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WOODWORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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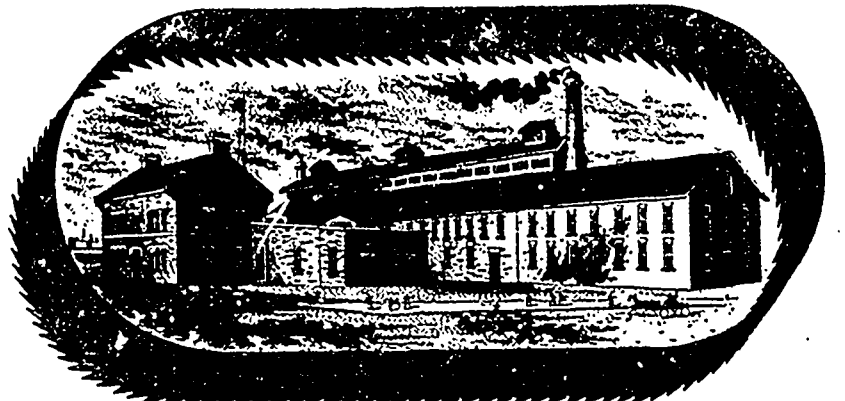


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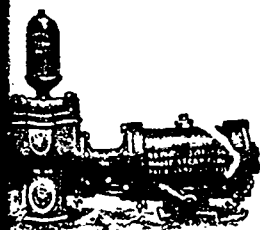
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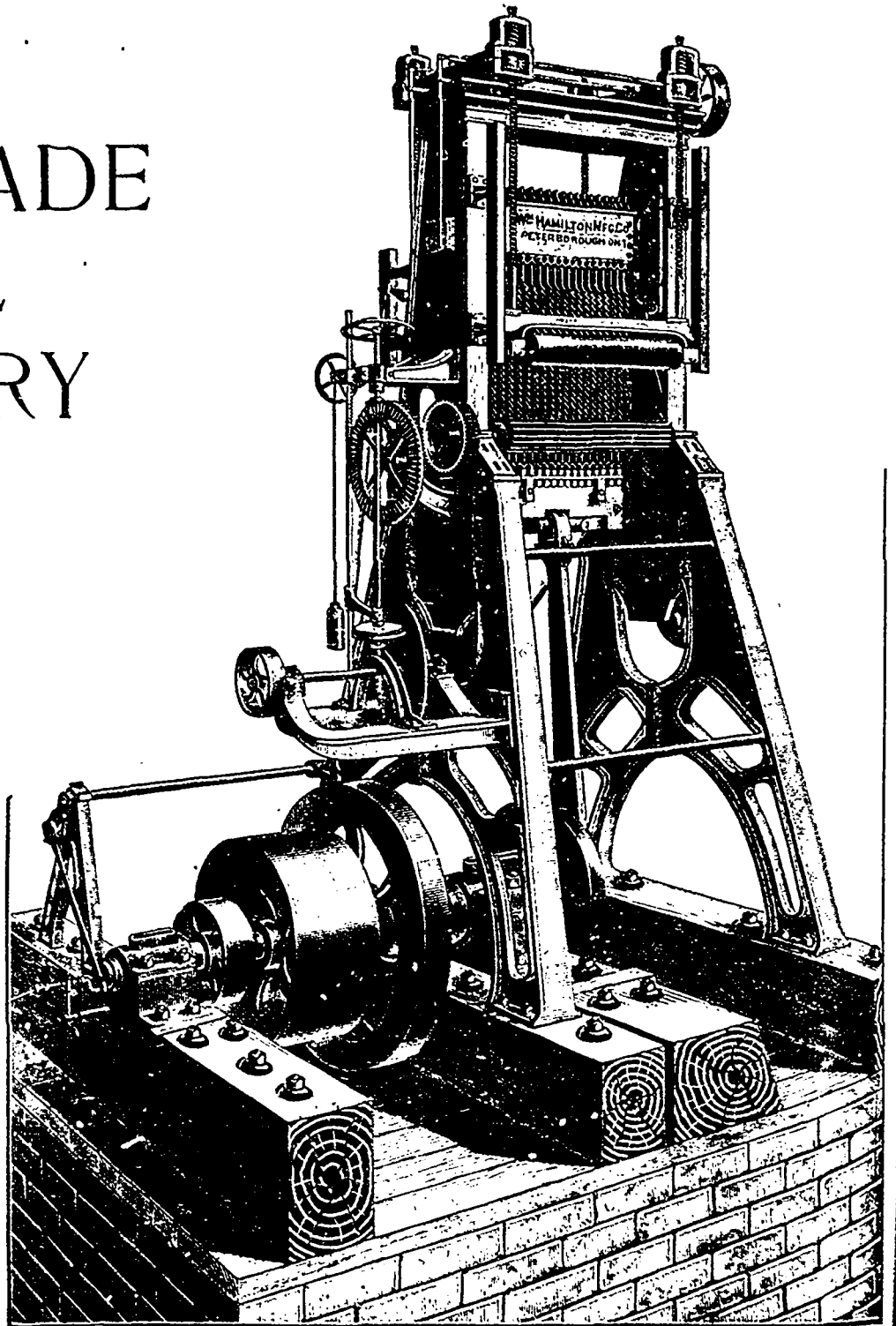
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SKETCH OF A CANADIAN LUMBER KING.

It is said of Mr. J. R. Booth, of Ottawa, that he is the greatest lumberman on the American continent. This distinction he has earned by enterprise, perseverance and business ability, his wealth when launching out to make his way in the world consisting of less than ten dollars. A review of the life of such a remarkable man is always read with interest, while it must also furnish an example of what may be accomplished even by those born in humble circumstances.

Mr. Booth is a native Canadian, having been born in the town of Waterloo, Ontario, over seventy years ago. Like many of the leaders in the commercial world, his early days were spent on the farm. When reaching manhood he secured employment in the city of Ottawa as a sawyer. His first business venture was the purchase of a machine shop, which was destroyed by fire after eight months. There was a small mill lying idle on the present site of Mr. Booth's great establishment. It was rented by men who intended to start in business, but the deal fell through, and the young millwright secured a lease of it for ten years. He started on a small scale with a single saw. His first encouragement came in the shape of a contract for furnishing lumber for the Parliament buildings, awarded in competition with other bidders. He worked out his contract at a substantial profit, and purchased the saw mill after three years' occupancy. That was in 1860. In war times his business was very slack, and he was compelled to take a partner, but the outlook was so doubtful that the latter retired at the end of a year.

Mr. Booth had a large stock of lumber on hand, and shortly after his partner left a brisk demand sprang up and he sold all he had. This gave him a good start. About this time several tracts of timber land along the Ottawa river were offered for sale, comprising the estate of John Egan, who had owned a tremendous quantity of timber. Mr. Booth was doing a small business with the bank, and the officials had confidence enough in him to advance a sum, for which he paid 7 per cent. interest. With this money he secured a large limit at a fraction of its value, and increased the capacity of his mill by putting in two gang saws. He used all the money he made and all that he could get credit for in buying more timber limits, running largely into debt. This proved to be a wise policy. To-day he owns more pine timber land than any other one person in the Dominion.

Frequently Mr. Booth found it necessary to add to his mill plant, and in 1892 he had 13 band saws and four gates in operation, with a capacity of more than one million feet in ten hours. Day and night crews could turn out two million feet of lumber in twenty hours, but as double crews were never employed on account of the difficulty attending

the handling of such an amount of lumber after it leaves the saws, the capacity has always been stated as one million feet, and exceeds that of any other mill in the world.

In the month of May, 1894, his extensive mill was destroyed by fire, entailing a serious loss to Mr. Booth and to the citizens of Ottawa and Hull. Shortly afterwards he purchased the old Perley & Pattee mill adjoining the burned property, and fitted it up with improved machinery. The plant as it stands to-day will cut from six to eight hundred thousand feet of lumber in a twenty hour run, and consists of a series



MR. J. R. BOOTH.

of buildings, some of which are of stone, the walls of which remained intact after the fire, while the other buildings are of timber. There is a lath and picket mill, a mill for the reduction of slabs into shingles, box boards and lath, a mill with one large band saw, swing saws, etc., and the main mill, which is fitted with four single bands, a pair of twin circulars, two 62 inch Wickes gangs, trimmers, butters, etc. Last year the season's cut was 130,000,000 feet.

The mill is situated on the Chaudiere Falls at Ottawa, and is driven by water power. The sawdust has for many years been dumped into the Ottawa river, but as an act has been passed by the Dominion parliament prohibiting the dumping of sawdust and refuse into rivers, steps are now being taken to dispose of the sawdust in another manner.

Over twelve hundred men are now employed about the mill and yards, and 368 wagons are utilized in moving the lumber from the mill to the piles or from the yard to the cars or river boats for transportation. The deals destined for

the English market are loaded upon river boats and towed to Montreal, for re-shipment by the regular ocean liners. Probably fifty per cent. of the product of the Booth mill finds a market in England, while the balance is sold in Canada and the United States, Mr. Booth's large trade in the United States being supplied largely through the mill and sorting yard at Burlington, Vt., and the sales office in Boston. There are often carried in stock over 100,000,000 feet of lumber, and the mill and lumber yard cover 160 acres of property.

To the subject of this sketch the mill employees of the Ottawa valley are indebted for a reduction in the daily working hours. In the spring of 1895 Mr. Booth voluntarily reduced the working day of his employees from eleven to ten hours, without any corresponding reduction in wages. This generous action was freely commented upon, and was very soon copied by other mill operators, until to-day ten hours has been almost universally adopted as the standard day.

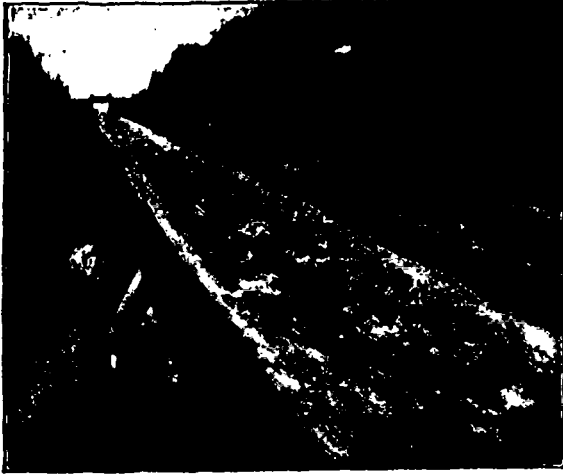
As previously stated, Mr. Booth owns very extensive timber limits, estimated at 5,000 square miles, at the head waters of the Ottawa river, 100 to 240 miles above the mill boom. After the logs are driven to the boom they are sorted into the smaller booms, the size and quality of the log deciding its final resting place. A novel method is employed by Mr. Booth for getting the logs from his Nipissing limits to Ottawa. Five miles from Lake Nipissing to the north-east is the Mattawa River, an important tributary of the Ottawa. Between Nipissing and the Mattawa is the rise of land separating the waters of the north and east from those of the west and south. Mr. Booth put down five miles of track connecting the two bodies of water, and built a great barge on which he floated a standard size locomotive from the Canadian Pacific Railway to his isolated track a feat that was applauded far and wide in that region. For twelve years that locomotive has been puffing back and forth transferring logs over the watershed.

Twenty-three years ago Mr. Booth established at Burlington, Vt., extensive lumber yards and wood-working factories, covering an area of forty acres. This branch of his business is under the management of his brother, Mr. E. Booth. A box factory there consumes from 5,000,000 to 8,000,000 feet of lumber annually. Most of the lumber handled is the product of the Ottawa mill, but lately considerable spruce has been taken down the lake by boat.

BUILDING OF RAILWAYS.

In addition to his extensive lumbering operations, Mr. Booth has interested himself very largely in the construction of railways. In order to obtain a direct outlet for his lumber to Atlantic ports and eastern inland cities of the United States, he built, some years ago, the

Canada Atlantic Railway, which extends from Ottawa to Swanton, Vt., a distance of 163 miles. The road crosses the St. Lawrence river at the head of the Coteau rapids, thirty-seven miles west of Montreal, where a bridge over one mile in length has been constructed. Mr. Booth financed the project from beginning to end, and



LUMBER SLIDE, MADAWASKA RIVER.

is now said to own seven-eighths of the entire railway and equipment.

The building of the Ottawa, Arnprior and Parry Sound railway is the latest work which Mr. Booth has brought to completion. This road extends west from Ottawa to Parry Sound, a distance of 264 miles, and passes through a large section of well timbered country. It has been the means of establishing large saw mills, of opening up the natural resources of the district, and of providing a freight and passenger service between the western country and England that is said to be several hundred miles shorter than by any other route. This railroad was commenced in the year 1892, but it was not until January 1st, 1897, that the first regular train ran over the line. At first there seemed to be almost insurmountable difficulties in the way of its construction, but Mr. Booth was not easily discouraged, and soon found a feasible route. In the vicinity of Whitney saw mills are springing up to send their product by the new road through Ottawa to the east and via Parry Sound



PERLEY CHUTE, MADAWASKA RIVER.

to Chicago and other lake ports. Two of the largest mills are those of the St. Anthony Lumber Company at Whitney, and Gilmour & Company at Canoe Lake. At Parry Sound, the western terminus, extensive docks and grain elevators have been constructed. In 1893 a tract of land in

the district of Nipissing, between Georgian Bay and the River Ottawa, was set apart by the Ontario government as a reserve. It is known as Algonquin Park, and contains about one million acres of primeval forest, lake and stream. The Ottawa, Arnprior and Parry Sound Railway passes through this park, which affords splendid fishing, shooting, etc., and is largely patronized by tourists. The passenger traffic is therefore becoming an important feature, and to-day the wisdom and keen foresight of the promoter in undertaking the building of the road is acknowledged by all.

Some of the greatest business achievements of Mr. Booth are outlined above sufficient to merit the distinction of a "commercial hero" which someone has aptly applied to him. As a citizen, he is held in high esteem, being kind-hearted and charitable. Although frequently urged to accept public office, he has preferred to follow his business career.

A portrait of Mr. Booth, taken from a late photograph, and views of a lumber slide and the Perley chute, on the Madawaska river, along the route of the Ottawa, Arnprior and Parry Sound Railway, are presented herewith.

BRAZING BAND SAWS.

By A. J. BURTON.

I USE an emery lap grinding machine, for I can make a better lap and do it much quicker with a grinder than with any other machine or process. If the grinder is kept in proper shape and run right you will not need to use a file. I have ground both laps on a 10-inch 14-gauge saw in 11 minutes with a Bolton lap grinder, and did not use a file after. Make laps $\frac{5}{8}$ -inch and 1-16-inch, grinding them down to a feather edge, and when you set the saw in clamps to be brazed overlap laps 1-32-inch on each end, so there will be something to file off, and after lap is dusted it will be a $\frac{5}{8}$ -inch lap.

After grinding the laps, place the saw in brazing clamp. If you run "back" in the saw, push saw along past the lap, set back guides up even to back of saw, then pull saw back to right place. By this way, when braze is made, the back will be the same along the lap as in the rest of the saw. Attention to this will save time and labor in drawing out the back. Clean the lap with a clean pine stick dipped in chemically pure muriatic acid—the purest to be had.

The silver solder should be a little wider than the lap, and should also be cleaned with the acid; 3-1000-inch is the best thickness—such as is furnished by Baldwin, Tuthill & Bolton. With this solder I can make a perfect braze, so that when it is dressed there will be only a small streak across the saw, about the size of a silk thread. My brazes always hold well, are about as hard or stiff as any other part of the saw, and will not bend when going round the saw sharpener, as is so common with factory brazes. A braze that bends easily is sure to break about one inch from the lap. You may not know the reason it gave way, but if you were to consider the number of times it has been bent and straightened in a day's run, you would see that this continuous bending causes crystallization in the saw at the place where the extreme edge of the irons was applied.

I can not make a good braze with irons too

heavy, for they don't clamp evenly, hold the heat too long, burn the steel, burn the life out of the solder, and frequently the braze will open up before the saw is ready to go on the mill. Irons $1\frac{1}{2}$ to $1\frac{3}{4}$ x $1\frac{3}{4}$ -inch thick are the best. Steel makes a better material for brazing irons than iron, for the steel does not scale like iron and it takes the heat more evenly. The irons should be heated slowly in a charcoal fire, as this is not so apt to burn the irons and cause them to scale. A forge designed especially for band saw brazing should be used—such as is made by the Covey Mfg. Co., Chicago—for it is almost fire-proof, and has a long blast, so that the irons can be heated their entire length without burning them.

