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THE CANADA LUMBERMAN.

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THE CANADA LUMBERMAN

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

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

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

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

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

WHILE the timber supply of the Northern States is gradually and surely giving out, dealers are watching for the most contiguous markets for future supplies. From casual observation many would come to the conclusion that Canada, with its boundless forests and excellent water ways, would prove a tempting field for Northern capitalists, but while quite a number have taken advantage of the forests of this country, by far the greater number have gone into the South. That is not only the nearest field, but the vexatious customs duties which would be experienced by Americans operating in Canada are avoided. For the past three years or more there has been going on a very quiet, but enormous traffic in Southern timber, and this will increase in volume and strength each succeeding year. The South abounds in cheap timber, the choice purchases, it is said, being now already taken up. It is only a question of time before Southern timber will have a stumpage value that will be counted in dollars instead of as now in cents.

IN the *Timber Trades Journal* we find two items of information that should have an interest for the trade on this side of the Atlantic. Our contemporary's Stockholm correspondent says: "There are several orders in the market for Australia from both the Geffell and Soderhamn districts, and good payable rates are being offered." Again in its letter from its correspondent in Christiania we read as follows: "The improved prospects for shipments to Australia (principally of white flooring)." Now why should this important Australian trade be left to Norway and Sweden when Canada is even better able to supply the market. The Atlantic coast of the Dominion is at least as well situated for the trade as the Scandinavian countries, and the Pacific coast is far better situated especially as regards distance and time of transit. We observe also that the United States secure a large portion of this profitable trade, of which Canada might surely obtain the lion's share if not a virtual monopoly. It should be remembered that there is a large demand for coniferous lumber in Australia, where, though there is abundance of hardwood, there may be said to

be no pine, and though New Zealand is better provided in this respect the supply there is not in excess of local requirements. It is a market that Canadians should develop, giving due attention to the kind of goods that suit the Australians. That the chief demand is for goods more highly manufactured than when they come from the saw mills makes care in shipping advisable, but adds to the value of the trade.

QUEBEC, where so much timber has been handled for the last half century, has seen many changes of late years, notably in the rapidly decreasing traffic in square timber, deals and staves. Many of the extensive docks which have done service for so long are now going to ruin, and adding to the many other signs of decay which abound throughout the ancient Capital. A recent visit among the timbermen of Quebec convinced THE LUMBERMAN of the fact that the wood trade was demoralized in the extreme, with little prospect of future revival. It may be said that the trade here depends entirely on the European markets, and partially through the depression in the old country, and also the fact that Norway pitch pine has come into such strong competition with Canadian timber, the outlook is of the gloomiest description. The Norwayout pine is not only placed on the English market at a lower price than the Canadian, but is also considered a more suitable wood for the purposes for which it is required. In addition to this there are other things militating against the Quebec dealers. A few years ago a very large trade in deals was carried on, but gradually this branch of the timber trade has been transferred to Montreal, the latter city, it is said, affording cheaper dockage and improved facilities. Then again, the Quebec operators have only to look back to find an extensive and prosperous stave trade, now almost, if not quite, nil. All these things considered the prospects for the future do not look very encouraging. Still, while such a state of affairs exists, we have not yet heard of any financial embarrassments of a serious nature, and all to whom we conversed, while seriously lamenting the depression, showed, so to speak, a "stiff upper lip" and were waiting, Micawber like, for something better to turn up. Doubtless before very long a different and more profitable branch of the wood trade may assume sufficient proportions to compensate the timbermen of Quebec for the losses sustained in the withdrawal of the trade above enumerated.

OUR Toronto contemporary, the *Manitowal and Milling News*, has evidently not studied the question of Commercial Union from a lumberman's standpoint, as the following paragraph will demonstrate:

"How often we find the news columns of our daily papers contradicting most effectually the arguments advanced in their editorial columns. As a case in point, the *Mail* gives as one reason for its advocacy of Commercial Union that it would benefit Canadian lumbermen, while the Ottawa correspondent of that journal, who is coming in contact constantly with leading lumbermen, states that 'of late years the demand for Canadian lumber has been very great in the United States, and as the supply is gradually becoming limited, the lumbermen at Ottawa know that they can have a good market for all the lumber they can cut.' In view of the above satisfactory condition of affairs, it would be interesting to know what use our lumbermen would have for Commercial Union."

In reply to the query contained in the above paragraph, "what use would our lumbermen have for commercial union?" the answer is not hard to find. As our contemporary is doubtless aware there is at the present time a duty of \$2 per thousand feet on all lumber entering the United States from Canada. This duty virtually comes out of the pockets of the Canadian manufacturer, for the reason that lumber from this country has to be placed on the American market at the same price as it can be obtained for at Buffalo, Tonawanda or any other point. If the Americans pay the duty in the first instance it is deducted in the price of the lumber and the Canadian shipper finds himself thus much short on every thousand feet of lumber exported. Not only would Commercial Union be a great saving to the trade in this way, but it would also open up a greater market for spare lumber, the production of which is too great for the home market, and cannot be exported owing to the high duty referred to. We are quite aware that the demand across the lines for Canadian lumber is great, but it would be considerably greater were the custom houses along the frontier abolished. Not only this, but a fair margin of profit would then be realized by the manufacturer, instead of allowing this money to go into the pockets of Washington.

FROM various quarters there come reports of want of sufficient railway accommodation to move lumber promptly, but this is by no means general. The lumbermen and dealers in Canada may well be thankful as they compare their position in this respect with that of their neighbors. From one after another of the centres of the trade in the United States come complaints of lack of cars to move their lumber till the cry seems universal. Crowded piling grounds, inability to fill orders, and other difficulties affecting business at this important season, are the result. It must of course be admitted in fairness that the railway companies should be allowed some consideration if in a busy season they do not have cars ready the moment they are wanted at every point on their extensive and complex system. Such a period is the fall when the mills are clearing off their heaviest summer cut, vessels are delivering all they possibly can before navigation closes, and dealers are stacking their yards for the winter, while the great movement of the crops is also taking place. If, however, some consideration and a few days' delay should be accorded, there is no excuse for a shortage of rolling stock causing a serious and prolonged check to business. The evil is so much greater than customary that it is impossible to avoid the conclusion that while there has been a great and rapid extension of railway mileage, undue parsimony has prevented the supply of additional rolling stock in proportion to the increased work. It is not sufficient for the companies to allege that if they supplied cars and staff sufficient to meet on the instant all the demands of the busiest season much of it would be idle at other periods. By their charges they have been granted almost a monopoly of the carrying business, and this and other privileges have been given on the understanding that they meet the business requirements of the public. They are not at liberty to consider merely what stock and what staff they may most profitably maintain. The Canadian lines as a rule are giving less cause for complaint in this respect than are those of the United States, and hope not only that readiness for the service of the public will be continued but that any present shortcomings may be remedied.

ONE of the most striking features of the lumber industry of this continent is the great and rapidly increasing development of operations in the Southern States. This extraordinary activity in the southern forests is making its mark not only locally but in distant places. The industrial progress on the spot is of course adding greatly to the demand on the spot, but from Chicago and other northern cities of the trade comes the cry that the South is becoming a formidable competitor in neutral markets, that in States where the white pine was formerly the main timber of commerce the yellow pine is fast growing in favor and increasing in consumption. Not is the increased demand by the products of the southern forests confined to this continent; it is now and more gaining a hold in the European market. This is a movement which Canadian lumbermen will naturally watch with interest, but there is another aspect of the question with which they are fully as much concerned. Not only have the forest products of the South been greatly augmented of late, but equally marked has been the demand for their lumbered lands by operators at a distance. The lumbermen of the Northwestern States have been and are investing heavily in the yellow pine forests, and the area thus held in the South by northwestern lumbermen must aggregate an enormous average. From these facts Canadian lumbermen may draw the conclusion that their brethren of the northwestern pine States, however contradictory may be the reports as to the exhaustion of their forests, are looking forward to a scarcity of standing timber as an event of a not far distant future. It tells the same tale as their efforts to obtain timber limits in Ontario. The lesson that our limit holders and mill owners may learn from these indications is that before very long the supply of pine in this country will be in greater demand and of greater value. With such a prospect they will do well to cut cautiously and not be in too great haste to sacrifice valuable property without obtaining adequate remuneration. To force their goods too rashly on the market may be a losing policy in the long run for more reasons than one. It will be wise to consider the future as well as the present, and in this way be guided by the experience of the past in other States of the Union.

FROM more than one locality in the United States there come accounts of the adoption of the practice of haling sawdust. At Manatee the machine used is an ordinary power hay press worked by steam. In Canada there are not such large cities near the mills to afford a good market, but surely a certain quantity could be sold. It would be worth the while of some of our millowners conveniently situated to see if they cannot adopt this process. What is now a source of expense might be made to produce a revenue, and the complaints would be avoided of the effect of the mill refuse in the rivers.

THE Ottawa Journal is very much chagrined because THE LUMBERMAN failed last month to give credit for an article which was reproduced from that journal, emanating from an Ottawa lumber manufacturer. We can assure the Journal editor that we had no intention of hurting his feelings, as the omission was not intended. Were we to use "cuss words" every time an article was stolen from this journal without due credit, we think our prospects of "climbing up the golden stairs" would be slim indeed. Dear Journal, we sympathize with you.

