ottawa on July 25th, death resulting from hemorrhage of the brain. Deceased was born in the township of Compton, Que., on Nov. 17, 1841. His parents came to Stanstead from Connecticut, and were among the first settlers at Lake Memphremagog. He was educated at Compton Academy, and in 1857 was called to the bar. For many years Mr. Ives successfully practised his profession, and in 1880 was created a Q.C. In 1869 he married Elizabeth E., only daughter of the late Hon. J. H. Pope, Minister of Railways and Canals under Sir John Macdonald. In addition to the pursuit of law, Mr. Ives largely interested himself in railway building and in manufacturing. He was one of the principal proprietors of the Cookshire Mill Company, president of the Hereford Railway Company, of the Royal Pulp and Paper Company, of the Salmon River Pulp Company, and of the Scots-



THE LATE HON. WM. B. IVES.

town Lumber Company, and vice-president of the Dominion Cattle Company.

Mr. Ives also devoted much attention to politics, and, after having been mayor of Sherbrooke, was elected as a Conservative to the House of Commons for Richmond and Wolfe at the general election in 1878. He continued to hold that seat up to the general election of 1891, when he was chosen as member for Sherbrooke, which he represented up to the time of his death. On December 5, 1892, he entered the government as President of the Privy Council. In December, 1894, he was appointed Minister of Trade and Commerce, and continued to hold that portfolio until the defeat of the Conservative party in 1896. Mr. Ives was one of the seven members who resigned from the government of Sir Mackenzie Bowell.

The Wm. Hamilton Mfg. Co., of Peterboro, Ont., have recently remodelled and increased their office accommodation. New hardwood floors have been laid, the wainscoting grained and varnished, walls and ceilings papered, and a new staircase put in to reach the upper floors and draughting rooms. The company are experiencing a large demand for their various lines of machinery.

NOTHING MORE IMPORTANT THAN PULLEYS.

There is nothing more important that is used around the mill than the pulleys, and yet how few people pay any attention to them, says a correspondent of the St. Louis Lumberman. A wagon without a wheel is of no use, and a machine without a pulley would stand in the same light. A man buying a machine will pay considerable attention to the make of the machine, to the size of the journals, the spindles, and its weight, and yet pay no attention at all to the pulleys—really the most important part of the machine.

Within the last thirty years wonderful strides have been made in the improvements of our wood working machines, yet no change in the pulley. Science and high degree of mechanical engineering have been brought into play to develop the machine to the highest degree, but when they came to the pulley their science and skill suddenly cease and the same old pulley is adopted. In saw mills the change all through the machine is apparent. The mandrel is much larger, the journals are larger, the frame is heavier, but the size of the pulley remains the same. On engines the shaft is much larger, the wristpin is larger, the working parts are heavier throughout, but the old-style pulley is the same.

There has probably been more change and improvement in our planing mill machines than any others, but look at the pulleys. The same remark is applicable to gang edgers. Look at these machines and compare them with the edger of twenty-five years ago. At that time the idea of making railroad ties on an edger would have seemed preposterous, but to-day it is a common thing to see 4-inch to 6-inch cants run through gang edgers and heavy dimension made to save time with the big saw, yet the pulleys are the same size practically. The necessity of enlarging the pulley seems to have been overlooked or ignored. Some manufacturers seem to think that if they adopt large pulleys, people will not buy their machines. They overlook the fact that a large pulley enables a machine to do more work, as much so as any other heavy part of the machine.

To the practical mechanic or mill man a large pulley is, or should be, as much of a recommendation to the machine as a large journal or spindle. If the builders of the heavy, massive machines of to-day were to put a little less metal in their frames and a little more in the pulleys that go with the machine, the results would be better and the purchaser benefitted. There is not a planing machine built in the United States but what comes out with pulleys that are too small. Take the heavy dimension planer that dresses a stick 18 inches thick by 30 inches wide on all four sides at one operation. The pulleys are 6 x 6 on the cylinders and 5 x 5 on the matcher heads. Does any sane man doubt that the machine would do the work easier if the pulleys were at least three-fourths larger, not only in diameter, but in the face? Take the 4, 5 and 6-saw gang edgers; if their pulleys were 24-inch diameter instead of 14-inch, would they not do the work better? Would it not be easier on the belts?

On the saw mills of to-day, where in this country the saw is running on from 10 to 24-inch feed, would it not be better if the pulleys were 36 or 40 inches than 26 to 30? Some one may ask, where is the advantage and economy of the

large pulley over the small one? The pulley bears the relation to the machine of a lever, and the larger the diameter of the pulley the greater the leverage. The longer the lever the easier it is to turn over the weight. Take a pulley 12 inches in diameter. One-half its circumference is 18 inches, which represents the surface to be gripped by the belt. Take another pulley 24 inches in diameter. One-half its circumference is 36 inches, which represents the surface to be gripped by the belt. Does it require any special amount of common sense to see that the belt will slip less on the big pulley than it will on the small one? And, slipping less, will not the belt last longer? The belt is benefitted in three ways by the larger pulley. First, it will slip less, it can be run slacker, and less weight is needed in the tightener, where one is used, to make the belt hug the pulley. The saving in bearing alone is enough to recommend the large pulley. The saving of time, by belts not breaking, and the saving of vexation of spirit, are also obtained in this way.

If our planers were fitted with pulleys on the spindles 10 or 12 inches in diameter and 9 or 10-inch face, will any one say the belts would not last longer? Some may say that you would have more belt travel. Very true; but a belt, like an engine, will travel at a high rate of speed under proper conditions better than it will at a slow speed under improper conditions. The manufacturer of planers, gang edgers and other machines who will step out of the old rut and adopt larger pulleys on his machines will soon be regarded by the users of machinery as a public benefactor. In my acquaintance among the mill men I know one man only who, when he buys a machine, discards the small pulleys and puts on others that are larger in every way. This man uses a lower grade of belting in consequence, is never annoyed by belts breaking and never kicks about his belts being no account. He never "cusses" the belt drummer and says those belts "did not come up to the guarantee." He fixes his machines up in a business way and then the machines go ahead and attend to business.

The use of the large pulley over the small one is based on all the rules of theory and practice. I hope the thoughtful mill man and the thoughtful mechanic will look into this matter and at least give it a trial before condemning it and frowning it down.

AN EXHIBITION OF AXES AND SAWS.

A TEST of axes and saws is to be held at Ulverston, a small town in Tasmania, under the auspices of the United Australian Axemen's Association, on November 20th, 1899.

British makers have for some time complained of the preference shown for United States saws and axes, so it has been decided, at the gathering this year of sawyers and axemen of Australia, to hold a contest, open to all British and American, and possibly Swedish and German saws and axes, and to all Australasian sawyers and axemen. The committee in charge of the trial will include Hon. Sir Edward Braddon, Prime Minister of Tasmania, and other gentlemen of standing. This should prove a valuable opportunity for opening up an export trade in Canadian products, if they are of as good quality as we believe them to be.

THE FORESTRY LAWS OF INDIANA.

A STATUTE for the encouragement of forestry passed by the State of Indiana this year provides that any person may select from his land owned by him a portion not exceeding one-eighth of the entire tract. The portion so selected must be original forest, and if upon each acre of the portion there are maintained not less than 170 growing trees, the law provides that it shall thenceforth be assessed at \$1 per acre at the end of three years, if the owner plants 170 trees per acre and cultivates and maintains the same during that period. If the tract selected has a number of original forest trees growing upon it, but less than 170 to the acre, it may be brought within the act by planting a sufficient number to make up the 170 to the acre. In case any trees are removed or die, the owner, in order to avail himself of the act, is required to plant other trees to take their place, and to protect them until they are at least four inches in diameter. The act further provides that no land owner shall permit cattle, horses, sheep, hogs or goats to pasture on the reservation before the trees are four inches in diameter shall receive the benefit of it. Before the land is specially rated as forest land the owner has to file a statement with the municipal authorities showing what portion of his land he selects for the purposes of the act. The assessor is required to personally examine the various reservations, and to note upon his return the condition of the trees.