Heat the irons to a good light red; not a white heat, or the irons will scale more in some places than in others and the braze will "miss." A common cherry red will not do, but a light cherry red is all right. Clear all scale off the irons after they are hot by scraping them across the edge of the forge. When the irons are ready, drop or pour acid on the lap till it is wet, then place irons square across, and clamp. Take the irons off as soon as they turn to a dark red or about the time the red is turning blue. Then remove the saw from the clamp and fan it with a shingle or paper for a minute, and you will see the saw taking temper again; it will not twist and curl up, as it would if the irons were left on till cold, as most saw-makers advise. Leaving the irons on till cold makes a soft lap.

After the braze is cold, pour on a little lard oil and rub lengthwise the saw with a piece of No. 1 emery cloth—not sandpaper—until all the black and rust are off. Clean off with a file all lumps or surplus solder that may have run out. But do not file the lap yet. Now roll the braze, commencing in the centre and rolling towards both edges. Do not roll saw except on the surface of the braze where the irons were applied. Roll every half-inch till you reach both edges, then roll in the centre till the saw becomes stiff, for the saw is "fast" at that place after being brazed. Level with a cross-faced hammer, then clamp saw lightly between the rolls, about five or six feet from braze, and put a block eight inches deep under the braze on the leveling table, with a weight on the other end of the saw; it will bend over the block and be easy to dress. Use a 10-inch file and file lengthwise the saw, and you will not leave any mark or scratch, as you will if you file crosswise the saw. A deep scratch will cause a crack in saw at that spot in a short time. Do not leave the lap too thick or lumpy, nor dress it too thin. If you do it will not last. If you take pains to make a good braze, and dress and roll it properly, it will last as long as the saw. After the lap is dressed and leveled, roll in the tension as in the rest of the saw, and make the back true. If a saw cracks in from one to two inches, do not cut saw and braze it, as most filers do, but cut out a piece of $\frac{1}{2}$ -inch wide or $\frac{1}{4}$ -inch on each side of crack, and the length or depth of crack. File a lap $\frac{1}{2}$ -inch on each side, shape a piece of steel to fit in it, and braze it in. Use a short brazing iron that will not rest all over the saw, and it will not take out the temper across the saw. It is much better to patch a saw in this way than to braze it, for you keep your saws all of a length, with less labor and less brazes. If the patch is in the front of saw it will

wear out in time. Your saws will run better and be a credit to the filer.

I have charge of a mill here with two large bands and two small bands, using ten and six-inch saws. It has run steadily since the 20th of April, with four new saws to the mill. I have not had to make a braze yet, and only had one crack, which I patched in the above way. If any of the readers of *The Woodworker* know of any one that makes a machine for grinding out a crack and putting in a piece or patch, I would be glad to here from them, with the address of the makers. *The Woodworker*.

A DOUBLE-ACTING BAND SAW.

In the mill of the H. C. Akeley Lumber Company, Minneapolis, Minn., there is in operation a double acting band saw, manufactured by the Edward P. Allis Company, and of which an illustration is given herewith. It is claimed that the saw has given entire satisfaction, and has a capacity greater than any single saw ever operated.

The following particulars of the invention will no doubt be read with interest by lumbermen in Canada:

To the ordinary observer the mill does not look any different from the ordinary band mill, with the exception that the saw has teeth on both sides, but there is a material difference that appears when the mill is running. Some considerable changes were made in the mill to receive this double saw. E. E. Fitzgerald, salesman for the E. P. Allis Co., some time ago worked out a scheme for the raising and lowering of the whole mechanism of a band mill. His idea in this was to do away with the guide that has been necessary for the saw, and by bringing the upper wheel down close to the log, to make the saw more rigid at that point. Heretofore objections have been raised to the band saw for the reason that it could not be made rigid enough to get the amount of speed out of it that was wanted. The whole mill is raised by hydraulic power, operated by means of a lever near the sawyer, and pulleys and a weight that nearly balance the mill.

The live rolls have been extended back through the saw and along the lower edge of the log deck, and to keep the logs off them on their way to the carriage, there are built extended arms to the log loaders that reach out over the rolls to the carriage. The position of the setter on the carriage has been moved to the other end, so that he can see the sawyer when he starts on a back trip. On the other side of the saw an arrangement has been devised by means of which the log, after it has been slabbled for the gang saw, can be canted off the carriage and carried to the gang, while the last board cut is carried along under it on the live rolls.

The saws that are used on this mill differ from the ordinary band saws in that they are double edged. They are fourteen inches wide and have teeth on both sides. Another machine that has been made necessary in the mill by the introduction of the double edged band, is a filing machine built specially for it, and which will file both sides of the new saw at once.

This double acting band mill is made to move on three vertical slides that are mounted in the center of a large base plate. The upper ends of the slides are supported in a heavy column, the lower ends of same supported by an independent plate that is bolted to frame work in foundation. By supporting the slides at the top and bottom ends as well as in the center, a very rigid construction for the support of the band mill is secured.

The machine is lowered by gravity and is raised by a hydraulic cylinder located under same. The hydraulic cylinder is supplied with pressure by taking water from the boilers below the water line at boiler pressure, or if used in a water mill by an independent pump. The band mill is counterweighted to within two thousand pounds of a balance, so that a comparatively small cylinder does the work rapidly and with ease.

The advantage of this machine over others is claimed to be that it moves the entire mechanism carrying the wheels up and down so as to bring the point where the saw leaves the upper wheel as close to the top of the different sized logs as possible. The object in this is to get a short, rigid blade, to keep the saw above the cut as short as possible at all times, and to keep the surplus length of blade below the log instead of on top, as with

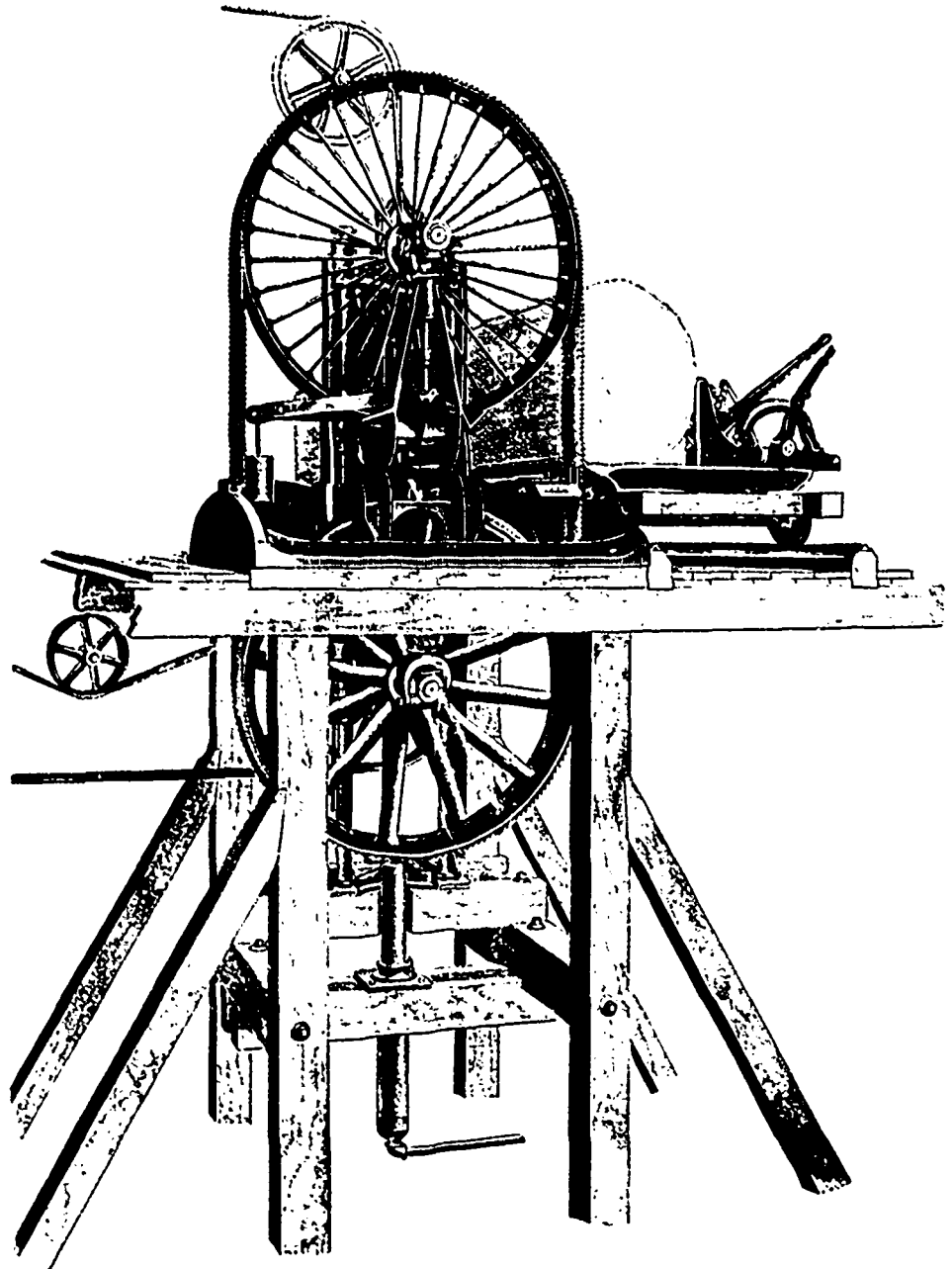
the ordinary mill. By lowering the mill they also bring the pressure of the log against the saw at a point close to where the saw leaves the upper wheel, making it impossible for the feed to crowd the saw backward on the wheels. The cutting capacity of the saw is limited only by the capacity of the teeth to carry out the sawdust.

In sawing under the upper wheel the saw will stand the feed and remain in place on the wheel with 50 per cent. less strain than the old style band mill. This naturally is easier on the saws, requires less work on the part of the filer to keep the same in order, and saves a great loss of power in friction, hot boxes, expensive stops, etc.

The invention of the telescopic band mill made the use of a double tooth band saw possible, as the upper wheel of this machine absolutely controls the direction of the cut and is set in perfect line; lower wheel is made adjustable

FOREST, CLIMATE AND WATER FLOW.

THE beneficial influence of the woods in tempering the rigors of a cold continental climate, with its sudden changes and severe storms, is probably conceded by all, writes Filibert Roth, special agent of the Division of Forestry, in his report on forestry conditions and interests in Wisconsin. What share the forest has in the general changes of humidity is not so apparent. That a general and very gradual change from a moisture to drier condition has been going on for a long time over the entire lake region seems quite certain. The behavior of hemlock and even white pine in the matter of distribution is probably in part due to this change. How much the forests have done to retard the progress of this desiccation can only be inferred. On the other hand, the striking changes in the drainage conditions which have taken place within the



DOUBLE ACTING BAND SAW—POSITION WHEN SAWING A LARGE LOG.

to range the saw on the wheels and is also used without an upper guide.

It is said that no time is lost in taking care of the lumber that is cut on the backward run, as the log deck is fitted with live rolls set 8 inches below the top of head blocks, and the steam log loader arms are provided with extensions which bridge over these rolls when loading logs onto the carriage, thus loading the logs without interfering with the board while passing on to the edger.

To test the capacity of the mill an eleven hour run was made recently. There was no selection of logs for the trial, which was just an ordinary run of the mill. In eleven hours there were cut 744 logs. The lumber cut from these logs was tallied, and amounted to 101,560 feet of inch lumber.

The British American Land Company have closed down their saw-mill at Sherbrooke, Que., and will not operate in the woods this winter.

memory of many of the residents, have fairly forced themselves on the attention of all experienced and observing people, and are all too intimately connected with the changes in the surface cover to leave in doubt the influence of this latter on the former.

The flow of all the larger rivers has changed during the last 30 years, navigation has been abandoned on the Wisconsin, logging and rafting have become more difficult on all rivers, and, what is even a far better measure of these important changes, the Fox river is failing to furnish the power which it formerly supplied in abundance. The "June freshet," which in former years could be relied upon in driving operations, has ceased on most streams and is uncertain on the rest of them. Of the hundreds of miles of corduroy road a goodly per cent. has fallen into disuse, the ground on the sides has become dry enough for teams, many swamps of former years are dry, and hundreds of others have been converted into hay meadows and fields without a foot of ditching.



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ADVERTISING RATES FURNISHED ON APPLICATION

THE CANADA LUMBERMAN is published in the interests 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 by others.

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

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

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

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

TO VISITING LUMBERMEN.

Lumbermen visiting Toronto are invited to use the office of the CANADA LUMBERMAN as their own. We shall take pleasure in supplying them with every convenience for receiving and answering their correspondence, and hold ourselves at their service in any other way they may desire.

EASTERN CANADA AND EXPORT EDITION.

THE October issue of this journal will be known as an "Eastern Canada and Export Edition," and will be largely devoted to the interests of manufacturers and exporters of lumber in the provinces of Quebec, New Brunswick and Nova Scotia. Spruce, the chief lumber product of these provinces, has grown in favor in foreign markets within the last few years; but, as is the case with other woods of Canada, it is as yet comparatively unknown by many extensive foreign consumers of lumber and wood goods. The principal objects in view in the publication of this special issue are to induce a better knowledge of the timber resources of these provinces, to more fully acquaint our manufacturers with the requirements and trade possibilities of foreign markets, and to furnish a medium of communication between our manufacturers and importers and consumers in other countries.

Arrangements have been made for the publica-

tion of much information bearing on the requirements of, and reflecting the conditions existing in foreign markets, and it is hoped to present a number which will be of intrinsic value alike to lumber manufacturers, exporters and importers. The support already received indicates that the trade appreciate the advantages to be derived from a wider diffusion of information on these lines.

A copy of this number will be placed in the hands of every lumber manufacturer in Quebec and the Maritime provinces, and the leading timber importers in Great Britain, France, Germany, South America, West Indies, and other foreign countries. The value of this special issue as an advertising medium, and as a means of communication between buyers and sellers of lumber and other timber products, will at once be apparent. Manufacturers of saw, planing and pulp mill machinery should not let pass this opportunity of bringing their goods directly to the notice of probable customers, while every lumber manufacturer desirous of cultivating an export trade, and becoming known in foreign markets, should be represented in the pages of this number. It is impossible to personally interview the large number of manufacturers, but advertising rates and other information will be gladly furnished by letter.

SHORT DELIVERY OF CARGOES.

PREVIOUS reference has been made in these columns to the necessity of manufacturers and shippers of lumber to foreign markets giving greater attention to the manufacture and shipment of the stock. The lack of this attention has in the past operated against the interests of the Canadian trade, and diverted orders in other directions. There has, we believe, been a partial realization of this fact by our shippers and manufacturers, but the trouble has not been entirely remedied.

Our contemporary, Timber, of London, Eng., devotes considerable space to this question, pointing out that importers of Canadian spruce have frequently to submit to serious and irritating shortage losses, either through the carelessness of the shippers or the ship-owners. It is said that often there has been a shortage of from 30 to 50 standards in a cargo, the discrepancy usually occurring in the measurement rather than in the number of pieces.

A late instance is cited in which the matter in dispute has just been decided by the courts. Last year Messrs. Crossfield & Co., of Barrow-in-Furness, chartered a vessel from the Deddington Steamship Company to carry a cargo of deals from St. John, N.B., to Barrow, the stock being shipped by Messrs. Alexander Gibson & Sons. On delivery the goods were measured by the consignees, and their return of the total number of pieces corresponded exactly with the number shown by the shipper's bill of lading. It was found, however, that the deals turned out 2,459 pieces less than claimed by the shipper, while the smaller and shorter sizes of boards, scantlings and ends were precisely the same

number in excess. There was therefore a deficiency in the total measurement of 44 standards, representing a value of £213 to Messrs. Crossfield. The latter brought action against the vessel owners for the delivery of the balance of the stock, but the court decided that the vessel had delivered all the cargo she received on board at St. John.

It now remains for Messrs. Crossfield to take action against the shipper, and for the courts to decide which measurement shall be accepted as correct. It is said that correspondence was produced between the buyer and the seller in which the latter admitted that part of the cargo had not been strictly measured in detail, which would seem to show the unreliability of the bill of lading.