AT length the great Nova Scotian log raft has been successfully launched. This time the ways, which last year yielded to the enormous weight, necessitating the reconstruction of the raft, did their duty and the large mass was floated. Mr. Robertson, the patentee, has so much confidence in the success of the tow to New York, that he has already commenced the construction of another raft on the same ways. If his hopes are verified, a revolution of no slight importance will be effected in the trade, for the example will no doubt be followed with the advantage gained from the experience of the costly preliminary failures. The conveyance of three million feet of timber by means of one tug would certainly be economical, if the risk should be shown not to be too great. Log rafts on this principle may perhaps be used on the great lakes to enable United States mill owners to carry out their desire of supplying their mills from Ontario forests.

THE merchants of St. John and Halifax are making renewed attempts to induce the Dominion authorities to foster trade with the West Indies and South America by granting subsidies to steamship lines. There is every appearance that their efforts are likely to be successful. This matter has a considerable interest for the lumbermen of our Dominion. A deputation from St. John, N. B. while recently addressing the Montreal Board of Trade to obtain its co-operation, pointed out that not only was there at present an export of Canadian lumber and other wooden goods from the Maritime Provinces to the countries in question but that also there was a far larger export from the United States a considerable portion of which was the product of Canada. The deputation urged very reasonably that this trade if carried on direct would be more profitable to Canada. The trade should use its influence to support this movement.

IN addition to the immediate destruction of property caused by the forest fires which have wrought devastation in so many limits this year, an indirect bad effect has been produced. From several quarters we hear of lumbermen making preparations for getting out an unusual quantity of logs, because their limits having been burned over the trees have been killed and must be at once felled to escape the ravages of the "borer." This must have a tendency towards a glutted supply, besides disturbing the calculations of mill owners, who had aimed at sparing their forests so as to reserve a supply of logs for their mills as long as possible. The loss and inconvenience thus caused will be an additional incentive to maintain and even improve the means that have been adopted for guarding against forest fires. The laws on this subject should also be rigorously enforced.

REFERRING to our remarks on the increased mileage and stumpage tax in the province of Quebec, the *Miravalchi Advocate*, of Chatham, N. B., asks:—"What would the LUMBERMAN say if Quebec operators had to pay \$8 per square mile as rental and \$1.25 per M. for spruce as the New Brunswick government forces our lumbermen to do?" It certainly appears on the face of it, that these demands upon the lumbermen are excessive, and that our contemporary has reason to say "The Quebec government is moderate and merciful in comparison with ours." To compare the two systems with exactitude it would be necessary, however, to take other circumstances into consideration. One of the worst features of the Quebec increase is that it prejudicially affects property that was acquired, has changed hands and has been accepted as security on the basis of the old dues, the value being suddenly and unexpectedly diminished by the increased tax. Those who now acquire timber limits in the Province of Que-

bec will not be subject to this wrong, for they will value the limit with reference to the amount of the rental and dues. Not having immediate access to information as to the dues formerly exacted in New Brunswick, we cannot say whether the same injustice has been done there. It would seem so from the language used by the *Advocate*, which says: "Our government knows that its victims cannot at once withdraw their capital, and they seem determined to secure as much as possible of it while it is within their reach." This is where the injustice comes in; it is no valid excuse to say that the leases are only for the year, since relying on the established practice and custom, men have in good faith invested capital for their operations, have bought limits, or have advanced money on them, and now find that their confidence in receiving fair play has been misplaced. We would be glad to learn from our contemporary what changes, and when, there have been made in the New Brunswick timber dues.

THE market reports and other information have shown that there has been generally an active business in shingles. Though there has certainly been no diminution in the output, values have been fully maintained, sales have been readily effected, and there has been a steady demand. With a few local exceptions such has been the satisfactory condition generally of this branch of the trade. The natural result has followed; from many different quarters we hear of orders for new machinery, the erection of new mills and enlarged operations among the shingle manufacturers. There is evidently room for expansion and it is well that advantage should be taken of the opportunity. It should, however, be borne in mind that the business may be overdone, and that any exaggerated increase of production must weaken the market even if it does not glut it. The steady demand for shingles that has prevailed seems to speak of increased building operations, more especially in residences of the class for which this kind of roofing is used, and therefore is an indication of progress and industrial prosperity.

BESIDES their general interest as Canadians, the lumber men of the Dominion have a special interest in the proceedings of the Joint Fishery Commission now in session at Washington. Even if not adopted, it is certain that reciprocity will be considered as a means of settling the long pending controversy as to the enjoyment of our fisheries. Whatever restrictions may be established, lumber would undoubtedly be included in the articles on the free list as it is already in the standing offer in our statutes. Such a change must necessarily effect the trade materially, though the extent of the benefit is a matter as to which there is some difference of opinion. Then besides the remission of the United States duty on lumber, any reciprocity even in natural products only would largely effect our lumbermen by their being able to import pork, beef, coarse grains and other supplies without paying the present Canadian duties, which with the prices now ruling would be advantageous to them. As the Commission is conducting its deliberations in private some little time must elapse before the results are made public. Our readers will await their publication with very natural interest.

AT this season it is necessarily impossible to form even an approximate estimate of the log cut for the coming winter, and the amount that will be brought to the mills. Much must depend upon the snowfall, which may be either too large or too small, and much also upon the supply of water for driving. Last winter many operators found that the work in the woods did not come up to their expectations, and an unusually large quantity of logs were detained by a deficiency of waters which also, in some water-power mills, diminished their cut of lumber. But though the result cannot be predicted, it is at least certain that preparations have been made for a large cut this season. The reports from different centres show that generally extensive operations are contemplated. Another strong indication to the same effect is the fact that men for the camps are in demand and there is even some difficulty in obtaining the required number, the common notice on the office door, "No more men wanted," having been rarely seen. With a favorable winter in the woods and spring on the streams and rivers, a large supply of logs may be anticipated, the cut being augmented also by the numerous logs "hung up" this year. A fairly prosperous season, with anticipations of a further improvement of general business, have contributed to this activity. Though there was nothing that could be called a boom, prices were well maintained, there was a steady demand, and a healthy, if not very active, business. The official returns for the Dominion show that the exports of "produce of the forest" amounted in October to a value of \$2,534,855. The home consumption also has been considerable. Altogether the results of the season's business have been satisfactory, and there are favorable anticipations for the future.

THERE is shortly to take place an important sale of timber limits by the province of Ontario, including forests in the heart of the Province that have not hitherto been opened to the lumberman, almost the last in a virgin state in that region. There would be a keen competition for these limits, for they are well timbered, well situated, and are almost the last in the settled portion of the province to be obtained at first hand. It is, however, very desirable that before the sale there should be authoritative information as to the conditions on which the purchasers are to hold the limits, as to the stumpage and other dues to which they may be liable. It has been extensively rumored that the Mowat administration contemplated following the example of Mr. Mercer in asking increased payments from the lumbermen. It has even been surmised that Mr. Mowat would avail himself of the opportunity of the meeting at Quebec to consider this subject with a view to similar action. If there was any such consultation its results have not transpired. In view, however, of these rumors and of the action of the Governments of Quebec and other Provinces it is only natural that some incertitude and anxiety should prevail among the Ontario lumbermen. Under these circumstances it is very expedient that before the sale, which is to take place on December 15th, full information should be given as to the terms on which the property is to be held, and as to the rentals and royalties reserved by the vendors. These terms should even be embodied in the conditions of sale. This is the only fair course alike to the purchasers and the vendors. The lumbermen acquiring the property would know exactly what they were buying, and could not have their calculations vitiated by demands for increased payments which they did not contemplate. The province would gain by obtaining the full value of the property by competition unrestrained by the belief that the purchase was a lottery. Business men would not dream of selling property on such loose terms as to make bidders uncertain and therefore timid, and the provincial authorities should adopt the same business-like policy.

WE find that the London, (Eng.) Board of Trade returns for October are more favorable, both as regards imports and exports, which have swollen considerably. The total declared value of the imports is £30,550,307, against £29,054,399 for the corresponding month of last year, or £1,495,908 more. The increase is chiefly in raw materials for textile manufactures, but is also striking in articles of food and drink, durable, metals, tobacco, and manufactured articles. The receipts of cereals from the United States have fallen off largely, and those from the British East Indies and North America are also less. On the other hand, consignments from Russia have about doubled, and those from Australasia are rather larger. For the ten months the total imports are valued at £294,953,817, against £285,468,148 last year, showing an increase of £9,485,669. The exports for the month amounted to £18,736,201, as compared with £18,224,823 last year—an increase of £511,378. Nearly all the items are larger, but the growth of business is largely seen in metals and articles manufactured therefrom (except machinery), and in machinery and millwork. The shipments of cotton piece goods to India continue to diminish, and there is also a decline in those to Egypt, Turkey, and Greece, while to China and Japan and to the European continent the quantities are more important. For the ten months the total exports are valued at £181,835,615, against £177,740,793 last year, being an augmentation of £4,094,822. Turning our attention to that department with which we are more directly associated, says *Timber*, we find that the import of hewn timber for October was 164,985 loads, as compared with 149,150 loads for the corresponding month of 1886, an increase of 15,835 loads. For the ten months ending October 31st, the figures give 1,476,460 loads for 1887, as compared with 1,368,275 loads for 1886, an increase of 108,185 loads. Taking sawn timber for October, the figures give 475,177 loads for 1887, as compared with 605,849 loads for 1886, a decrease of 130,672 loads for the present year. For the ten months ending October 31st, the returns give 3,380,038 loads for 1887, as compared with 3,244,657 loads for last year, an increase of 135,381 loads. The falling off in sawn timber is general in all districts from which we draw our supplies; the only exception to the statement being the United States, which gives a slight increase. For October the importation of staves has been smaller than last year at corresponding date, and the returns for the ten months show an importation less than half the quantity imported in 1886 up to the same date. The importation of mahogany shows a much lessened quantity, the return for October giving 2,197 tons less than in the same month of last year, while of the ten months, the statistics are 31,684 tons for 1887, as compared with 47,070 tons for 1886, a decrease of 15,386 tons, or a declared value of £30,000 less this year than there was last. On the whole the returns show a more favorable state of affairs.

