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# THE CANADA LUMBERMAN.

VOLUME VIII.  
NUMBER 12.

PETERBOROUGH, ONT., DECEMBER, 1888.

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## THE CANADA LUMBERMAN

PUBLISHED MONTHLY BY

ARTHUR G. MORTIMER.

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### TERMS OF SUBSCRIPTION:

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### Advertising Rates Furnished on Application.

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

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

Special correspondents in localities of importance present 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 effecting 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 ten cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for three 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.

INSTRUCTIONS have been issued from the Department of Inland Revenue that hereafter no lumber which has passed through the Ottawa or Lachine river canals shall be delivered up unless a *bona fide* check, properly endorsed by the owner himself, is presented. The change is evidently aimed at the middlemen, who it is said have been profiting largely out of the old arrangement. Heretofore anyone having a specification and filing it at the office, provided the dues were paid, could have the lumber delivered up to them. Bankers assert that the risk has become too great for them and have accordingly strongly advocated the change referred to.

THE London Times furnishes some interesting statistics as to the frightful consumption of wood used as sleepers for railway tracts, and points to its figures as a strong argument in favor of the employment of metal sleepers. It appears that the six principal railway companies of France use more than 100,000 sleepers per day, or 3,650,000 per annum. As a tree of the usual dimensions will give only ten sleepers, the railways in question require 1,000 trees per day for sleepers alone. In the United States the consumption is much greater, amounting to about 15,000,000 sleepers a year, which is equivalent to the destruction of about 170,000 acres of forest. The annual consumption of sleepers by the railways of the world is estimated at 40,000,000, and this is probably less than the actual number. The Times remarks: "From these figures the rapid progress of deforestation will be understood, and it is certain that the natural growth cannot keep pace with it. Hence we have had during the last quarter of a century the frequent inundations and changes in atmospheric condition." It would be interesting to calculate how much wood is annually wasted in Canada on sidewalks, block pavements, telegraph and telephone poles, and general railway work. The figures we fancy would startle those who have been advocating greater conservatism in the utilization of our timber resources. It is of course to be noted that for all the purposes mentioned wood is needlessly and unprofitably used.

THE competition of the work by which the Lake St. Peter channel between Quebec and Montreal has been deepened to permit the passage of vessels drawing twenty-seven and a half feet has been celebrated by a formal opening. This improvement is one of considerable interest for the trade. From the recurrent troubles at Quebec and other causes the practice has been increasing of loading timber and lumber at Montreal instead of at the ancient capital as formerly. The improvement and deepening of the channel between the two cities will have a strong tendency to attract vessels to Montreal. This will not only be a convenience to the trade desiring to ship from that port and tend to keep down freights, but it will also have a beneficial influence in the port of Quebec, confining them in the better ways under the new regulations that have been adopted, and leading to further improvements in the same direction. This increase of competition and extension of shipping facilities in the St. Lawrence ports cannot fail to be beneficial.

THE appointment of a committee by the lumbermen's branch of the Toronto Board of Trade to present their grievances between the Council of the Board and obtain the co-operation of that body is a sensible step towards obtaining a very important object. That object is to obtain from the Grand Trunk and other railways a change in their methods which are felt to be unfair and prejudicial to the trade. The foremost grievance is that lumber being loaded on flat cars is often exposed for considerable periods unprotected to rain, snow and ice by which its weight is considerably augmented, and as it is weighed at the point of delivery instead of the point of shipment, freight has to be paid on this not beneficial addition of so much water. It is claimed that the weighing should be done at the point of shipment. A further grievance is that the joint classification tariff is unjust, as it assumes that certain quantities of lumber will have so much weight, when as a matter of fact they do not weigh so much as is thus assumed. There are also complaints of a great shortage of cars said to be otherwise employed. These and minor grievances are now in a fair way to be forcibly presented with the weight of combined action and there is a better prospect of obtaining redress than by individual remonstrances.

THE great advance in ocean lumber freights during the past year is given a striking illustration by the River Platte business. Twelve months ago the rate on lumber from Portland, Me., to Buenos Ayres ruled at \$9.50 per M. with an increase of \$1.50 per M. to Rosario or other up river ports. On August 24, 1888, there was an advance to \$13 to Buenos Ayres. The following week brought the figures at \$13.50 and a week later to \$13.75. Now, \$13.50 is freely offered to load for Montevideo for orders, and if ordered from that port to Buenos Ayres \$14.50 is paid. The rate to Buenos Ayres direct is \$14 and to Rosario \$15.50. Even with such rates as here quoted the placing of orders is very difficult, and the Boston Post says one Boston firm has orders for twenty million feet of lumber on hand at the present time and is experiencing much difficulty in securing transportation for any portion of it. It had been supposed that many large coasters engaged in the coal trade would be induced to accept River Platte charters by the high rates obtainable, but the coal carrying trade has also enjoyed a most prosperous season, with a steady demand for vessels of both large and register, at very satisfactory rates. In other lines, too, the rates have advanced in proportion, and are steadily maintained.

IN the course of last month the choice of the President of the United States was virtually decided, for the proceedings of the electoral college have become a mere formality. Gen. Harrison will be installed next March and the Republicans have gained the day. Not only have they elected their candidate as President, but they have gained greater strength in both Houses of Congress if not the complete control, which is still uncertain. They will at least have greater power to carry any legislation they may propose than the Democrats have had for the last four years. This is a matter of interest to Canada, and especially to the lumbermen. Whether there will be any important change in the tariff or what direction it would take no man can foretell. The Democrats talked of

taking off the duty on lumber, but they were by no means unanimous, and the Republicans as a rule opposed the change. It is of some significance that in more than one Republican procession during the campaign might be seen the inscription "no free lumber." Mr. Blaine too, the great Republican leader, in addressing audiences in lumbering districts in Maine spoke to the same effect. There seems therefore little probability, if there ever was any, of a remission of the duty. As to the larger question of reciprocity some of the Republican organs and speakers, notably Mr. Blaine, have declared that Canada should not enjoy their markets unless it became part of the United States, but of course in politics no such declarations are final. There seems to be no immediate probability of a change.

THE invitation that has been extended by the Canadian authorities to delegates from the Australasian colonies to visit Ottawa for a conference of the best means of extending and making closer their commercial relations and kindred matters is a wise step and one that should have important results. Our trans-continental line of railway, the steamship line that is being established with the assistance of public grants, the contemplated cable beneath the Pacific ocean and the proposed reduction of postage, are all steps to bring Canada and Australasia practically closer together and to open their markets to each other. A large proportion of the imports into the Australasian colonies consists of articles that Canada could very well supply though at present they are obtained from foreign countries. The Australian forests are chiefly hardwood and in any of their journals it will be seen that they rely chiefly upon "Norway pine" and "Oregon pine." Why should not Canadian pine almost wholly replace these foreign woods? The quality is at least equal if not superior the distance is shorter and soon there will be far better facilities for communication. Already there has been of late a considerable impetus given to exportation of timber and lumber from British Columbia to Australia with a strong tendency to a further increase of this trade. Full advantage should be taken of the improved facilities that are being provided or are foreshadowed for the near future, and the visit of the Australian delegates should be utilized to the utmost to promote an intercolonial commerce of which the trade in timber cannot fail to be one of the most important branches. The members of the trade should organize to see that their interests are duly represented and their views adequately expressed at this important conference.

MESSES. PAQUETTE, whose lumber yard and sash and door factory at Montreal, were recently destroyed by fire with a reported loss of \$75,000, uninsured, are taking the matter into court. They claim that the city should reimburse them on account of alleged insufficiency of the water supply, the machinery and the fire brigade to protect the property from destruction by checking the fire. As having a bearing on this question of the responsibility of the corporation it may be remarked that the city of Montreal is not contending that the fire insurance rates should be reduced in compliance with an agreement to that effect when the protection against fire should be rendered effective. The underwriters, however, decline to make the demanded reduction at present on the ground that the city had not yet complied with the conditions as to the efficiency of the means to prevent fires. If the proceedings of Messrs. Paquette are prevented in the courts this question of the efficiency of the fire protection and the responsibility of the municipality will receive a thorough ventilation. The proceedings and their results will be watched with great interest by many in the timber trades, who feel that while they are called upon to pay heavy municipal taxes they do not obtain in return that adequate protection for their property which they think they have a right to expect for their contribution to the municipal exchequer. Then, again, when they complain of the oppressive insurance rates on their property they are told by the underwriters that the neglect of the municipalities to render their means of fire protection effective necessitates the maintenance of high rates to cover the risk. A stirring up of the whole question in the courts will not be amiss.

REFERRING to the sawdust question and the report upon its accumulation made under the auspices of the Dominion Government, the *Northwestern Lumberman* says. "The fact about sawdust is that it will stay where it collects unless there is something to disturb it, being very different from sand in respect to shilling; and experience has demonstrated that it will remain a long time in water without decomposing. Damaging effects from its accumulation cannot always be staved off. But the mill men of the Ottawa valley seem to be placed between two fires—the Government is complaining about the practice of dumping sawdust in the river, and the Canadian insurance companies, for some unexplained reason, object to the use of sawdust as fuel. Judging from the practice this side the line, there is no good reason why they should. If proper piping and care is used in conveying sawdust to the furnace or the refuse burner, there is no extra hazard, and if the American insurance companies object seriously to such risks sawdust would not be used for fuel in the states so universally as is the case. Saw mills, planing mills and other wood-working establishments burn sawdust, shavings, etc., right along, and they appear to get all the insurance they want."

THE annual report of the division of forestry of the United States Department of Agriculture, recently issued, contains some interesting information. The import duty laid upon manufactured lumber in 1872 had the effect at first of decreasing importations from Canada by from 50 to 60 per cent. until 1876-77 when an upward tendency of imports began. A comparison of the imports of the last three years with those of the preceding three, shows a noticeable decline in all classes of foreign products from the amounts to which they had gradually increased up to 1884, when the importation of manufactured lumber reached nearly the same amount that was imported in 1872. For the decrease in unmanufactured wood now, the Canadian export duty of \$2 on logs may serve as an explanation, but causes must have worked to effect the reduction of manufactured lumber in the face of decided enhancement of value of product. The difficulty of access and interested distance from the market is probably the explanation. It is suggested that, so far as the saving of standing supplies is concerned, there need to be no fear or hope from foreign competition, for the "quantity of standing pine in the United States and Canada is reduced to a condition of absolute control; it is held in strong hands on both sides, and will not be lightly frittered away."

THE CANADA LUMBERMAN closes a record of eight years existence with the current issue. Since the present management assumed control a strong effort has been made to raise THE LUMBERMAN to the front rank of Dominion trade journals. How far we have succeeded in accomplishing this object our many readers are left to judge. Commencing with Vol. IX we have decided to largely augment our correspondence department by engaging the services of thoroughly reliable and practical correspondents at the following points throughout the Dominion: Toronto and Ottawa, Ontario; Montreal and Quebec, Quebec; St. John, N.B.; Halifax, N.S.; Winnipeg, Man.; and New Westminster, B. C. We trust that we will receive applications to fill these positions from some of the most practical and able writers in the lumber trade. The editor will look to each correspondent to faithfully report all matters of news pertaining to the lumber and wood working industries throughout his division, and discuss all matters within his knowledge affecting the lumber interests. As liberal terms as possible will be allowed those whom the editor may select to carry on the work, and it is sincerely hoped that the trade in general will further our efforts by extending as liberal a financial support to the LUMBERMAN as possible during the year 1889.

THE export duty on saw logs has been raised by order-in-council, as authorized by statute, from two to three dollars a thousand. This was no doubt considered necessary to check the increasing export from Georgian Bay and especially the very large increase that was evidently contemplated. For instance the Saginaw Lumber & Salt Co. had just been reported as having purchased three timber berths on Spanish River from which they expected to cut two hundred million feet to be rafted in the log to their mills near Saginaw city. A subsequent report from East Saginaw stated that it had been anticipated that a hundred and fifty million feet of logs would be brought to the river from the Georgian Bay next season, and that the raised duty had caused a trade for two hundred million feet to be declared off. It is indeed well known that the Michigan lumbermen have been making very extensive investments in Canadian pine to supply their mills with logs. There will now, however, be less inducement for them to operate in this manner, and if they want to use Canadian logs they will

have to erect mills in this country. This is only fair so long as they have the benefit of their own import duty of two dollars a thousand on our lumber. The Michigan lumbermen are very much disgusted and threaten to use all their influence to procure an increase of the United States import duty on lumber in order to console their disappointed hopes. In this, however, they are not likely to be successful, for there are also important interests in the country which are eager to see the duty on lumber reduced or removed and they would protest very strongly if instead of a reduction there were an increase.