The effect of disputes such as the above cannot but injure the Canadian lumber trade, and it behooves exporters to take every precaution against errors of this character. There are said to be many difficulties encountered in loading cargoes in the port of St. John, and that occasionally it is impossible to measure in detail all the deals, boards, scantlings, ends, etc. This may account for some of the discrepancies which have arisen, but they should in any case be reduced to a minimum, otherwise importers will refuse to buy except on delivery at port of discharge.

THE RECENT MEETING OF LUMBERMEN.

AT time of writing a conference is being held in the city of Quebec for the purpose of adjusting matters in dispute between Canada and the United States. As was pointed out in a previous issue, the question of lumber and log duties is almost certain to enter into the deliberations of the commissioners. Recognizing this, the lumbermen of Ontario held a meeting on August 2nd and placed themselves on record in a manner that cannot but be of assistance to the Canadian members of the conference. In brief, the Lumbermen's Association of Ontario unanimously declared in favor of reciprocity in both lumber and logs.

It is too much to expect that the policy adopted by the association will meet with the approval of all. Personal interest is the standpoint from which it is viewed. There were those at the meeting who were in favor of a free exchange of forest products between Canada and the United States; others who were bitterly opposed to the export of saw logs from Canada under any conditions; yet they met on a common ground and unanimously agreed upon a resolution which would be most likely to strengthen the position of the commissioners at Quebec.

Some persons may be inclined to the belief that the lumbermen have changed their ground by adopting this resolution. Reference to the proceedings of former meetings will show that this is not the case. When the prohibition of the exportation of saw logs was asked for, it was accompanied by a provision that whenever an equalization of conditions should be brought about, the embargo placed on the export of saw logs should be removed. This is in line with the action now taken.

Canadian lumbermen do not fear fair competition, but take exception to giving the manufacturer in Michigan sawing Canadian logs a direct advantage of two dollars per thousand over the manufacturer located on the Georgian Bay.

Whatever may be said in favor of maintaining our timber for our own industries, no one will deny that to lumbermen, engaged in the business for pecuniary results, the free entry into the United States of the forest products of Canada is of some value. In return for this the lumbermen as a body have declared that they are willing to allow the Michigan mills to continue to obtain their log supply from Canadian limits. It is improbable that anything short of the free entry of all forest products, including pine, spruce, hardwood and other lumber, both rough and planed, would be sufficient to induce the lumbermen to ask the Ontario government to abrogate the law requiring home manufacture of timber cut on Crown lands. There would also seem to be some doubt, owing to the present small majority of the Liberal party in the Legislature and the strong public sentiment in favor of having timber manufactured within the province, that the Ontario government would grant the request even if asked to do so. It must be remembered, however, that the revenue from timber limits is certain to be decreased by the manufacturing clause.

To return to the meeting of the Lumbermen's Association. It must have been gratifying to the trade to hear the kindly sentiments expressed by the President in relation to the hardwood manufacturers. He outlined the steps that had been taken to induce them to become members, and evidenced his pleasure at having representatives of that branch of the industry present. It was resolved that the Board of Management should take up with the railways the question of the high freight rates on hardwoods, a matter that has been frequently referred to in this journal as an injustice to the hardwood trade. A vigorous effort will be made to secure a reduction of the rate on hardwoods to the same as charged on pine. For this action the association merits the thanks of every hardwood dealer in the province. If immediate success is not attained, the agitation should be continued, as we believe that finally the rates will be made uniform. We were recently informed by a representative of one of the railway companies that the rates are based on valuation, and that the opinion is prevalent that hardwood lumber is more valuable than pine. In Canada we do not think that this is the case. Our supply of expensive hardwoods is very limited, while our common hardwoods, such as basswood, elm, maple, birch, and ash, are even less valuable than pine. When these facts are brought to the attention of the Classification Committee, the request for a reduction in rates will no doubt be granted.

There are in Ontario a number of hardwood manufacturers who have not yet identified themselves with the association, but whose connection would materially strengthen its influence. Now that the work has been begun, let there be a hearty response to the invitation of the President to persons belonging to this section of the trade to enroll themselves as members.

The Canadian Locomotive and Engine Company, of Kingston, Ont., will exhibit one of their well-known shingle mills in operation at the approaching Industrial Exhibition in Toronto. Their exhibit last year attracted much attention.

EDITORIAL NOTES.

LUMBERMEN from all parts of the Dominion will visit Toronto within the next two weeks for the purpose of attending Canada's industrial exhibition, which is now recognized as one of the best on the continent. The CANADA LUMBERMAN extends to visiting lumbermen a cordial invitation to visit our offices, where they will be furnished with facilities for answering correspondence and supplied with any desired information which it may be in our power to give. Our offices are situated in the Confederation Life Building, corner Richmond and Yonge streets, one of the finest office buildings in the city, centrally located, and equipped with electric passenger elevators.

THE Northwestern Lumberman comments upon the backwardness of eastern wholesalers this year in purchasing stock at northern lake ports, and states that only for low grade stuff have they entered the market at all. The reason for this is that the demand from the west has been extremely active, which has forced prices so high that the eastern dealer felt very skeptical of being able to make any profit in handling the stock. Our Chicago contemporary concludes with these words: "It is likely that when there shall be a return of normal conditions in the east and west alike, the scramble for western pine will be more fierce than was ever before known. It will grow intense as the supply shall diminish. Which section of the country will come out uppermost in the trade struggle?" Here is another admission that the timber of the United States will soon become exhausted, and also of the early dependence of the Eastern States upon Canada for a supply of lumber.

THE following pointed remarks concerning Canadian business methods are found in a recent issue of the Timber News, of Liverpool, England:

"The cheap way some of our Canadian cousins have of endeavoring to open up new markets is amusing. Firms in the Dominion are ever seeking to make some new thing, just as firms over here are. Before they launch very far into their new enterprise, these Canadians, however, command the services of their commissioner in London, and ask him to put out inquiries through the trade journals and the ordinary press as to firms in this country who are ready to purchase their manufactures. The commissioner does so, with what result may be imagined. The general body of the likely buyers ignore the inquiries, believing they look a bit fishy. Practically only new beginners and second-rate houses take any notice of them, and but very few of these trouble to communicate with the commissioner. The upshot of the whole thing is that no trade results. The system adopted does not commend itself to the British mind, for Britishers themselves never adopt the plan of the Canadians named when they want to open a new market. The British merchant either sends out a representative or advertises his goods in such journals and newspapers as he believes circulate influentially among the people he is desirous of having a business connection with. Will our said half-awake Canadian cousins take the hint? To make use of their commissioner may be and is a cheap plan of doing the thing, but it is a puerile and unsatisfactory method in the year 1898."

These remarks, although perhaps inspired by a personal interest, contain a degree of truth. We are free to admit that Canadian manufacturers may have relied too greatly in the past on government agencies to secure trade. On the other hand, taking the lumber trade as an example, the efforts of a number of exporters, who have established European agencies and successfully competed with the large and old-established

Baltic houses, are to be commended. It must also be remembered that in Canada there are many manufacturers in a moderate way, who cannot afford to send a representative to foreign markets until reasonably certain that business can be obtained. It is in the direction of furnishing information as to the prospects of trade that the government commissioners can be employed to advantage, and not after our manufacturers have launched into the new enterprise, as stated by our contemporary. Canadians are not only half awake, but wide awake.

MAKING VENEERED DOORS.

VISITING a large woodworking factory some time ago, in New Haven, Conn., where veneered doors are made in large quantities, I interviewed the foreman with regard to the method of manufacture of these doors, with the following results: "Our first operation is to take common coarse white pine boards, with sound knots, and which have been well kiln-dried. The stock used is generally 16 feet long, 1 x 12 inches. This stuff is surfaced on both sides by a Daniels planer without regard to thickness, as some boards are thinner than others, while others are warped in drying, and the thickness of the boards is immaterial, perfectly seamed surfaces only being necessary. After the stock is planed up it is cut into such lengths as the bill of doors calls for. They are ready now to be glued up. The face board of whatever hardwood to be used is planed generally to $\frac{3}{4}$ of an inch thick, and is also run through a Daniels planer. The stock is now ready to go to the glueing press, and as the Daniels planer makes the best glueing surface in the world, no scratch planing is needed. After properly heating in a box the stock is brought out and carefully glued, the hardwood face parts marked for it. From three to five parts are put in the press at one time, and a pressure of twenty tons, brought down by screws, is put upon these parts. After remaining in the press the proper time they are taken out, and generally remain several days before being worked up, which gives the glue plenty of time to harden. When ready to work again these parts are taken to a Daniels planer and squared up, after which the parts are taken to a very nice cutting table or bench saw, and are cut up to sizes required, leaving them $\frac{1}{8}$ of an inch large for future dressing. It is a positive necessity that the saw cuts free and clear, as heating has a tendency to warp the stock or spring it slightly, which would make it necessary to dress the stuff again. If the saw does not heat, the stiles come out perfectly straight, and these stiles can be laid on a Daniels planer bed, and a light shaving taken off. They are now straight, and if the saw table is in good condition, square, the other side may be finished with pony planer or with a Daniels; I prefer a Daniels, because it makes a better glueing surface, and if the planer is in good shape the work is turned out from the planer perfect, so far as square and surface are concerned. The work is now ready for the veneering, the thickness of which is immaterial, as it may vary from the thickness of thin paper to $\frac{1}{4}$ inch. Heated cauls are now used for the veneer, and the stiles, if heated at all, are just warmed, and the veneer glued on by piling up with a hot caul between each stile.

THE RETAILER AND Wood-Worker

EXCURSION OF WESTERN RETAIL LUMBERMEN'S ASSOCIATION.

(COMMUNICATED.)

It is several years since a lumbermen's excursion has been held on the Lake of the Woods, but the custom was revived this year, when the following invitation was sent out to over two hundred retail lumbermen throughout Manitoba and the Northwest Territories:

"You are cordially invited to join us in a two days' outing on the Lake of the Woods. The steamer Keenora will leave her dock at Rat Portage on Monday, August 15th, at 24 o'clock, and it is the intention to go as far as Fort Francis, thus giving our friends an opportunity to have a full daylight view of not only the Lake of the Woods, but also the far-famed Rainy river.

(Sgd) RAT PORTAGE LUMBER CO., LTD.
BRUNETTE SAW MILL CO., LTD.
KEEWATIN LUMBERING AND MFG. CO., LTD.
B. C. MILLS, TIMBER AND TRADING CO., LTD.
GRAHAM, HORNE & CO.
PACIFIC COAST LUMBER CO., LTD.
VIGARS BROS.
SAVANNE LUMBER CO."

One hundred and twenty-five acceptances were received by the indefatigable secretaries, Messrs. J. C. Graham and A. F. E. Phillips, the names being as follows:

J. B. Mather, President of the Association, Glenboro; John Dick, Secretary of the Association, Winnipeg; M. C. Flett, Norman; J. A. F. Bleau, St. Boniface; G. F. Birney, Morris; R. McDonald, Roland; J. P. Allaire, Somerset; J. E. Gaudin, Napinka; W. C. Thorburn, Broadview; J. Schwartz, Altona; Gus. Wagner, Plum Coulee; H. Doell, Winkler; J. L. Campbell, Melita; John Love, Grenfell; F. W. Falkner, Grenfell; L. Marks, Plum Coulee; Col. Anstuther, Portage la Prairie; C. W. Plummer, Bois-Sevain; T. Leese, Foxwarren; E. Green-shaw, Shoal Lake; D. Sinclair, Winnipeg; J. E. Parrott, Saltecoats; R. J. Stead, Cartwright; J. Broadbent, Thornhill; W. Busby, Reston; W. C. Van Nostrand, Elkhorn; J. McNaughton, Killarney; J. H. Hanbury, Brandon; J. Thompson, Wolseley; J. H. Hughes, Brandon; J. A. Badgley, Emerson; J. White, Rapid City; J. McGuire, Moosomin; John Lockhead, Deloraine; W. Reid, Strathclair; T. D. Robinson, Winnipeg; J. J. Moon, Russell; Geo. Lister, Winnipeg; B. Harvey, Qu'Appelle; J. H. MacCaul, Qu'Appelle; J. Foreman, Alexander; J. Rennie, Shoal Lake; F. McPherson, Binscarth; J. Friesen, Greta; J. Dyck, Winkler; J. Esau, Winkler; J. Friesen, Winkler; J. W. Jones, Selkirk; F. Shaw, Dauphin; W. Bell, Winnipeg; W. A. Smith, Carnduff; T. A. Cuddy, Minnedosa; J. Sharpe, Fleming; E. Brough, "Free Press," Winnipeg; J. K. Robson, Treherne; G. W. Murray, Winnipeg; W. Sillers, Holmfield; T. Ruthenford, La Riviere; T. Kellett, Sewell; P. A. McIntosh, Winnipeg; R. Conn, Douglas; W. Cranston, Clearwater; C. Burley, Portage la Prairie; A. McDonald, Portage la Prairie; J. Davidson, Manitou; H. J. Badlam, Stockton; W. Armstrong, Portage la Prairie; H. Byrnes, Portage la Prairie; G. H. Stacy, McGregor; J. Conway, Crystal City; D. Leckie, Hartney; J. E. Campbell, Carman; G. B. Housser, Portage la Prairie; R. O'Hara, Brandon; John Boyd, Deloraine; E. Parker, Winnipeg; W. Bell, Portage la Prairie; G. O. Alserbrook, Winnipeg; A. Black, Winnipeg; R. Magee, Simulata; H. McDougall, Moose Jaw; E. T. Simpson, Moose Jaw; Chas. Brown, Hilton; J. Shaw, Dauphin; J. F. Frame, Virden; A. J. Archibald, Elva; W. W. Ireland, Carberry; D. Stewart, Rosenthal; E. Nichol, Bois-Sevain; T. Nicol, Bois-Sevain; T. H. Patrick, Souris; A. M. Stewart, Morden; D. N. McMillan, Morden; A. N. Shaw, Miami; J. J. Lane, Morden; John Taylor, Portage la Prairie; Fred. Robinson, Fort William; F. Avery, Austin; J. A. Ovis, Souris; A. D. Clusholm, Griswold; J. A. Thompson, Griswold; C. Willoughby, Regina; J. Caswell, Rathwell; R. Shearer, Melita; P. Schwartz, Altona; Wm. Irwin, Newdale; W. Burley, Portage la Prairie; Joseph Rinn, Elm Creek; S. McClain, Carman; A. R. Stevens, Cypress River; J. M. Neilson, Carberry; F. Dagg, Hoiland; J. McCutcheon, Hoiland; J. McElrae, Sidney; R. A. Mather, of the Keewatin Lumber

and Mfg. Co., Keewatin; J. Feren, Savanne Lumber Co., Savanne; A. E. Phillips, Pacific Coast Lumber Co., Ltd., Winnipeg; J. C. Graham, Rat Portage Lumber Co., Ltd.; (Winnipeg branch); Geo. Campbell, B. C. Mills, Timber and Trading Co., Ltd., Winnipeg; W. Robertson, Rat Portage Lumber Co., Ltd., Rat Portage; E. W. Hogan, Savanne Lumber Co., Savanne; R. Vigers, Vigers Bros., Port Arthur; G. Shaw, Traffic Manager's office, C.P.R., Winnipeg; M. McDonald, M. & N.W. Ry., Portage la Prairie; A. H. Bailey, "Commercial," Winnipeg.

A number of the lumbermen arrived at Rat Portage on Sunday, but the majority journeyed by the Steamboat Express, which left Winnipeg at 4:30 Monday afternoon and reached Rat Portage at 9:30 the same evening. After making themselves acquainted with a few of the places of interest around town, the travellers embarked on the Keenora, and promptly at midnight a sharp blast from the steamer's whistle announced everything in readiness for sailing. As the beautiful steamer pulled out from her wharf all the steamboats in the vicinity whistled a "bon voyage."