Erastus Wyman and the Lumber Trade.

Mr. Erastus Wyman—or Sir Erastus Wyman as some Canadians hope by-and-by to hail him—has been down to the Ancient Capital, in Quebec, giving his views on the question of Commercial Union. From a report of his speech, comprising several columns, THE LUMBERMAN has extracted the following views as expressed by him regarding the timber interests.

In the matter of lumber no greater boon could happen to Canada than to break down the barrier which shuts her out from fair competition with the neighboring Republic. The lumber question in the United States was rapidly assuming great importance. It was alleged by some that within twenty-five years almost the entire stock of available lumber would disappear. The protection which had been afforded to the lumber interest in that country had been practically destruction, because they could in no sense replace the rapidly disappearing forests. The charge against Canadian lumbermen of two dollars a thousand had been a serious impediment, and, if for no other thing, unrestricted Reciprocity should be encouraged. The demand for lumber was likely to be very great. The growth of the great cities absorbed yearly more and more, aside from the treeless prairies, and the activity in providing homes and the necessity for enlarged building operations at almost every point in the neighboring republic made it the very best, as it was the nearest, market for the products of the forests of Quebec. There was not a lumber merchant in the city of Quebec, there was not a holder of lumber land throughout the Dominion, but would be benefited by an open market at a point so contiguous, so cheaply reached, as the points of receipt in the United States. If this was true with regard to lumber, what might not be the result in regard to all manufactures of which wood forms the bulk of the raw material. In the article of furniture Canada ought to be the greatest producing region on the Continent. She possesses no less than sixty-nine different varieties of wood, and throughout Quebec there is an infinite supply of the most attractive kinds of wood for interior decoration. The beautiful birdseye maple, the black ash, the oak and basswood, are all in abundant supply. Is there anything in the matter of furniture, the shape or form, taste or color, which the American possesses that the Canadian does not possess? Is there any device in beauty of construction, in strength, in skill, or in excellence, that could not be imitated in Quebec for the supply of the wants of the United States? Plenty of manufactories in the United States employ French Canadians, Germans, and foreign labor, in the production of the most elegant furniture, and it is safe to say to-day that in the large establishments of New York, Boston and Philadelphia, where could be found the most elegant furniture in the world, that seven-tenths of the labor employed is foreign labor, and that twenty-five per cent. of that is French-Canadian labor. The cheapness with which the furniture could be shipped West and distributed throughout the North-Western States and Territories, as compared with the cost of shipment from other Atlantic ports, would give us an enormous advantage at this point, while the cost of labor, of raw material, and the cheapness of power would be an advantage of the greatest possible value. It might not be that in the finest grades of furniture Quebec could compete, although in that it is difficult to see what barrier there is, but for the bulk of the supply of Western needs in furniture Quebec would have a great advantage. If in lumber and in furniture Quebec possessed advantages from her location and abundant supplies of wood, what would prevent her from being the greatest ship-building port of the Continent.

A Monster Raft.

The great raft that was launched at Two Rivers, N. S., November 15th, is 585 feet long, 62 feet wide and 37 feet deep, and weighs 9,000 tons. There were four ways 1,200 feet long, and the raft went slowly at first, but gathering speed ran a thousand feet, until she floated. She made the run in thirty-four seconds without the slightest strain, did not part a single chain nor spring the vast structure an inch. She was taken in tow by the tug Neptune, and the cradle removed at once. The raft draws 19½ feet, or six feet less than was expected. It was in 1883 that Hugh R. Robertson, of Two Rivers, conceived the idea of building a raft somewhat in the form of a ship, composed of logs cut in full lengths and firmly secured by chains. In the following year Mr. Robertson drew a plan of the proposed raft and patented it in the United States, Canada, Great Britain, Norway and Sweden. Early in 1885 Mr. Robertson visited New York and contracted with Wilson Godfrey, of 91 Wall street, for the construction of a raft afloat on the shore of the Bay of Fundy. In November of the same year B. B. Barnhill, of Two Rivers, N. S., contracted to furnish the lumber required for the raft and to build it ready for launching, according to plans and specifications prepared by Mr. Robertson. Mr. Barnhill began at once to prepare a place for the raft near the head of the bay—a place

called "Finger Board," about six miles down the bay from the Joggins and about three from Shulee. The spot was admirably adapted for the purpose, and soon workmen were engaged in the construction of the raft. The raft was completed in August, 1886, and was almost as large as the Great Eastern, and full a third heavier. It contained over two million feet of lumber, being over 400 feet in length, 50 in width at the centre and 33 in depth, and 25 in diameter at either end. On the 31st of July, 1886, the first attempt was made to launch the raft, but it did not move. A second attempt was made the following day and the large mass ran down the ways nearly two hundred feet. There it remained, owing to the breaking of the ways. Several other attempts were made to launch the raft but without success. Then Mr. Robertson, who felt satisfied of the practicability of the scheme, decided to tear it apart and rebuild it. This was done and the new raft was finished a few days since. It is much larger than the first structure, being over 500 feet in length and containing about three million feet of timber. Its general form resembles that of a fat cigar, somewhat fastened at its upper and lower sides, with the pointed end cut off. It is one solid mass with the exception of movable interstices necessary in the packing of round lumber, in trees cut as long as they grow, from 30 to nearly 100 feet in length. The timber has been stowed with its small ends generally towards the end of the raft, which helps to give the proper taper, and it is so interlapped that great strength is attained to hinder the structure breaking in two. The patentable point in this system of rafting is the adjustment of the chains which bind the whole together. The main or centre chain runs from one end of the raft to the other, and it is that by which the structure is to be towed. The lateral chains are used to prevent the raft from working apart longitudinally by the action of the waves. The encircling chains are attached to the lateral chains, and are to prevent the raft from flattening out while afloat.

The Hon. William Gould, of Portland, the historian, has unearthed some ancient records showing that the timber raft above referred to has had some predecessors, says the *Industrial Journal*, of Bangor, Me. All of them were successfully launched but came to grief before reaching their destination. In 1792 a raft containing about 1,000 tons of timber was built at Swan island, in the Kennebec, by Dr. Tupper, a somewhat noted eccentric character. It was made by treenailing square timber together in the form of a ship's hull, and was ship rigged, the intention being to send her across to England. At that time no manufactured lumber was admitted into Great Britain; hence the timber in the raft was simply squared with the axe, to make it stow well. The ship or raft lay at Bath for some time, it being difficult to get men to go in her. She finally went to sea, however, carrying a small vessel on her deck. But off the Labrador coast her crew got frightened by bad weather and abandoned her. She was afterwards boarded by men from a passing vessel and found to be in good order, and it was suspected that she was deserted without sufficient cause. Two other similar attempts were made from the Kennebec, and both vessels went safely across, but foundered on the English coast, under the same suspicions of fraud as in the case of the Tupper ship. In 1825 the ship Baron of Renfrew was launched at Quebec, having made a previous unsuccessful attempt when she stopped on her ways, owing to the grease being consumed by the friction. She was towed down to the island of Orleans and anchored. Her dimensions are given as follows. Length, 309 feet; breadth, 60, feet; depth, 38 feet internally and 57 feet externally; tonnage, 5,888 tons; draft when launched, 24 feet; cargo on board when launched, 4,000 of timber. She was ship rigged, with four masts, and was perfectly flat bottom, and with a keel of about 12 inches; wall sided, sharp forward and rather lean aft, and looked more like a block of buildings than a ship. She sailed in August 1825, in command of a Scotchman, a half pay lieutenant in the British navy. October 27 the Baron of Renfrew drove on shore on the coast of France, near Calais, and went to pieces. And thus closed the record of ocean timber ships up to the Nova Scotia raft.

The Motive Power of the Future.

It is a recognized fact that the steam engine makes use of only a small fraction of the amount of fuel that is burned to run it. The nature of the machine is such that this fact is a necessary one. The fault does not lie in the workmanship, for the actual loss of power from imperfections in this respect is found (by the indicator) to be only about twelve or fifteen per cent. The cause of the low efficiency lies too deep to be overcome by any mechanical device, and it has often been remarked that the motor of the future must work on an entirely different principle.