The act of the Indiana legislature shows the growing public appreciation of the importance of forest preservation.

THE HARDWOOD TRADE IN FRANCE.

Referring to the import of hardwood lumber into France, a United States Consul says: "Most of the trade in hardwood lumber products is done by English houses. Of course, the product originally comes from American mills. Wagons, spokes, and handles, and all turned goods in this district are, I think, imported from England, though the wood itself is mostly of American origin. Whether it would pay to seek to get this trade direct is a question which can only be determined by months of careful study on the part of one thoroughly familiar with every branch of the business. Though I have been a manufacturer in this line, and have consequently a particular inclination to the study of conditions affecting this trade, I should hesitate to advise any manufacturer to enter this field without some months of careful study of actual conditions, not of the market merely, but of the ultimate consumption. Judging from what I have learned, I should doubt the policy of competing with the English trade, which is carried on by customers of American producers." We trust this excellent advice will be followed.

An English syndicate, represented in New Brunswick by Fred. H. Hale, M.P., and George S. Murchie, purpose erecting a mammoth saw mill on the Tobique river. The promoters have been in negotiation with the Canadian Pacific Railway with a view to getting a low freight rate to St. Andrews, from whence it is proposed to ship the lumber. At last account it seemed probable that a favorable rate would be granted.

LOCATION OF HEADS IN PLANERS AND MOLDERS.

By W. E. S.

If one hundred men were to design one hundred planers, I dare say not two of them would be just alike in all their details. Nor is it desirable that they should be; on the contrary, there should be a difference, taking in consideration the kind of wood and the kind of work they are expected to do. But there are certain principles and details that, to my way of thinking, should be alike on all planers. We will talk a little about the bottom head on a planer or heavy molder.

Glancing over the catalogues of the different manufacturers, we find the bottom head placed in the following positions: (a) Between the first two pairs of feeding-in rolls; (b) after the first two pairs of feeding-in rolls and before the top head; (c) after the top head and before the side cutter heads; (d) after the side cutter heads and before the feeding-out rolls; (e) after the feeding-out rolls or the end of the machine.

Now, from this list there is apparently, among the manufacturers of planers, a difference of opinion as to the proper position of the bottom cutter head. And why? Surely not all of them are right; one of the five ways must be the best way. It can't be that for planing pine the head should be at one end, and for planing mahogany at the other end of the machine. Just because it was first placed at the feeding-out end of planing machines built in this country should be no reason that we should continue to place it there, when by breaking away from custom we can do better work.

The argument advanced is old, but still as good as new. If a person had a board to plane up by hand, he would straighten it, take it out of the mill, and then thickness it. If he did it any other way you would kick him out of the mill. At the same time you have in another part of the mill a machine that thicknesses your lumber before it is faced off.

It is a well-known fact that you cannot thickness lumber with the bottom head on a planer, and yet it is expected to do it where the said head does its cutting after the top head. If you will watch a kinked or warped board passing under the top head you will see that the board does not lay down on the platen in spots, and as it passes to the bottom head the thin places in the board will have a tendency to drop down from the pressure bar and are planed still thinner. Try your calipers on such a board and see for yourself.

In the last few years some of the prominent manufacturers have placed on the market planers with the bottom head just after the top head and before the side head spindles. I do not know why they made this change, unless the idea was to bring the top and bottom heads together as closely as possible. One of the manufacturers has the head, platen and rolls connected and arranged so that they may be raised or lowered for taking a light or heavy cut while the machine is in operation. Imagine a board to be passing through a machine of that kind, and you raise or lower the platen. Don't you see that you will have thick and thin places in your board at distances apart corresponding with the distance between the top and bottom heads, or nearly so? After an extended experience with planers and

heavy molders with bottom head cutting first and last, and with two bottom heads and two top heads, the writer has come to the conclusion that the proper place for the bottom head is just before the top head; also, on molding machines and on planers for certain kinds of work, it is necessary to have a second bottom head at the tail end.

For illustration, we run quantities of oak stepping out of five-quarter stock, plowed on both sides, to receive the risers and molded on one edge. The stock will run from one and three-sixteenth inches to one and one-half inches, kinked and warped so much that it is sometimes necessary to take off a quarter or more one side to clean it up. With such stock in view, and running face side down, don't you see the advantage of having the bottom head placed in front of the top head, and arranged to raise and lower while at work? If necessary, you can take off one-sixteenth inch on one board, a quarter inch on another, or an eighth inch on a dozen boards, thus varying the amount to be taken off to conform to the condition of the lumber. As the board passes on to the top head to be thickened, it will lay down and touch the platen at all points, allowing the top head to do its work smoothly and bring it to a positive thickness. If an extra smooth finish is desired, the second bottom head comes into play.

I prefer, when the greater part of the face of the pattern to be worked is a plane surface, to work the face side down, as in stepping, for instance. Often a board is thin in places and doesn't dress up, and had we been running face side up it would have been thrown out. The bottom side of a step will admit of a little roughness. And so in flooring; if we run the face side down a number of boards will be thick enough which otherwise would have been cast aside.

Nor is this all. We may have a thick board with a knot on one side. If we run the face side up we are not cutting enough off to cut the knot out, and if we run the other side up we will cut into the knot. A notable example of this class of lumber is North Carolina sap pine.

Were I to build my model flooring machine, I would have two bottom heads, one just before the top head and one at the tail end of the machine. I would have the first bottom head to raise and lower by a screw at the feeding-in end of the machine, convenient for the operator, and with a gauge to indicate the exact amount taken off at all times. I would run my flooring face side down, and hollow out the back side, even on the soft woods.

But, hark! I hear some one say: "You are putting too much work on your flooring. We don't get paid for that work." But I say to you fellows who are "hogging" out the work, while it may take me a little longer to keep my machine in order, I am doing better work than you are. I get a little more per thousand than you do, and my customers like my flooring. I can get more out of a board by taking a light cut off the best side for the face and leaving the excess come off the back side.

I have not originated this idea; it is an old one, followed in European countries as long as planers have been built, from all I can learn. If you were to attempt to sell an Englishman an American planer with bottom head cutting last

he would laugh at you. Don't infer that I think an English planer superior to an American planer for general planing. I am speaking of the location of the heads.

Some few American manufacturers have been building planers with bottom heads cutting first, but why they do not take I cannot understand. I can recollect the first one I saw. I did not like the looks of it, but it was not long until I found out its advantages.

Admitting that the proper position for the bottom head is just before the top head, we must also admit that the inside cutter head, or the one next the guide, should cut first on a molding machine, and for the same reasons. I have yet to talk with the man, experienced in this matter, who says that a bottom head cutting first is not a good thing.—Wood-Worker.

REQUISITES OF THE SUCCESSFUL FOREMAN.

The first requisite of the successful foreman is absolute and unimpeachable honesty. I do not like to hear a foreman tell his men certain things and then warn them not to tell the "old man." I have not time to mention all the undignified subterfuges to which some foremen resort by which to ingratiate themselves with their men, but will simply say abandon this line of tactics altogether and apply yourself to mastering all the details of the line of work it is your duty to direct.

Men very soon learn all your weaknesses and you may rest assured that they will not be slow to direct them to their own ease and advantage. Laboring men do not respect a foreman who does not understand his business, and the control of your men is greatly impaired by any weakness in this direction. The entire respect of your men is a very important adjunct to the successful and profitable accomplishment of your work, and to secure and retain it you must be honest. Men don't respect a dishonest foreman, even when the trait is exercised in their favor.

We will assume, of course, that the question of ability has been settled by your appointment to the position. Now let me enjoin the importance of dignity; but do not confound dignity with arrogance. A great many people imagine themselves dignified, when the truth is they are afflicted with a decided case of arrogance, or, in plainer words, the "big head." You do not have to be haughty and overbearing to be dignified; in fact, you can laugh and joke and be the very embodiment of good humor, and still be dignified. But true dignity will not permit undue familiarity, nor stooping to the recital of obscene stories; neither will it permit you to disparage your men in their absence.