There being more passengers than there was state-room accommodation for, the berths were balloted for, the lucky drawers of state-rooms being much envied by their less fortunate brethren, who only succeeded in getting a hammock or a blanket. After running about forty miles, Captain Thompson deemed it advisable to cast anchor for a short time, on account of the heavy gale which was blowing, but most of those on board were unaware of this fact until daylight, when the anchor was hove up and the steamer got under way again. There was quite a heavy sea running on the Big Traverse, and a few of the dwellers on the prairie were wishing themselves in their yards again. One sturdy dealer, on being condoled with regarding the weak state of his stomach, indignantly replied that such was not the case, as he was "throwing as far as any of them."

About 9 o'clock in the morning the port of Rainy river, on the American side, was reached, and after the purser, Mr. R. D. Ross, had delivered his papers to Uncle Sam's representative at that point, the Keenora proceeded on her way up Rainy river. Having got into smooth water, breakfast was now called, and judging from the quantity of entables that were disposed of, and the smiling faces of those who partook thereof, the first meal on board was a decided success; the rest were even more so. About noon the sorting boom of the Rainy Lake River Boom Corporation was reached, but no stop was made excepting for the purpose of picking up one of the lumber company's bush managers. The retail men, however, had a good view of the sorting works, and as there was a large quantity of logs in the boom at the time, it gave them a very good idea of the immense proportions of the lumber business in this district.

Proceeding up the river, between the well tilled farms on the Canadian side and the dense bush on the American side, the Long Sault Rapids came into view about one o'clock. Great excitement was now manifested upon every countenance as the Keenora sailed majestically on to meet the rushing waters. By the skillful handling of Captain Thompson, the steamer eventually reached the top of the dangerous rapids, and all went down to dinner with their appetites sharpened by the excitement they had just experienced. Dinner was no sooner over than the Manitou Rapids were announced, although they are comparatively short as compared with the Long Sault. The river is much narrower at this point, and the volume of water much heavier. A heavy cable was run out and secured to the pier above the chute by ten or twelve Indians, and in a few minutes the Keenora was safely over, and, after handing over a sack of flour to the Indians, proceeded on her way to Fort Francis.

A short stop was made at Emo, a flourishing settlement

about 20 miles below the fort, and the band, which had been discoursing excellent music during the day, played several pieces for the benefit of the residents of this rising town. A short visit was made to the saw mill and grist mill, and after several attempts at photographing the company, the voyage was continued. About 8 o'clock in the evening Fort Francis was sighted, and a rush was made to the fore part of the vessel to get a view of the objective point of the expedition. Three blasts from the Keenora's whistle announced to the good people of the Fort that an invasion was imminent, and by the time the Keenora had safely breasted the rushing water below the Couchiching Falls, and pulled in along side of the wharf, a large crowd was waiting to welcome the visitors. A few minutes sufficed for the disembarkation of the party, and although it was rapidly growing dark a visit was made to the uncompleted lock by the side of the falls, and the general feeling amongst the hard headed business men from the west was one of regret that this important work should have so long remained in this unfinished state. The falls were very much admired, as was also the town site, which is without a doubt second to none in the Dominion.

As a good many of the travellers had not slept very much on the previous night, those who did not occupy state-rooms on the steamer engaged rooms at the hotels, where they expected to enjoy sweet slumber until 6 o'clock in the morning, the time appointed for departure on the homeward trip. But alas! these fond hopes were soon to be shattered. A few of the "boys," fearing that the excursion might get a little tame, or perhaps on account of the exhilarating effects of the waters from Rainy Lake, decided to hold an impromptu concert on board the Keenora. After the singing of the "Hen Convention" by the popular travelling representative of one of the lumber companies, another ventured to sing a Scotch song, for which he was loudly applauded by the rest of the performers. Encouraged by this unexpected appreciation of his efforts, he favored the company with another Scotch song and another, until by sheer force he was compelled to desist. An adjournment was then made to the main deck, where the big drum belonging to the band was brought into requisition and a genuine Indian pow-wow was inaugurated, accompanied by such whoops and yells as would do credit to any band of Sioux that ever roamed the prairie. After awakening everything with life in it on board the Keenora, the braves proceeded up town to serenade the slumberers in the hotels, and those unfortunates at first came to the conclusion that the lumber companies had enticed them up there to be murdered in cold blood by the merciless horde which apparently surrounded them, but one of the braves unfortunately yelled something about "cull plank," and the terrified innocents recognized the voices of their brethren from the west. By this time the "Skitt-wah-boo" began to tell upon the warriors, and they died peacefully one after another until nothing was heard but the roar of the falls.

By six o'clock on Wednesday morning everyone was on board, looking none the worse of the terrible experiences of the night just passed, and after waiting for the fog which enveloped the falls to rise, the lines were thrown off, and after a rush through the turbulent waters beneath the falls the Keenora dropped down the river and the homeward journey was commenced.

The passage of the rapids was again made without incident, and the port of Rainy River was reached about two o'clock in the afternoon. A short stop was made here for the purpose of getting a clearance for the steamer at the custom house, and most of those on board took advantage of the opportunity to set foot on Uncle Sam's domain and invest in some little nick-nacks at the store as a memento of the trip. On pulling out the band played the "Star Spangled Banner," and three hearty cheers were given for "Old Glory" floating gaily in the breeze from the Custom House Building. This proceeding appeared to greatly please the hoary haired representative of Uncle Samuel.

The trip across the Big Traverse in direct contrast to that of the previous day was delightful; the lake was calm as a mill pond, and although the sun was shining brightly the breeze caused by the Keenora as she skimmed over the water dispelled any oppressiveness that might have resulted from the burning rays of "Old Sol."

Shortly after crossing the Big Traverse the committee piped all hands to the hurricane deck, where the follow-

ing address to the hosts was read by Mr. J. L. Campbell, of Melville:

TO THE CANADIAN WHOLESALE LUMBERMEN:

Gentlemen: It is with pleasure and much satisfaction that we, the Western Retail Lumbermen, do on this occasion express our thanks and appreciation of the excellent and most enjoyable excursion given us. It must have entailed a great deal of expense and trouble on your part to perfect and carry out the elaborate programme which has given us so much enjoyment. From the time we boarded the train at our respective towns, we felt that we were the guests of the wholesalers; then the trip on the splendid steamship Keenora up the Lake of the Woods, with its ever changing views in the sea of islands; then the 100 mile run up the Rainy River, that mighty stretch of water which is surely designed to play an important part in the commerce of our fair Dominion, and whose existence in such magnitude was a revelation to many of us. We also remember with pleasure your unceasing efforts to contribute to our comfort and enjoyment. From the splendid effects of the fireworks display as we pulled from the wharf at Rat Portage, accompanied by the music of the excellent band which you so kindly provided, and who in such a good-natured way seemed to be untiring in their efforts to make the trip enjoyable to us, by their delightful music, it has been a continual round of pleasure. Captain Thompson and his officers will also be remembered for their kind consideration of us. We also wish to convey to the C. P. R., M. & N. W., and Dauphin Railway companies our appreciation of their splendid accommodation provided us by their respective trains. But we must express our regrets at the absence of Mr. D. C. Cameron, whose presence always affords us pleasure. We must especially thank you for the abundant hospitality in every way provided us, and we feel sure that your kindness must cement more closely than ever the always pleasant business relationship which has hitherto existed between the wholesale and retail lumbermen of Western Canada.

J. B. MATHERS, President.

JOHN DICK, Secretary-Treasurer.

Rat Portage, Aug. 17th.

The representatives of the manufactures replied briefly, and Captain Thompson, on behalf of the Rainy River Navigation Co., expressed the hope that the retailers would bring their wives the next time they came.

After a rapid passage from the mouth of the river through the thousands of beautiful islands of the Lake of the Woods, the Keenora pulled along side of her wharf at nine o'clock in the evening, and the company stepped ashore congratulating themselves and each other on the successful termination of the pleasantest trip of the kind they had ever embarked upon. Most of the visitors stayed in town over night and left for their homes on the Pacific express at one o'clock in the afternoon.

During the disembarkation the steamer Clipper, which was lying at an adjacent wharf, brilliantly illuminated the Keenora wharf and Water street with her powerful electric search light.

Much regret was expressed at the absence of the manager of the Rat Portage Lumber Co., Mr. D. C. Cameron, who was unable to attend on account of illness.

STRIKE OF MILL EMPLOYEES.

A STRIKE of the employees in the mills of the Rat Portage Lumber Company, at Rat Portage and Norman, Ont., occurred during the past month. The direct request was for a reduction of the hours of labor at the mills from eleven hours to ten hours, and for an advance of 25 cents per day in wages.

The manager of the company was ill at the time and could not be interviewed. The men stopped work, it is said, before the position of affairs could be made known to him. Several days afterwards, the mills being idle in the meantime, a meeting took place between the manager and the men which resulted in reducing the working hours to ten for a full day, but it was stated that the company could not just then advance the wages. On a vote being taken by the men on this proposition, they decided to resume work, but made the decision subject to the manager giving them a signed agreement as to the ten-hour day. This he refused to do, when the men resolved to stand out for the full demand. Men were then brought up from the east, and on Tuesday, the 16th inst., one of the mills at Norman started work, when strikers to the number of three hundred assembled and a detachment entered the mills with clubs, driving out those who were at work. Police protection was then sought by the company, and at time of writing the strike, which lasted fully two weeks, is believed to have collapsed, as all the company's mills have started running, with men imported from the east. The strikers are hopelessly beaten, and do not appear to know what course to pursue, as their places are being rapidly taken up by the new arrivals. Many of the

old hands are reported to be anxious to resume work, but on account of having joined a labor union are unable to do so until the executive committee of the organization decide that they may.

The Rat Portage Lumber Company have been paying as high or higher wages than the average in Canada or the United States, many of the men receiving \$2.25 per day. This does not include foremen. Now that a reduction in the working hours has been granted, it is not thought that the men have any serious grievances.

OTTAWA LETTER.

(Correspondence of the CANADA LUMBERMAN.)

As might be supposed, the lumbermen of this district are watching with keen interest the proceedings of the Quebec conference, as all are now convinced that some proposition will be advanced to secure more satisfactory trade relations in respect to forest products. Hon. Don. M. Dickinson, the special representative of the Michigan lumbermen, was in the city yesterday on his return from Quebec, and from what could be gleaned, no stone will be left unturned to accomplish an arrangement whereby Canadian logs may be secured for the Michigan mills. Mr. Dickinson appeared before the American commissioners before he left Quebec, and urged the repeal of the Ontario regulation requiring the home manufacture of all logs cut within the province. It is recognized that the problem is not easy of solution, many contending that it is not within the power of the Dominion premier to change the Ontario law. There appears to be a growing feeling among Ottawa valley lumbermen that the action of the Ontario Association of Lumbermen in requesting the Ontario government to prohibit the export of saw logs was, after all, a wise step. Of course, there are lumbermen who, having previously shown opposition to the movement, cannot now consistently recede from their position. Mr. Levi Crannell, of the Bronsons & Weston Company, is one who takes strong ground from a business point of view against the restriction of the exportation of logs to the United States. In the course of an interview, he said that to compel the manufacture into lumber of all logs cut in Canada would undoubtedly have the effect of raising the United States lumber tariff against this country. It is impossible to find as good a market elsewhere, he adds, as the United States on certain kinds of lumber. Yellow pine from the south is, on account of its proximity, competing against Canada in the South American republics, and is already taking the place of Northern pine in the United States. While he would like Canada to be self-sustaining, he contends that it is necessary to keep open the United States market for this industry in order to keep the lumbering men now in the country employed.

The difficulty at the Rockland mills of the W. C. Edwards Company is not yet finally settled. A request was recently forwarded by the mill men to Mr. Edwards asking for a ten hour day, and agreeing to a corresponding reduction in wages. It is said that the company are willing to grant this request next spring, but that at present, owing to dull markets, profits will not warrant such a step.

Some interesting work has been going on in connection with the dredging of the Ottawa river for the inter-provincial bridge. As is well known, the sawdust from the saw mills has been settling in the river for many years, and places an obstacle in the way of the work. There lies on the bottom between 27 and 40 feet of mill refuse, and on the site of each pier this material is brought away down to the solid rock itself, which is sometimes 80 feet below the surface of the water. The sawdust removing machine resembles the mouth of a huge fish, and is attached to a steam derrick in the same manner as an ordinary dredge. One would naturally think that the hole made by the removal of a few loads of sawdust would be filled in as quickly as removed by the surrounding material, but this is not the case. The water has packed the refuse into so solid a bed that an excavation can be made to the bottom with the walls perpendicular. The water must have to a great extent a preserving influence on the sawdust, as it nearly all comes to the surface in much the same condition as when it came fresh from the mills. It thus appears that an almost inconceivable period must elapse before nature can rid the Ottawa of this unnatural bed.

Last week Mr. T. Kavanagh, of Peterboro, agent of the Rat Portage Lumber Co., left for that place with 100 picked men, engaged to work in the woods up there,

at wages varying from \$16 to \$22 per month. The wages of woodsmen in the Ottawa district the coming winter will be about the same as last season, log cutters receiving \$17 per month and others from \$14 to \$16. It is believed that about the same quantity of logs will be taken out.

OTTAWA, August 25th, 1898.

QUESTIONS AND ANSWERS.

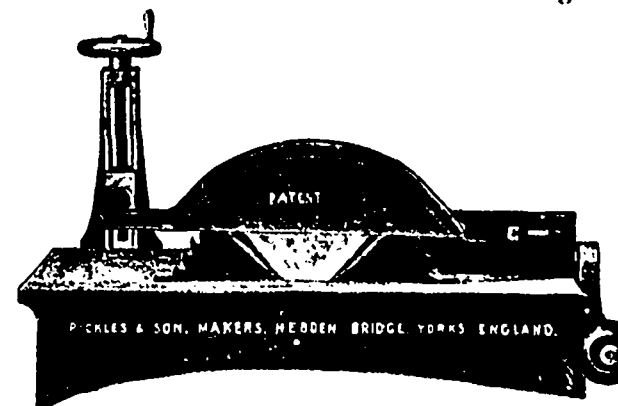
"J.Q." St. John, N.B., writes: "Is juniper and hackmatack the same kind of wood? If not, explain the difference."

ANSWER.—The juniper and hackmatack trees are distinct. There are many varieties of the juniper found in the United States, but the red cedar is the only one native to Canada. It is found in Ontario and Southern New Brunswick, and is sometimes confused with the red cedar of British Columbia, although the latter is really a redwood. It grows to 30 metres in height; the wood is light, soft, very close and straight grained, and the color a dull red, the thin sapwood being nearly white. There is also an evergreen shrub called a juniper, of low-spreading form, with awl-shaped, rigid leaves. The hackmatack, or American larch, is the name given in the New England States to the tamarack. It is a coniferous tree, with slender deciduous leaves; the wood is coarse grained, hard and strong, and the color a light, bright red. It is used largely for knees for vessels, and for ship timber, fence posts, telegraph poles, and the like.

AN ENGLISH SAW GUARD.

IN England, because of strictly enforced laws compelling their use, saw guards are more generally employed than in this country. Illustrated herewith is a circular saw guard made by a leading firm of English tool makers, and which is described by our contemporary, Timber, as follows.

The standard is fixed to the saw bench top by two set-screws or bolts. In the centre of the standard is a set-screw which works through the sliding arm which carries the cover. This is raised and lowered by simply turning the hand-wheel on the top of the standard, and thus made adaptable for less diameter saws. The cover is made semi-circular; the front of saw is covered by a plate, whilst the back side is partially shielded. The action of the saw in running



AN ENGLISH SAW GUARD.

naturally creates a current of air, and the air being conducted in the trough form cover, blows away the sawdust in front of the saw so that it at once enables the operator to see the gauge lines or ascertain if the saw is cutting true. It will be noticed that the standard carrying the cover is fixed beyond the periphery of the saw, and thus does not interfere with or lessen the efficiency of the bench for cross-cutting purposes, whilst for sharpening purposes, by the slackening of the screws or bolts at foot of standard, it may be swung clear of the saw, thus giving the workmen clear access to the saw.

The points of excellence claimed are: Entire prevention of accident through the timber being thrown over the saw against the operator; preventing the sawdust being thrown into the eyes and face of the operator, also preventing the sawdust accumulating in front of the saw; its great efficiency and simplicity throughout, and its adaptability for all makes of saw benches. The guard is made in four sizes, viz., to take saws from 12 to 48 inches diameter.