Mr. Edison has invented a motor which transforms heat into mechanical energy without the intervention of either boilers, pistons or cylinders, and he is very hopeful of improving it so that it may become of practical use. We have ex-

amined drawings of it, however, and have become skeptical. The motor is electrical in nature, and in order to make it run it is necessary to heat and cool a piece of iron very rapidly. We doubt if this can be satisfactorily done.

The hot air engine is very inviting, but men like Ericsson and Siemens, after years of thought, have not brought it into successful competition with steam, although they were well acquainted with the theory of its action, and were vastly better prepared to make experiments than the fathers of the steam engines were.

The wind mill is too uncertain in its action to compete with steam, though the fact that it consumes nothing must become a very weighty consideration in its favor when our coal supply gives out.

The tide mill has never been very widely adopted, and hardly anyone thinks of it seriously as a rival of steam, but it is nevertheless possible to construct one that can produce power enough for the entire United States. A reservoir forty miles square, at or near the head of the Bay of Fundy, where the tides are very great, would contain sufficient water to generate 700,000 horse power for twelve hours; and this might be distributed electrically and sold in every State in the Union. When coal has become scarce the construction of such reservoirs may be attempted, so that power and light and perhaps heat also, generated in Nova Scotia, may be sold all over the continent.

Power obtained in this way would not come from nothing. If a tide plant like that we have suggested is ever constructed, it will lengthen the time of day. It will slow down the earth's rotation just as certainly as a big gear wheel would, if placed on the earth's axis and made to drive machinery; though the effect would be so slight, owing to the immense size of the earth, that the increase in the length of day would not be measurable for thousands of years.

The gas engine has proven itself very convenient in many places, and oil and powder engines are also in use; but all of these use fuel, so that, equally with the steam engine, they fail to solve the great problem that must face the world sooner or later, when the coal is gone. The engine of the future must draw its energy from some of the forces of nature, and it seems that it must be operated by wind, waves or tides, or by rivers, ocean currents or the direct rays of the sun. *Power.*

CHIPS AND SAWDUST.

THE art of paper making has reached a point where a tree may be cut down, made into paper, and turned out as a newspaper, in thirty-six hours.

It is no use to expect shafting (and especially heavy shafting) to run well when it is crooked or the couplings are out of truth. The power used by this alone often amounts to a serious item of expense.

A BRITISH authority on the circular saw says: When having saws hammered, be sure they are placed in competent hands, we have seen saws that have been hammered by so-called experts that might have been better done by a blacksmith's striker.

THERE is a good reason to suppose that there may be, not long hence, a craze for cypress the same as there has been for other woods from time to time. Cypress as a finishing lumber has this advantage over the hardwoods, or even over yellow pine—it is almost as easily worked as white pine.

A REMARKABLE imitation of black walnut has lately been made from poor pine, the quality and appearance of the article being such as almost to defy detection. To accomplish this one part of walnut-peel extract is mixed with six parts of water, and with this solution the wood is coated. When the material is half dry a solution of bichromate of potash with water is rubbed on it, and the made walnut is ready for use.

WOOD decays very rapidly when exposed to the alternate action of air and water, such as in the case of tidal rivers, but this is not the case when it is immersed in deep water or in still water that is not changed. The air contained in such water becomes exhausted of its oxygen, and the process of decay is arrested, or may never take place to any extent. Accordingly, it is found that piles driven in deep water, or in clay or mud, will remain sound for almost an indefinite length of time.

A MAN from Michigan, who was admitted to the Royal palace, at Amsterdam, Holland, passed off by the news papers don't lie through a door hung on brass hinges and secured by a brass lock, made in a Massachusetts factory, and saw the following further evidences of the spread of United States art and industry in the old world. A chair from Grand Rapids, Michigan, and a spittoon (he called it a "cuspidor,") from Baltimore, stood near over the mantle, which was of American design, hung a landscape by a Philadelphia man. Thos. Moran, and upon it were a Colorado stag vase and a box of Michigan tooth picks.

THE NEWS.

ONTARIO.

—The box factory at Waubashene is again in operation.

—The Parry Sound Lumber Co. are building a new shingle mill.

—John Harrison's saw mill, at Owen Sound, has been burned.

—Mr. T. P. Pearce, Marmora, is building an extensive lumber mill at that place.

—Mr. C. H. Harrison, Norwood, is about starting an extensive sash and door factory.

—Betty's sash and door factory, at Pembroke, recently destroyed by fire, is being re-built.

—Cedar blocks, for paving streets, are being manufactured quite extensively at Norwood.

—The sash and door factory belonging to John Leath, Ridgetown, has been destroyed by fire.

—The Big Mill at Deseronto has closed down for the season, having been running since April 21st.

—A new sash and door factory at Campbellford, built by Mr. Jas. Benor, is nearly ready for work.

—The Midland and North Shore Lumber Company's mill at Parry Sound has been closed for the season.

Considerable progress is being made towards the organization of a Lumber Board of Exchange in Ottawa.

—The railroad ties cut this season by the Rathbun Company's mill, at Campbellford, are being shipped to the State of New York.

—Work on the new shingle mill, at Deseronto, is being pushed forward. It is a substantial three-storey building with cupola.

—Messrs. Bronson & Weston, the well-known Ottawa lumbermen, are seeking incorporation as the Bronson & Weston Lumber Company.

—It is reported that Mr. Booth, of Pembroke, has sold his limit, known as the old Mackie limit, to Mr. W. R. Thistle, of Renfrew, for \$25,000.

—Messrs. Thompson & Ellis, of Fenelon Falls, have sustained a heavy loss by the sinking of two scows loaded with provisions for the shanties.

—Mr. George Brooks, of Barrie, is building a saw mill at Melville Bay, on the Lake Huron shore, about 12 miles above Providence Bay.

—Mr. A. Irwin, Blenheim, during the months of September and October manufactured 100,000 barrels for the flour, apple and bean trade of that town.

—Jacob A. Shaver, of Ancaster, writes us that he is doing a brisk trade, and that the only trouble is short stock. He cuts about 8,000,000 feet per year.

—H. & J. D. Smith, of Stratford, are erecting a new saw mill in that city, which will, it is expected, be in operation about the beginning of the new year.

—On Nov. 6th, 1000 cords of firewood, a lot of lumber and a large barn, owned by Kerr & Davis, near Beamsville, were burned. The saw mill near by was saved.

—John Armstrong, of Chaffey, has secured the contract from the Northern and North-western railway to supply 10,000 ties. This looks as if the Northern was improving.

—Both the Gilmour and Rathbun mills at Campbellford, have closed down for the season. The latter had been running scarcely five months, and every log has been sawn.

—Mr. Harman Mutchlenbake, a young man 16 years of age, sawed 42½ M. feet of 16 inch shingles in 11 hours, at the new shingle mills at Rosseau Falls. Can this be beaten?

—Mr. Robert Harrison, Cavan, is adding a sash, blind, door and chair factory to his lumber mill, and is building a 50x30 foot extension to his works to accommodate his enlarged business.

—Mr. E. W. Rathbun, the well-known lumberman of Deseronto, recently delivered an able address in Oswego, strongly opposing Commercial Union between Canada and the United States.

—Owing to the excessive lowness of the water in Chats Lake, Messrs. McLachlin Bros. have been compelled to shut down their steam saw mill which will lessen their cut by at least a quarter.

—The lumber firm of McCraney & McCool, of Toronto, has admitted Mr. Robt. S. Wilson as partner, and opened a branch at Ottawa, where Mr. Wilson will be resident manager. The firm has mills at Oakville, Burlington, Bronte, and Huntsville, and makes a specialty of long bill stuff and dressing and the higher grades of pine. The style of the firm is now McCraney, McCool & Wilson.

—Mr. H. J. Russell, for many years Inspector of Crown Timber agencies and Collector of Timber Dues, died at Ottawa, during November, aged 82 years. He was the father of Mr. Lindsay Russell, Surveyor-General of Canada.

—Scott, Scott & Co. have just completed a very successful season's sawing at their Medonte mills, the output being four millions. Shipping is being proceeded with vigorously, and they have got well into the bush work for next season's stock.

—Messrs. Hurdman Bros., of Pembroke, deny the report, which has in some way gained circulation, that an epidemic exists in their shanties, in the form of typhoid fever, and that the rumor of any death taking place in such, is entirely false.

—Lumbering is going to be carried on extensively in the Lake Megantic district this winter. Dudley's company alone will take out eight million feet. Beatty & Co. bought a whole township on the other side of the boundary line, and they are busy building now.

—Reynolds & Scord's saw mill at Reynoldsville, on the Twelve Creek, three miles south of St. Catherines, together with the adjoining barrel heading factory and lumber piles, were completely destroyed by fire in the early part of November. Loss about \$15,000; insurance, \$5000.

—Mr. Boyd's lumbering operations in the Haliburton district, back of Peterborough, will be very extensive this year, so much pine having been killed by the fires. He will cut more logs than he can saw, and will have to warehouse them in the woods. The firm will run about eight shanties in this district, says the *Post*, and some of them will employ a hundred men.