JUST as the November issue of THE LUMBERMAN was going to press word was received from Sault Ste Marie that the Spanish River Lumber Co. (Buswell & Co.) of Michigan, had failed, with liabilities \$100,000. A week or so previous to this announcement one of the company's mills was burned on the Spanish River, the estimated loss being \$40,000, without insurance. The Canadian Bank of Commerce was the largest creditor, being interested to the amount of \$60,000, and they declined to carry the company's paper any longer. The authorities of this bank also suspected some fraud in connection with the recent fire, and accordingly had a warrant sworn out for the arrest of the principal of the defunct firm, F. E. Buswell, and placed it in the hands of a couple of officers to execute. They succeeded in serving the warrant at Spanish River. The prisoner insisted on dining before he left, and invited his captors to partake. They accepted, and while they were so engaged Mr. Buswell stepped outside to see a man, as he said, who happened to be on board the company's tug, which stood alongside with steam up. Mr. Buswell no sooner touched her deck than she cast off, and before the officers of the law had finished their meal, had him well on his way to his home across the lines, where he still remains and defies his would-be captors. The result of the failure of this firm will strike a heavy blow at the lumbering trade on the North Shore of Lake Huron. They had about 200 men in their employ, 150 of which were already in the woods at the time of the failure. It is stated that some of these men have so far trusted Buswell & Co. as to leave their wages with the firm, and in some instances as much as \$500 has been deposited. The report that the burnt mill would soon be replaced by a new one is a mistake as the company has decided to tow its logs in the future to Detour or Cheboygan for sawing.

REFERENCE was made in our last issue to the case of H. R. Hazleton, of Michigan, which is now before the exchequer courts. This suit is attracting a great deal of interest in lumber circles as it will decide what constitutes dimension timber in the interpretation of the present customs laws of the Dominion. The minister of customs has filed his defense in the exchequer court as the Crown's defense. It reads as follows:

It is admitted that the claimant did, during the years 1883-1884, import into Canada from the United States a quantity of oak lumber and timber, but it is not aware that the quantity or value of such is correctly set out in the statement of claim. The fact is that the oak lumber and timber so imported by the claimant were manufactured, inasmuch as the same, at the time they were imported into Canada by the claimant, were not oak planks and boards coming within the classes of lumber and timber mentioned in the 726th item of the tariff as free of duty, but on the contrary, such lumber and timber were manufactured, inasmuch as the same were, at the time they were imported into Canada, sawn, cut and shaped to the exact sizes and dimensions required for the separate parts and pieces of the wood-work of railway cars and carriages, and were, therefore, dutiable under the items 504 and 506 of the tariff. In consequence of which the crown was legally and properly entitled to be paid the duties thereon. It is denied that the amount of \$2,733.25 was paid by the claimant to the customs officers under protest, as mentioned in the statement of claim. On the contrary, it was paid by claimant without compulsion. Further, it is contended that the amount sought to be recovered was paid by the claimant as duties of customs upwards of three years before the commencement of this action, and no application for repayment was made within three years before the action was commenced. Hence no action lies against the crown.

Mr. Hazleton bases his claim on section 726 which provides that "lumber and timber, plank and boards, sawn, or basswood, cherry, walnut, oak, etc., not manufactured" may be imported into Canada free of duty. The sections 504 and 506 of the customs acts, and under which the minister of customs has classified Mr. Hazleton's lumber, reads: "Wood and manufactures of, and wood-ware, namely, pails, tubs, churns, brooms, brushes and other manufactures of wood not elsewhere specified, 25 per cent. *ad valorem*, and lumber and timber not elsewhere specified 20 per cent. *ad valorem*." A date will shortly be fixed for the hearing of the case.

AN agitation has already been started by Michigan lumbermen to induce Congress to double the import duty on Canadian lumber. This, as will readily be seen, is intended as an offset to the recent increase in the export duty on pine logs by the Dominion Government. Such action on the part of our neighbors will not cause the slightest surprise to Canadians, as they are already quite aware of the Yankee capacity for retaliation. Neither do we fear such retaliation, even should it be adopted, which is certainly very doubtful. The United States has arrived at that stage in the history of its lumber industry that to do

without the products of our Canadian forests would be next to impossible, and should Congress add another \$2 import duty the change will militate more against the trade of that country than it will against Canada. For years American lumbermen have been cutting all their available timber regardless of future demand, and now that they find their limits exhausted, they are compelled to look to Canada for a future supply. But while they come in competition with our own lumbermen in picking up some of our most available limits they refuse to build mills in this country, but seek to tow the timber through Canadian waters to American mills. When the Dominion government two or three years ago placed an export duty of \$2 per thousand feet on Canadian logs entering the United States, it was thought that that would be sufficient to put a stop to the practice. It has been seen, however, that while it has diminished the export of logs to a considerable extent the practice is still being indulged in. Brother Jonathan may squirm and threaten Canadians with retaliation in its most gasty visage, but on the lumber question we certainly hold the trump. Canadians extend the hand of good-fellowship to our Yankee friends and invite them to join in fair and equitable competition, but will not sanction the cutting of our timber to be manufactured in American mills.

#### HARDWOOD INSPECTION.

One of the subjects but seldom touched upon heretofore in the columns of THE LUMBERMAN is that of inspection of hardwoods. In order to cultivate the desire to inaugurate a uniform system, which, whatever else it might do, would be a step to making the culling of our hardwood somewhat similar by each culler, we have prepared the following, which we think will be found to be in practice about what is done by most of our hardwood inspectors. The rules as given have been followed for years by many of our readers who have given particular attention to the timber growing in different parts of the country, and we fancy they are about as near right as can be applied in actual culling.

It would be a matter of considerable interest if some of the hardwood inspectors would give their views on the subject. Should a discussion be brought about and the rules herewith condemned as being too rigid, we shall be pleased to see the subject thoroughly gone into by practical cullers.

ASH.—The standard lengths are 12, 14 and 16 ft. The standard thicknesses are 1, 1½, 2, 2½, 3, 4, and 5 inches. *Waggon tongues*—to be cut from the toughest timber and be free from all imperfections, particularly that of cross grain. Length 12 ft. 6 in.; size 2x4 at one end by 4x4 at other, and 2½x4½ at one end and 4½ square, splits not allowable. *Firsts*—Must be not less than 12 ft. long nor under 8 in. in width and at such width and length be clear. At 12 in. wide a standard knot will be admitted and no other defect. As width and length increase defects are allowable in proportion, but in no case shall defects be such as to prevent the piece from being used as a whole in the best kind of work. *Seconds*—Width not less than 7 in. nor under 10 ft., and at such much be clear. From 8 to 9 in. one standard knot allowed. As dimensions become greater imperfections are allowed in proportion, but five-sixths of the piece, as a whole, must be suitable for good work. Heart shake, rot, dote, wormholes and bad manufacture are excluded from Nos. 1 and 2. All lumber to be cut ½ in. over the required thickness and well manufactured. In black ash particular attention is directed to the annular rings, as inferior qualities of this wood they are often detached.

BASSWOOD.—Standard lengths are 12, 14 and 16 ft. The usual thicknesses are 1, 1½ and 1¾ inches. *Firsts*—Must not be less than 7 in. and free from all defects. *Seconds*—Must not be less than 5 in. at this width, and up to 6 in. must be clear. As width increases defects are allowed in proportion, but no piece however wide having black sap shall be taken in this grade. Sap must be bright and in good condition. Pieces having defects so numerous or of such nature as to render five-sixths, as a whole, unsuitable for first-class work must be excluded. All lumber to be well manufactured, plump thickness and free from stain.

BEECH, BIRCH, MAPLE.—Standard lengths are 12, 14 and 16 feet. Standard thickness 1, 1½, 2, 2½, 3, 4 and 5 inches. *Nevels*—Must be free from heart and cut so as to square 5, 6, 7, 8 and 9 inches. Length to be four feet or the multiples thereof. *Balusters*—Must be cut exactly square 2, 2½, 3, 4 inches, and 6 in. length from 28 to 32 inches, to be entirely free from all defects. *Firsts*—To be not less than 8 in. wide and perfectly clear to 12 inches. At 13 in. one standard knot allowable or one and one-fourth inch of sap on one edge and side, with a perfect face. Defects in proportion to width and length, but in no case shall the defects prevent the piece from being used as a whole. Sap must be bright. All pieces to be evenly sawed, square butted and square edged, plump thick-

ness when seasoned and free from taper. *Seconds*—Not less than 7in. wide and clear. At 8in. wide one small sound knot may be allowed, but no other defect. As width increases defects in proportion are admissible but not to decrease the piece below the above standard nor render five-sixths of it continuous, unavailable for good work. A short split, parallel to the edges, and not exceeding one-twelfth of the length on one end is a defect, but admissible. When sap, knots, splits and bad manufacture combine to render the waste greater than one-sixth of the piece such a piece must be rejected. Sap must be bright, knots small and sound; and the lumber entirely free from heart.

**BUTTERNUT, WALNUT, CHESTNUT.**—Standard lengths are 12, 14 and 16 ft. Standard thickness 1, 1½, 2, 2½, 3, 4 and 5 inches. Balusters and newals same as in birches. Counter tops are from 12 to 18 feet long, and from 20 inches and upwards in width, strictly clear. *First*s—Must not be less than 8 inches in width free and clear from all defects. At 12in. wide may have one and one-half inch of sap on one side, face clear. No defects are allowable that will decrease the piece below the standard waste is not to be allowed in this quality. *Seconds*—Not less than 7in. at which width it must be clear. At 9in. wide 2 defects may be allowed and as width increases defects in proportion. Waste not to exceed one-sixth of the piece.

**CHERRY.**—Standard lengths are 12, 14 and 16 ft. Standard thicknesses are 1, 1½, 2, 2½, 3, 4 and 5 inches. *First*s—Not to be under 8in. wide clear and free from all imperfections. According as the width increases defects are in proportion, but in no case must there be any less in the piece. Sap when allowed must be bright. *Seconds*—Not less than 7in. and must be free of all defects. At 8in. one defect will be allowed; at 10in. wide two defects and so on as the width increases; but in no case must the loss exceed one-sixth of the piece. All pieces under 12ft. long and 7in. wide must be entirely free of knots, sap, gum specks and splits. Gum specks are excluded from firsts.

**ELM, SOFT.**—Standard lengths are 12, 14 and 16 ft. Standard thicknesses are 1in. and 2in. *First*s—Not to be less than 10in. wide at which and up to 13in. must be perfectly clear and free of all defects. Whatever defects are allowed in wide pieces must not cause any waste, must be cut plump thickness and well manufactured. *Seconds*—Not to be less than 8in. wide, and at such must be clear. At 10in. wide one defect will be allowed. Defects are not allowed in such numbers nor of such kinds as will cause any greater loss than one-sixth of the piece.

**ROCK ELM.**—*First*s—Shall be free from rot, decayed knots and open annular rings; must be cut plump thickness and well manufactured. Each piece as a whole must be free from all imperfections that would prevent it from being used in the best kind of work. Heart pieces not admitted. *Seconds*—Include all lumber which can be used without a greater waste than one-quarter. The three-quarters must be three continuous quarters.

**HICKORY.**—*First*s—Shall be not less than 7 in. wide and free of all defects. *Second*s—To be not less than 6 in. wide, and may have a few sound knots. Not less than two-thirds of the piece must be available for good work.

**OAK.**—*First*s—Must be 8 in. and over in width, clear and free of all defects. All pieces to be evenly sawn, square butted, and square edged. What knots are admitted to be small and sound and not to exceed in size the standard, and so few as not to cause waste to the best kind of work. Pieces having worm holes are absolutely excluded. *Seconds*—Must be 7 in. wide and clear. From 8 to 10 in. will allow from 2 to 5 knots, small sound knots, of standard dimension, or a little bright sap. Two-thirds of each piece must be available for ordinary work. The standard lengths of oak are 12, 14 and 16 ft., thicknesses are 1, 1½, 2, 2½, 3, 4, 5 and 6 inches.

**QUARTERED LUMBER.**—To find ready sale this lumber must be of good width and plump thickness when dry, not to be under 5 in. in width.

#### SPLINTERS.

THE LUMBERMAN wishes its readers A Merry Christmas.

THE mills are fast closing down for the season. The year's output on the whole has been large.

THE value of timber limits under license in Ontario is estimated at \$18,500,000 and in Quebec at \$23,000,000.

THE consumption of timber is said to have increased one half since 1850 and represents an annual expenditure of \$1,305,000,000 throughout the world.

HON. CHARLES TUPPER, minister of marine and fisheries, has taken the initiative step in issuing an order against the deposit of sawdust in several rivers in Nova Scotia and New Brunswick.

MR. RUFUS STEPHENSON, of Chatham, has again interviewed the Minister of Finance in regard to the imposition of an export duty on hemlock logs, which are produced chiefly in Kent, Essex and Lambton counties, Ontario. Mr. Foster promised to give the matter his consideration.

HENRY F. ALBERTS is another acquisition to the little army of bootlers who are forming a colony in Canada. He hails from Buffalo where he was extensively engaged in the lumber business. He leaves behind him a large amount of debts and spurious paper. He was a forger to a large amount.

DURING 1887, at a \$2 export duty, about 3,000,000 feet of pine logs were exported from Canada to the United States. The present year there has been considerable rating of Dominion logs to American mills, and it is said that previous to the recent increase in the export duty, Michigan men had expected to raft fully 200,000,000 feet of logs from the Georgian Bay region next season.