A LUMBERMAN from Algoma whom I recently met was somewhat indignant at the Dominion government, not on account of any question of lumber or log duties, but from what might be termed lack of patriotism. He contended that Canadian industries should at least be accorded the support of the government. In the lumber trade this was not done. The Dominion government were bringing in timber for canal work from the state of Minnesota, which he regarded as especially unjust in view of the tariff wall against Canadian lumber. If I am not incorrectly advised, the bulk of the canal construction in the Dominion, as with other public works, is let by tender, and the contractor is free to buy his supplies in the cheapest market, but complying with specifications. This may account for the purchase of foreign timber. In my opinion, the government might very well insert a clause in the specification confining the contractor to Canadian materials, whenever they can be obtained in this country of equally good quality and at a reasonable figure.

* * *

Mr. Carl Zeidler, of Toronto, returned not long since from the European continent, where he went in connection with his business interests. He visited the principal cities of Great Britain, France, Germany, Belgium and Holland, and reports being well received; but he is more convinced than ever of the absolute necessity of making Canada better known in these countries. "Why," he remarked, "Canada is really not known at all as a separate country, but is looked upon as a small section of the United States. There are a few, of course, who are quite well informed, but they are doing business with us, and are, from policy, keeping quiet about it." Referring particularly to the timber trade, Mr. Zeidler stated that great injury was being done to the Canadian trade by the shipping of lumber on consignment. As an inducement to the shipper, there are agents who will offer to handle the stock at a small commission. Upon delivery the lumber is piled on the dock, and in a very short time there are storage, insurance, piling, lighterage and other charges against it, which the shipper never dreamed of. A buyer comes along and secures the lumber almost at his own figure, and the shipper discovers, to his sorrow, that his receipts from the shipment are nil. This, Mr. Zeidler says, is the way much of the consignment business is done, and that, altogether, it is unsatisfactory. He believes that Canada could supply a vast amount of wood goods to European consumers, as he received enquiries for numerous kinds of material, such as mining timber, furniture stock, lathwood, staves, excelsior, etc. He does not think we could profitably export excelsior at the prices paid. At Brussels he was offered 90 francs per ton, equal to \$18 of Canadian money. "I found," said he, "that many of the largest consumers import lumber in the log. This is very

unprofitable, as they pay freight on much waste material which can be used only as fuel. However, they are gradually realizing this fact." Speaking of the most effective manner of securing foreign trade, he ventured the opinion that Canada should be represented in each country by one or two practical men, who would give information to importers as to where goods could be secured, and also protect the shipper by acting as arbitrator in cases of dispute. Then, he thinks, direct trade between the exporter and consumer would result.

* * *

Mr. Wilson, of the Cutler & Savidge Lumber Company, was recently in Toronto, and to a press representative gave his views on the lumber question. The Cutler & Savidge Company is a Michigan concern which carries on lumbering operations in Algoma, with mills at Cutler, Ont. "You see," said Mr. Wilson, "the war between the United States and Spain has destroyed, for the time being, the market which has hitherto been the principal outlet for southern pine. A large number of mills in the south have, in consequence, been closed; but there is a great deal of this southern pine on hand, and the owners are shipping it to the Northern States, where they dispose of it at slaughter prices. Having this to contend with, in addition to the \$2 duty, you can see it knocks us out, for the Northern States is, of course, the principal market for Canadian white pine. When the war closes the southern pine will again have its market in the West Indies and the South American countries, but the duty of two dollars per thousand feet Canadians will still have to contend against. That duty is a bad thing for Canadian lumber." In response to the question, "Do you think that if Canada were to put an export duty on logs it would induce Congress to remove the duty," Mr. Wilson gave an emphatic "no," and continued: "What we want to try and do is to get the United States to take off that two dollar duty. This is what we should devote our energies to. Now, what Canadians desire is that mill owners shall set up mills on this side of the line. That is so, isn't it? Well, then, if the export duty is put on logs it will not induce the Americans to remove their import duty; neither will it induce Americans to build mills in Canada. But, on the other hand, get the United States to remove the two dollar duty and it will be an encouragement for Americans to start mills on this side, for it pays better to cut the logs on this side than it does to tow them across the lake and cut them in Michigan." "But why did not more of them start mills in Canada when the duty conditions were more favorable than they are now?" was asked. "Well, I'll tell you. If you had your money invested in a mill and plant at some point in Michigan you would not be inclined to shut down and remove to Canada as long as your plant was in good condition and did not require replacing. That, then, is the condition of affairs with a good many mill owners in the United States. As these plants became old and obsolete the tendency would be, with the two dollar duty expurgated, to remove to Canada, for the average loss entailed in towing logs across the lake is 10 per cent. What we want is a permanent settlement of this tariff question on lumber. We

do not want to be doing one thing this year undoing it the next."

* * *

I FIND the following in the Mississippi Valley Lumberman: "Some years ago an English syndicate desired to interest some Wisconsin lumbermen in a tract of sugar pine timber in Northern California. A party was made up, consisting of the English promoter; Mr. Tainter, representing Knapp, Stout & Co.; an Iliou Clatsop timber owner, and a representative of the firm of Bronson & Weston, Canadian lumbermen. This party proceeded to the Pacific Coast and carefully looked over the timber. The mill was up in the mountains, and the lumber, after coming from the saw, was transported by means of a flume some forty miles to the sea coast. Having been up in the mountains at the mill, the party decided to make the trip down to the coast in the flume. Little rafts were made by nailing two or three boards together, and seated firm in the centre of these, one on each so-called raft the party started, and about four hours later arrived at the company's office down on the lowlands. It was a rather risky ride, Mr. Tainter says, for some time the water in the flume flowed very swiftly, and then again the flume would make short turns and cross deep chasms, that would almost make one's hair stand on end. In making the sharp turns one had to be very careful so as not to lose his seat, for it was impossible to steady one's self by taking hold of the sides of the flume, owing to the splinters that would stick in one's hand. Then to make the matter worse, it was an awful hot day, the temperature being over 100 in the shade in the low country. The end of the flume was about five miles beyond the company's office, and the party had planned to get off at the office so as to avoid being out in the hot sun any longer than necessary. Mr. Tainter reached the office landing first, and having been used to riding logs in the Red Cedar river in Wisconsin, it was an easy matter for him to jump off. He warned the rest of the party to be ready, and as they came along he helped them off, one after another, until the English promoter reached the landing. Like most of his nationality, he had a good many "traps" with him, which Englishmen usually call "luggage." He did not heed Mr. Tainter's warning, being busy getting his boxes and bags in shape to throw off, and, as a result, went spinning by and on down five miles to the end of the flume in the broiling hot sun. Mr. Tainter says he was a sorry spectacle when he dived up to the company's office a few hours later."

ARE YOU A LUMBER EXPORTER?

EVERY lumber manufacturer and exporter in Quebec and the Maritime Provinces should be represented in the "Eastern Canada and Export Edition" of this journal, to be published October 1st. This issue will have an extensive circulation in Great Britain, France, Germany, South America, etc., and will contain valuable information as to the requirements of these markets. Write immediately for advertising rates.

No matter in what part of the Dominion you are situated, an expression of your views on any subject relative to the lumber trade is solicited by the publisher of this journal. No reader should wait for a personal invitation. Assistance thus rendered, as well as suggestions for making this journal more valuable to subscribers, will be much appreciated.

THE NEWS.

-An examination for licenses as cutters was held at Huntsville, Ont., on the 25th of August.

-E. Cutler & Co., of Welland, Ont., has lately added considerable new machinery to his planing mill.

-Archibald Lindsay, of Aylmer, Que., has commenced the erection of a new saw mill, to cost \$10,000.

-The board of examiners of cutters for the province of Quebec meets at Quebec on the 15th of September.

-The furniture store of Murray Crawford, of Campbellville, Ont., was destroyed by fire recently. The loss \$700.

-Thos. F. Bradley, of Ottawa, has entered into partnership with his brother at Glen Almond, Que., as lumber dealers.

-For stealing lumber from Wm. Mason & Sons, Ottawa, Moses Letreau was lately sentenced to six months' imprisonment.

-The British Columbia Mills, Timber and Trading Company are erecting a large warehouse at Winnipeg, to carry finished lumber.

-Dobbs & Craig, saw-millers, Dunchurch, Ont., have dissolved partnership, Mr. Dobbs retiring and Mr. Craig continuing under his own name.

-The Kamy Lake Herald says that should the railroad be completed to that place, a large lumber company at Chippeway Falls will build a saw mill there.

-It is reported that B. Clark, of Cypress River, has purchased the lumber business at Glenboro, Man., from J. B. Mathers, and will take possession in November.

-Capt. W. A. Jamieson, manager of the Ottawa mine at North Bend, R.C., was in Toronto recently purchasing machinery for a saw-mill to be built by the company.

-Messrs. Hurdman & Elmitt, wholesale lumber dealers, Ottawa, have established an agency at Russell, on the line of the new Ottawa and New York railway.

-Mr. James McKinlay, spool wood manufacturer, has removed his mill from Richibucto, N.B., to Red Bank, Miramichi, where he can obtain a greater quantity of timber.

-Jesse Brown, Hugh McDonald and Joseph Sutherland have formed a new co-partnership at Clyde River, N.S., under the name of the Clyde River Steam Mill Company.

-James Morrison, late with the S. C. Kanady Lumber Company, Toronto, has commenced business on his own account as a wholesale lumber dealer, with office at 552 Yonge street.

-Mr. R. W. Gibson, of Wolsely, Assa., has bought out the lumber yard and business of G. K. Grass, at Sinaluta. Mr. Grass will continue his repair shop and planing mill business.

-The tug Ainslee, owned by Maitland, Rixon & Co., saw-millers, of Owen Sound, Ont., was burned at South Bay, Manitoulin, whither she had gone for a raft of logs. She was valued at \$10,000.

-It is the intention of Mr. J. R. Booth, of Ottawa, to connect his Nipissing timber limits by railway with the Ottawa, Arnprior and Parry Sound railway. A branch seven miles in length will be built.

-Mr. T. H. Steel, manager of the Utterson Lumber Co., of Utterson, states that his company will build a saw-mill on Horse Shoe Lake this fall, if the O. A. & P. S. railway will put in a switch at Falding.

-The temporary saw-mill erected by the Rathbun Company at Ashburnham is now in full operation. All the waste material, including slabs, is sent down to Deseronto. The local manager is Mr. Callaghan.

-Kilgour Shives, of Campbellton, N.B., is shipping box shooks to the English market. Doherty's new saw-mill at the same place is nearing completion, and those of Richards and Stancliffe will be rebuilt this fall.

-An exchange states that the Thayer Lumber Company, of Muskegon, Mich., have lately put in improved machinery, by which 100,000 feet of lumber per day is produced by ten men. Formerly they employed sixty men.

-Mr. Frank Halliday, Crown Timber Agent, Parry Sound, Ont., reports that early in August fires were raging on both sides of the South Channel from Seven Mile Narrows to below the Crooked Narrows. They were caused by campers.

-Mr. V. L. Emerson, of Boston, is having erected in the yard of the W. C. Edwards Company, New Edinburgh, a retort for the manufacture of calcium carbide from saw-dust, and hopes to prove the feasibility of the scheme at an early date.

-The employees of the W. C. Edwards Company, Rockland, have again requested a reduction in the number of working hours from eleven to ten per day. It is said that they are not willing to accept any reduction in wages in consideration of the shorter day.

At the recent examination for license as cutters held at Hull, Que., the following were successful: Baxter Moore, Ottawa; J. Cousineau, Masson; Telephone St. Jean, Gatineau; E. Dunning, East Templeton; G. Derby, East Templeton; J. Coghlan, Arnprior; Alf. Blondin, Ste. Adele.

-An order-in-Council has been issued authorizing

Crown timber agents in the Yukon to issue yearly permits to cut cordwood and ties on certain defined areas of land under regulations made by the Minister of the Interior. The fee for each permit is \$5, and the dues for timber cut are 50 cents per cord for wood and 6 cents for each tie.

-John Lewis & Sons, of Truro, N.S., manufacturers of peg wood, bottle tops, lasts, etc., have removed their mill to Sheet Harbor, where they have purchased a tract of 12,000 acres of timber. The firm is said to be one of only two in the world that manufacture peg ribbon for pegging machines. Their tops for ginger ale bottles are shipped to England, Ireland, Germany and other parts of Europe.

-September 9 has been chosen by the lumbermen of Omaha to entertain visiting lumbermen on the Trans-Mississippi Exposition grounds. An attractive program has been prepared, specially low railroad rates have been secured, and there is no doubt the occasion will be a notable success. A log-rolling contest on the lagoon, in which a number of the leading expert log-rollers of the country will take part, is one of the attractions.

-The Interior Department at Ottawa have taken steps to secure a large timber reserve on what is known as Turtle Mountain, in Manitoba. The reserve is to extend along the international boundary from the middle of range 18 west to the middle of range 23 west, and tapers up in a rough triangle to near the middle of township 2, including in all about 105,000 acres. Of this 41,000 acres belong to the C.P.R. and 5,000 acres to the Hudson Bay Company. The government is giving these companies land elsewhere in place of on that Turtle Mountain, and selections are now being made in other parts of the province.

-New regulations for cutting timber on Dominion lands have been promulgated. The license fee is \$5 per square mile, except for lands situated west of Eagle Pass, in the province of British Columbia, in which case the yearly ground rent shall be five cents an acre. The following crown dues will be collected: Sawn lumber, 50 cents per thousand; railway ties, eight feet long, 1 1/2 cts. each; railway ties, nine feet long, 1 1/4 cents each; shingle bolts, 25 cents per cord, and 5 per cent. on the sales of all other products of the berth. A rebate of 40 cents per thousand feet will be allowed on lumber exported from British Columbia to places outside of the Dominion of Canada.

-The Ontario Forestry Commission, consisting of Messrs. Thomas Southworth, E. W. Rathbun, John Bertram and J. B. McWilliams, last month visited the limits of the Rathbun Company in the township of Hinchinbrooke, Frontenac county, to observe the effects of the plans for the prevention of forest fires, and to ascertain to what extent the land could be made available either for settlement or reforestry. The Rathbun limits have been under license practically since 1854, and it was a surprise to see the quantity of pine that is still standing. That so much pine should remain after many years of steady cutting is creditable alike to the lumbering methods of the Rathbun Company and to the judgment and careful supervision of Mr. Scantling, the manager of the company. Besides the pine in the Rathbun limits there is an abundance of hardwood. The latter will be utilized in supplying fuel to the charcoal iron-smelting furnace which will be "blown in" at Deseronto on the 1st of October. The iron works are owned by Detroit capitalists, but Mr. Rathbun has contracted to supply them with a million bushels of charcoal per year. This will be made from hardwood on the Hinchinbrooke limits.

-A correspondent gives the following particulars of logging in British Columbia: The main road is swamped out about twenty feet wide, the trees being taken out by the roots, powder being used for this purpose when necessary. Everything being cleared off, the work of laying skids commences next. They are laid every nine feet. These skids are twelve feet long and average about fifteen inches in diameter. They are sunk into the ground within about six inches of the top, or filled up, as the case may need. After this work has been done rock-apple gluts are inserted in the centre of the skids for the logs to run on, these being hollowed out so that the logs will follow on them. The road has to be corduroyed with cedar split about four inches thick. This means a great deal of work. When this is done the logs begin to move. The trees are sawn down and then cut into lengths to suit the trade, which ranges from twenty-four to one hundred and twenty feet. They are then barked and prepared for moving. Then the teamster comes along with his team and the logs are started on their journey. The greaser goes in advance of the team with a dish of grease, with which he greases the gluts. One day last week one team hauled thirty-six thousand at six turns.

CASUALTIES.

-Jas. Day, a logger, stepped off a boom of logs at Gimber Island, R.C., and was drowned.

-John Cordick, teamster for William Young, Warton, Ont., was killed by the breaking of the double trees on his wagon.

-Alfred Blackburn had his left arm torn from his body by coming in contact with a saw carriage in J. R. Booth's mill at Ottawa.

-A son of Mr. Lagace, foreman in Price Bros.' mill at Matane, Que., was recently killed by having his chest crushed in by a board.

-Alex. Crepin, teamster at J. R. Booth's mill, Ottawa, fell under the wagon wheels and was instantly killed. The accident was caused by the breaking of a neck-yoke.