—Mr. Norman Barnhart, manager for M. Boyd & Co., of Bobcaygeon, reached Lindsay with a gang of about seventy men from the lower provinces, and at once engaged a special train and was whirled northward to the seat of the firm's lumbering operations in the township of Snowden. It is now probable that the firm will have about six hundred men engaged during the season.

—The last of the mammoth whitewoods growing near Chatham, in Kent county, once famous for big trees, was cut recently on the farm of Mr. C. W. Richardson, measuring sixty-two hundred feet board standard. It was trucked to Blenheim and shipped thence to Chatham via Erie and Huron. Old lumbermen tell the *Planet* that it is the largest tree that has come to Chatham in the past fifteen years.

—The lumber firm of Messrs. Bronson & Weston have obtained, according to the *Evening Journal*, a lease of the small island in the Ottawa river below the Chaudiere docks, and opposite Blyth's Point, and will next spring construct extensive docks over the entire island which will be used in future as a lumber piling ground, for which purpose it is admirably suited.

—For some time past Ottawa lumbermen and others have been petitioning Parliament for the construction of a permanent iron bridge to replace the present suspension bridge across the Ottawa river below the Chaudiere Falls. It now seems that steps are being taken towards that end, the cost of the new structure being estimated at \$40,000. The new bridge when completed will be of great benefit to the lumber trade in particular.

—At the lumber camp of Mr. George Massey, says the *Parry Sound Star*, a jobber for the Georgian Bay Lumber Co., Jno. Armstrong's team during the space of 49 days skidded 5,436 logs. All the different lumber companies are busily engaged in taking supplies to their lumber camps, most of which are now in full running operation. The cut of logs during the coming winter will in all probability be the largest for some years past, and a busy season and good times generally will be the result; particularly so if the demand for lumber and good prices rule next summer.

—Letters patent under the great seal of the Province of Ontario have been issued incorporating the Lakefield Lumber and Manufacturing Company with a capital stock of \$300,000. The first directors are Messrs. Roland C. Strickland, Percy W. Strickland, C. J. Bloomfield, W. H. Casement and F. R. Barlee, all of Lakefield. The objects of the company are to acquire the mills, limits and business of Messrs. R. & G. Strickland, to carry on the business heretofore carried on by them, and to more thoroughly develop the Lakefield water power. The chief place of business will be at Lakefield.

—The following notes regarding lumber operations at Wyevalle come to hand: A number of shanties are in full blast here. Mr. C. Varty employs a large gang of men, who under the management of his foreman, Mr. Jas. Crawford, are cutting and delivering logs on the beach. Mr. Alex. Hill has taken the contract of cutting next summer's stock for Messrs. Hogan Bros. It will be the largest since the mill was built. Messrs. A. & R. Flemming have about fifty men employed in cutting and drawing cordwood. They are building a large shanty and intend employing as many men as can be had. Another

wishing to obtain work should come to Wyevalle where they will find a winter's employment and good wages.

NEW BRUNSWICK.

—John F. Carter's saw mill, at Bathurst, has been burned.

—The saw mill belonging to John Carter, Bathurst, was destroyed by fire Nov. 1st. Loss, \$5,000; insurance, \$2,000.

—The *St. John Telegraph* publishes a long interview with Mr. Aie. Gibson, New Brunswick's lumber king, regarding unrestricted trade with the United States. Mr. Gibson seems to strongly favor such a policy.

—The *Frederickton Gleaner* understands that one of the heaviest lumber operators on the upper St. John is in serious trouble with the American customs' authorities for making alleged false entries at the customs' office, Fort Kent.

—The lumbermen of upper St. John are devising a plan to dam the river a short distance above the falls for the double purpose of holding their lumber in spring till the booms are swung and to assist in driving the lumber in low water. There is talk of a joint stock company for this purpose.

—A great disadvantage under which the lumbermen of the North Shore labor, says the *St. John Sun*, is the distance which vessels carrying lumber to the United States have to pass over before reaching their destination. Were the long and dangerous sail around the coast of Nova Scotia abolished by the construction of the proposed ship railway across the isthmus which connects that province with New Brunswick, all the wood now wasted in the manufacture of deals in the shape of slabs and edgings, could be profitably converted into laths, pickets and other short lumber. As the matter now stands, it does not pay to ship short lumber from the north to the States. On the Restigouche as well as on the Bonaventure there are large quantities of the finest cedars. Hundreds of millions of white cedar of large size on the Bonaventure River.

—The cut of logs at the headwaters of the Kennebec (Maine) this season will be above an average, between 100,000,000 and 125,000,000. Hon. J. Manchester Haynes, of Augusta, will cut about 14,000,000; Bradstreets of Gardiner, 10,000,000; Lawrence Bros., South Gardiner, 8,000,000; Lawrence & Philips, Somerset Mills, 7,000,000; E. Shaw & Sons, Bath, 12,000,000; McPheters, Grenville, 5,000,000; Clark & Milliken, Richmond, 5,000,000; Putnam L. Clason, Randolph, 4,000,000; E. Millen & Sons, Augusta, 4,000,000; Fogg & Co., Bowdoinham, 4,000,000; N. Totman & Sons, Fairfield, 3,000,000; Omar Clark, Carratunk, 5,000,000. The above does not include all the operators, but nearly all the large ones. Lumbermen are now sending their teams into the woods.

—A contributor to an exchange writing from Blackville discourses thus on the life of the hardy woodsman: The lumbermen are once more on the alert. Owing to the large exodus, a reason for which your correspondent does not dare to venture, good woodsmen are scarce, and wages consequently higher than for some years past. Every few days sees the departure of a crew for the "Big Hole," or the "North Pole," or some other bear haunt, and to the uninitiated it is indeed an affecting sight to witness the partings which are to consign man to the forest depths (from whence with a sufficiency of pork and beans, he will emerge in the springtime, a veritable baby elephant) and his better half to wood-cutting and stable work, while the snow endureth. And when the balmy days of March breathe an aroma of returning "bush-whackers," the affectionate wife eagerly scans the snow-covered hills until that beloved form, clad in snow-shoes and whiskers, appears, when she rushes to his outstretched arms with the sentimental expression of welcome—"John have you any gum?"

NOVA SCOTIA.

—The excavation for the Halifax dry dock is well nigh completed, and about 150 feet of the concrete walls have been laid. Every appliance known to modern handicraft in the conduct of large contracts is in operation at these works and progress is very rapid. The coffer dam is a complete success and none of the harbor water can find an entrance into the excavation. The dock will be finished and ready for service within two years.

—Dougald Dickey, nineteen years old, had his left arm caught in a circular saw and torn out at Beckman's mill, Halifax, Nov. 16th. The saw also inflicted a bad wound in his side. The young man lived for only half an hour afterwards. An inquest was held by Coroner Ligney, of Waverly, when a verdict of accidental death was rendered. Dickey belonged to Glenmore, Middle Musquoboiboi.

—R. A. Gregory's mill, at Carleton, after some repairs, has resumed work, which will be continued about a month longer. Adams & Gregory's mill will run until the first of the year, when it will close down for repairs. Hayford & Stetson's mill will only run about a month longer. The Clark mill, it is expected, will run a few weeks yet. Warner's shingle mill is running night and day, giving employment to 25 men.

QUEBEC.

—J. B. Scott, lumberman, Nicolet, Que., has assigned for the benefit of his creditors.

—Mr. McLean's new steam saw mill at Otter Lake will commence cutting logs shortly.

—Water has been so low in the Missisquoi river that Messrs. Fuller & Hill, of Bolton, were obliged to stop work in their tub-mill for some four weeks. They have turned out and sold over 60,000 butter tubs this season.

—It is now reported that the Cookshire Mill Company will put up a steam saw-mill at Sawyerville, to get the lumber on the Newport and Clifton branches of the Eaton River above there. It is supposed that 100,000 cords of lumber can be obtained on the said branches of the Eaton River, above Sawyerville and as the Hereford Branch R. R. runs through that place it will evidently help to build up Sawyerville and much of the adjacent country.

AMERICAN NOTES.

—New York's building will average this year about \$1,250,000 per week. Philadelphia's account will run far behind, but may reach \$21,000,000 or \$22,000,000 for the year.

—Advices from Sault Ste. Marie are to the effect that there will be plenty of men for the woods in that region, and the log crop is estimated at 50,000,000 in excess of last winter.

—The lumber shipments from the Saginaw river for the season show a marked falling off as compared with any previous year since 1876, and the movement in shingles is the smallest since 1874.

—An Oshkosh, Wis., lumber firm has sold two thousand cords of pine slabs to a Chicago concern for \$3.50 a cord. Oshkosh also sells her sawdust, bark and edgings to outside parties for good prices.

—Although the receipts of lumber in Chicago have been greater by 130,000,000 feet than they were last year, the stock of lumber in pile in that city is about 20,000,000 short of what it was on Nov. 1st, 1886.

—The barge Waubaushene, in tow of the steam barge Isaac May, became waterlogged in Thunder Bay, Wis., October 29, and lost her deck load of lumber. She was bound from Serpent River, Ont., to Buffalo.

—The yellow pine manufacturers along the Atlantic coast are preparing for an increased production next year. The sap pine manufacturers are finding a good market for everything that they properly kiln dry.