Mr. Cassels, register of the Supreme court, recently dismissed a motion to quash the appeal in the Manitoba case of Shields vs. Leacock, involving the affairs of the Northwest Lumber Co., Mr. Dalton McCarthy, Q. C., renewed application on behalf of the respondent before Judge Fournier in chambers, but judgement was reserved. Hon. John Haggard, Postmaster-General, is a party to the litigation.

ATTENTION is directed to the advertisement of the Messrs. Northey & Co., on page 19 of the present issue. This firm is well known throughout the Dominion as manufacturers of Steam Pumps, and they have achieved a reputation for turning out the best article of the kind in Canada. From our personal knowledge of this company we can recommend their manufacture with confidence to the lumber trade.

THE Wm. Hamilton Manufacturing Co. of Peterboro', have now completed the extensive additions to their works, mention of which was made in a former issue of this journal. But few manufacturing establishments in Canada have made such headway during the past few years as the one referred to, and their success can be attributed to the very fine class of saw mill machinery they are constantly shipping to every part of the Dominion.

IF the immense quantity of sawdust which is now deposited into the rivers and streams of this country was converted into gas, either by the use of the Luntum or Swedish process or by the Siemen's regenerative furnace, we could have the best fuel possible for roasting ores and other such purposes. Under such a process sawdust can be converted into gas and used for all the purposes for which the natural gas is utilized, while the cost would be reduced to a minimum.

AS will be seen by advertisement in another column the Ontario Government will put up at auction on the 11th inst. timber berth No. 2 in the township of Ballantyne, the purchaser who bid this limit in at the sale of limits in December last having failed to comply with the conditions of sale. Particulars as to locality and description, area, etc., and terms and conditions of sale will be made known on application, personally or by letter to the Crown Lands Department, Toronto.

THE day previous to the Presidential election Mr. A. M. Dodge, wholesale lumber dealer of Tonawanda, N. Y., and President of the well known Georgian Bay Lumber Co. of Canada, issued the following printed circular, which he caused to be placed in the hands of each of his employees:

Each man in our employ is requested by us to vote at the coming election as his conscience and intelligence dictate, and in this all will be sustained by us. If any foreman or inspectors in our employ attempt to use their authority otherwise than in performance of the work for which they are employed, a report of such conduct at our office will be appreciated. Our employes are paid by us for work performed, and not for their votes.

THE latest annual report of the Forestry Division of the United States Department of Agriculture again directs attention to the conservation of the timber wealth of the country. It points out the need of a more careful and more rational utilization of the material at hand, and of a greater regard for the production of a future crop. The natural wood crop of the country is apparently being used up faster than it replaces itself. The report enforces the conclusion regarding the forests that concerted and systematic action on the part of both the government and the people is necessary to prevent the waste of the forest wealth.

Michigan lumbermen are still investing their bootle in Canadian pine, with the expectation of being able to tow their logs across the boundary. We fear that the late move on the part of the Dominion Government in raising the export duty on logs will have a rather depressing effect on such operations. The latest investment reported has been made by the Saginaw Lumber & Salt Co. who have concluded the purchase of three timber berths on Spanish River in the Georgian Bay region, from which it is expected two hundred million feet of lumber will be cut. If they desire to make their investment a success they had better bring their mill to the timber.

OUR readers will notice in this issue the new advertisement of the Sherwood Harness Co. And in this connection we beg leave to copy the following letter recently received by the said company:

Grand Traverse Co., Mich., Oct. 16, 1888  
SHERWOOD HARNESS CO., SYRACUSE, N. Y.  
*First*s—I cannot say too much in praise of your Steel Logging Harness. The six sets bought of you last fall as an experiment have been in constant use in the woods and about our mills. The great ease and comfort to the team is but one of the many advantages that you can justly claim for your meritorious Harness. On no account would I use the old style again. We are now fitting up our teams for the woods and wish you to send us eight sets more. Ship same as before, and oblige.

Yours truly, M. L. S.

It is said that Canadian freights have reached almost prohibitory limits. The Ashdene is stated to have been fixed Quebec to London, Leithe to Newcastle, at 85s. deals, with option of 60 or more standards timber at 95s. The West Cumberland is also reported to have been chartered for a range of ports in the U. K., for a lump sum of £2,200, the shipper paying stevedore charges. This, on a steamer of about 500 standards, works out about 90s. per standard. The Craigalton, 1,200 tons register recently discharging in London from Quebec, has been chartered at 70s. She is to proceed to St. John, N. B., in ballast and load for range of good English ports.

In going through our correspondence some days ago we opened a letter from Messrs. Stanlake Bros., of Hillsdale, Ont., which contained a bank note of a denomination large enough to pay their subscription up to the year 1894. We fully appreciate the liberality of our Hillsdale friends, and trust that their example may have the effect of at least calling to the remembrance of several hundred delinquents that it would be an act of generosity on their part to pay up the old score and as far ahead as they deemed expedient. To all such we would say, drop your check into the post office and watch how quick you will get your receipt back.

#### EXCHANGE ECHOES.

Lumber World.

Reports from various lumber centres situated in nearly every section of the United States indicate an encouraging condition of trade. Here and there dullness is reported, but on the whole trade is fair, collections good and the outlook encouraging. The political excitement has retarded business somewhat, but the damage from that cause has been far less than was anticipated so long as the Mills bill was in existence. With the removal of that unwise and uncalled for bill from the arena, the various industries threatened by it began to improve, and the result is that the winter opens with cheerful prospects.

Chicago Timberman

Timber cutting on Drummond Island, Spanish River and other points on Georgian bay waters will assume large proportions this winter. The output next season will approximate closely 150,000,000 feet, all of which will be brought to Michigan mills. The fact is, that irrespective of any tariff action, the work of importing Canadian timber to supply the Michigan mills will continue to grow year by year. The real opposition to this means of supply comes from interested holders of the Michigan pine, who are seeking to "bull" the market by holding on to the timber in their possession for a rise. These men naturally look upon any effort to obtain supply elsewhere as extremely unpatriotic, and when questioned they are pretty sure to be found in favor of protection. It all depends upon whose ox is gored. If the man owns pine lands he is against the removal of the tariff, first, last and all the time. If he owns a mill he wants logs and thus becomes a tariff reformer. It is really wonderful how these interests affects politics in Michigan. Nevertheless Canadian saw logs are going into Yankee lumber fast.

Toronto Empire

Captain Peters, of Windsor, is in the city from Algoma on business connected with some of the large lumber firms who are operating along the north shore. The Empire had a short talk with Captain Peters on the prospect for the lumbering trade in that section of the country this winter. Everything up there is booming at the present time. Everybody appears to be busy and there is work for all who want it. Large quantities of supplies are going in for the lumbermen and the prospects were never better. While there was not a very great deal of lumber cut along the north shore last season a large quantity was shipped. Part of this was old stock, however, and the result is a clearing out of all that was cut, and the lumber to be shipped this year will have to be fresh cut. There is a brisk demand for board pine, and large stocks will be needed at Quebec to be shipped to the Old Country. The cut this year will probably be much larger than for some years past. The cut of clear pine for paving will also be rather more than an average one. These posts mostly go to Chicago. The lumbermen along the north shore, Captain Peters says, feel most hopeful of the coming winter's work. All that he has spoken of, say they intend to cut more this winter than for some years past, and they are now actively engaged in their operations.

### THE "CLIPPER" SHINGLE MACHINE.

The accompanying illustration will give the reader a very fair idea of the mechanical construction of what is known as the "Clipper" shingle machine, which is now rapidly taking its place in the best mills of this country. It is the development of a long, practical experience by the patentee, who for the past ten years has made the construction of shingle machinery a specialty.

All working parts are very durable, and possess equivalent strength for the duties they have to perform, and are very easily controlled by the operator. The machine is automatic in set and feed, cuts all tips or butts from either end of belt, or will cut a tip and butt alternately; also runs long and short stroke. The carriage runs on rollers on a V track, thereby reducing the friction to a minimum, and is driven forward and backward by a heart-shaped cam which is driven by friction, and engages directly with back of carriage. No lost motion can be produced by wear. The feed works are placed high up on the frame of the machine, and out of the way of sawdust, which is usually a great source of trouble. The top of carriage is lifted by a foot-treadle, which enables the operator to use both hands to block the machine.

The seven trip-dogs for shortening the stroke each quicken the speed of carriage so that at the short stroke for narrow shingles the carriage will make as high as ninety strokes to the minute. The average cut per minute is about 60; speed of saw 1,300. A very important feature of this machine is that there is no jar on the carriage, a foot break being provided by which the carriage can be stopped in any part of the stroke. On the last stroke the jar is taken off by this treadle; on other machines the operator has to throw his whole weight against the carriage to prevent the jar. By the use of the six ratchet wheels which accompany each machine the shingle can always be kept to a uniform thickness with either a thick or thin saw.

The average cutting capacity of this machine, with the usual run for ordinary bolts, is from 30,000 to 35,000 per day; with good bolts 60,000 have been cut in nine hours.

For prices and all other information we would direct our readers to the manufacturer, Mr. Robert Brammer, Orillia Ont.

### Do Tools Grow Tired?

It is a common complaint among mechanics that their tools do not serve them as well some days as others.

A correspondent of the *Iron Industry Gazette* says: Tools, like men, grow tired. I have seen a first class chisel get tired and act as though it was possessed of the King of Sheol. It would not keep its edge, and the more I sharpened it, the sooner it would lose its edge.

I called the attention of a shopmate, a grizzled old veteran, to the peculiar behaviour of the chisel. He looked it over and handed it back to me, saying: "The tool is all right, only a little tired. Lay it away and let it rest. It will come out all right again, just like a man who is tired." I did not believe the old fellow, and I really thought he was crazy to talk of a tool getting "tired," but as there was no help for it, the tool was laid away. I do not remember how long it was left to rest, but when it was again sharpened and used it appeared to hold its keenest edge as well as it did before it got tired. Barbers tell me their razors in constant use get tired in the same way, and woodchoppers say their axes sometimes seem to get soft all at once. Possibly constant and hard usage may cause changes in crystallization that would account satisfactorily for the peculiarity alluded to. Locomotive engineers often observe peculiar misbehaviour in their machines, which may possibly be the result of continued heating, friction and pounding. When a tool gets "tired," or a machine "balky," give each a rest.

### A New Waterproof Belting.

The particular attention of LUMBERMAN readers is directed to the illustration on last page of this issue of Robin & Sadler's waterproof belting, which is now being introduced to the public for the first time. This belt is made in both light and heavy double leather, of the best material, fastened with waterproof cement and brass wire screws, after which the entire belt is saturated with a preparation which renders it entirely waterproof. Saw mill owners will find this new article in belting especially adapted for damp places in a saw mill. Messrs. Robin & Sadler, the manufacturers, inform us that they will send a sample of this belt to any intending purchaser on application either at their head office in Montreal, or at their Toronto branch, 129 Bay street.

## THE NEWS.

### ONTARIO.

—The Blind River Lumber Co. is shipping lumber and lath over the C. P. R. to the Sault.

—The steam barge Kincardine, which ran aground and sank in French river, has been raised.

—Mr. Wm. Orr, Shelburne, will build a saw mill there on the site of the mill recently destroyed by fire.

—The sawmills of Caldwell & Son, at Carleton Place, have closed down. The season's cut was 9,000,000 feet.

—The slack barrel coopers throughout Ontario are pushed with orders for barrels in which to market the present apple crop.

—Hollister & Jewett's mill at Gordon River has cut its first half million feet of lumber, which was purchased by a Chicago firm.

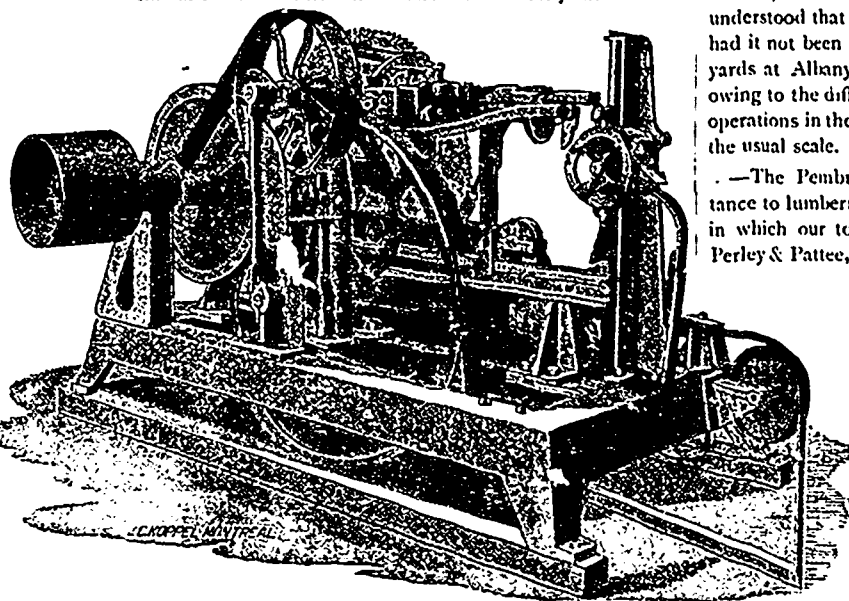
—It is estimated that 200,000,000 feet of timber, board measure, was destroyed by fire in the Muskoka and Petawawa districts last year.