A fatal boiler explosion occurred in Chas. Best's saw-mill at Sycamore, near Ridgetown, Ont., on July 17th. Chas. Best, the owner of the mill, and three others, were killed, and others seriously injured. Large portions of the boiler were carried over 400 yards.

PERSONAL.

Mr. Robert Thackray, sash and door manufacturer, Ottawa, sailed from Montreal on August 6th for England.

Mr. P. C. Campbell, Crown timber agent at Sault Ste. Marie, was in Toronto recently on business with the Department.

The death is announced, in British Columbia, of Mr. John Crozier, formerly foreman for A. & P. White, Pembroke, Ont.

Mr. Charles T. Higgins, who recently retired from a long service in the Ontario Crown Lands Department, died in Toronto last month, in his seventy-fourth year.

Hon. J. Sharples, M. L. A., head of the well-known lumber exporting firm of W. & J. Sharples, Quebec, has been elected as a representative of the shipping interests of the Board of Harbor Commissioners of that city.

On July 1, Prof. B. E. Fernow, chief of the division of forestry of the United States Department of Agriculture, resigned that office to assume the direction of the new State College of Forestry at Cornell University. A forest area of 30,000 acres in the Adirondack mountains has been allotted for purposes of demonstration. Prof. Fernow is recognized as well versed, and an expert in technical forestry, and should prove himself well equipped for his new field of work.

Mr. Wm. Murray, a member of the well-known firm of T. & W. Murray, Pembroke, Ont., died in that town last month, in his sixtieth year. During his life-time he had been prominently identified with the commercial welfare of Pembroke, and was also engaged quite extensively in lumbering, having large limits, and operating a number of general stores in different districts. As contractors, his firm carried to completion some important contracts, including the Pembroke waterworks. A resolution of condolence at his death was passed by the Board of Trade at Montreal, of which he was a member.

Mr. T. H. Sissons, manager at Winnipeg for the British Columbia Mills, Timber and Trading Company, has been entrusted with the responsibility of representing the company in Australia. Mr. Sissons left Winnipeg last month, sailing from Vancouver for Australia. He was accompanied by Mr. John Hendry, manager of the company, who, after establishing Mr. Sissons there, will return home again. The company have had a selling agent in Australia for some time, but hereafter they will have a direct representative in that part of the world. Mr. Geo. W. Campbell, who has been with the company for twelve years, succeeds Mr. Sissons as manager at Winnipeg. Mr. Campbell has had charge of the sales department at the Royal City mills, Vancouver, and is thoroughly familiar with the details of the lumber trade and the requirements of the Manitoba territory. The company intend to push their Winnipeg business.

CANADA'S COMMERCIAL AGENTS.

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

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

EASTERN CANADA AND EXPORT EDITION.

WRITE for advertising rates for the special "Eastern Canada and Export Edition" of this journal, to be published about the first of October. A copy of this issue will be placed in the hands of every lumber manufacturer in Quebec and the maritime provinces. A word to the wise is sufficient!

WOOD PULP DEPARTMENT

SITE FOR A PULP MILL.

RICHIBUCTO, N. B., is said to be very favorably situated for the manufacture of chemical pulp. Mr. F. Schield, in a recent communication, figures out the cost of building a pulp mill as follows:

COST TO BUILD A PULP MILL.

Building, including land, all foundations, chimneys, etc., \$35,000; steam plant, including 4 boilers, 150 h.p. each, 110 lbs. pressure, steam pipe for heating and conducting steam to digesters, engines and paper machines, including all valves, gauges, etc., \$20,000; power plant, including boiler feed system steam engine at 340 H., condenser dynamo with small engine and all wires, \$14,000; transmission of power, including all shafts, pulleys, gears, bearing and belts, \$10,000; water, including pumps, water pipes, valves, tanks, etc., \$10,000; wood room, including saws, barkers, splitters, chipper, sorting arrangement and conveyors to digesters, \$15,000; digester room, containing bins to hold the chips for digesters at 6 tons capacity each, lined, with all the gauges, pipes and other appliances, vats to empty the fibre into, \$50,000; paper machinery, including pumps, conveyors to transport the cooked fibre, 2 openers, vat, screens, 2 paper machines, etc., \$30,000; acid making, including towers, sulphur or pyrites for acid tanks, pumps and pipe linings, \$10,000; small machine shop and carpenter shop, \$5,000; total, \$200,000.

A comparison is given between the cost of manufacturing one ton of pulp in the United States and in Canada, as follows:

IN THE UNITED STATES.

2 cords of wood	\$12.00
300 lbs. sulphur	2.75
½ ton limestone	.75
1½ tons coal	3.75
Labor	10.00
Freight on pulp	3.00
Maintenance of plant, etc.	5.00

Total..... \$37.25

IN CANADA.

2 cords of wood	\$4.00
300 lbs. sulphur	2.25
½ ton limestone	.50
1½ tons of coal	3.75
Labor	8.00
Freight on pulp	4.00
Maintenance of plant, etc.	6.50

Total..... \$29.00

The above shows a difference in favor of Canada of \$8.25 per ton, which equals \$57,750 per annum, or about 28 per cent. on \$200,000. Fibre in England is worth from \$35.00 to \$55.00 a ton, according to quality. There is an unlimited demand. The failure of many pulp mills in the United States is claimed to be due to a lack of knowledge on the part of the management.

The Acadia Pulp and Paper Mills Company are about to build a dam across the outlet of the La Have Lake. The dam will be 600 feet long and eight feet in height at the deepest point. The purpose is to raise the water by six feet and reserve the extra water for use at the pulp mills at New Germany, N.S., during dry spells. At present these mills have to be closed down for two or three months for want of water.

OBSTACLES TO THE DEVELOPMENT OF TRADE.

The High Commissioner for Canada has forwarded to the CANADA LUMBERMAN a copy of a communication received from the Darwen Paper Mill Company, Limited, Darwen, Eng., which speaks for itself:

DARWEN, July 25th, 1898.

DEAR SIR, With reference to your letter of the 18th instant, we beg to say in reply, that we have fairly large contracts for Canadian wood pulp over the next twelve months. The principal objections to an increase of the business are:

(1) That the pulp is not packed as well as that from Scandinavia.

(2) The pulp is supposed to contain 50% moisture. We find from actual working that this cannot be relied upon, and the consequence is frequent disputes between the parties concerned. Regularity in this respect is of great importance, and we naturally prefer to do business where this annoying feature is not present.

Large Canadian mills seem determined to adapt themselves to the English business, but in view of the lower prices of pulp from Scandinavia it is doubtful whether the Canadians will care for the business at the low prices which will doubtless prevail next year.

We should like to hear what prospects there are in Canada of a duty being put on timber for pulp making passing into the United States. You will remember that we expressed an opinion that this would help to foster Canadian industry with this country.

Yours truly,

(Sd.) J. E. CROFT,

For the Company.

PULP MILL AT EAST ANGUS.

THE Royal Paper Mills Company have extensive paper, pulp and saw mills at East Angus, Que. The saw and pulp mills have both been completed within the past year, and are modern in every respect. They are situated across the river from the large paper manufactory.

The saw mill is 36 x 126 feet, with an ell 24 x 36 feet. The power is furnished by two large water wheels. It is substantially built, and rests upon solid masonry. In the basement are the water wheels and the shafting, also the pumps that supply the reservoir on the hill above the pulp mill at an elevation of 100 feet. From this reservoir an eight-inch pipe is laid to the pulp mill, giving a water pressure of forty pounds to the square inch. This pipe feeds a system of hydrants that affords protection from fire. The first floor is devoted to clapboard sawing and planing, and to the cutting and screening of chips. The second floor is where the lumber is cut. One circular saw here makes an average of 80,000 feet in twenty-two hours of each day, and is the fastest machine of its kind in Canada. On this floor is a planer and a flooring machine, and also the machines that take the bark from the slabs, which are exclusively used for pulp wood.

There are three carriers run by machinery between the saw mill and the pulp mill. One carries the chips out of which the pulp is made, another the saw-dust and shavings to the furnaces, and a third the slabs and edgings also to the furnaces.

In the pulp mill, the boiler house is 63 x 94 feet in size, and contains six steam boilers, a rotary furnace for reclaiming soda ash, and a Yar-Yan evaporator. There is here, also, the steam engine which furnishes the power for the pulp mill. The room where the caustic liquor is made is 29 x 78 feet. It contains 12 iron tanks, 10 feet in diameter and 12 feet high, standing on solid masonry.

The washing room is 61 x 78 feet. It is a model of convenience, and plenty of storage for liquor, ample stuff chests and eight washing pits. Everything in this room rests on masonry. The pumps are all in line in this room. There are four large digesters in the digester building, which is 35 x 55 and 70 feet high, the upper part making an ample storage for chips. The finishing room is 108 x 43 feet. It now contains one machine, and a second one is to be put in. There is also a shipping room, 60 x 45, and a room for the storage of soda ash, 48 x 43 feet.

The capacity of the mill is 16 tons of dry pulp per day. It is the intention of the company to put in another Yar-Yan evaporator, another rotary furnace, another digester and a wet machine, which will bring up the capacity of

the mill to about 20 tons per day. For these purposes the company asks for subscriptions for their capital stock to the extent of \$25,000.

PULP NOTES.

The Sault Ste. Marie Pulp Company have been making some improvements to their grinders.

Kidd & Riley, of Sarnia, Ont., are taking a considerable quantity of pulp wood from Manitoulin Island, in Lake Huron, this season.

It is expected that the new English company which has taken over the pulp mill at Sturgeon Falls, Ont., will have it in working order by October 1st.

It is said that Mr. Mernier, owner of the Island of Anticosti, intends erecting a pulp mill on the island. He recently visited the extensive mills at Grand Mere.

The Riordan Pulp Company have commenced the erection of a pulp mill at Hawkesbury, Ont. The mill will be eight stories high, covering an area of about three acres of ground.

It is stated that certain Toronto parties will erect a large pulp mill in the near future at Escuminac, near Carleton, in the Baie des Chaleurs, the proposed output being 100 tons per day.

Mr. T. R. Allison, pulp mill designer, who built the Masterman pulp mill at Chatham, N. B., has been engaged by Messrs. John Bertram & Sons, of Dundas, Ont., to superintend the building of pulp machinery.

The new pulp mill at Mispec, near St. John, N.B., is nearing completion, and some of the machinery, manufactured by Messrs. John Bertram & Sons, of Dundas, is now being installed. Mr. B. F. Mooney is manager.

Mr. R. Cullen, superintendent of the sulphite plant in the Riordan paper mills, Merriton, Ont., has gone to Hawkesbury, Ont., to superintend the erection of the mills to be established there by the Riordan Pulp Company.

The Chicoutimi Pulp Company shipped no less than a thousand tons of pulp to England by the steamer Manchester Trader. The cargo was taken to Quebec by 25 cars of the Quebec and Lake St. John railway and seven schooners.

The Miller Brothers Company, a Montreal concern, will shortly ask for a Dominion charter, to manufacture paper, wood and straw pulp, etc. The capital will be \$300,000. W. T. Miller, of Montreal, and W. S. Miller, of Glen Miller, Ont., are interested.

A representative of a large Hamburg firm, it is said has made arrangements for the transmission of the entire product of the Chicoutimi pulp mills from Quebec. The pulp will be taken to Quebec, partly by cars and partly by sailing vessels, and will be forwarded by steamer every fortnight.

The Shawenegan Water and Power Co., which has been incorporated to develop and utilize the water power at Shawenegan, Que., will not manufacture pulp at present, it has been decided, confining itself to the production of power. The incorporators of the company are: David Russell, Montreal; John Joyce, Boston; William Strachan, Montreal, and others.

The making of wood into wood pulp and thence into paper set inventors thinking, and a result is the discovery of the transformation of wood fibre into strong and handsome cloth. The wood is boiled, crushed, and the fibres separated into parallel lines, dried and spun, the same as cotton or wool. Oak, hickory and locust make a very handsome cloth, while bamboo produces one which is almost iron-like in its strength and elasticity. The cost of the new process is not large, but is still a little above that of converting cotton or linen into substantial tissues.

A GOOD SALES AGENT.

THE value of the CANADA LUMBERMAN as an advertising medium for manufacturers of machinery and appliances adapted to the requirements of saw and planing operators, is well known to those who have given it a fair trial. For the benefit of persons who have not made a test of our advertisement pages, we may be permitted to repeat the statement recently made to our representative by the manager of the Canadian Locomotive and Engine Co., Kingston, Ont., that as a direct result of the publication in the LUMBERMAN of a description of the Draft saw-mill machinery exhibited by the company at the Toronto Industrial Exhibition last year, they made a sale of five machines to one firm.

CANADIAN SPRUCE.

In regard to whitewood an impression seems to prevail in some quarters that owing to the high freights from the spruce ports, shippers in the Baltic will be able to maintain prices. These people, however, lose sight of the fact that a large proportion of the lower port spruce comes here on consignment, and is thrust into the public sales as soon as it arrives. If the market is well stocked the mere fact of its having cost more to bring it here will not influence buyers. Good class wood has already shown a stronger tendency on that account, but this elevation has been confined as yet mostly to the spot market, and in a lesser degree on contract goods of specially favored makes. We believe that if the shipments to this country are fairly moderate spruce prices will recover, but the advance in

freights is not in itself a guarantee of this desired result. No doubt there is a big future for the Canadian wood market, and we can see no earthly reasons why a lot of the best description of spruce should not be planed up, for flooring purposes, for which, in our opinion, much of it is serviceable. A cargo of well-assorted spruce flooring would be the precursor of hundreds to follow, and it only requires the ball to be once set rolling for a large trade to develop itself. In our last impression we drew attention to the possibility of the high freights checking the supply, and there were certain grounds for hoping that the importation this season would not overtake the demand, as probably the spruce people will hesitate to consign with doubtless prices here and an increased freight to lessen the chance of profit. —Timber Trades Journal.

The Dominion government are making a forestry exhibit at the Omaha Exposition, one of the features being a pine slab six feet across. The tree from which the slab was taken measured 150 feet to the first limb.

The attention of pulp and paper mill proprietors is directed to the advertisement in this issue of the City Brass Foundry Company, of Hamilton. This company manufacture phosphor bronze castings, which they claim will resist the action of chemicals in a manner greatly superior to that of any other metal, and hence the adaptability of their castings for use in pulp and paper mills. They have recently completed at their works a casting weighing 1,750 pounds for the Cornwall paper mills, and are prepared to turn out bronze castings of any desired size and weight.

TORONTO'S GREAT EXHIBITION.

On August 30th Canada's Great Exposition and Industrial Fair opens at Toronto. It is no idle boast to say that the arrangements made for this year guarantee that the Exhibition will be easily the best ever held. Owing to the war, amusement matters have been very quiet in the United States. As a consequence the management have been able to secure special features that otherwise could not have been obtained. Nor is that all, for the exhibits are of a great deal better quality and more varied than usual. For the first time manufacturing establishments of both France and Great Britain are sending over collections of goods especially made for this purpose, included in them being several recent scientific inventions of a revolutionary nature. Two great spectacles are to be given, one, which will be free, by day, and the other by night. The first will be an illustration of real warfare, and will be conducted by the Royal Engineers, of Halifax, and the Dominion Artillery, of Kingston, and will comprise the exploding of submarine mines, the blowing up of ships, the storming of forts with shot and

shell from quick-firing and Maxim machine guns, Red Cross hospital work and so on. At night the great spectacle presented will include the blockade, bombardment and surrender of Santiago, the sinking of the Merrimac, the captive balloon, and the destruction of Cervera's fleet, concluding with a joyful celebration of victory. An exhibit of horseless carriages will be a feature of interest, while the bands of music will number a score, including three or four from the United States. On the whole there is more to be seen at Toronto for less money than at any fair in America, and such an opportunity as the present, when rates prevail on the railways that may never be so low in another year, should not be missed.



Your Best Interest

Will be served by getting our prices on the following

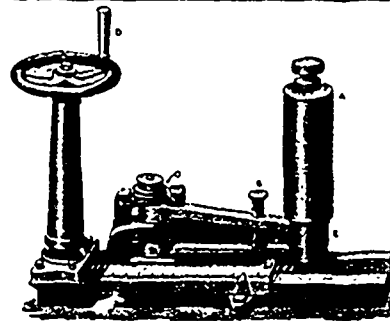
White Beans
Comadia Figs
Raisins and Currants

Prunes in 25 and 50 cent boxes
Sugars, dark yellow
Syrup and Molasses

H. P. ECKARDT & CO.,

Wholesale Grocers

TORONTO



STAFFORD The BEST TIMBER GAUGE

There are imitations; don't buy them.