—Saginaw capitalists and others are looking up and buying stumpages in the Duluth district, and the hope is created that the place which Proctor Knott made famous will again come to the front as a lumber producing point.

—Buffalo, N. Y., had received during the season to Nov. 1, 235,935,000 feet of lumber and 30,205,000 shingles, an increase of 2,250,000 feet of lumber, and a decrease of 14,000,000 shingles, as compared with 1886 to same date.

—The largest leather belt ever made or used in New England has just been furnished for the Boston Cordage Works. It is 120 feet long and three ply, four feet wide and weight 1,500 pounds. Over 100 hides were used in its construction.

—There is a deep-seated conviction, says *The Timberman*, in the minds of most Chicago dealers that \$12.50 is as little as piece stuff can be sold for. It has averaged to cost \$10 all the season, and '82 will not let the handler out with a profit.

—A colossal stick of timber from Puget Sound has been contributed to the Mechanics' Exhibition at San Francisco. Its length is 151 feet, and it is 20x29 inches through. It is believed to be the longest piece of timber ever turned out of any saw mill.

—It is reported that Southern lumber is constantly trenching on territory which for a long time was mostly supplied by white pine. The white pine dealers are, however, shipping lumber in great quantities from Chicago and more northern points of supply.

—No one knows, or can form an idea of, the volume and value of the Southern lumber trade, says the *Southern Lumberman*. We all know that it is immense; that it is growing, and we also know that all classes of Southern lumber are selling below their actual value. To use a Southern phrase, "we are fooling away what we already have."

—Everywhere lumber shippers are kicking about the scarcity of cars. Thousands of cars have been added to railway equipment during the year, but the famine has not abated and business is hampered. In the Saginaw valley 2,500 more cars could be used to-day than the railways can supply, and at Buffalo, Tonawanda and other points the lack of cars is a painful reality.

We are promised something wonderful in steam engines

into its own boiler; at least, so its inventor claims, and the *London Engineer* and the *Iron Age*, after elaborately explaining the invention, appear to think that there is some foundation for his hopes. The invention is simply to use the steam and then put it back into the boiler again. Take a case in point: The "City of Rome" burns about 400 tons of coal daily. This coal costs from \$1700 to \$1800. Run under the system at work by this last invention the same steamer could be run at a cost of \$200 daily. This item alone is enough to prove the value of the invention. It will cheapen the carrying trade, give more room for coal, do away with one-fourth or fifth of the space required for boilers, and reduce the cost of coaling stations for the navy. When applied to engines on shore, it will be equally revolutionary in its effects, and unless the invention can be applied to engines now in existence, we may, in a short time, see all the engines in the world worth nothing more than what they will bring for old iron.

NEW BRUNSWICK BUDGET.

Special correspondence to the CANADA LUMBERMAN.

Navigation has closed on the St. John river, and with it the work of the Frederickton Boom Company, and St. John River Log Driving Company. Both corporations handled about as much lumber as last year. The returns of the Frederickton Boom Company show: 118,000,000 superficial feet rafted, 97,000,000 feet of which were rafted at the booms, the balance by Tapley Brothers, as agents for the company, who collected and rafted what lumber went by the booms during the freshet of the spring.

In round numbers the quantities rafted for the leading lumbermen are.

W. H. Murray, St. John,	27,000,000 feet.
Miller & Woodman, "	15,000,000 "
Hayford & Stetson, "	15,000,000 "
E. G. Dunn, "	11,000,000 "
A. Cushing & Co., "	6,000,000 "
A. F. Randolph, Frederickton,	10,000,000 "

The St. John River Log Driving Company handled in all 103,851,580 feet, made up as follows:

From Grand Falls	59,576,642 feet.
" Salmon River	417,187 "
" Aroostock Falls	30,363,631 "
" Tobique River	10,761,827 "

All logs being driven clean within their limits except the jam that formed in the Aroostock Falls last spring of about twelve million.

The statements above give no idea whatever of the total quantity of lumber moved on the St. John river this season, but only represent what was cut above Frederickton and freighted to St. John direct. In addition about 31,000,000 ft. got above Frederickton were what we call bank logs, and rafted at brows and sawn in mills along the river. Alexander Gibson manufactured, say, 22,000,000 feet on the Nashawak, and about 20,000,000 were got on the tributary below Frederickton, making the total quantity got to market this season on the main river and tributaries in the vicinity of 191,000,000 superficial feet.

This winter the log cut will be larger than usual, but not nearly so many American logs will be got out, while the quantity of Provincial logs will be greatly increased. The reason of this change is that the U. S. Treasury Department has done away with the regulations which allowed Provincial lumbermen to bond their teams on going into the woods and have them cancelled when returning in the spring. Now duty is demanded of every team. By this move it was supposed that the St. John manufacturers, in order to get their complement of American logs, would be forced to employ American labor and Aroostock county (Maine) reap the benefit of it. The result is as we state, the quantity of American logs is greatly reduced.

It is almost impossible to give a reliable estimate of what this winter's cut will be. As near as we can get at it St. John manufacturers will get 23 million feet of Provincial logs above Grand Falls, and about 48 millions of American, which includes some seven millions hung up last year, from the Aroostock 30 millions of new logs (American), and fifteen million, from Tobique (Provincial). The largest operation will be that of Robert Connors at Cabano Lake on timber lands held by W. H. Murray and Millar and Woodman from the Quebec government. He will cut ten million feet of Spruce. They will probably be the largest cut this season and will average about 7½ to the thousand. Contract figures for Spruce are somewhat higher than formerly and are from \$9.00 to \$9.50 for American, and \$7.75 to \$8.25 for Provincial.

There will be considerable sawn lumber wintered in St. John. Dry shipping pine boards are very scarce and held at \$15 per thousand. Randolph & Baker's and George E. Barnhill's mills

CONTEMPORARY COMMENT.

We feel deeply indebted to our contemporaries of the press for the very kind reception tendered THE LUMBERMAN. Space will not permit of our republishing all the flattering notices sent us, and we have therefore simply taken the "narrow from the meat," which will suffice to show the esteem in which this journal is held. Such encomiums make us feel that our labors towards making this journal a credit to the interest in which it is published have not been in vain.

A very handsome and useful publication. —*Byron Advance*.
It is a fine specimen of the typographical art, and is highly creditable to the publisher in every way. —*Deseronto Tribune*.

Excellent printed, ably edited. —*Elton Express*.
The November number comes out resplendent in a new dress throughout and presents an exceedingly attractive appearance. It does one good to turn over its pages and admire the excellence of its typography. It gives a large mass of information. —*Pitou Times*.

It is always prompt in giving full and timely information on all subjects touching the lumber interests, and presents as handsome a typographical effect as any trade journal in the country. —*Canadian Manufacturer*.

It presents a most creditable appearance. Editorially it is ably conducted as usual, and is a welcome exchange. —*Sherbrooke (Que.) Examiner*.

In addition to making a very fine appearance typographically, several new departments have been added, and the scope of the journal enlarged. On the whole it is an exceedingly creditable publication, and reflects great credit on the ability and energy of the proprietor. —*Peterborough Daily Review*.

The handsomest trade journal in Canada. The advertisements are the neatest we have seen except in specimen sheets from type foundries. —*Peterborough Morning Times*.

It is well and carefully written, and as bright and neat as new type can make it. —*St. Catharines Daily News*.

It is one of the handsomest and best publications on the continent. —*Bruce Reporter*.

Its typographical appearance is a delight to a careful printer's eye, and a credit to Canadian journalism in every way. —*Bridge-town (N. S.) Monitor*.

Everything about it appears neat, clean, and in every way a credit to the publisher. —*Meaford Monitor*.

The trade journal of Canada's staple trade ought to commend itself. It bears evidence of being carefully conducted. —*Patent Review*.

It comes out in a beautiful new dress of type, and is worthy of commendation both in an artistic and literary sense. —*Peterborough Daily Examiner*.

Always full of news and looking well. —*Brockville Evening Recorder*.

Beautifully printed on fine paper, and full of information of interest to all engaged in the lumber business. —*Fenton Falls Gazette*.

It is gotten up with a taste and skill highly creditable to its management. Replete with news and ably written. —*Trenton Advocate*.

Its mechanical appearance is second to that of no paper of the class on the continent, and it is an excellently edited and compiled journal. —*Essex Centre Liberal*.

It has made solid advance in prosperity as well as literary excellence. In typography it is a credit to home craft. —*Kingston Daily Whig*.

It may be said to be typographically faultless, and has reached a point in the art of typography attained by few journals and surpassed by none on the continent. Its editorial matter compares favorably with its typographical appearance. —*Lakefield Chronicle*.

It compares favorably with any trade publication on the continent. —*Nipissing Times*.

Its general appearance, as well as in the range and quality of its contents, is a credit to the special interest in which it is published. —*Miramichi Advance*.

It is an excellent journal and should be patronized liberally by the trade generally. —*Perry Sound Star*.

It is well printed and brim full of interesting reading matter, and is a journal which should be in the hands of every manufacturer, contractor and mechanic. —*Cannington Gleaner*.

It looks very handsome. —*Aurora Borealis*.

It is as pretty a journal as can be seen anywhere, and its contents are such as to deserve all the aid which a good typographical appearance can give. —*Dundas Standard*.