Do not tell one man about the shortcomings of another; tell the man himself in a plain dignified way, and never under any consideration allow the idea to get into your head that your position is a "soft thing" or a "snap." If you have any such idea, dispel it at once, for you are surely neglecting your duty. I have just looked away out in retrospection over an immense industrial field for the place that is faithfully administered that can be called a "snap." Well, I couldn't find it. I don't think there is any such place; you can always find something profitable at which to busy yourself if you will try.

It is not very long ago that a foreman told me that he could do much better work if he was

paid better wages. This is one of the points I want to call your attention to. You must be satisfied with your wages until you fully prove your ability to earn more. If you expect to get one hundred dollars per month next year, you must earn it this year. The man who neglects his work because he considers his wages inadequate cannot reasonably expect to receive any better wages, and he cannot be a very desirable man at any price.

How is your employer to know you are worth more wages unless you demonstrate your ability by actually earning it? You will say that this is not fair. I agree with you; it is not fair, yet it is reasonable. This looks like an inconsistent proposition, but it's not. You certainly should have full remuneration for your services, and on the other hand you should not expect promotion until you have earned it; and you must be careful and not overestimate yourself. It sometimes occurs that a foreman considers himself overworked and underpaid, and gives up his position with the impression that he has been ill treated. A man from the ranks steps in, systematizes the work and does all that the disgruntled man did and more, and then thinks the task easy. The other fellow overrated himself; he was not able to do the work, and his excessive estimate of his worth blinded him to the fact.

You cannot place too high an estimate on the value of your system. If you neglect to systematize your work, you will be obliged to deal with emergencies continuously. Your haphazard methods will wear you out and make heavy inroads on your employer's dividends. And this is another point you should hold in view—the "dividends." And do not get in the habit of letting things "pull through." If there is anything going wrong, check it at once. Don't get in the habit of waiting for things to adjust themselves, because they just won't adjust, not by a jugful; they are sure to get worse all the time.

When you have a man that cannot bear correction when he is not doing right, dissolve partnership with him at once, assuming, of course, that the correction has not been given in the form of abuse. And do not forget that success is the reward of eternal vigilance and application. D. H. Bloomer, in *St. Louis Lumberman*.

SOME POINTS IN MILL MANAGEMENT.

THERE are some points in regard to the management of a lumber manufacturing business that are so evident that it seems unnecessary to call attention to them, and yet they are among the points which most frequently are ignored. Of more importance than the most modern machinery, of more importance than the arrangement of a mill, is the personnel engaged. In the saw mill there are three critical positions upon the proper filling of which largely depends the success of a saw mill management. These positions are those of sawyer, edger and trimmer. They are important for three reasons:

First, the importance of the work these men have to do in fixing the quality of the output of the mill. The sawyer is most important in every particular, for in the matter of quality he has the primary influence, as he handles the logs. The edger man can lose from 25 cents to \$1 a thousand on the quality of all the lumber that passes

through the edger if he be careless or ignorant. The man in charge of the trimmer can raise or lower the grade and the selling value of the stock in a marked degree.

Secondly, upon these men depend very largely the volume of the product, though most of all upon the sawyer. The lumber he cuts the rest must take care of, and a fast and yet careful sawyer can often increase the capacity of a single band or circular mill 25 per cent. above a man who is not first-class. In mills where there is no esprit de corps, where the ordinary hands about the establishment are intent on seeing how little they can do for their wages, the sawyer of the first class is thoroughly hated, for there is no getting away from the work he throws upon them. The lumber comes through and must be disposed of somehow, and the only way to dispose of it is to put it through the regular process. Yet this does not affect quality provided the edger and trimmer men are of efficiency in proportion to the sawyer.

The third reason why these men are of especial importance is that, locating the sawyer and trimmer at either end and the edger man at the centre of the mill, they form, if they are of the right sort and interested in the work they are doing, a sort of perpetually present set of deputy foremen. Nothing that is going on in the mill in relation to the running of the machinery, or the way it is handled, or the work of the other hands can escape them. In giving these men a pre-eminent place, we do not at all minimize the importance of the filer or the inspector. The former may command as high wages as the sawyer, but his work is that of the expert, done in seclusion, and beyond the furnishing of properly fitted saws he has no influence.

Many a mill fails to be satisfactory to its proprietors, simply because of a penny wise and pound foolish policy in the selection and handling of those principal men in a mill. An ordinary modern mill can better afford to pay \$10 a day to either sawyer or edger man than to have a poor one. The foreman of a mill can have no more valuable assistants than these if they are efficient and well disposed toward him and the proprietors.

This question of good will is one that is not often given due consideration. A thoroughly well posted mill man said recently: "I would not have in my employ as superintendent or foreman of any department a man who was not on good terms with all the other foremen, or at any rate with those with whom he comes in contact. The woods foreman and the mills foreman must be friends; the yard foreman and the planing mill foreman must each be in touch with the mill foreman, and the man in charge of the shipping must not be at outs with the head of any other department. I should expect them to form a sort of cabinet in my interest, always prompt to consult each other about any improvements to be made or defects to be remedied. If I had a foreman in my employ who would come to me with any complaint about any other department without first having gone to the head of that department in a friendly way I would 'fire' him instantaneously. If the yard foreman sees that stuff is coming out of the mill unevenly sawed, he will at once call the mill foreman's attention to it, provided the feeling between them is what it ought to be and I am to make money, and it will not be nec-

essary for him to come to me with a thing like that; and so on through all the departments of the mill.

"Then, again, I believe in paying my men just a little more than anyone else in the neighborhood does. I know that this policy cannot be followed universally, for if all of us were trying to pay our men more than anyone else we would soon bury ourselves under expense, but there is no danger that men will be overpaid, and I believe that from the foreman down to the common laborer this policy is a money-making one. I need not pay my laborer more than four or five cents more than does my neighbor, but if I do that he appreciates the fact, and I get many times the extra expense out of him in the form of faithful work, and, besides that, have the pick of the men in the surrounding country."

These are ideas which are to be commended to the attention of many lumber manufacturers. There is a disposition to magnify the value of machinery and to underestimate the value of brains; while the fact is that the more costly and intricate the machinery, the higher the class of brains to control it and get from it the best results.—*American Lumberman*.

LEGAL DECISION OF INTEREST TO LUMBERMEN.

AN important judgment was rendered at Quebec on June 30th by Judge Caron, in the case of John Livingstone, of Montreal, against Frank Ross, of Quebec. The plaintiff contended that he had an option from Mr. Ross upon all the Ross property, including mills, limits, etc., in Buckingham and elsewhere in the county of Ottawa, and that when he proffered the amount in payment therefor, Mr. Ross repudiated his written agreement. Hence the action which was to compel Ross to carry out the contract or to forfeit \$500,000. The defendant denied certain allegations of the plaintiff's declaration, and further stated that prior to August, 1897, the plaintiff requested him to employ him as a broker for the sale of defendant's mills and limits in Buckingham, that the plaintiff was in communication with Messrs. Kenneth, Blackwell and Wilson, of Thos. Robertson & Co., of Montreal, and Mr. Wilson's father, a member of the Imperial House of Commons, all three reputed to be very wealthy, and desirous, according to plaintiff, to purchase property for the manufacture of pulp and paper. His letter giving the option to plaintiff was, he alleges, intended to be only an authority to the plaintiff to negotiate the sale of the Buckingham property to the above named parties and to no others, and it was never contemplated that it should be an option in favor of the plaintiff personally. Judgment was given for plaintiff. The case will be appealed.

CANADA'S COMMERCIAL AGENTS.