DUBLIN, Ont., July 1, 1891.
DEAR SIR, Please find enclosed cheque for payment in full for Set Roller. We find it works remarkably well; in cutting a log of 700 feet or more, you can run the saw through the centre of the log and stand the roller back out of the way. It is always ready and never in your way.
Yours truly,
JNO. BENNEWIES.

LANCASTER MACHINE WORKS
17 Oak Street - LANCASTER, ONT.

PULP MILLS - ATTENTION!

Phosphor-Bronze Castings

of any weight, for Pulp Mills (special mixture.)

All Bronze manufactured by us.
Quotations and References cheerfully given.

CITY BRASS FOUNDRY - HAMILTON, ONT.

Advertisement for The Jenckes Machine Co. featuring an illustration of a machine and text: 'THE JENCKES MACHINE CO. SHEERBROOKE QUE.', 'IMPROVED WATER PRESSES', 'SCREENS', 'SORTERS', 'WATER WHEELS', 'CENTRIFUGAL PUMPS', 'GRINDERS & GENERAL PULP MILL MACHINERY.', 'Screen Plates Closed & Recut.'

DICK'S ORIGINAL BELTINGS

Enormous
Transmission
No Seams or
Joints



Not Affected
by
Dampness
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Stretching

SOLE AGENT: J. S. YOUNG

This is the Only Genuine and Original Balata Belt offered on the market.

15 Hospital Street, MONTREAL

OAK TANNED BELTING

TORONTO
20 FRONT ST EAST
TELEPHONE 475

THE J.C.McLAREN BELTING CO

MONTREAL

TRADE NOTES.

The Dodge Manufacturing Company, Limited, has succeeded the Dodge Wood Split Pulley Company, of Toronto.

Mr. Carl Zeidler, of Toronto, has been appointed Canadian representative for Messrs. Beck & Polltzer, licensed wharfingers, forwarding and insurance agents, etc., London, England. This firm have large premises in London, and are in a position to quote low freight and through delivery for goods.

Later reports show that the damage to the works of the Jenckes Machine Co., at Sherbrooke, Que., by fire on the night of the 13th of August, was very much exaggerated. The fire was confined to the machine shop building, and the other departments, foundry, boiler shops, etc., were in operation as usual on the following Monday. A few days later a portion of the machine shop was started up, and the whole was in running order by the 23rd of August. The patterns, drawings and office records were preserved practically intact, and all orders for work are being accepted as usual. The principal item requiring replacement is the roof of the machine shop; this, however, is well under way. The whole of the work is being pushed with much energy, and the numerous orders in hand will suffer comparatively slight delay.

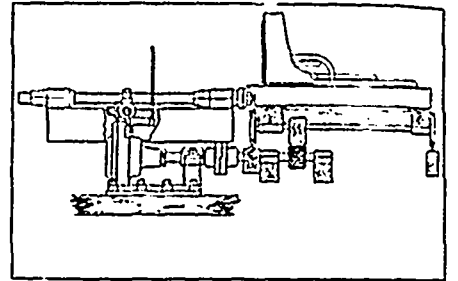
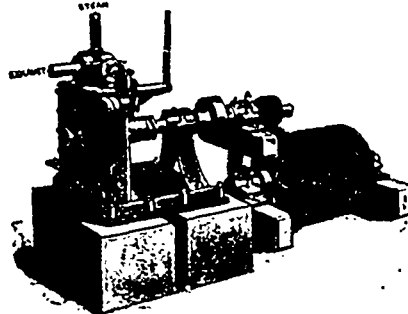
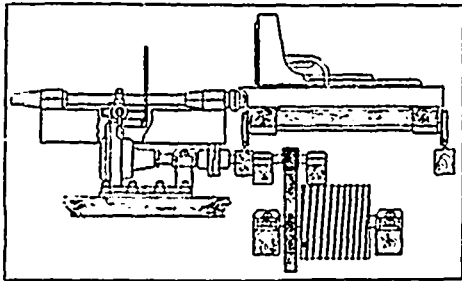
We are advised by Mr. Madison Williams, successor to Paxton, Tate & Co., Port Perry, Ont., that Messrs. H. R. Williams & Co., 345 and 347 St. James street, Montreal, have been appointed selling agents for his turbines, machinery, etc., for the city of Montreal and vicinity. Messrs. Williams & Co. are thoroughly acquainted with the various lines of machinery, and the addition of the well-known manufactures of Mr. Madison Williams should prove of great advantage to their present customers, and be an inducement to new buyers of mechanical goods. Mr. Williams reports the following recent orders: One 15 1/4" Vulcan turbine, for globe case, to Acadia Powder Co., Halifax, N.S.; one steel flume for Carvelth & Cornish, Luskard, Ont.; two steel and cast iron draft tubes to Summerteldt Bros., Sutton, Ont.; one Lane circular saw-mill, with 25 ft. carriage and independent rope feed, to W. H. Keeley Lumber Co., Buckingham, Que.; one 30 1/2" Lefsel turbine to W. P. Widdfield, Siloam, Ont.; one 48" Lefsel turbine to Jos. Beausoliel & Son, St. Felix de Valois, Que.; three 61" Vulcan and one 35" Vulcan turbines to the Monastery of the Good Shepherd, "Moulin de Crochet," Parc Laval, Que., and one 40" Lefsel turbine to D. T. Creswell, Apple Hill, Ont., supplied through W. & J. G. Greey, Toronto. Mr. Williams also reports numerous enquiries from all parts of the Dominion

PUBLICATIONS.

The Canadian Manufacturers' Association have begun the publication of a Bulletin, to be issued monthly, or oftener, as occasion may require, which will contain considerable information regarding the possibilities of the export trade of Canadian manufactures. This information is obtained from the Dominion Department of Trade and Commerce, and from the publications issued by the British and United States governments, and other reliable sources.

Cassier's Magazine for September contains, among others, the following articles: "General Distribution from Electric Central Stations by Alternating Currents," by Herbert A. Wagner; "The Cyanide Process of Treating Gold Ores," by Dr. Joseph W. Richards; "Speed as an Element of Warship Design," by Passed Assistant Engineer Walter M. McFarland, U.S.N.; "Projectiles for Modern Naval Ordnance," by Professor P. R. Alger, Bureau of Ordnance, U.S.N.

Mr. N. D. Seaman's saw and shingle mills in Keppel Township, near Owen Sound, Ont., were destroyed by fire on Sunday, 14th inst. The loss is \$3,000, with no insurance.



The **DAKE**
STEAM FEED

Embodies the following Advantages:
SIMPLICITY OF CONSTRUCTION,
POSITIVE AND EASY MANAGEMENT,
ECONOMICAL USE OF STEAM,
SMALL SPACE OCCUPIED, CHEAPNESS,
EASY ADAPTATION TO EITHER NEW
MILLS OR THOSE NOW IN USE.

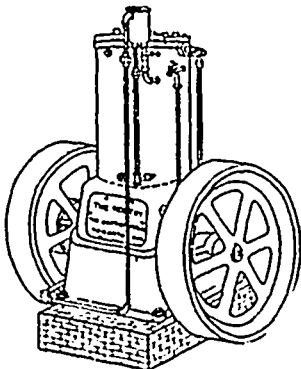
THE JENCKES MACHINE CO. - Sherbrooke Que.
Succeeding the PHELPS MACHINE CO., EASTMAN, QUE.

The movement of the engine in either direction under the absolute control of the sawyer, thus accommodating the speed of the feed to the size of the logs. Mill men who have used other makes of Steam Feeds comment favorably on the economical use of steam of feed over others.

Write for Catalogue and full particulars.

Northey
Gas and Gasoline
Engine

Safe Powerful Economical



"Built for Hard Work."

Can be used to advantage for Lath and Stave Mills, Shingle and Deal Machinery, Portable Saw Mills, Barking or Pulping Machinery.

Our Booklet tells all about it. Write for it.



Pumps
"FOR ALL DUTIES"

Simple Strong
Durable

Single and Duplex Types
Steam and Power

Write for Catalogues.

Northey Mfg. Co., Ltd.

1016 King Street Subway, Toronto.

TO BELT USERS:

Try Our **GENUINE**

ENGLISH OAK-TANNED BELTING

and Our **Lancashire Hair Belting**

D. K. McLAREN

Victoria Square, MONTREAL

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 MANUFACTURER OF
Lumber, Lath & Shingles
 BRACEBRIDGE, ONT.

RAILS FOR TRAMWAYS

NEW AND SECOND-HAND STEEL AND
 IRON RAILS FOR TRAMWAYS AND LOGGING LINES, FROM
 12 lbs. per yard and upwards, estimates given for
 complete outfit
JOHN J. GARTSHORE,
 49 Front St. West, Toronto.

WEST AND SOUTH

run the lines of the
 Central Railroad and the Yazoo & Mississippi
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South Dakota	Kentucky
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Presenting an unequalled territory for diversified Indus-
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Fine Sites for New Mills

Best of Freight Facilities--Coal Fields

Close Proximity to Distributing Centers

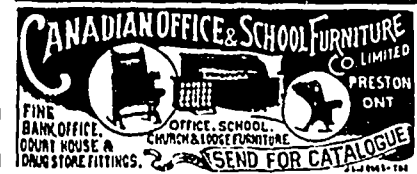
Intelligent Help of all Kinds

Many Kinds of Raw Material

To sound industries, substantial inducements will be
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 pamphlet "New Cities and Towns Wanting Industries."
 Write for a copy. Nearly all kinds of Industries are
 wanted. Very liberal inducements are offered **TEXTILE**
INDUSTRIES in the South by a number of good
 places. **GEORGE C. POWER,** Industrial Commis-
 sioner I. C. R. Co., Chicago



Solo Canadian Agents :-: Prices Reduced.
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CHARLES F. CLARK, President. **JARED CHITTENDEN,** Treasurer.
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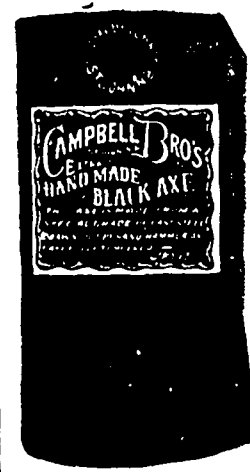
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 THE BRADSTREET COMPANY,
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346 & 348 Broadway, NEW YORK.

Offices in the principal cities of the United States,
 Canada, the European Continent, Australia,
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The Bradstreet Company is the oldest, and finan-
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TORONTO OFFICES:
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OUR EXTRA
 HAND-MADE
AXE

This Axe stands
 better in frosty
 weather than any
 axe made.
 Send for sample.
 Can supply any
 pattern.

CAMPBELL BROS.
 Mfrs.
 St. John, N. B.

It Pays to advertise in the CANADA LUMBERMAN. Try it.

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stand for many things, but for nothing of more significance
 to the water-power miller than.....

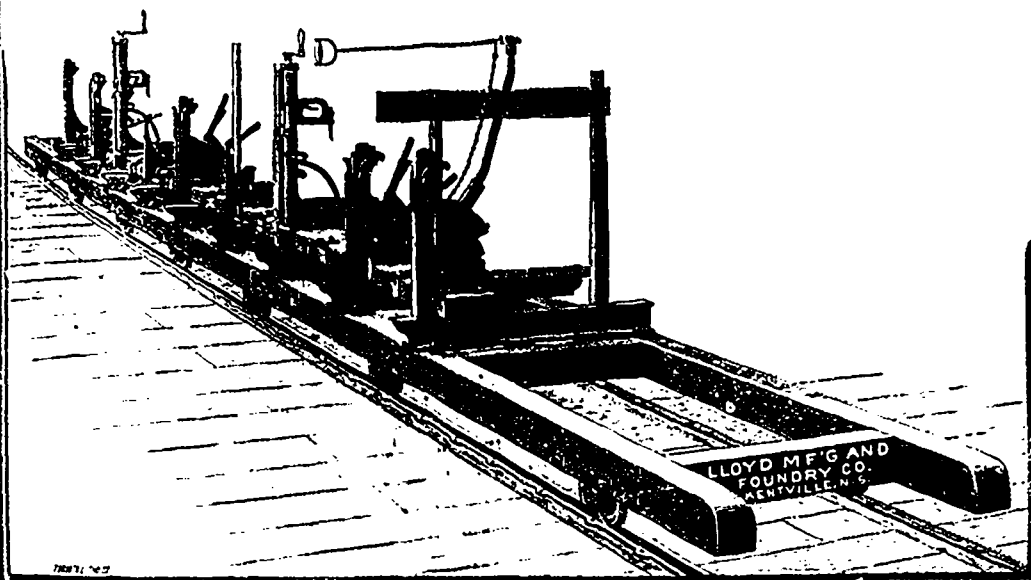
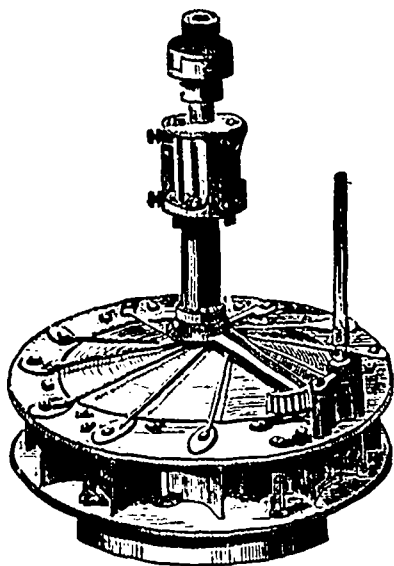
"LEFFEL" "VULCAN" AND "PERFECTION"

which, with addend of **"TURBINE,"** and the proviso that the Turbine emanates from the
 shops which have brought the Turbine in Canada to its present advanced sphere of useful-
 ness, is a "gold-bond" of satisfaction between manufacturer and user.

Do not be misled by the statement that anywhere else the same wheel is made.
 To be perfectly safe address only.....

MADISON WILLIAMS, Successor to **PANTON,**
TATE & CO.
PORT PERRY, ONT.

or **H. R. WILLIAMS & CO.,** Agents, 345 ST. JAMES STREET, MONTREAL, QUE.



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SAW MILL OUTFITS
 Pulp Machinery, Belting, Etc.

OUR SPECIALTIES:

Band Saw Mill Machinery,	Power Feed Gang Edgers,
Improved Rotary Saw Mills,	Buzz and Surface Planers,
with Green Mountain Dogs,	Heading Rounders,
Also Screw Post Dogs,	Stave Machines, Stave Jointers,
Turbine Water Wheels,	Stave Planers.

KENTVILLE, N.S.

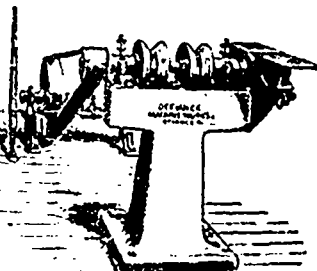
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THE DEFIANCE MACHINE WORKS

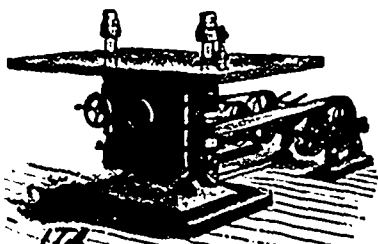
Designers and Builders of

DEFIANCE, OHIO, U.S.A.

**PATENT HUB, SPOKE, WHEEL, WAGON, CARRIAGE,
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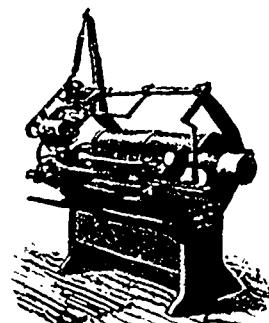
PATENT NO. 0 ROUBING AND CORNERING MACHINE, WITH 6 INCH BUZZ PLANER ATTACHMENT.



DOUBLE SPINDLE SHAPING MACHINE



AUTOMATIC SAWED HOOP PLANER.



COMBINED SPOKE TURNING AND SQUARING MACHINE. Capacity, 7,500 Spokes per day.