—The lumber firm of Thompson & Ellis, Fenelon Falls, has been dissolved. Mr. Ellis will continue the business alone in the future.

—The Lake of the Woods mills are being closed down for the season. Men are in demand for the woods, at \$28 to \$30 per month and board.

—A new steamer will be built at Keewatin this winter, for the Lake of the Woods trade, which is mainly in connection with the lumber industry.

—The paper pulp factory of Brophy & Co., at the Chaudiere, is working at full capacity. It is stated that two or three more similar establishments will be started there next year.



THE "CLIPPER" SHINGLE MACHINE.

—Hall Bros. & Brown have commenced the erection of a saw mill at Keewatin, which they expect to have ready for operation early next spring.

—A new mill to replace the one recently burned at Glen Lewis is being constructed, and Mr. Hungford expects to have it ready for cutting operations next spring.

—McClellan & Goodmurphy's new saw mill on the Lake Huron shore, township of Burpee, is now rebuilt on the site of the old one and will be running in a few days.

—The lumber firm, of which Mr. F. E. Boswell, of Boswell Mills, (Spanish River district) is the head, shipped over 3,500,000 feet of lumber to the Chicago market this season.

—Carpenter's mill on the Kaministiquia, Thunder Bay district, has had a prosperous season. He will have a large force of loggers at work in the woods during the winter.

—Thompson, Tassart & Co., owners of a large saw mill at Teeswater, require better facilities for the purposes of their business and threaten to abandon the place unless they obtain them.

—O'Brien & Lequier cut 3,000,000 shingle for Graham, Horne & Co., of Port Arthur, this season. Formerly all the shingles used in the district were imported from across the lake.

—An assignment has been made by W. & W. Addison, sash and door manufacturers, of Hamilton. The liabilities are nearly all to local firms, and a meeting of creditors has been called to consider the position of affairs.

—The break in the Cornwall canal has proved a serious matter to lumber forwarders. A great number of barges, loaded with lumber were tied up at Prescott, and were compelled to remain there until the break was repaired.

—The *Algoma Advocate* thinks that Thessalon should have another saw mill, and that all the timber that is being cut in that vicinity should be manufactured there, in order that the village might get the benefit. The *Advocate* is right.

—Messrs. Charles Scott & Co., of Philadelphia Pa., will probably establish an extensive hub and spoke factory at Port Colborne, in the vicinity of which place are large quantities of elm timber especially adapted to the manufacture of such goods.

—The lumber exported from Ottawa to Liverpool is purchased principally by the following Quebec houses, viz.: Smith, Wade & Co., I. Burstall & Co., Pierce & Co., R. R. Dobell & Co., and Sharples & Co. It is delivered at Montreal, where it is loaded on to the ocean vessels from Canal boats or cars.

—At a meeting of the creditors of the Michael's Bay Lumber Co., held at Toronto last month, a statement of the liabilities and assets was given, showing that the debts amounted to about \$100,000 and the assets \$80,000. Both the Central and Imperial Bank are secured for their respective claims, the former being for \$40,000 and the latter for \$20,000.

—The Victoria Harbor Lumber Co., Alex. Fraser and Chas. J. Smith, have received contracts from the Canadian Pacific railway for supplying all the lumber required for the construction of the new Toronto Esplanade. The amount of the lumber for this work will be very large. The Leycock Lumber Co., of Buffalo and Gravenhurst, Ferguson Bros., of London, and Messrs. Fraser & McGinn, of Toronto, have received contracts for the supply of lumber for the construction of trestle work, etc., on the C. P. R. line west of London.

—Messrs. M. Boyd & Co., the old-time lumbermen of Bobcaygeon, have already shipped this year 18,000,000 feet of lumber, besides large quantities of lath, pickets, etc. It is understood that their shipments would have been much larger had it not been for a scarcity of shipping facilities. The firm's yards at Albany, N. Y., have at times been almost depleted owing to the difficulty in shipping lumber to that point. Their operations in the woods this winter will be conducted on about the usual scale.

—The *Pembroke Standard* says: A case of some importance to lumbermen was tried at the Ottawa Assizes recently, in which our townsman, Mr. A. McCormack, sued Messrs. Perley & Pattee, of Ottawa. The action was to recover commission for the sale of a timber limit on the Du Moine river. \$5,000 was claimed as commission for negotiating the purchase of the limit from the Quebec bank, the price of the limit being \$80,000. Later on it seems that defendants would not take the limit owing to the increase of timber dues made by the Quebec government. The defendants afterwards negotiated for the purchase of the limit for \$80,000 without the knowledge of the plaintiff. The case was tried before Hon. Justice Street without a jury, and considerable interest was taken in it by the lumbermen of the district.

The Judge in giving his decision said that he considered some sort of a bargain had been made with reference to the commission, and he thought the plaintiff was entitled to some commission and he awarded him \$2,500 and costs. Dalton McCarthy, Q. C., and J. H. Burritt, Pembroke, appeared for the plaintiff, and A. J. Christie, Q. C., and Thomas Deacon, Q. C., Pembroke, for defendants.

—The amount of three inch deals annually manufactured at Ottawa is estimated at about 100,000,000 feet, made up as follows: J. R. Booth, 30,000,000; Eddy Manufacturing Co., 20,000,000; Hamilton Bros. 15,000,000; Perley & Pattee, 10,000,000; Pierce & Co., 5,000,000; other firms, 20,000,000. The greater part of the stock finds a ready market in England, the Bronson & Weston Co. being the only large firm which manufactures exclusively for the American market.

—An exchange, speaking on lumbering in the Ottawa valley, says that although the present yards are overcrowded, it will not be for long, as the Canada Atlantic Railway and the firms of J. R. Booth and Perley & Pattee have workmen engaged laying tracks in the new yards of the latter, on the line of that road, a little over a mile from the mills. This railway has been extended almost into the heart of the lumber district, the station being but a few hundred yards from the mills of the two firms above mentioned, Bronson & Weston Lumber Co., and Pierce & Co., at well as Barnes & Co's box shook factory. Therefore a great saving is expected, as the lumber is taken almost directly from the saw to the yards by rail, which cheaper than by ordinary wagons, and when dry, it can be shipped directly to his destination, and another advantage, the ground, being high and open, it is expected that the lumber will season quicker than in the overcrowded vicinity of the mills. But for this extension most of the mills would have been obliged to shut down long ago for want of piling room.

—Messrs. R. Cox & Co., of Liverpool have purchased next season's cut of pine deals from Perley & Pattee, of Ottawa.

—The Canada Atlantic railway seems to be carrying far more lumber from Ottawa this year than any other road. As many as one hundred cars in a day have been shipped by this line.

—There will be an unusually large output of logs this winter in the up river shanties, providing the snowfall is favorable. This season will see a larger number of men logging up the Ottawa river and tributaries than any season before.

—The colonization road between North Bay and Lake Temiscamingue has been extended to opposite the Hudson Bay fort on the lake a distance of some 68 miles. This means increased facilities for lumbermen getting in men and supplies to their limits between the two points.

—A correspondent from Wahnapiatae writes to the LUMBERMAN as follows: The weather for the past month has been very unfavorable in this district and has retarded work considerably in the lumber woods. Alex. Fraser, of Westmeath has a mill erected on his limit west of Sudbury in which he intends cutting dimension timber. McCormack & Son, of Sudbury, have a mill in operation there which has been running steadily all summer, and they intend to move it back on their limit about three miles from Sudbury and will cut all winter. They will haul their logs direct to their mill. The Georgian Bay Lumber Co. are doing less this season on their Wahnapiatae limits than last. The Emery Lumber Co's cut will be about the same as last year.

—J. B. McKay, a lumber measurer, formerly in the employ of Flatt & Bradley of Hamilton, and lately employed by John D. Lebel, of London, recently requested a resident of Paisley to endorse a draft on Lebel for \$45 which was cashed at the Western Bank. McKay said he was going to load a car of lumber at Harriston. He afterwards went to a second gentleman and said he was short of funds and would return here Tuesday to load lumber and that he wished to get a draft for \$35 on Lebel cashed and requested the second gentleman to endorse this draft which was cashed at Porteous & Saunders' bank. McKay told his second victim that he was going to Milverton to load there. McKay is now missing and Mr. Lebel refused payment of the drafts. McKay is probably on the American side of the line.

—At a recent meeting of the ratepayers of the village of Teeswater, convened for the purpose of enquiring into the shipping facilities, etc., of the place, the following facts of interest to LUMBERMAN readers were brought out:—That Thompson, Fessant & Co. pay yearly freight on 250 cars at an average rate of \$25 per car, being a total of \$6,250, besides way freights; they have at present an order for 80 cars of maple for Liverpool, Eng.; the freight to the C.P.R. on this shipment alone will amount to nearly \$5,000. Mr. F. Deutschman, lumber dealer, has shipped this year 600,000 feet of lumber, or about 75 carloads, and has 140,000 feet more to ship, the freight on which would amount to about \$2,400. Besides these large shipments there are three flouring mills, foundry, cabinet factory, woollen mill, etc., whose shipments must be considerable.

—The product of square timber on timber limits on the Ottawa valley is likely to be large during the coming winter though the wet season may retard operations. It is estimated that 5,500,000 cubic feet of white pine, and 800,000 feet of red pine square timber making 6,200,000 feet in all will be taken to market next season. Advices from the regions north and west of lake Nipissing are to the effect that this has been the worst fall experienced in the woods for many years. Owing to the heavy rains in October the swamps are filled with water which makes the work for skidding teams very difficult. The roads over which camp supplies are usually forwarded are now almost impassable. Large gangs of men are, however, located on the limits. Messrs. Edward Moore, R. H. Klock & Co., Alexander Fraser, Booth & Hale, Barnett & McKay and the Hawkesbury Lumber Company are going heavily into square timber making, and a considerable quantity has been contracted for. The high prices ruling during the past season have proved an incentive to increased operations. The cut of last winter did not exceed 4,500,000 feet, so that an increase of nearly fifty per cent. in the output is anticipated.

#### QUEBEC.

—Messrs. Henry Lovell & Sons are building a steam clap-board mill at Coaticook.

—The lumber yard belonging to Mr. Roberts, of Montreal, was destroyed by fire during the past month.

—Messrs. Hall & Price have sold the cut of their Three Rivers mills, about 8,000,000 feet spruce, for the American market.

—The weather during the past month has favored the vessels

at Quebec to get a fair despatch for this season of the year, consequently but few vessels now remain in port.

—The sale of Baptist's Three Rivers deals to Messrs. John Burstall & Co., is reported. Prices are stated to be \$112, \$77, \$37 and \$27 for 1sts, 2nds, 3rds and 4ths respectively.

—Messrs. R. R. Dobell & Co., of Quebec, are reported to have purchased next season's cut of spruce deals of the Montgomery mills, and also Baptist's wintering pine and spruce deals at Calumet.

—By the burning of his extensive saw mill and lumber yard at Montreal the latter part of October, Mr. McFarlane will lose about \$30,000. In addition to a complete outfit of new machinery 50,000 feet of lumber was burned.

—As compared with 1886 the quantity of white pine timber measured and culled at Quebec to November 10, fell off from 3,032,738 to 1,661,884 feet, but as compared with 1887, an increase of 493,741 feet.

—Lumber freights from Quebec to American ports during the past month have remained steady with tonnage in fair demand. From Quebec to Burlington \$1.40 a thousand feet; to Whitehall \$1.66; to New York \$2.75; to Troy \$2.75.

—A Montreal purchaser at the recent timber limit sale by the Provincial government, refused on the spot a bonus of \$3,000 on a portion only of his purchase. The proceeds of this sale averaged \$20 per mile more than the sale of 1885.

—It is understood the contemplated deal between the Eddy Manufacturing Co., and R. Hurdman & Co., of Hull, for the Maganicippi limits, has fallen through, one of the reasons given being that certain parties interested with the Hurdman's in the limits refused to sell at the price agreed upon.

—The local demand for lumber in Montreal fell off considerably the last month, owing principally to unfavorable weather and the bad condition of the country roads. The prospects do not look encouraging, contractors being almost at a standstill. Prices have ruled steady all round.

—It was confidently expected that the Cornwall Canal would be again open for traffic the early part of November, but unfortunately a crack was discovered in the bank where the old break occurred, and now the chances are that the boats will not get through this fall. This will be bad news for forwarders, as fully a million dollars worth of goods is locked up on the other side of the break.

—In April last an order-in-council was passed by the Quebec government wherein it is provided that the rates of ground rents and of duties on timber cut shall not be increased till 1st September, 1900, reserving, however, the right to change the table required to be used in ascertaining the contents, board measure, of saw logs, etc. This information appeared for the first time in the statutes for the last session recently issued.