FOLLOWING is the correct official list of Canada's Commercial Agents in Great Britain, British possessions and foreign countries:

- J. S. Larke, Sydney, N.S.W., agent for Australasia.
 - G. Eustace Burke, Kingston, Jamaica, agent for Jamaica.
 - Robert Bryson, St. John, Antigua, agent for Antigua, Montserrat and Dominica.
 - S. L. Horsford, St. Kitts, agent for St. Kitts, Nevis and Virgin Islands.
 - Edgar Tripp, Port of Spain, Trinidad, agent for Trinidad and Tobago.
 - C. E. Soutum, Christiania, Norway, agent for Sweden and Denmark.
 - D. M. Rennie, Buenos Ayres, Argentine Republic, agent for Argentine Republic and Uruguay.
- In addition to their other duties, the undermentioned will answer inquiries relative to trade matters, and their services are available in furthering the interests of Canadian traders.
- J. G. Colmer, 17 Victoria street, London, S.W., England.
 - Thomas Moffat, 16 Church street, Cape Town, South Africa.
 - G. H. Mitchell, 15 Water street, Liverpool, England.
 - H. M. Murray, 40 St. Enoch Square, Glasgow, Scotland.
 - Harrison Watson, Curator, Imperial Institute, London, England.

THE NEWS.

Mr. Wm. Jennings is considering the building of a cash and door factory and planing mill at Fenwick, Ont.

Mr. Jud. Saunders made a record cut of shingles at Longford Mills recently, cutting 70,000 in ten and three quarter hours.

Mr. Shielas has submitted to the council of Kamloops, B.C., a proposition to establish a saw mill and cash and door factory there.

Mr. H. G. Marsh, lumber merchant, of Tonawanda, will probably establish a mill at Welland, Ont., for the manufacture of staves and bolts.

Messrs. G. Neiberger & Son have taken over O. R. Taylor's mill at Camp Palmer, giving in exchange fifty acres of land in Colchester South.

It is understood that Mr. D. H. McDowall intends again starting his saw mill at Prince Albert, N.W.T. This mill gives employment to about fifty men.

The National Hardwood Lumber Association, which assembled in Milwaukee last month, passed a resolution opposing the granting of reciprocity with Canada.

Love & Drake, lumber merchants, of Red Deer, N.W.T., have dissolved partnership, Mr. Love continuing the business and Mr. Drake removing to British Columbia.

Messrs. A. H. Edwards and H. N. Williams have formed a partnership as lumber dealers at Carleton Place, Ont., under the firm name of Williams, Edwards & Co.

Messrs. Winnacott & Irons have rebuilt the planing mill at Burks Falls, Ont., owned by Mr. Duncan McCaffery, and which was almost totally destroyed by fire recently.

The Rat Portage Lumber Co. has opened a yard at Brandon, with a view to supplying the western trade from that point. Mr. J. D. Kennedy will have charge of this branch.

The directors of the Central Canada Fair, Ottawa, propose making the log rolling contest a special feature of this year's exhibition. Contests will be held each day on the lake at the grounds.

Mr. Walter Shanley, C.E., of Montreal, is making a government survey of the route of the proposed Ottawa and Georgian Bay ship canal, of which Mr. McLeod Stewart, of Ottawa, is the promoter.

The body of the late C. W. Robertson, bookkeeper for Thomson Smith's Sons, Cheboygan, Mich., was found last month in a lake about ten miles from Webbwood, Ont. He had been missing since December last.

The Rat Portage Lumber Co. have had plans prepared for a new warehouse to be built in Winnipeg. This warehouse will be 50 x 125 feet, of brick and stone, three stories and basement, and will cost about \$15,000.

The law-suit of Alexander Fraser vs. the Hull Lumber Co., in which the Table Rock property at Hull was interested, has been settled out of court by the Hull Lumber Co. paying the costs since the institution of the action. These amount to about \$12,000.

Andrew Haslam, of Nanaimo, B. C., has a novelty in the way of a dry kiln. The walls are made of sawdust and lime in the proportion of four parts sawdust to one part lime. The walls are six inches thick. Mr. Haslam thinks he has the best kiln on the coast.

The Royal City Mills, New Westminster, B.C., has received an order from Australia for a sample shipment of ten thousand boxes suitable for shipping canned goods to Europe. This business is no doubt the result of the establishment by the company of an agency in Australia.

Mrs. M. L. Rochon, of Rockland, is said to have issued a writ against the W. C. Edwards Lumber Co. for \$5,000 damages for the death of her husband, who was killed by an accident in connection with the erection of a sawdust burner. The usual claim of negligence is made.

The Conger Lumber Co.'s mill at Parry Sound, Ont., which has been closed down for the past year or two, is in operation this season, having been refitted and put in first-class shape. The company have a good supply of logs on hand, and expect to run steadily until the end of the season.

Messrs. Geo. Perley, Fred Avery, Chas. E. Reid and Walter White, of Ottawa, have purchased the mill of the

Ottawa Lumber Co. at Calumet, Que., together with an area of 60 square miles of spruce limits. It is the purpose of the purchasers to erect a large pulp mill at an early date.

Mr. Geo. A. White, agent for the Peoples Bank of Halifax at Woodstock, N.B., is inviting tenders for the purchase of timber lands in Aroostook county, Maine, containing 8,200 acres, also saw mill, planing mill and shingle mill property at Woodstock, N. B. Tenders close on Tuesday, August 15th.

It is reported that the J. A. Fay & Egan Company, of Cincinnati, Ohio, have been given a contract by Millar & McCromby, of Montrose, Scotland, for a large quantity of saw and planing mill machinery for installing in a proposed saw mill near Quebec. It is said that this mill will probably be the largest in Canada.

Mr. Thomas Southworth, Clerk of the Ontario Bureau of Forestry, and Mr. Aubrey White, Deputy Commissioner of Crown Lands, have in preparation a history of the crown timber regulations both during the French regime and in the period which has since elapsed. The work will appear as an appendix to Mr. Southworth's forthcoming forestry report.

An interesting decision is shortly expected in the case of the Dominion Bunge Co. vs. the Queen City Bunge Co., both of Toronto. A board of arbitrators was asked to decide the question of priority of invention between these companies upon a new machine for cutting bungs for barrels, etc., an industry about to be established in Toronto, and which is believed to be the first of the kind in Canada.

The Ymir Sawmill Co., of Ymir, B.C., have completed a novel tramway running from the mill to a timber limit which the company recently purchased from the Great Northern Railway Co. The tramway is two miles in length, and trees with the bark peeled off are used for rails. These are firmly bolted together, and upon them runs a car with large grooved wheels some ten inches thick. This car is capable of taking to the mill between two and three thousand feet of logs.

In the Dominion parliament Mr. Clarke Wallace called the attention of the Minister of Marine to the fact that the Ottawa river was full of sawdust, notwithstanding that there was a law on the statute books to prevent the dumping of mill refuse in such waters. Sir Louis Davies replied that any person who deposited sawdust in the river was liable to the penalty of the law. He pointed out, however, that experiments were being made with a view to utilizing the sawdust, and the result so far had been most satisfactory.

Mr. Thomas Southworth, of the Ontario Forestry Department, has received from a Canadian proprietary medicine company an enquiry as to the possibility of obtaining tamarac gum in Ontario. Mr. Southworth states that in the highlands of New Ontario, north of the height of land, the tree grows everywhere, but throughout the older part of the province it is found only in swampy places. He suggests that residents in the neighborhood of tamarac swamps might find it profitable to gather the gum.

As a result of the visit of Hon. J. M. Gibson, Ontario Commissioner of Crown Lands, to the Lake Temagamingue district, a forest reserve is likely to be established in that district. All round the shores of the lake there is a dense growth of white pine greatly in excess of what was believed to exist, and it is understood that the Commissioner will take steps to create it into a forest reserve. As the district is likely to be visited by many tourists, it is necessary that precautions against devastating forest fires should be taken.