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The BEST Article Known for the Purpose

MANUFACTURED BY THE DOMINION LEATHER BOARD CO'Y. - MONTREAL, QUE.

The WM. KENNEDY & SONS, Limited
Manufacturers of Owen Sound, Ont.

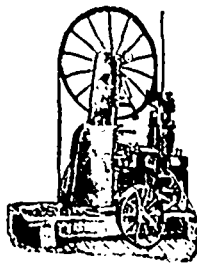
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TURBINES

Accurately Machine Dressed Gearing, Iron Bridgetrees, Pulleys, Shafting, Trevors Swing Shingle Machines, &c. Propeller Wheels from 12" to 12' diameter and for any Purpose.

NOTHING BUT FIRST CLASS WORK.

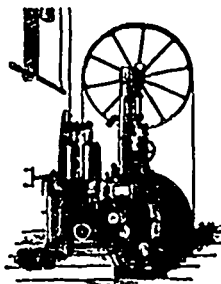
Band Re-Saws



50 SAGINAW

In SAW MILLS

If you want a Band Re-Saw for Any Purpose, write to Headquarters :



W. B. MERSHON & CO.

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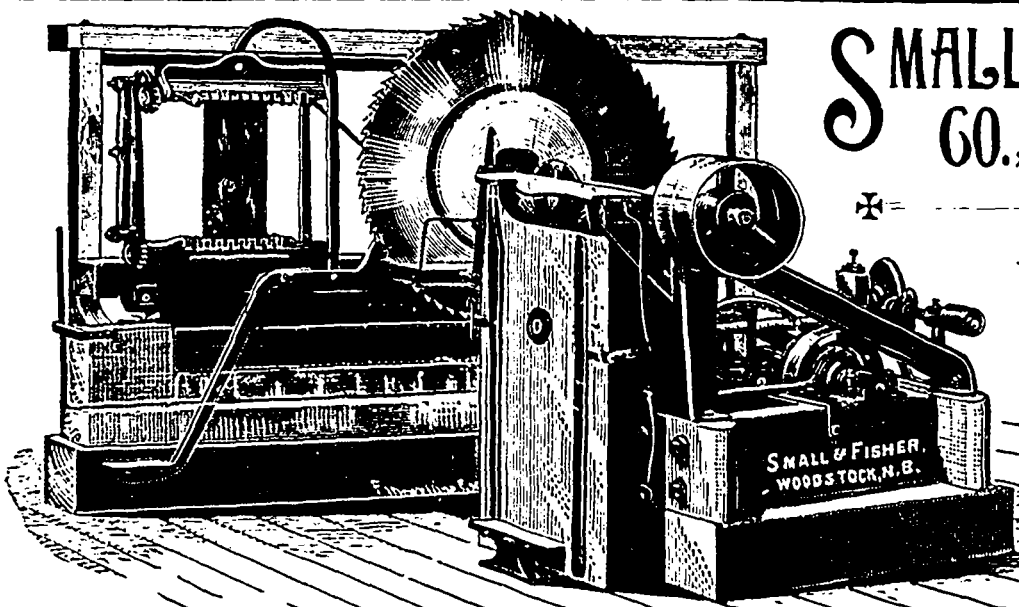
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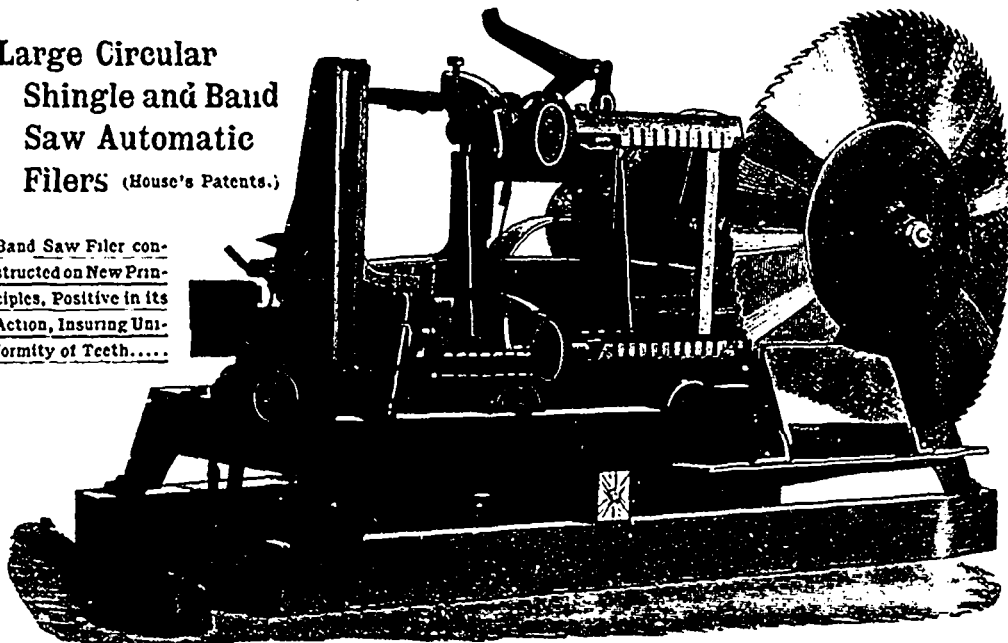
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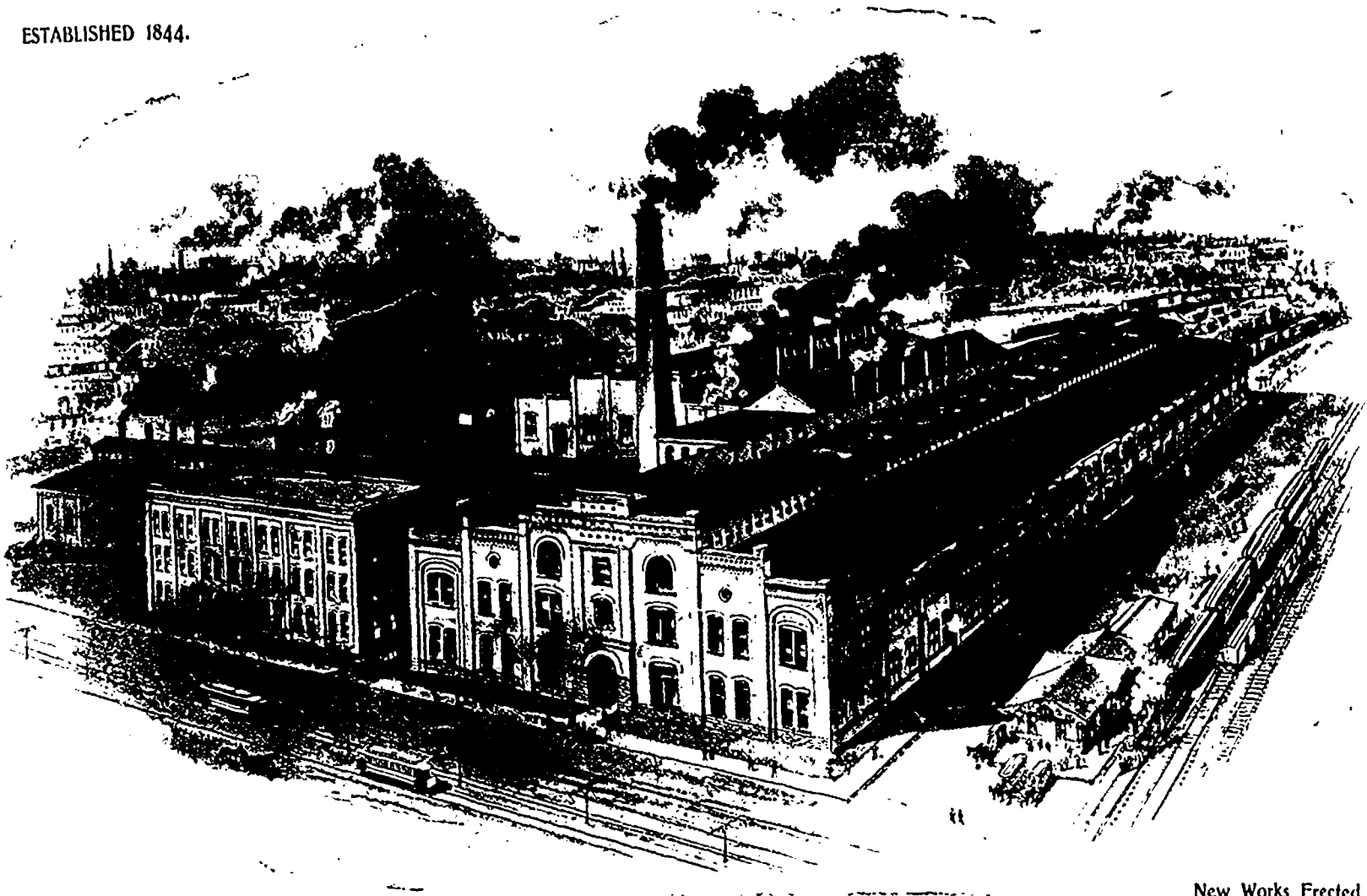


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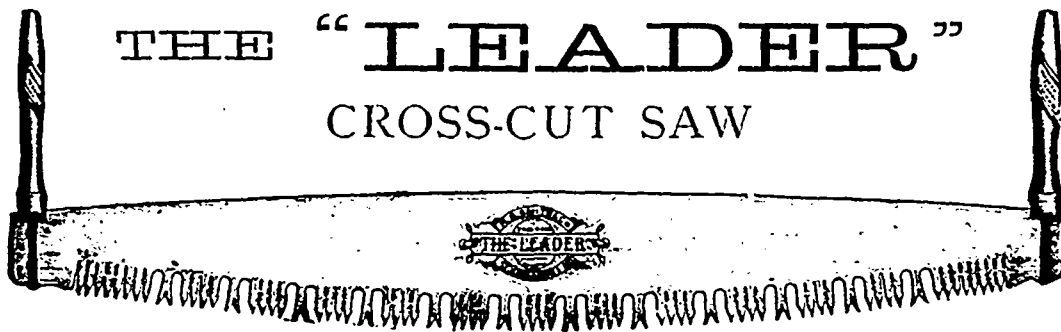
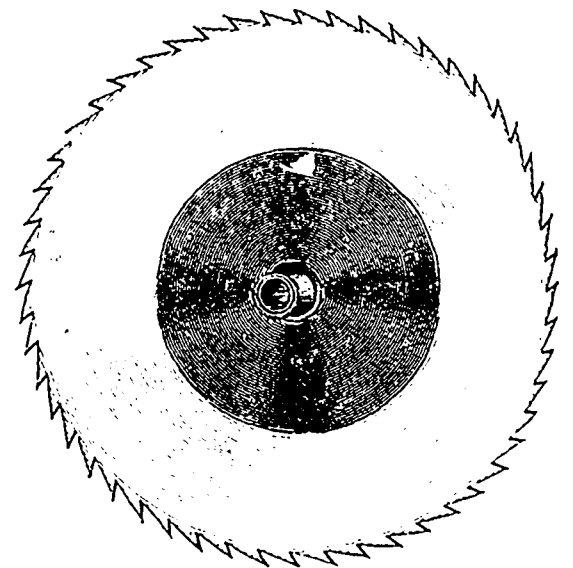
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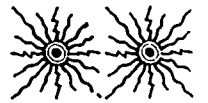
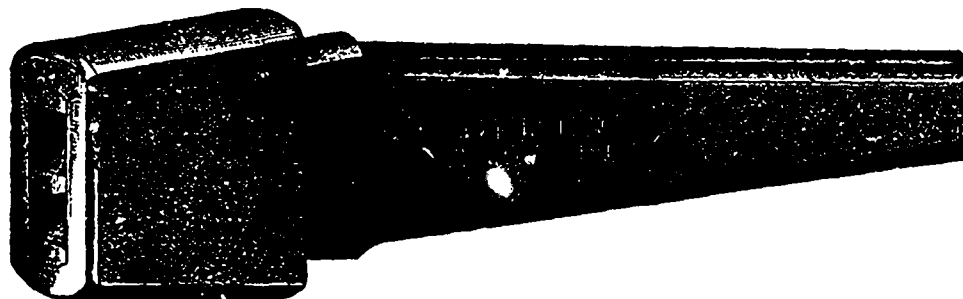
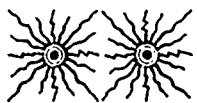
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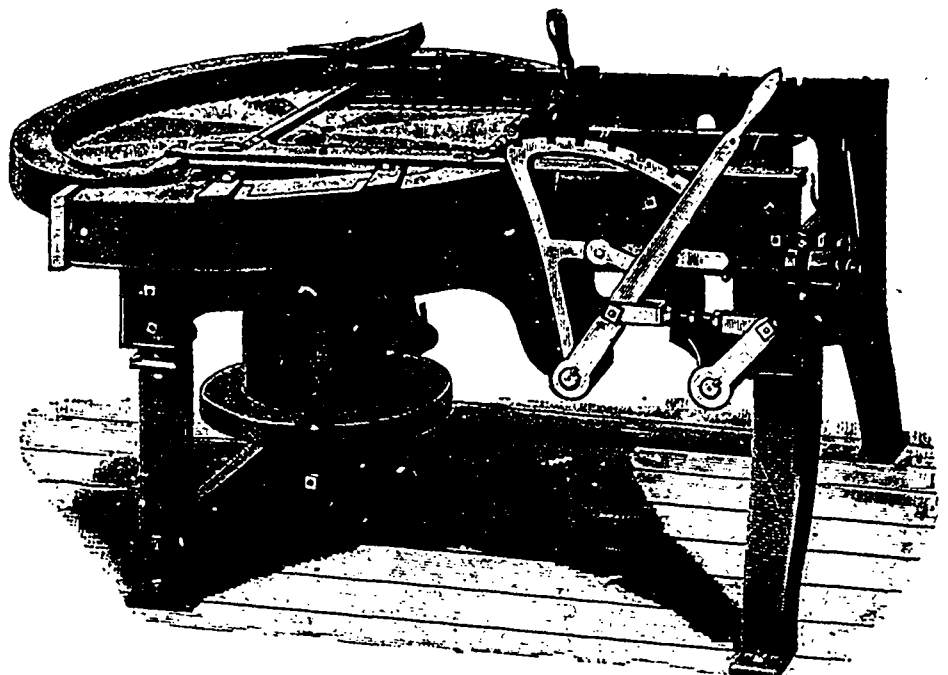
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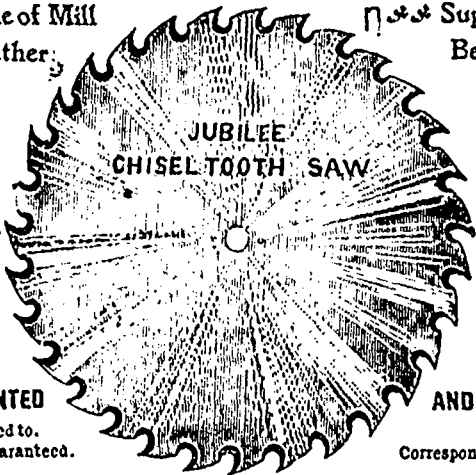
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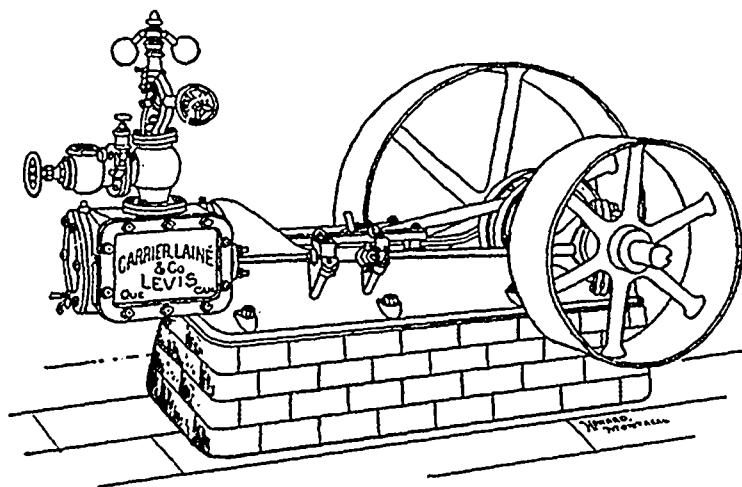
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