—Lumbering operations are expected to be very active in Saguenay county this winter. Very advantageous arrangements have been made by contractors and wages are higher than usual. N. Brassard will operate on the river Cyrine, Joseph Brassard on the river Pickauba, and Ed. Lemieux has signed a contract with Price Bros. to get out 40,000 logs on the river Blanche. At St. Etienne H. P. Blair hopes to cut between 200,000 and 300,000 logs. The cut of Chantiers, of Bersimes & Sault au Cochon, will be considerably more than in past years, while at Lake St. John the new saw mill of B. A. Scott has given an impetus to lumbering operations in the vicinity.

—Mr. W. F. Hutchinson, Sherbrooke, has recently invented and patented some simple but effective machinery by which he can manufacture 60,000 wooden tooth-picks per hour. He has established a factory in Sherbrooke and will engage extensively in the business. To supply the millions of tooth-picks used every year, ingenious machines of great productive power have been invented. Like all other occupations the tooth-pick business has its combination, but a Maine inventor has set out to break it with a machine that makes 6,000,000 picks a day, and he is making a machine that will produce 72,000,000 a day. Green, clear, straight-grained birch and maple wood is used, and after steaming for several hours it is easily cut into veneers or thin strips of wood with the grain running across. These veneers are pliable and are wound upon large spools, a hundred feet on each, and from the spools they are fed into the pick machine, which cuts them into picks with wonderful rapidity.

#### NOVA SCOTIA.

—The law requiring saw mill owners to prevent saw dust from entering the streams is causing much comment among mill men in Nova Scotia. It is stated that as most of the mills in Nova Scotia are direct action, there will be waste in any attempt to stop the sawdust, and the effect must be to curtail the business. A stoppage of business has taken place until an understanding can be arrived at in the matter.

Mr. Leary, the New York builder of rafts at Joggins, N. S., takes issue with the Dominion government upon its position that \$1 a thousand should be charged on the rafts entering into rafts which are sent out of Canada, to protect the shipping and labor interests. His claim is that out of the \$48,000 which the raft cost that successfully reached New York city, \$38,000 were expended in Nova Scotia for timber, materials, labor, etc., the benefit to Canada by that expense being much greater than would have resulted had the timber being shipped by vessel.

#### NEW BRUNSWICK.

—Word from the lumber districts indicate that the winter's operations will be commenced on a scale much larger than usual. Wages to axemen on the north shore are reported twenty-five per cent. higher than last year.

—It is estimated that St. John alone has shipped the first eight months of this year at least 200,000,000 deals, while the output from other New Brunswick ports has been unusually large. The timber shipment has been on a proportionate scale.

#### MANITOBA AND THE NORTH-WEST.

—Hugh McDougall is opening a lumber yard at Moose Jaw, Assa.

—A large number of men are engaged in the forests at the Riding mountains taking out saw logs.

—All the lumber is in from Lake Winnipeg, and the boats are going into winter quarters at Selkirk.

—Hamilton & Badgley, lumberers, Emerson, are disposing of their business to McDonald & Muller.

—The engine and machinery for a grist and saw mill at Duck Lake, Sask., has been shipped from the east.

—E. M. Gatliff, lumber, Emerson, has admitted a Mr. Adams into partnership, and is opening a branch at St. Jean Baptiste.

—There is talk at Selkirk of the formation of a company to operate the large saw mill at that place. The mill has been idle for some years.

—An exchange chronicles the fact that a lumberman on Lake Winnipeg has decamped. Here the information ends, however, and we are in ignorance of who the decamping party is.

—The mills are now all about closed down for the winter, after a very successful season. Business is now slackening up. Stocks on hand are not large for this time of year, and in lath and shingles there is said to be a shortage. Prices are firm but last quotations hold for the present.

#### BRITISH COLUMBIA.

—J. Curtis, of Michigan, has lately been prospecting in British Columbia, with a view to engaging in lumbering in that province.

Fader Bros' new mill at Vancouver is being pushed towards completion. The capacity of the mill will be about 100,000 feet per day.

—The *News-Advertiser* announces a new lumbering firm in Vancouver, viz., Anderson & Grady, composed of John Anderson, late of Pembroke, and Mr. C. Grady, of the first named place. They intend to erect a saw mill on the Inlet, with a capacity from 70 to 80 thousand feet of lumber per day. The machinery for it, made by the Wm. Hamilton Manufacturing Co., Peterborough, is on the way.

—Fred Robinson, of the Beaver saw mill, near Donald, B. C., has stopped sawing for the season. He turned out 2,500,000 feet of lumber, says Donald *Truth*, finding a market for about half of it. The other half is piled up in the yard, where it is likely to remain until next season, as the C.P.R. will not make a rate to points east of Regina that will leave him a profit.

#### AMERICAN.

—The total cut of the La Crosse, Wis., lumber mills, the past year was 210,700,000 feet.

—It is stated that there are single trees in Humboldt county, California, that yield 50,000 feet and acres that yield a million feet of lumber.

—Pronounced satisfaction is expressed with the outcome of the recent election in lumber circles in the Puget Sound district where free trade was more feared than anywhere else. It is little more than an imaginary line which divides the pine in Canadian territory from that in Washington territory.

—It is stated that several lumbermen of Duluth have voluntarily increased the wages of their employees 25 cents a day on the strength of Harrison's election as President. They realize that the Mills Bill which was intended to put lumber on the free list is now a dead letter and they are accordingly greatly rejoiced thereat.

PART II.  
**HARDWOOD LUMBER AND ITS MANUFACTURE.**

BY ANSON A. GARD.

If the manufacturer of hardwood lumber would pay the same attention to his business as the pine man does to his, there would be less dissatisfaction about the inspection of his lumber. If he learned the requirements of this or any other market he would know that to please he must send his product in in good condition. There are too many sawyers of Hardwood who have merely "picked up" the "trade" the result is that many a No. 1 log, which if handled as a Pine sawyer would handle it would turn out valuable lumber, but instead it is not sawed with judgment and the result is one-half its value is gone, and even the good is not extra. To know how to properly put a "carriage" on its foundation so that it will run true; to know how to set a saw with just enough "set" to cut smooth, even lumber; to know how to put a log on the carriage to cut as few "heart" boards as possible; to know when to "turn" a log—in short, to know how to get the best results out of logs is not in the power of him who has merely "picked up" his trade, and the sooner this is learned by the manufacturer of valuable lumber, the better for the credit side of his bank account.

The prevailing custom of paying a stated price per thousand feet for sawing is another cause of much poorly sawed lumber. The sawyer must know his business thoroughly, but to work up to his knowledge may require more extra time than he is willing to devote to "the other man's" interests, and the result is he does a good day's work in the number of feet he has sawed, but the man for whom the work was done doubly pays for it. How much better it would be for both mill owner and the man who is having the work done could they agree on a stated price per hour. It may seem a broad assertion, but I venture to say that by this arrangement the man for whom the sawing is done—providing the logs sawed be valuable timber—will gain enough to pay for the whole day's sawbill, as by this plan the sawyer can see advantages to be taken of a log which never would have occurred to him if quantity instead of quality were taken into consideration. The mill owner who saws his own logs need not be told that care must be taken, and yet many will "butcher" their own timber as though they were not sawing money out of their own pockets every hour they run their mills. These are the men who want the lumber buyers from the large markets to pay them the same price that the careful sawyer gets for his product, and will think they have not been fairly dealt with if they are made to pay for their own mistake.

I have tried many ways for getting the most good lumber out of logs, and find that is best: first take off a slab, turn the slab side down upon the carriage and saw the log through past the heart until you get a clear face if the log be a good one, then turn it over against the head blocks and saw until you have a wide clear face, which may leave a plank two, three or four inches thick, owing to the size of the log. Then take the sawed boards or plank and after running the head blocks back 24 or more inches, place the boards or planks, whichever you have sawed, so that the saw will edge them properly. To determine just where the saw will come may be done by "sighting," or better still by the man at either block using a two foot measure, which placed across the board, back to the block, will show how far out to place it (the board); treat the other edge the same way and if the heart runs straight enough not to cut away too much lumber saw it out. A better way to edge lumber, but requiring extra machinery, is to have attached to the mill an edging saw bench. In this way the lumber can be edged as fast as the log is sawed and where a mill can be so provided the result will show that it pays well.

Of course where the logs are poor so much care is not necessary, but one thing I have paid dearly to learn and that is, no log can be too poor to neglect to saw full thickness.

Thousands of dollars have been lost in not urging upon the sawyer the great importance of sawing full. There is a double loss in thin lumber. It drops one grade if inch, and will often be refused altogether, while on the other hand, if a carload of lumber is plump, but really a little inferior, its thickness will often sell it, so that a manufacturer cannot urge too emphatically upon his sawyer to be liberal in thickness. A stout 1-6 for 3/8 and 1 inch and a scant 1/8 for inch and a quarter and inch and a half, and full 1/8 for two inch; for three and four inch 3-16 is not too much; better be too thick than too thin.

A careless sawyer will often allow his log to "come" out, making one edge of the board plump while the other edge may lack just enough to spoil the board for the grade into which its quality would place it. This same result more often occurs from the carriage not being properly set in place or again the saw may heat and "run." A good sawyer will see that everything is

kept in perfect order and stop at once to adjust his mill at the first mis-cut board.

Not a mill man in the country but who can tell (?) just how to properly stick lumber, and when to stick it, and yet when the lumber is marketed it shows that some of the many have made a grave mistake, especially so in the case of Poplar, and other light colored lumber. In sawing Poplar, when it is green with sap, it should be stuck up at once, as if left piled together it will "sap color" in a few hours. "Haven't time" will not answer! If you care to get the full value of your lumber, you must stick it up as fast as sawed. This is true of Oak, and in fact of all lumber affected by sap. Lumber manufacturers often wonder why their stock is not as bright and nice as some they have seen. If these same men continue to saw their lumber and pile it close together and leave it until they have time to stick it up, then I can assure them they will spend the rest of their days wondering. This should be the order in importance with them, first how to keep the lumber bright, then next how to saw it properly. Use narrow strips, and under no circumstances may they be green, as they will most certainly color the wood wherever they touch and if left too long will rot it. If you have no dry sticks and are on a railway line, buy a carload and run them to your mill; it will be money well spent, and the first sawing you do let it be on a good supply of sticking lath, which will soon be dry enough to use.

Walnut should be piled together as soon as sawed and will receive no injury if not stuck up for some time after sawing. The sap seems to dry out faster when finally the lumber is put on sticks than if stuck right from the saw.

If you have plenty mill yard room pile your lumber thus: Set the piling blocks at least a foot from the ground and with sufficient fall to let the rain run off readily when the pile is finished and covered. Begin by laying the first course with the boards say 6 inches apart if wide and the narrow ones put two together, and build the pile in this order, so that when finished the spaces started in the first course will run to the top of the pile. The openings will be so many chimneys, drying out the lumber more in one month than in three months the old way. Start the next pile at least twenty inches away and so continue covering your yard and you will be surprised how soon you can begin shipping dry lumber. One point more in the sticking of lumber in which there are sappy boards: instead of placing these boards away in the centre of the pile they should be put on the outside as far as possible, so that they will get the more air, and again, these boards should be laid with the sap side down. It may seem useless advice, but a glance into the mill yards of some of the smaller mill owners will show that they may well be told to stick each length lumber together.

No mill is complete without an "evener." It pays for itself many times over, as where each board in a car comes into market exactly even length, it is no trouble to find a buyer. The enterprising mill man is finding this out to his profit.

When you have cut your logs good lengths, carefully sawed them into even lumber, and properly stuck it up and have it ready for shipping; you have then only reached that point where you will begin receiving a return for your labors. If you have done your work well, your returns will show it, as good lumber is always in demand. But if you have allowed your logs to be run to the mill with no care about square ends, and have had them sawed in a careless manner, or if after having used all precautions up to this point to get good lumber, you fail to care for it properly after it leaves the saw, then your returns will show it. Poor stock requires a special sale for every car, while one car of good lumber only opens the way for as many as the buyer may need.

If you ship your lumber "all rail," load it with even ends showing, so that a good impression is given when the car is opened, as many a buyer will judge the lumber by the way it is loaded, on the principle that one who will load a car in a careless manner will also manufacture the same way. Unless so ordered, a car should not contain mixed lengths, i. e., 10, 12, 14 and 16 feet, all thrown in together, as so many shippers are wont to load it. If different lengths must be shipped, load each one by itself and not promiscuously. It looks better and will sell far more readily.

Don't write to your consignee and say, "I've just shipped you a car of lumber." Tell him what you have sent as nearly as possible. Say: "I have loaded a car of [give the kind] lumber for you, containing the following." Then give number of feet, number of pieces, thickness, length, how well seasoned, and any general remarks you may think will aid the seller in describing the lumber to a customer. If the stock is at all desirable, it will be sold by the time it arrives, and can be ordered at once direct to its destination, with no demurrage or storage charges to eat into the profits. To merely say, "I've sent you some lumber," or, worse still not to say anything about it, the consignee really knows nothing until he

sees the stock, and must find a place for it, after it arrives, requiring so much time that very often it will have to be stored, which means that you have either bought your lumber at a very low price or that you and the profits are to remain strangers.