Mr. W. C. Edwards, M.P., president of the W. C. Edwards Lumber Co., recently entertained in shanty style about two hundred guests, including senators, members of parliament and newspaper men. Taking the steamer at Ottawa, the party sailed to Rockland, where, in a large marque erected in front of Mr. Edwards' residence, a real shanty dinner was served. After this the demonstrations of life in a lumber camp were carried out. A shanty had been erected at the rear of the grounds, built of red pine logs, with roof of "scoops" and wooden chimney, and in the centre of the floor there was a real "caboose," whereon the wholesome fare of the shanty crew was cooked. The men, called out by a foreman, cut down a couple of pine trees, trimmed and sawed them into logs, skidded them onto the rollways,

and loaded them onto sleds. The drive was next illustrated, and finally the booming of the logs at the mill to be cut into lumber.

CASUALTIES.

Frederick Dobson, shingle sawyer in Alexander's mill at Campbellton, N.B., had his right hand cut off by coming in contact with the saw.

In Macdonald's saw mill at Montague, N.S., Thomas Hume was drawn under the saw of a shingle machine, receiving such injuries that he died in a short time.

Frank Jones, working in a saw mill at Odessa, Ont., fell across a circular saw while it was in motion. The right arm was severed above the elbow, and his forehead cut.

PERSONAL.

Mr. Richard R. Dobell, of Dobell, Beckett & Co., timber merchants, Quebec, sailed for England on June 15th.

The death took place recently of Mr. Frederick W. Taylor, senior member of the firm of Taylor & Crate, lumber dealers, Buffalo.

Mr. G. F. Stevenson, Dominion Crown Timber Agent at Winnipeg, has gone to the Yukon district on important departmental business.

The sympathy of friends is being extended to Mr. Geo. W. Nickels, of the hardwood firm of Regan & Nickels, Toronto, upon the death of his wife, which occurred on July 11th.

Mr. Arthur H. Campbell, who is engaged in the lumber business in New York city, recently spent his vacation with his parents, Mr. and Mrs. Paul Campbell, of Lorne Park.

Mr. John Durkin, an official in the woods and forests branch of the Ontario Crown Lands Department, died in the General Hospital at Toronto last month. Deceased was an expert in the subject of forestry, and was fifty-seven years of age.

Mr. Fred Dyke, representative in New Brunswick for Thomas B. Neale & Co., timber agents and importers, Liverpool, Eng., has taken an office in Winslow's Law Chambers, Water street, Chatham, N.B. Mr. Dyke is favorably known on the Miramichi.

Mr. L. H. Swan, of the Swan-Donogh Lumber Co., North Tonawanda, N.Y., sailed from New York on June 24th, per steamer Umbria, for England. It is Mr. Swan's intention to combine business with pleasure, and to spend a month or six weeks on the European continent.

Mr. J. M. Macoun, of the Geological Survey, Ottawa, has been commissioned by the Dominion government to prepare a Canadian forestry exhibit for the Paris Exposition in 1900. Mr. Macoun is already arranging for a complete collection of native woods, and hopes to prepare an exhibit which will surpass anything yet accomplished.

TRADE NOTES.

Messrs. Deane & McLellan, of Campbellton, N. B., recently sold one of their double edgers to Geo. Moffatt, of Dallousoe.

Messrs. Shurly & Dietrich, the well known saw manufacturers of Galt, Ont., are erecting a new bedstead factory, with the intention of concentrating all their works at Galt.

Mr. D. K. McLaren, of Montreal, has opened an office at 69 Bay street, Toronto, where he will keep on hand an assorted stock of the leading sizes in leather belting. He has lately introduced an excellent method of stretching the leather, and manufacturing, as he does, solely from imported English oak tanned stock, with the utmost carefulness, he guarantees entire satisfaction to users of the "genuine oak belting." Mr. J. T. Craig, late of Craig & McArthur, is in charge of the Toronto office.

Robt. Bell, jr., of the Hensall Engine & Machine Works, has just completed a large brick machine for making bricks from sand and cement. This is a want long felt in localities where brick clay is not to be found. These bricks are said to be much superior to clay bricks in every way, have a better appearance, and can be made almost as cheaply as the clay bricks. The machine has just been tested, and is being shipped to Vancouver, B.C. Mr. Bell is also doing a large trade in saw mill machinery, engines, boilers, etc.

WOOD PULP DEPARTMENT

FREIGHT ON PULP WOOD.

A new factor has appeared in the export tax controversy between the governments of the United States and the Dominion of Canada, says the Paper Mill. This new and very important factor is the matter of railroad freight charges. Rather than bring his pulp from Canada to his mill in the United States, the American manufacturer will take his mill to the pulp fields. This plan is well stated by the editor of the Canadian Trade Review, who says in a recent issue of his journal: "It is now believed that the desire to avoid the heavy rail charges upon pulp wood to the mills will soon do as much in forcing American pulp and paper mills across our border as an export tax. All those American mills depending on railway transportation for their supply of Canadian pulp wood will soon be induced by considerations of economy to bring their mills to Canadian limits. It is generally understood that the railway companies threw their influence against the agitation for an export duty, as they say it would kill their remunerative pulp wood traffic. Their own high rates may have the same effect. The great necessity nowadays is to lessen the cost of production, and we can trust to that necessity to bring mills to the fine spruce limits of this country. Legislation for the purpose will be unnecessary. Not only will pulp mills gravitate toward the limits, but also paper mills will develop from these, and all under the operation of the same cause, namely, the desire to eliminate as much as possible of the railways' heavy charges."

USES FOR PULP.

Wood pulp has been used as a substitute for iron steel, wood, stone, glass, ivory and innumerable kinds of animal and vegetable fibre. As a material for car wheels the manufacturers have

found it superior to any kind of metal, being about three times as durable as steel and much more elastic. It has been found available as a material for paving bricks, drain tiling and conduits for electric cables. For ivory, which is becoming scarcer every day, cellulose is the best substitute that has yet been found. When properly treated, it is practically proof against heat and moisture, hence it has been found superior to timber as a material for telegraph poles and screws. Cannon, too, and bicycles are made out of wood pulp in Germany and Chicago respectively, while a Frenchman has succeeded in producing a thread from the same substance which he declares can be worked up into all sorts of fabrics. A Vienna inventor declares that his wood pulp leather is superior to animal leather in fineness and durability. Among the other articles made of wood pulp are boats, canoes, cuspidors, pails, flowerpots, tables, chairs, bureaus, barrels, wagons, horseshoes and imitation porcelain ware. The manufacture of silk from wood pulp is now said to be an important industry in England and France.—Popular Science.

PULP NOTES.

The Cushing Sulphite Fibre Co. have invited tenders for the erection of their pulp mill at St. John, N. B. Mr. Geo. S. Cushing is local manager.

Mr. Wagon, manager of the Dominion Pulp Company at Chatham, N. B., states that the capacity of the mill is being increased from 90 to 120 tons per week.

Mr. John Mather, of Ottawa, has still under consideration the establishment of pulp and paper mills at Keewatin. The proposed output is 100 tons daily.

Mr. T. G. McMullen, M. P. P., of Truro, N. S., has commenced work on the foundation of his new pulp mill to be built on the Salmon river, in New Brunswick.

The first cargoes of cedar for pulp were received at the Behring Paper Mills, Erie, Pa., on July 3rd. The wood was brought from Canada and cost \$4.00 per cord.

Labrador is likely to possess a new pulp mill in the near future, Messrs. H. J. Crowe, M. Currie and W. R. Calder, of Bridgetown, N. S., being the promoters.

The pulp and paper mills at Port Rouge, about 40 miles west of Quebec, on the north shore of the St.