Nous accusons reception du dernier numero du CANADA LUMBERMAN, publie a Peterborough, Ont. Ce journal s'occupe exclusivement du commerce de bois. Il contient les prix du bois et donne beaucoup de renseignements sur la qualite du bois dans differentes places. Ce journal annonce qu'il a des correspondants particuliers dans toutes les localites importantes, afin de mettre le lecteur au courant de tout ce qui se passe dans le commerce de bois. —*La Presse*.

The attention it gives to the interests of the class for which it is published deserves the success it is achieving. —*Brockville Daily Times*.

Well printed, ably written. —*Gladstone (Man.) Age*.

Its mechanical make-up is excellent, and altogether it is a worthy representative of an important interest. —*Bobbygon Independent*.

It is greatly improved, is a live publication, and carries several carefully edited departments. —*Albert (N. B.) Maple Leaf*.

Nous accusons reception du CANADA LUMBERMAN, journal industriel publie a Peterborough, Ontario. C'est un journal d'une grande importance pour la classe a laquelle il s'adresse et tres bien fait. Nous le recommandons a ceux qui ont des interets dans le commerce de bois, et aussi a ceux qui veulent se tenir au courant des machinerie nouvelles offertes aux industriels. L'abonnement n'en est que de \$1 par annee. Pour plus amples informations s'adresser a M. A. G. Mortimer, editeur, a Peterborough, Ontario. —*L'Union, St. Hyacinthe, Que.*

Notre estimable confrere de Peterborough, le CANADA LUMBERMAN, nous arrive cette semaine avec une toilette tout a fait nouvelle et tres elegante, l'indice d'un excellent etat de prosperite, ce dont nous le felicitons cordialement. Le CANADA LUMBERMAN, est publie dans les interets du commerce des bois et des diverses industries qui en decoulent. Il est le seul journal du pays qui traite exclusivement de cette branche si importante. En souhaitant longue vie au confrere, nous exprimons l'opinion que tous les commercants de bois du pays devraient etre ses abonnées. —*Le Moniteur du Commerce*.

It is a valuable publication to all who take an interest in lumbering and manufacturing, and is a credit to the publisher. —*Penetanguishene Herald*.

A handsome publication, of which the lumber and kindred trades have every reason to feel proud. May its light ever shine. —*Port*

NEWS NOTES.

—The building in Calgary during last season aggregates \$270,000, largely in residences.

—The season's cut in McGillivray's mill, Peneanguishene, amounted to 3,000,000 feet. They ran from 15th April to 14th November.

—September showed a fire waste of over \$3,000,000 in the United States and Canada. Lumber interests contributed something like \$1,000,000 to the total.

—At Tay Creek, N. B., an elm tree was recently blown down which was four feet in diameter, and measured 36 feet to the first limb. The trunk contained 4,000 feet board measure.

—Messrs. Miller & Woodman are building what is said to be the largest shingle mill in New Brunswick. It will be 165 feet long and 80 feet wide, and there will be 20 shingle machines in it.

—Messrs. J. R. Booth & Co. have completed laying the side tracks through their new piling grounds on the line of the extension of the Canada Atlantic Railway and the grounds are now ready for use as soon as the extension is completed.

—Alexander White, aged 19, son of Mrs. A. White, of Alice, while engaged in raising a scoop bearer on a building in Smith's shanty, Pettewawa, was instantly killed. The bearer slipped, striking him on the side of the head. He lived for about half an hour, bleeding to death, and never spoke.

—A saw mill at Rochesterville, a suburb of Ottawa, owned by Mr. A. G. Jones, and many thousand feet of lumber, the property of Mr. J. R. Booth, have been destroyed by fire. The loss on the mills and building, with planed lumber, will amount to \$8,000. There is insurance, but only to a third of the amount. The loss on the lumber will be heavy.

—An extensive fire has taken place in the saw mills belonging to Messrs. Hurdman & Co., at Ottawa. Both mills were completely destroyed. Eddy's mill had a narrow escape. No idea can be formed of how the fire originated. The loss is put at \$75,000, with an insurance of about \$35,000. The burned buildings were not of great value, the chief loss arising from the valuable machinery they contained.

—An occasional correspondent from Madawaska, N. B., writes: The rush for the woods has started in full blast. There will be more extensive operations in long and short lumber this season than usual. Men are scarce. Oats, hay, and beef run in price about the same as last year. G. V. Hammond is making things lively in his parish just now. Mr. Ward has started his new steam mill and it works like a charm. He is erecting a track above Grand Falls bridge to the mill, in order to better facilitate the moving of lumber.

—In fitting up mills and workshops, one of the most important items to be considered is the belting, and upon this portion of the plant depends, to a great extent, the satisfactory working of the machinery, for if the belting is good all will run smooth and evenly. We hear that Messrs. Robin & Sadler, of Montreal and Toronto, are to supply the entire outfit of leather belting for the immense flour mill at Keewatin, now being completed by the contractors, E. P. Allis & Co. of Milwaukee, who have without doubt, placed their belting order in good hands for execution.

—A large colored map, 6 feet by 9, showing the canals of Canada and the connecting and competing canals of the United States, as well as the Canadian water power, will shortly be issued by the Department of Inland Revenue. The main map is planned on a scale of three miles to the inch, there being shown in addition an enlarged map of each canal. Tables and other smaller maps in the main map also show canals proposed as well as defunct, profiles, lockages, and tables of comparative sizes of locks. The map was designed by Mr. F. K. Blatch, of the Department, who has been engaged on the work for three years.

—The following revised estimate of the amount of lumber cut by different lumber firms at the Chaudiere during the past season, furnished by the *Mail* correspondent, which is about fifteen per cent. less than the cut of 1886, the latter, however, being the largest turned out at the Chaudiere for twenty years previous: —Bronson & Weston, 65,000,000; J. R. Booth, 70,000,000; E. B. Eddy Manufacturing Company, 69,000,000; Perley & Pattee, 70,000,000; Hurdman & Co., 56,000,000; Grier & Co., 35,000,000. Although the cut this season is almost up to the cuts of former seasons, the disadvantages in the shortness of the log cut during last winter have had the effect of leaving most of the firms without a customary reserve fund of logs to begin work next summer, and should the supply of logs secured this winter be not up to the standard there will undoubtedly be a considerable shortness felt next summer. The lumbermen are, however, very confident of the coming season being a prosperous one, and have placed unusually large gangs of men in the woods, with the intention of

European Financial Statistics.

Americans will see in the following financial tables some powerful reasons why European producers emigrate from Europe by hundreds of thousands annually. Enormous governmental expenditures and national debts make the burdens of taxation unendurable and force the citizens of European countries to seek work and homes in other lands where wars are fewer and taxes lighter. Here is the showing from official records:

	Annual Expenditure.	Army and Navy.	Interest on National Debt.	National Debt.
Austro-Hungary	\$97,337,071	\$13,867,743	\$23,066,909	\$523,908,381
Belgium	12,652,396	1,964,716	4,146,502	84,677,042
Denmark	2,734,432	924,701	567,431	10,845,755
France	147,417,215	34,201,118	50,697,092	1,435,011,000
German Empire	34,530,775	22,660,123	915,175	28,407,000
German States	94,917,042	14,246,565	352,727,179
Great Britain	92,223,884	39,288,594	23,449,678	748,282,411
Greece	3,521,919	1,282,496	919,915	19,419,792
Holland	10,911,970	2,589,684	2,782,440	88,545,242
Italy	68,009,166	12,704,934	21,213,147	449,262,660
Norway	2,392,621	447,252	261,751	5,953,866
Portugal	8,476,731	1,512,234	3,208,353	115,354,000
Roumania	5,309,780	1,130,110	1,987,215	28,960,805
Russia	130,792,309	36,839,353	38,946,774	586,323,803
Serbia	1,839,825	648,451	463,353	8,851,000
Spain	36,637,054	8,013,404	9,522,857	254,425,140
Sweden	4,712,777	1,404,125	596,020	13,726,088
Switzerland	2,102,100	682,013	74,710	1,428,539
Turkey	12,894,213	5,628,911	1,006,437	104,897,217
Tot. of all Europe	\$770,008,447	\$166,944,502	\$198,072,394	\$4,810,422,260

Is Steam the Best for Power?

The conversion of water into steam absorbs such a large amount of latent heat that many persons have endeavored to obtain some substitute which produces a vapor by absorption of less heat. Such attempts, to obtain economy of fuel, are not likely to be successful, not on account of mechanical defect, but because of the inherent physical properties of the vapors produced.

The mechanical value of the expansive force of different vapors, depends upon the bulks produced from equal bulks of different liquids, and although water absorbs in its conversion into steam a greater amount of latent heat than any other liquid, the amount of vapor produced, bulk for bulk, is greater than it is with other liquids. There still might be some gain were it not that for the equal volumes of these vapors, experiments have shown that the latent heat is very nearly equal.

There would, therefore, be no economy in using other liquids in place of water, even if they cost no more. On the contrary, there are reasons to expect that there would be a loss. The engine would take a definite volume, and hence a definite amount of latent heat, to keep it running in either case. In addition there would be to charge up against any other liquid the increased volume necessarily pumped into the boiler, against the boiler pressure, to keep up this definite volume of vapor. Were it not for the fact that this great difference in volume, between water and steam, is of immense importance in the economy of power, then there would be no economy in using steam over pumping cold air into the boiler and using hot air to run the engine.—*Journal of Progress.*

THE WESTERN STATES.