It may be some trouble to select the grades, but it will pay you to do so. One car of "log run" Poplar or Walnut will require more time to sell than it will take to dispose of ten, of all one grade lumber; beside this it will cost far more money to handle it, as it must be carted to as many different places as there are grades in the car. The above will apply as well to thicknesses, as only one thickness should be sent in the same car. While five men may want a car of inch lumber, it will be hard to find one who will care for a car with three or four thicknesses; especially is this true of Poplar.

If mill men would be held close to their contracts, the above advice would be but useless words. The men to whom this does not apply need not take it to themselves, as I only wish to talk to the mill man who will positively agree to fill a specific order at a stated time, and when he finds it inconvenient to furnish the stock, quietly drops it, as though he had not given his word to furnish it. He forgets that the other man, especially if he should be a novice, may have in turn sold the order to arrive at a stated time, and not being able to furnish it, must pay for any loss occasioned by not filling the contract. Do what you agree to do. It may cost you money the first deal, but you will be placed on the list of "square men," and you can always drive a better bargain for it, as you can be counted upon and your trade will be sought after.

Many of my readers are located where they can have a choice of the roads over which to send their lumber to market. It is not always the one with the most agreeable agent at the point of shipment who should get the patronage. It is the road that will aim to give you full value for your money, and be willing to promptly adjust an error when one has been made, and not tire you out by a species of red tape calculated to discourage you from ever again trying to get back what it has taken from your profits. Again, choose the road that will handle your lumber in lightering as though it were of value, and not to be thrown about and split by careless handling.

All shippers should see that the agent writes across the bill lading "lighterage free," as most roads now will give free lighterage where it is so written across the bill. Otherwise there is an extra charge of 3 to 4½ cents per hundred pounds.

In these papers I may have said many things which would seem to be unnecessary, but there is not an absurd line in all the number, as each one will fit into some particular instance. To those who already know the requirements of this and other particular markets—and all markets are each year calling for better manufactured Hardwood lumber—I do not ask to take my advice to themselves as I have been talking to that mill man who blindly works on year after year, wondering why he don't succeed. I want him to stop wondering and do his work better—do it as the successful competitor does his. It may require more care, but his bank account will show that he has stopped working for nothing.

#### EFFECTS OF FOREST DENUDATION.

Whatever may be the truth or the state of opinion on the question of how much the cutting of the timber of a country affects the rainfall, there is no question as to the fact that the denuding of our hill-sides and mountains seriously affects the permanency of the streams and lakes, and produces floods and drouths to a far greater extent than before the cutting of the forests. All experience proves that serious climatic changes are to be noticed over extensive sections of country where the forests have been removed. It is as equally true that the planting of large number of trees over hill-sides and on heretofore barren slopes has brought about important and permanent changes. The absence or presence of trees in large numbers over any great extent of country is as a natural rule accompanied by absence or presence of water.

History shows that large tracts of country that were once prosperous and fertile have become desolate and barren by the destruction of the forests, and, in at least one instance within our own knowledge, in one of the Pacific islands a large sugar plantation was made a successful venture by the planting and growth of a tract of timber adjacent to and partially surrounding it. The reason of this is evident to any one who thinks or studies the process of nature. The verdure of the trees, the decaying leaves, and the shade induce and retain the moisture, and the rains of summer and the snows of winter are held until they penetrate the ground and slowly seep away, preserving a uniform and steady flow of the spring and streams, while the barren surface, hardened by exposure to the sun and with nothing to retain the rains, allows them to flow away as fast as they fall. There is no mystery or scientific wonder about this; it is mere common sense, and result of cause and

effect. In many, in fact, in most civilized countries, the Government, at least in a measure, takes this matter in hand, and enforces strict rules concerning the disforestation of the soil. The nearer that mankind in its work leaves the country in its natural condition, the better for all interested.

Attempts have been made in this country by associations,

twenty. But it is proper to state that while in most other directions there has been a loosening of the hold of government on private affairs, and a tendency toward non-interference in the ordinary things of every-day life and of the old strict and oppressive police regulations, in the matter of forest management the necessity of some form of strict supervision, and of stopping the indiscriminate cutting of timber, has become so apparent that the matter of governmental care and interference has become an acknowledged fact, and steps are being taken to enforce a more economical system.

Hitherto, the most of the European countries, private individuals have been permitted to enjoy their forest property without any government interference. "Communities, villages, towns, and cities and 'eternal' corporations, like churches, colleges, etc., very often own large tracts of forest land as common property. Over these the State, in many cases, exercises supervisory powers, with a view of preventing the waste or depreciation of this common property, acting quasi as guardian or trustee, as in other corporated interests. Wherever supervision of private forest property is exercised, it is almost always done only after full demonstration that the common welfare—the interest of the many against the few—demand it, and full indemnification for damage sustained is given in every case." "All European governments, without exception, have felt themselves in duty bound to encourage and aid proper forest management and all efforts at reforestation. This is done:

"By setting a good example in the management of the forests belonging to the State.

"By offering an opportunity of acquiring the necessary knowledge in forest schools, and encouraging the employment of trained foresters.

"By aiding and encouraging reforestation, when it appears necessary, with active financial aid."

The experiment of a bounty system, or exemption from taxation as a reward, has been tried only in France, and there, as in some of our Western prairie States, it has proved a failure, while the plan of giving plants at a nominal cost, with the added advice and suggestions of forestry officers, as well as the wise expenditure of money in reforestation, has given practical and valuable results. These facts are in contradiction to our ideas of European government forestry, but they seem to be well authenticated and official. The plan of planting and preserving what are called protective forests—that is, those not merely for a future supply of fuel or lumber, but combining therewith the forest influence on climate and product—is becoming a settled and practical one, both with private citizens and with the government, and each are becoming active in promoting this. The mere idea of preserving fuel and timber is in every instance made subservient to that of protection against damage by flood and drought, and the prevention of harmful climatic changes. This appears to be the European reason for forest preservation and growth, and it would seem that what was the right course there could not be wrong or harmful here. We invite discussion of, and correspondence concerning, this matter, which is of interest to all our people.—*Southern Lumberman.*

#### CANADA AS A WOOD-PULP CENTER.

The agent to the minister of agriculture, Ottawa, Dr. Otto Hahn, located at Reuthgen, Germany, has sent over to his department a report on German pulp manufacture from wood. The report includes a letter from a director of one of the largest paper mills in Germany, which is as follows:

"The accompanying are samples of a new fiber material which as now prepared in enormous quantities, is bound to have an immense influence on the paper making industry. There are factories which turn out as much as fifty tons of it a day. The invention was covered with a patent until recently, and the inventor has made a large fortune out of royalties. The imperial law courts have now caused the patent rights to be cancelled, as the process appears to have been revealed to Professor Mitscherlich by a Scotchman. It has occurred to me that Canada is destined to turn to account its vast resources of forests, and of sulphur, which latter exists so largely in the deposits of pyrites, in connection with the manufacture of paper for the continental or even the international requirements. If our existing supply of wood were to be devoted to the paper industry, it would soon be exhausted, and prices would rise very much. With the profits to be derived from Canada's forest resources in this direction, the railway debt could easily be paid off, and settlers, instead of burning the pine and fir, might obtain a substantial return for that which they are compelled to destroy. If the idea I have thrown out should meet with any support in Canada, I should be prepared, with my friend, to arrange for the promotion of a company in Germany for the utilization in a large way of Canadian wood fiber.

Canada, with its abundance of vast pine woods and clear water, the discharge of which is in our country objected to, alone has the possibility of meeting the wants of the world for this new branch of industry. Suppose the yearly produce of paper to amount to 2,400,000 tons, and half of this weight, say 1,200,000 tons, to be made of wood pulp, and, further, that each ton of finished paper requires three tons of wood pulp, then the total consumption of paper demands 3,600,000 tons of pine wood. But Canada furnishes besides the wood still other important additional materials for the manufacturer; for instance, coal for firing, and common iron pyrites for distilling the sulphuric acid. Canada possesses all these raw materials in the vicinity of its shipping ports. The freight from Canada to Europe can, therefore, not come into consideration against these enormous advantages. But till now a great part of wood adapted for paper manufacture is simply burnt in Canada. Let us suppose that Canada is able to furnish only half of these 3,600,000 tons, say about 1,800,000 tons every year, and let us further calculate the ton of pine wood at 100 to 120 marks, as it will cost in Germany, we obtain for Canada a gross receipt of 198,000,000 of marks, from which the freight expenses are to be deducted. But even these expenses remain again in Canada for the benefit of either its inland economy, or of its equipment. The author thinks it his urgent duty to call the attention of the government to this favorable opportunity of so immensely increasing the receipts as well of the government, which has the sole right on all the wood on its land, as of private persons. The writer now proposes that your government should take this matter in hand and make arrangements for the manufacture of pine wood pulp whereby Canada may also retain the profits from this work.

The European production suffers everywhere from two facts. (1) From the high prices of the wood, which will more and more increase in consequence of this industry. (2) From the difficulties of establishment, the necessary water not being at disposal, neither in sufficient quantity nor clearness; and finally, what is worst of all, that no favorable discharge is to be had, because the drainage of the waste water into the rivers is not permitted on account of the fishing, waterworks, and so on. I submit now to your government samples of (1) bleached pulp, (2) of raw paper pulp, (3) of raw paper pulp bleached and dried. The latter cost 40 marks per 100 kilograms. By personal observation made with one of the first engineers in the German paper trade, I am willing and able to give the necessary instruction for the establishment of cellulose manufacture, and also to make arrangements for the sale of the finished pulp in Europe, and are waiting for corresponding directions. The utilization of the material increases every day, and the price per hundredweight is now about 15 marks. Imagine the number of hundredweights that Canada's forests would furnish. If war does not break out in the meantime, I shall send my son to Canada in the course of the present year to investigate the matter more thoroughly."

—A Port Arthur paper says that the reason lumber is being imported from the U. S. into that district, is that many of the best timber limits are held by speculators who have not the capital to work them. This looks very much as if the government had been doing it up handsomely to some of its political heeled.

#### HINTS TO PLANING MILL OPERATORS.

The care and management of wood-working machinery is a subject that can always be profitably discussed. Much has been said upon this subject and yet much remains to be said. It is one of the most important duties of the designers and manufacturers of this class of machinery, and one that should not be neglected, to so apportion every wearing part of the machine that the surfaces in contact with each be in proportion to the weight and velocity, so that there will be no danger to those parts from heat and abrasion.

The conveniences for the proper lubrication of such parts cannot be too carefully taken into consideration. Many places it is true are to be found where a bearing is necessarily so located that it is difficult to get at it with the usual appliances for oiling, but in all such places by a careful calculation in the first instance, they may be rendered more accessible than they frequently are. A small shallow oil hole in such a place, especially if the bearing has considerable length, will be condemned as a nuisance by any sensible operator who is disposed to keep this machine in good working order. There are but very few places where an oil cup of some kind cannot be applied, but if the space occupied is so small that one cup cannot be used, a hub should be cast upon the box large enough to admit a good sized hole being drilled into it, at least part of the way through, to form a suitable receptacle for the oil, and this should be provided with a cover, if one can be applied, and packed full of cotton waste, sponge or some other fibrous substance, to retain the oil and prevent it from running off as soon as it is applied.

It is not so much the quantity of oil that is required to keep a journal well lubricated as it is in the manner in which it is applied. An ordinary journal when once well covered with oil will not retain more than a few drops at a time, the rest soon runs off and is wasted, but it may be that the few drops may be required more frequently than it is convenient for the operator to apply them, especially if he is obliged to stop the machine in order to do so, and in that case the journal may run dry and begin to cut before he is aware of it. Hence the necessity of retaining the oil in the cup and distributing it gradually.

There is no class of machinery that is required at times to work under more unfavorable conditions than wood-working machinery. Under very unfavorable circumstances, the wear and tear is greater, the high speed at which it is required to run in all kinds of dust and grit with which the lumber is sometimes covered, and which is a very difficult matter to exclude from the bearings, is a constant source of trouble and annoyance to the most careful operator. For that reason woodworking machinery requires to be stronger in proportion and more accurately fitted with long bearings, and the most practical and convenient manner for lubricating.

In cold weather, especially when there is no provision made for heating the mill, the trouble with some parts of the machine is rendered still greater. While the fast running parts, such as the cylinder and matcher spindles will always warm up after running; a few minutes sufficient to keep the oil in a fluid state, the roller bearings and that portion of the gearing which runs slow and loose upon studs and pins are the parts which are the most liable to suffer in cold weather, when the oil as soon as it comes in contact with the iron becomes chilled. In such places a small oil hole is worse than none at all, and it is safer to slip off the wheel and apply the oil directly to the stud or pin, and for this reason all such gearing should be so arranged that they can be readily and quickly removed for this purpose.—*Timberman.*

#### FIRE RECORD.

Messrs. J. & J. Kerr's planing mill at Petrolia, Ont., has been totally destroyed by fire.