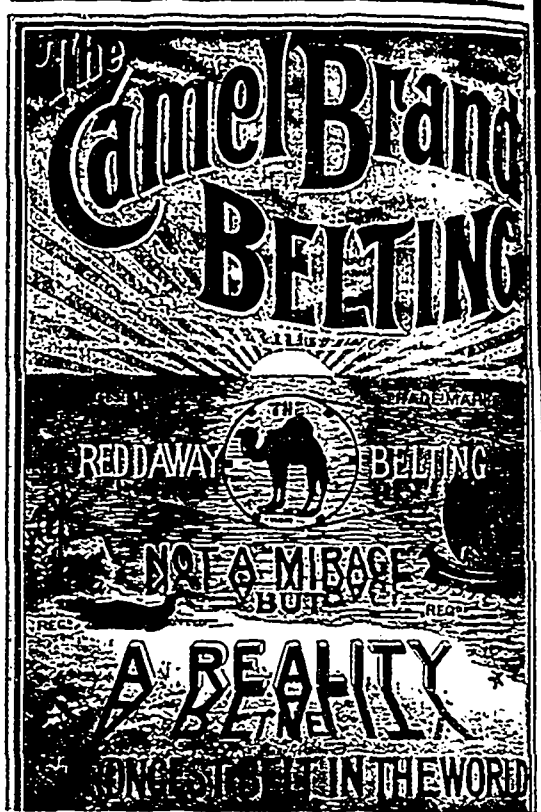
Lawrence, have been sold to Mr. Gou Penny, of Montreal.

About sixty paper makers and wood pulp merchants of Great Britain left last month for Norway and Sweden, at the invitation of the Scandinavian Wood Pulp and Paper Makers' Association.

The St. John Sulphite Fibre Co. have their mill at Miramichi in operation, and are turning out between 25 and 30 tons of pulp per day, which will be shipped to London, Eng. The mill gives employment to 120 hands.

The exportation of wood pulp from the United States is on the increase. Nearly twice as much was exported during May as during the previous similar month, while the period of nine months just ended shows an increase of about 25 per cent. over the preceeding period.—The Paper Mill.

Mr. C. LeBaron Miles, C. E., has recently been making surveys in connection with proposed pulp and paper mills to be established at the Narrows of the Tobique River.



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at Andover, N. B. Mr. A. H. Hillyard, of St. John, is the promoter, and Mr. Grover, of Oregon, Maine, is acting as hydraulic engineer.

The London correspondent of the Paper Mill, writing under date of July 1, states that recent arrivals of mechanical wood pulp at British ports included several hundred tons from Newfoundland. According to the customs declarations, the value of 2,100 tons to hand in one week was £3,540—certainly an under valuation.

A recent fire in the works of the Laurentide Pulp Company at Grand Mere, Que., destroyed the chip conveyor, and water tanks, building and equipment, sulphur house, sulphur fume cooler house, and acid tower. The loss is about \$50,000, partially covered by insurance. The works will start up again about the end of August, when 75 tons of sulphite per day will be manufactured.

Speaking of the proposed pulp mills at Grand Falls, N. B., Senator Proctor, of Vermont, one of the promoters, said that surveys had been made and that prominent engineers in Montreal were at work on plans of mills, dams, canals, etc. The larger mills will be situated at the Falls, but it is the intention of the promoters to construct a smaller mill at the confluence of the St. John river.

Incorporation has been granted to the Trent River Paper Mill Company with head office at Frankford, Ont., and a capital stock of \$50,000. The provisional directors are J. S. Lovell, Wm. Bain and E. W. McNeill, of Toronto. The company have purchased the Sills Bros' water privileges on the Trent river near Frankford, and

are engaged in deepening the river, constructing a dam and building a new paper mill.

American wood pulp is to be represented at the Paris Exposition. Mr. Tarrleton Bean, director of the Department of Forestry and Fisheries for the United States, says the exhibit in his department will be remarkable for many reasons. There will be no display of natural specimens in the forestry division, but in lieu thereof there will be exhibits of finished lumber which have special uses. In this connection articles manufactured from wood pulp will have much prominence.

Referring to the undertaking of the Occidental Syndicate of London, Eng., at Sturgeon Falls, Ont., a correspondent writes that a large pulp mill has been built and is now in operation, and that daily shipments of large quantities of pulp are being made. Preparations are under way for the erection of paper mills, the intention being to manufacture completely the raw material in the near future. When their plans are fully carried out, the company will have expended nearly \$1,000,000.

The charter incorporating the British America Pulp & Paper Co. sets forth that its objects are to acquire and develop timber limits, water powers and mill privileges, and to establish and operate pulp and paper mills, principally at the falls of the Peribonka, Mistassini, and Chamouchouan rivers, in the Lake St. John district, province of Quebec. The capital stock is to be \$3,000,000, and Montreal the chief place of business. The applicants for incorporation are: Raymond Prefontaine, Robert Bicker-

dike, A. A. Thibaudeau, D. A. McCaskill and E. G. Penny, of Montreal.

United States Consul Manhain, of Riechenburg, quotes an account in a local newspaper of a process for making artificial cotton from the wood of the fir tree. It appears that the wood is reduced to thin shavings, which are placed in a washing apparatus, exposed to the influence of steam for ten hours. They are then subjected to a strong preparation of sodium lye and are heated under great pressure for thirty-six hours. The wood is now changed to pure cellulose, and to give this a greater resisting power some castor oil, caffeine, and gelatine are added. The substance is then put into an apparatus and made into threads, which are reeled.

Several Chicago capitalists are looking into the question of establishing mammoth pulp and paper mills in Canada, and have appointed a representative to report on an available site. This gentleman, speaking of his trip to Canada, said: "You can hardly imagine what a great impetus that the paper business has received in Canada during the past year. Mills are starting up at many places not thought of a couple of years ago. Canada is simply, at its best, an awful, unending forest, and while the edges are being taken off, our grand-children will long be dead before a real beginning is made to clear them away. If there were more railroads in that country it would be easier to get started with such enterprises, but these will, of course, come in time. Meanwhile keep your eyes on Canada for a real, live big boom in the paper manufacturing business."

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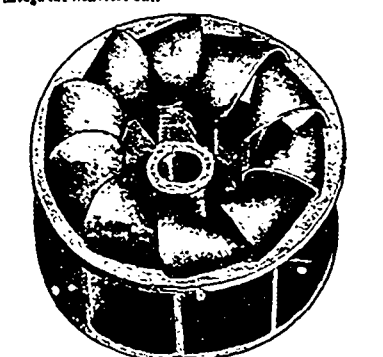
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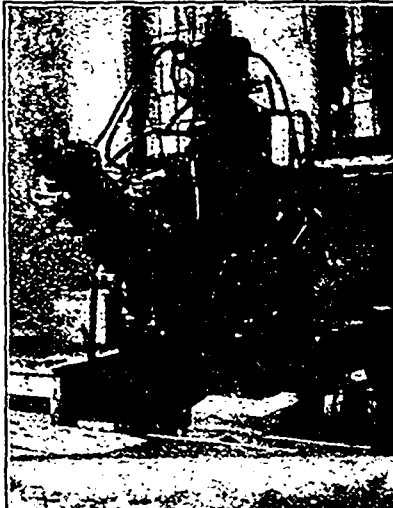
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PULP FOR JAPAN.

It is learned that the Sault Ste. Marie Pulp & Paper Co., of Sault Ste. Marie, Ont., are shipping five hundred tons of pulp per month to Japan. This is about one-fifth of the total production of these mills. The pulp is shipped by way of Vancouver, Seattle and San Francisco, where it is loaded on vessels for Japan. It will be remembered that Mr. Geo. Anderson, special commissioner to Japan and China for the Dominion government, reported favorably as to the prospects for Canada supplying these countries with pulp, and the trade which has been secured is probably the outcome of his report. These countries have received almost their entire supply

of pulp from Norway and Sweden, but it now appears as though Canada would capture much of the trade.

HEAVY PURCHASE OF SPRUCE LIMITS.

A LIMBER deal of very great importance has been closed in the city of Quebec. An American syndicate has purchased, through Charles Lionais and John N. Hickey, both of Montreal, several large spruce limits on the lower St. Lawrence, agreeing to pay for them \$1,850,000. The limits are on the north shore of the peninsula of Gaspé. The purchasers are said to have a capital of \$10,000,000 at their command, and are credited with the intention of at once proceeding to build two

saw mills and two pulp mills, costing several million dollars, the pulp mills to have a daily capacity of 600 tons each. A party of engineers is now making surveys and planning for the location of the mills. According to reports, the work is to be rushed, as it is stated that Mr. Lionais will be put in charge of 1,500 men to begin operations without delay. Not is this all. Mr. Lionais is reported to have secured certain other valuable spruce berths below Quebec city. The total area of this tract is put at 1,446 square miles, the pulpwood upon it being described as of the finest quality. It is understood that the International Paper Company are at the back of the purchase.

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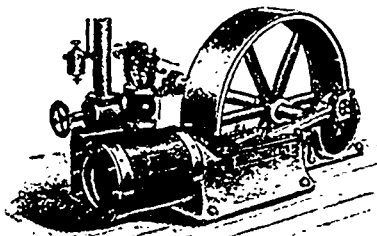
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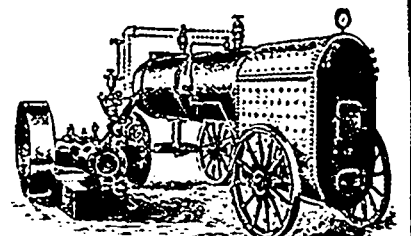
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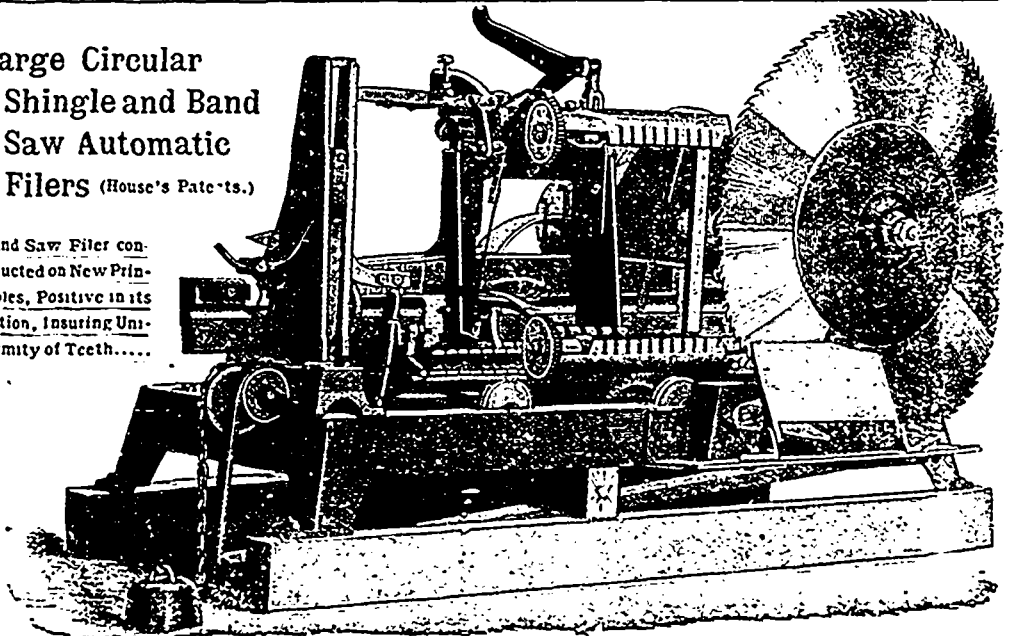
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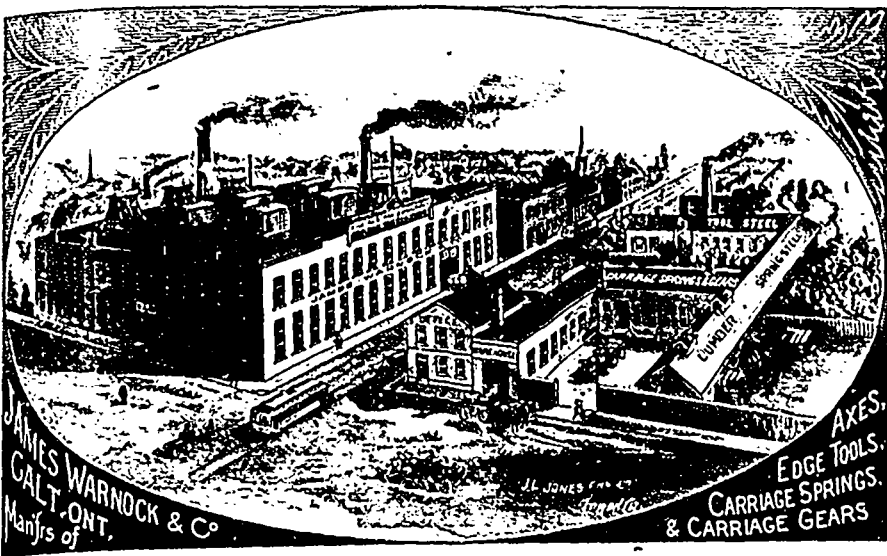
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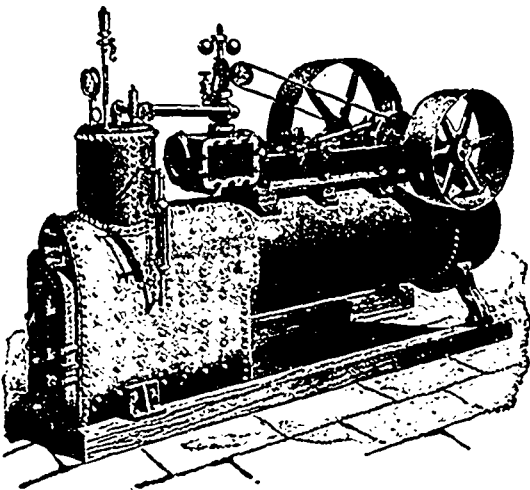
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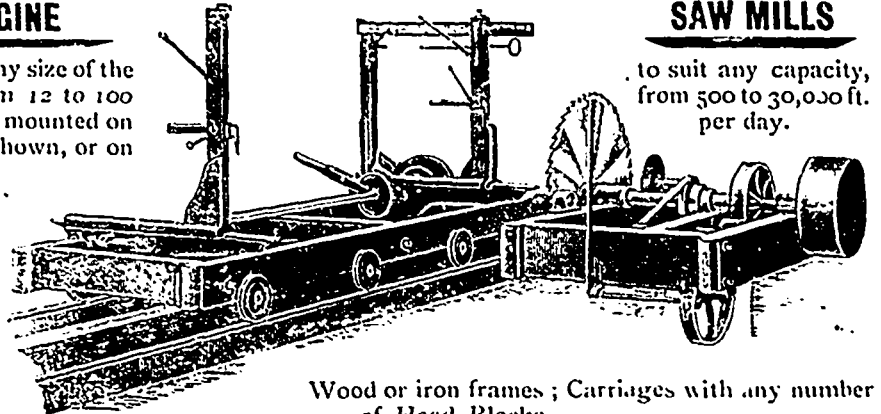