Colthart & Neilson's furniture factory, at Chatham, Ont., was destroyed by fire the early part of November. Loss, \$2,800; fully insured.

The custom woollen mill, owned by the Lakefield Lumber & Manufacturing Co., was destroyed by fire at that place recently. Bapic's planing mill had a narrow escape.

The twin saw mills owned by John Robinson and Harvey Copp, at Midjic, N. B., were burned the early part of November. Each mill was insured for \$1,000. The loss is \$4,000.

French, Wells & Burnes' sash and door factory at Dresden, Ont., has been burned. In addition to the loss of the factory there was material made up to the amount of \$2,000. Total loss about \$7,000; insured for \$3,000.

Joseph Paquette's planing mill and sash and door factory at Montreal was totally destroyed by fire on Nov. 5th. The loss is estimated at \$70,000, with no insurance. Another large planing mill on the opposite side of the street had a narrow escape.



PERSONAL.

It is rumored that Mr. E. B. Eddy, the well-known lumberman, will be asked to contest Ottawa (Quebec) county against Mayor Rochon.

At a meeting of the Board of Directors of the Quebec Bank, Mr. R. H. Smith was elected president in place of the late Hon. J. G. Ross, deceased.

A London, (Ont.) Syndicate have purchased some timber lands at Little Rock, Arkansas, and Messrs. R. Lewis and R. W. Greer have been sent to that place to look after the company's interests.

It is said that William Carson, the Eau Claire lumberman, who, by the way, is a native of Canada, is one of the most temperate of men. He has amassed considerable wealth, and is one of the most respected citizens of Wisconsin.

Mr. John Brennan, who has been in the employ of the Ontario Lumber Co. at French River for some years, has gone to California where he has accepted a position with Mr. J. M. Dollar, late Toronto manager for the above company.

It is asserted on presumably reliable authority that Hon. A. S. Hardy, provincial secretary of Ontario, will become Commissioner of Crown Lands in place of Hon. T. B. Pardee who is about to resign owing to illness. Col. Gibson, of Hamilton, is mentioned as the probable successor of Mr. Hardy.

Mr. Geo. Humphrey, jr., who was the Montreal resident agent for Cook Bros. of Ontario and a leading Liberal politician, died the early part of November at his late residence at Sillery from galloping consumption, aged 46 years. The deceased unsuccessfully opposed Hon. Thos. McGreevy in Quebec West, during the Dominion elections of 1882.

It is understood in legal and political circles that Mr. H. J. Cloran, of the law firm of Cloran & Bedard, of Montreal, is about to retire from the political and legal arena and enter upon the career of a lumberman. We understand that he has already purchased one hundred square miles of timber lands on the Ottawa river. We hope to hear that Mr. Cloran's well-known business ability will do him good service in the new field in which he has entered.

CASUALTIES.

A young man named Joe Prevost had his fingers amputated by an edger in a Hull saw mill a few days ago.

Geo. Golding was cut nearly through the body by a saw, and died instantly, at St. John's, N. B.

Jean Baptiste Richard, a mill hand employed in Hurdman's mill at Ottawa, had his hand badly jammed in the mill machinery recently.

Joseph Laundry, a boy employed in the saw mills of the E. B. Eddy manufacturing company, of Hull, Quebec, had two toes of his left foot cut off by a circular saw.

Mr. J. R. Booth, one of the Ottawa's lumber kings, had one of his ankles severely fractured some days ago through a truck loaded with lumber running over his foot.

James Hore, engaged in a North Toronto lumber yard, was struck on the head some days ago by a piece of timber. He now lies in the hospital in a precarious condition.

Elie Proulx, while working in Messrs. J. R. Booth & Co.'s saw mill at the Chaudiere was struck with a knot and received injuries from which he died a day or two later, after suffering intense agony.

William Burrel, a lumberman, met with a serious accident while chopping in the bush at Lead Lake, fifteen miles from Gravenhurst. The axe slipping cut his foot through from the toe to the instep.

A young man named Stewart Wood engaged in falling trees in Gilmour's shanty near Oak Lake, (Ont.) was struck by a falling pine, the injury from which resulted in his death a day or two later.

Alonzo Sopher, employed at Richardon's shingle mill, a short distance from Guelph, was holding a shingle to the jointer when it split, throwing the man's left hand against the knives, shaving the flesh off the index finger.

A shocking accident took place some days ago on the Upper Ottawa which resulted in the death of a young man named Oliver Laroque. He was employed above the "Rocher Capitaine," and while engaged in felling a tree was caught under it. The crashing timber fell on his body, and broke three of his ribs. An endeavor was made to bring him to Ottawa for medical treatment, but he expired on the road near Pembroke.

A distressing accident happened on Nov. 24th in the big mill at Deseronto belonging to the Rathbun Co. Felix Cautre was employed on the bucking saws and in some way got caught in the gang and was drawn onto the saws. One saw cut his head open, exposing the brain, another nearly cut off

his left arm, while a third split his left foot open. Both legs were also badly cut. On his removal home his arm was amputated and his other wounds dressed by a local physician. He is said to have stood the operation bravely and the prospects are that he may still live.

THE FORESTS OF THE UNITED STATES.

The following is a summary of the annual report of the Division of Forestry of the United States Department of Agriculture, which estimates the forest lands in the States and territories as follows:—

Table with 2 columns: State/Territory and Acres. Lists forest land acreage for 36 states and territories, including Maine (12,000,000), New Hampshire (3,000,000), Massachusetts (1,359,500), Rhode Island (163,328), Connecticut (650,000), Vermont (1,990,000), New York (8,000,000), New Jersey (2,330,000), Pennsylvania (7,000,000), Delaware (300,000), Maryland (2,000,000), Virginia (13,000,000), North Carolina (18,000,000), South Carolina (18,000,000), Georgia (20,000,000), Florida (17,000,000), Alabama (13,000,000), Mississippi (13,000,000), Louisiana (40,000,000), Texas (14,000,000), Wisconsin (17,000,000), Minnesota (30,000,000), Ohio (4,258,767), Indiana (4,300,666), Illinois (3,500,000), West Virginia (9,000,000), Kentucky (12,500,000), Tennessee (16,000,000), Arkansas (25,000,000), Iowa (2,300,000), Dakota (3,000,000), Nebraska (1,550,000), Kansas (3,500,000), Wyoming (7,800,000), Colorado (10,630,000), New Mexico (8,000,000), Idaho (10,234,000), Nevada (2,000,000), Utah (4,000,000), Arizona (10,000,000), Washington Territory (20,000,000), Oregon (20,000,000), California (20,000,000).

EXCHANGE ECHOES.

Canadian Manufacturer.

A new scheme of utilizing the sawdust of the Ottawa River for the purpose of fuel is proposed. It is claimed that by a system of grinding the refuse into a uniform fineness, mixing it with the refuse gas tar from the gas house, and compressing the substance into cakes, a fuel can be made in every way superior to soft coal for open fires. Sawdust rolls were common forty years ago in England and Scotland, and were considered far ahead of peat and grate fires. The cost of manufacturing this kind of fuel is merely nominal, and it is expected that it can be sold at a very much lower price than soft coal. The formation of a company to give the scheme practical effect is mooted.

Northwestern Lumberman.

It would appear from the facts that come to the surface, that lumber will continue to come in good and increasing volume from Canada to the United States—not only to the more important eastern markets, but to Chicago, without the stimulus afforded by a removed customs duty. Canadian lumber has all along cut more or less figure on the Chicago market, and late purchases by men on the American side, of pine timber in Canadian regions, accessible to Chicago by waterway, indicate enlarged operations in such regions from now forward. Of course these purchases have been mainly in anticipation of an increase of value in the timber, and some buyers have been moved by a belief that the free lumber measure in this country would carry. The feeling in Canada is that, in that event, the Dominion would be largely benefited, and natural operators in the Northwest want a finger in the pie. But the timber in the Spanish river region of Ontario is good property without the duty off, and those that have bought some of it will no doubt find it so. As an evidence of this probability it is instanced that the Buswell Lumber Company, formerly of Grand Rapids, Mich., and now operating on the Spanish river, has been cutting 10,000,000 feet annually, and shipping the most of it at a profit, in spite of a \$2 customs duty assessed on this side the line. Many Michigan men now operating in Canada are reported doing well.

AMERICAN NOTES.

—Michigan lumber dealers say that the recent increase in the export duty on Canadian pine logs will stop their importation into the United States.

—Three coal boats and one barge loaded with one million feet of pine lumber from Ottawa, consigned to the Oswego Manufacturing Co., which were at anchor at Cape Vincent, N. Y., harbor for fair weather, dragged anchors Nov. 26th in the severe gale. The wind took several thousand feet of lumber off the boats, all of which came ashore and were picked up.

A correspondent writing to the New York Lumber Trade Journal wants to know what kind of lumber was used in the building of Noah's ark. The editor has endeavored to satisfy the correspondent's curiosity by giving his reasons for the belief that Cypress was used in the construction of this ancient but wonderful building.



—Very few charters for timber are being now reported, the Canadian and Baltic seasons being practically over.

—The demand for pine in London is reported as being very sluggish and any violent rise in price may have the effect of checking what little business there is now doing.

—The Thomas Hillyard from Quebec bound for Liverpool had a fearful passage during October. During one gale her boats were washed away, one seaman was swept overboard and drowned, and another killed.

—Liverpool advices state that steamer freights by the regular liners from Montreal and Quebec have advanced to 80 s. per standard. From St. John N.B. freights are a little easier but the supply of deals will be small.

—The excess of importation of wood goods up to the end of September over that of last to London amounts to 19,915 loads of hewed wood and 83,734 loads of sawn, or a total of 103,649 loads. Other large wood trading centres exhibit a like result.

—The stock of Quebec timber at Leith has already got reduced to small proportions, and only a few cargoes are expected this fall. This, taken in conjunction with the limited Clyde stocks, will very materially affect the market during the winter and spring months.

—The extensive timber yards and saw mills belonging to Messrs. Watson & Todd, of Liverpool, were burned on Nov. 14th. The loss is estimated at \$15,000. It is announced that the fire will in no way interfere with the firm's business, as all orders will be executed as usual from their branch mills.

—Inquiries for next year's goods continue to be received by agents both in England and France, but it seems that buyers are slow in committing themselves to any definite quotation. Many of the importers have expressed themselves willing to repeat contracts closed at the highest prices of the current year, but these offers have been declined. It is generally thought by large buyers that a slight advance in values on free-on-board prices is not unlikely to take place.

—Denny, Mott & Dickson, of London, in their wood circular, under date Nov. 7th, in speaking of Canadian lumber say: "The demand for all classes of this timber has been good; little oak remains in first hands, and prices continue to advance for first-class quality. Square and Waney pine are asked for at advanced prices, the demand by consumers being altogether out of proportion to the small floating supplies. Elm is in good demand with a moderate stock.

Items of Interest.

Timber constitutes a great industry and represents an annual expenditure of \$1,365,000,000. Its consumption throughout the world has increased 50 per cent. since 1850.

From the annual circular of the Export Lumber Company it is learned that the total shipments of pine and spruce lumber from the St. Lawrence river to the River Plate for the season of 1888 were 17,980,814 feet—14,544,814 of pine and 3,436,000 of spruce. In 1887 the shipments amounted to 34,036,076 feet, and in 1886 to 29,088,204 feet.

TRADE REVIEW.

Toronto, Ont.

TORONTO, Nov. 29th, 1888.

CAR OR CARGO LOTS.

Table listing lumber prices in Toronto, Ontario, including items like 1 1/2 inch clear picks, 1 1/2 inch thicker, etc.

YARD QUOTATIONS.

Table listing yard quotations for various lumber types and sizes, such as mill cull boards, dressing stocks, etc.

Ottawa, Ont.

OTTAWA, Nov. 27th, 1888.

Dimensions, Inches. Per M.

Table listing lumber prices in Ottawa, Ontario, categorized by dimensions and per meter.

Hamilton, Ont.

HAMILTON, Nov. 29th, 1888.

Table listing lumber prices in Hamilton, Ontario, including items like mill cull boards, dressing stocks, etc.

St. John, N. B.

ST. JOHN, Nov. 29th, 1888.

Deals, Boards, Scantling, etc.

Table listing lumber prices in St. John, New Brunswick, including deals, boards, and scantling.

Goderich, Ont.

GODERICH, Nov. 27th, 1888.

PRICES IN CAR LOTS.

Table listing lumber prices in Goderich, Ontario, including 1 inch mill culls, 1x6-8-10 & 12, etc.

Montreal, Que.

MONTREAL, Nov. 29th, 1888.

Table listing lumber prices in Montreal, Quebec, including pine, 1st quality, 1st m, etc.

Saginaw, Mich.

SAGINAW, Nov. 29th, 1888.

CARGO LOTS.

Table listing lumber prices in Saginaw, Michigan, categorized by cargo lots.

YARD QUOTATIONS-CAR LOTS DRY.

Table listing yard quotations for car lots in Saginaw, Michigan.

Flooring and Siding-Dressed.

Table listing flooring and siding prices in Saginaw, Michigan.

Finishing Lumber-Rough.

Table listing finishing lumber prices in Saginaw, Michigan.

Joist, Scantling and Timber.

Table listing joist, scantling, and timber prices in Saginaw, Michigan.

Plank and timber, 12 inches wide, \$1 extra.

Table listing plank and timber prices in Saginaw, Michigan.

Wide Select and Common-Rough.

Table listing wide select and common prices in Saginaw, Michigan.

Lath, Shingles and Pickets.

Table listing lath, shingles, and pickets prices in Saginaw, Michigan.

Philadelphia, Pa.

PHILADELPHIA, Nov. 29th 1888.

White Pine.

Table listing white pine prices in Philadelphia, Pennsylvania.

Cargo Lots.

Table listing cargo lot prices in Philadelphia, Pennsylvania.

Hemlock Boards and Scantling.

Table listing hemlock boards and scantling prices in Philadelphia, Pennsylvania.

Shingles and Posts.

Table listing shingles and posts prices in Philadelphia, Pennsylvania.

HARDWOOD.

Walnut.

Table listing walnut prices in Philadelphia, Pennsylvania.

Poplar.

Table listing poplar prices in Philadelphia, Pennsylvania.

Oak.

Table listing oak prices in Philadelphia, Pennsylvania.

Ash.

Table listing ash prices in Philadelphia, Pennsylvania.

Yellow Pine-Yard and Wholesale.

Table listing yellow pine prices in Philadelphia, Pennsylvania.

New York City.

NEW YORK, Nov. 29th, 1888.

Black Walnut.

Table listing black walnut prices in New York City.

Poplar, or White Wood.

Table listing poplar or white wood prices in New York City.

Dressed Poplar.

Table listing dressed poplar prices in New York City.

Ash.

Table listing ash prices in New York City.

Oak.

Table listing oak prices in New York City.

Cherry.

Table listing cherry prices in New York City.

Miscellaneous.

Table listing miscellaneous lumber prices in New York City.

Boston, Mass.

BOSTON, Nov. 29th, 1888.

Western Pine-by car load.

Table listing western pine prices in Boston, Massachusetts.

Eastern Pine-Cargo or Car Load.

Table listing eastern pine prices in Boston, Massachusetts.

Spruce-by Cargo.

Table listing spruce prices in Boston, Massachusetts.

Lath.

Table listing lath prices in Boston, Massachusetts.

Shingles.

Table listing shingles prices in Boston, Massachusetts.

Oswego, N. Y.

OSWEGO, Nov. 29th, 1888.

Pine.

Table listing pine prices in Oswego, New York.

Brown Ash.

Table listing brown ash prices in Oswego, New York.

Basswood.

Table listing basswood prices in Oswego, New York.

Shingles.

Table listing shingles prices in Oswego, New York.

Lath.

Table listing lath prices in Oswego, New York.

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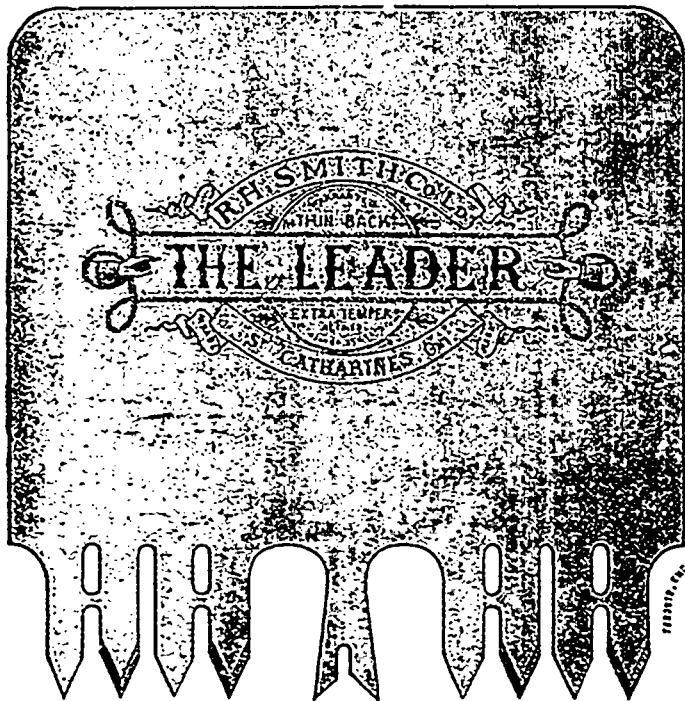
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NOTE.—The above berth was bid off at the sale  
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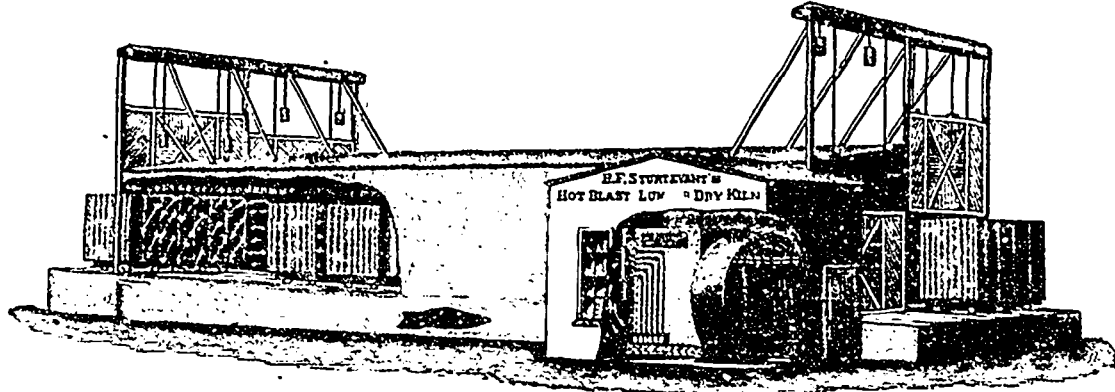
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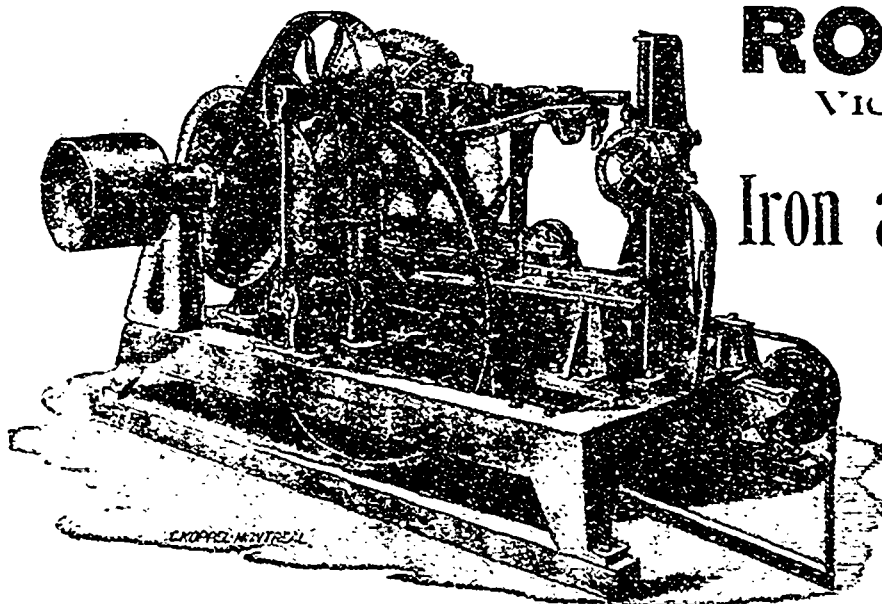
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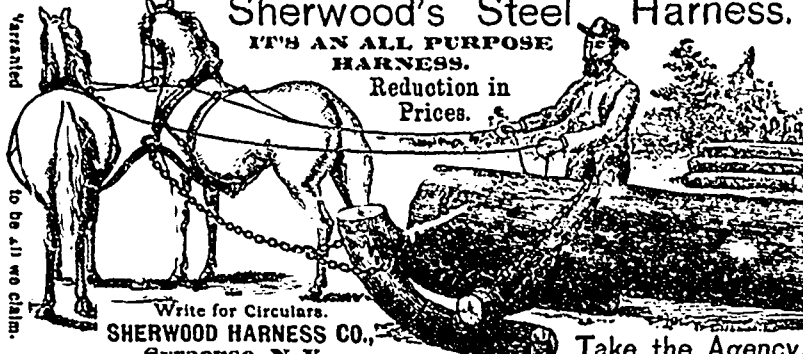
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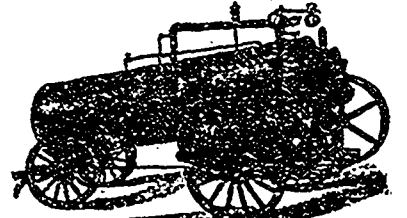
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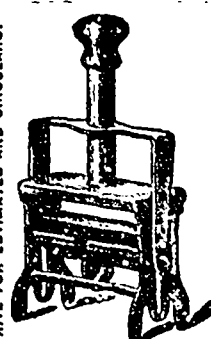
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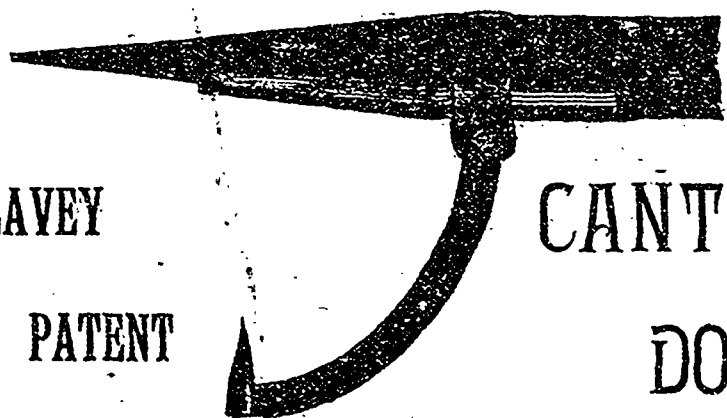
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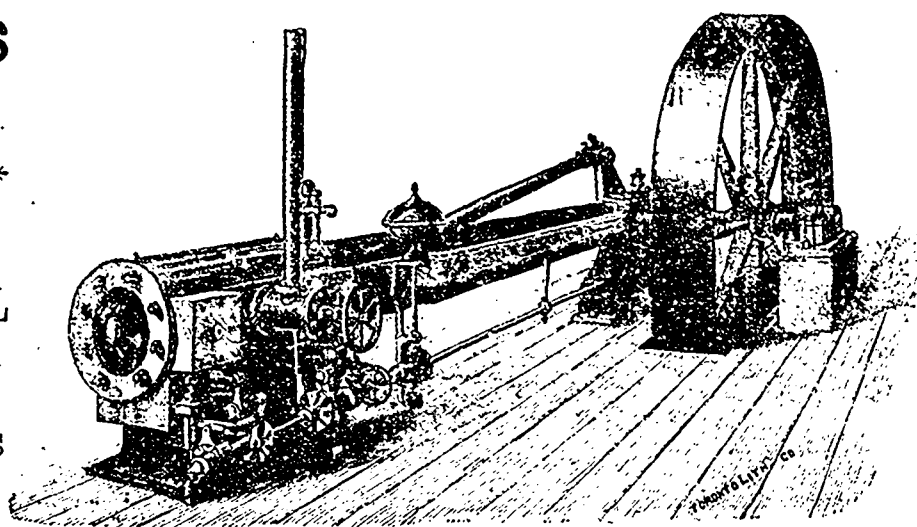
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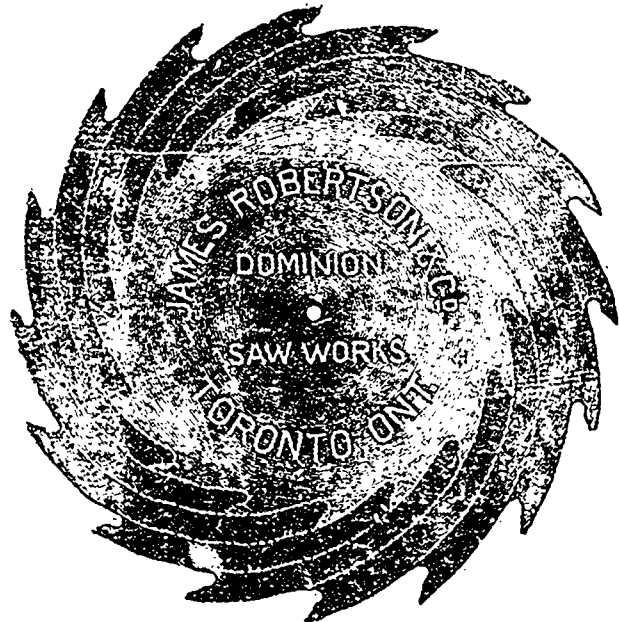
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