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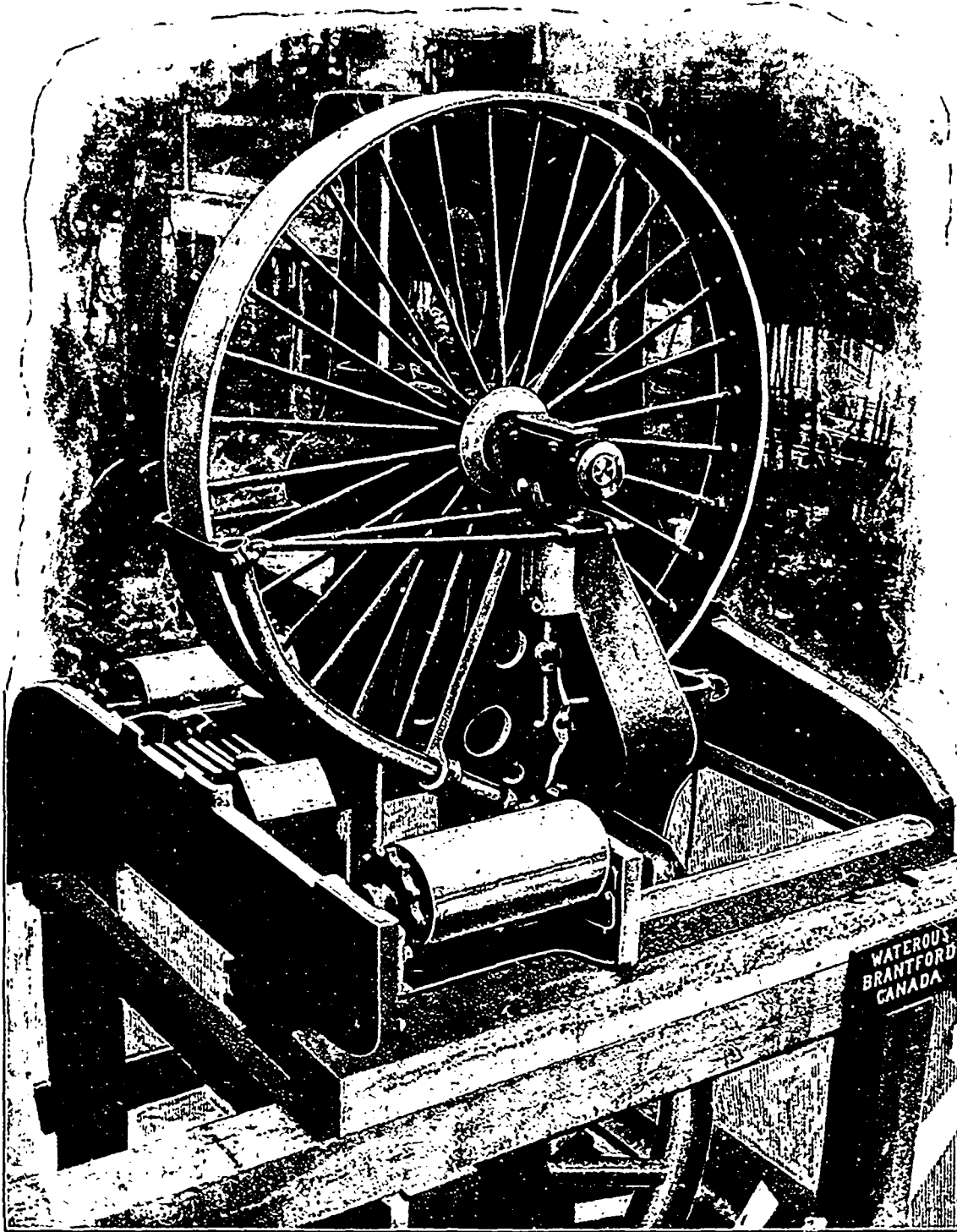
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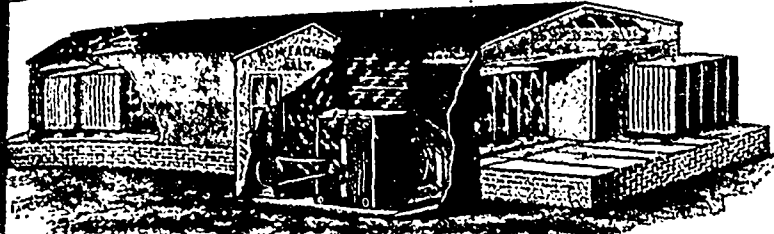
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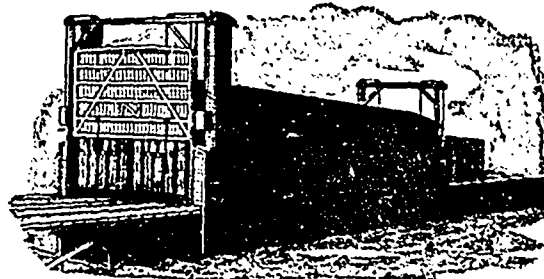
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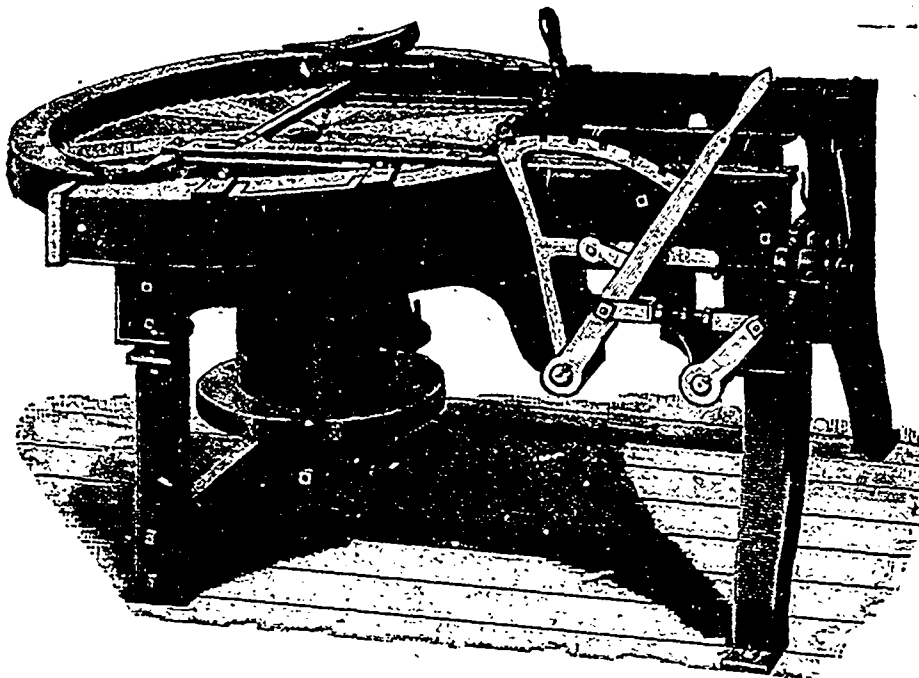
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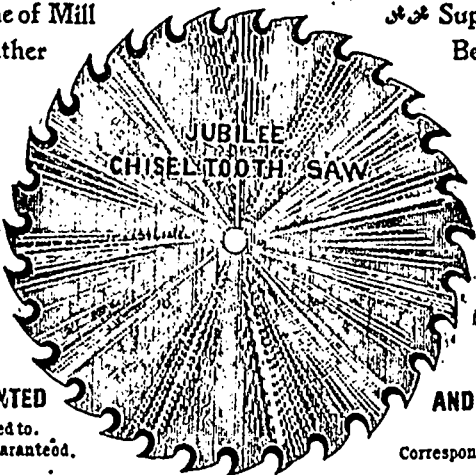
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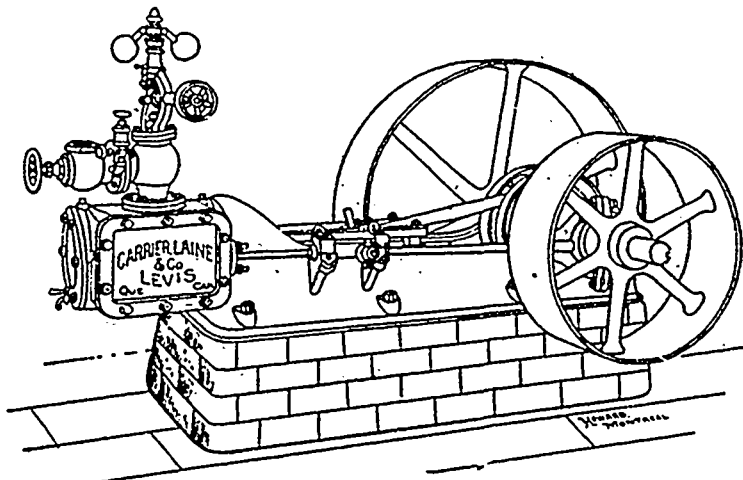
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