Special Correspondence to THE LUMBERMAN:

ST. LOUIS, Mo., Dec. 1, 1887.

Under favorable weather conditions the lumber interests of the Middle and Western States was equal in all respects to the anticipations during the month just ended.

Prices all through the section of country I write from have been firmly maintained. No change of importance either way is looked for until spring. Col. Philip Gruner & Bros' Lumber Co. will increase their rafting business next season to 14,000,000 feet. The total receipts of white pine in raft this season has reached 209,000,000 feet. The hardwood trade is falling off some.

FRANK R. BIGNEY.

TAKE time to do repairs thoroughly. It will pay in the long run, although it will seem almost time wasted now.

London, Eng.

Nov. 19th.—There was a rather full room on Wednesday, at Messrs. Simson & Mason's sale, considering the limited quantity of unreserved goods to be submitted, which certainly seems to indicate more disposition on the merchants' side to acquire stock. The close of the season without any heavy increase to the stocks is evidently having a healthy influence on the trade here. The big rise in freights, coupled with the appearance of an early closing of the shipping ports, makes any heavy consignments now very unlikely.

There has been nothing in the state of the market here to induce speculation, although, if tonnage had been plentiful,

season. There is a marked absence of Swedish deals from the sales lately. We do not know whether we may take this as an indication of any scarcity; but it, anyhow, is pretty plain proof that those who are stocked have no occasion to go to the sales to realize. Beyond a few odd lots here and there, the moderate quantity of Gulf red deals was a noticeable feature.

Spruce went low, but the 3rd pine was a bit better treated: 9 to 10 ft. planks at £8 10s was certainly low, but sellers could hardly complain of some 13 feet that realized 20s better.

The shipment, per "Jarlen," from Quebec, consisting of 24 lots of pine and spruce of the lower qualities, sold fairly well, being old stock. The four lots of unsorted Miramichi spruce, ex "Finland," offered without reserve, luckily enabled the auctioneer to dispose of five succeeding lots that had a holding price upon them.

The expected reaction which long before this period would in the ordinary fluctuations of trade have supervened on the severe depression from which the wood market has suffered seems as far off as ever. We are not alluding merely to a recovery of the market in respect to certain goods, which may have been only moderately traded in, with a consequent decline in the importation which has sunk below the demand, but in a general uprising in the demand for building timber throughout the country; not some large works here and nothing doing in another direction, but universal activity all over the kingdom. Such a return to prosperity of the building trade as would make itself felt on all an' every description of imported timber. Before we can hope for such a happy result we shall have to witness a revival of the staple industries of England.

We do not notice any particular alteration in the dock deliveries except that flooring keeps active.

The importation is gradually thinning off and the cargoes at the tail end of the season are at present far short of the average quantity. *Timber Trades Journal.*

Liverpool, Eng.

Nov. 17th.—The better feeling still prevails, and the general impression seems to be that there are good times in store for the timber trade. We are not too sanguine, but sincerely hope it may be so; up town and on 'change there is a still stronger tone and many articles of produce have gone up considerably. Outward freights are better, and homeward freights from many places much improved; there is a good demand for shipping, and some of the large shipbuilders here, on the Clyde, and elsewhere, have recently received good orders. All these things help trade and are encouraging.

The arrivals have been few, there being only eight vessels, three of which are steamers with pine deals and boards from Montreal, two cargoes of spruce deals from Lower ports, one with mining timber to Garston, and two or three parcels of ash, maple, oak, teak, etc.

There have been several transactions in timber during the week. A parcel of common pine, per Narwhal, was sold at 18d., and some of better quality but smaller averaged 19½d.; a parcel of elm, per Abana, at 20d., and the oak, per same vessel, large and of good quality, to the Midland Railway Co. at 3/- . A parcel of Halifax birch has been placed at 16d., and I understand, this price was paid some little time since for the St. John's wood now landing.

The cargoes of spruce deals, per Volkora and MacLeod, now discharging, are, I believe, still unsold, and the importers are asking high prices for them.

Low-Priced Boilers.

Low-priced boilers are not generally the cheapest that can be bought, although there is an almost universal opinion that they are. On the contrary they are, in the majority of cases, the dearest that can be bought. First-class boilers at the present time do not command an excessive price, no fancy profits are made on them, nor have been made for some years past. What then does it avail a man to buy a boiler for say \$500, get an article made of the poorest material that can be worked, put together in the slouchiest possible manner, generally be stopped several times during the first year to have repairs made which never ought to have been needed, and would not have been required had the boiler been made properly, when by paying \$200 more in the beginning he would have avoided all trouble, actually have expended less money at the close of the first year and probably have run his business uninterrupted. It is needless to say that some manufacturers always buy the very best of everything they can get to do their work with. Such men always have the best of boilers and engines, they are cared for in the best possible manner, and it is generally noticed that they are, as a general rule, more prosperous than their slipshod brethren who are always after

EXCHANGE ECHOES.

The Timberman, Chicago.

Whether the log stock that is to be put in this winter will be equal to or exceed that gathered last year, is a question already exciting interest and comment among lumber makers and lumber dealers. Up to this time, all the signs point to the conclusion that there will be no decline in the output, notwithstanding there are in many of the districts in which large operations are carried on, a good many old logs that still await sawing, having, unluckily for their owners, been held back by low water in the streams until past the time for conversion into lumber this season. All over the pine territory, it is reported that extensive preparations are making for the input of logs, the news evidencing the fact that the sum of the loggers' intentions is, as it usually has been, to get in all that he possibly can, with the time, timber and means he has at command.

Mississippi Valley Lumberman.

A despatch from Calais, Me., recounts a curious complication that has arisen at Baring, in that state, over lumbering. The custom house officials there have seized a large amount of heratock lumber, owned by H. F. Eaton & Sons, for alleged violation of the revenue laws. The lumber was manufactured and planed in mills now situated on the Canadian side of the river, but the owners claim that when the mills were built they were on the American side, and that time, dams and improvements have changed the course of the river. Some sixteen years ago the question of location arose and the authorities decided that the mills were American, and the present move is a great surprise. The mills have been shut down until a treasury decision can be obtained. If the present tactics of the customs officials continue it is the opinion of the best informed citizens that it will ruin the business of the American side of the St. Croix river.

Timber Trades Journal, London, Nov. 19th.

Up to the present we hear of nothing of consequence having been done in the f. o. b. trade in the English market for next open water. We expect London importers, who have been a bit cautious this year, will be encouraged to buy, owing to the moderate consignments which the closing season brings. The opinion seems to be that the first transactions for next year will be in flooring to the outports; but in the London markets are excessive, and buyers will certainly have no need to hurry into cargo transactions. It is expected that there will be a scarcity of whitewood—though this is an unusual thing at the European ports—which, coupled with the advance in freights, will lead to a corresponding advance in the delivered price of flooring. It is possible that with the opening of the season lower freights may be quoted, notwithstanding the serious loss of Norwegian ships caused by the recent gales; but the large quantity of goods wintering will stimulate the demand for tonnage as soon as the shipping season begins.

A Cheap Steam Box.

In nearly every shop, some form of apparatus for bending wood would be often used were it available. Where steam is at hand, there is not the slightest excuse for not having a steam box for use in wood bending.

Steam is so scarce in some shops, where the work is too great, and the boiler and engine too small, that the exhaust steam must be utilized. In a number of cases the writer has successfully used the exhaust for this purpose, by building a perpendicular box of plank and making doors for the introduction of the wood to be steamed.

In many shops the exhaust steam is allowed to escape from the end of a horizontal pipe and no notice is taken of what the steam comes in contact with during its absorption into the atmosphere. In all such cases the steam box will be a benefit in the preservation of surrounding buildings alone.

The steam-box in question was built of two-inch white pine planks, each 14 inches wide, two of them rebated upon their edges $\frac{3}{4}$ by two inches to receive the edges of the remaining two planks. This steam-box was 16 feet long. One foot from the bottom, a head of two-inch plank was cut in and finally nailed. This head was bored three or four times with a $\frac{3}{4}$ -in. bit, to allow the water of condensation to escape. Just above the head, as the box stood on end, a hole was cut to receive the end of the exhaust steam pipe. A cast-iron flange was bolted to the steam-box and the pipe screwed into the flange, but if the exhaust pipe be of cast iron, the threaded flange may be dispensed with, and the cast-iron pipe bolted or lag screwed direct to the wood.

The plank forming one side of the box is not nailed into its rebate. Instead, it is cut into three feet lengths, excepting the top length, which is four feet long, and together with the bottom piece is nailed in place, leaving three loose sections of three feet length each. These sections were hinged on one edge and made fast when closed, by pins of wood, one to each section, which were placed in holes bored through the rebated plank, into the hinged section.

The box in question was fitted with iron hinges—common

eight inch hinges, the end of each hinge being bent around the corner of the rebated plank. If the writer ever constructs another steam box of this kind he will use brass hinges, so they will not rust out, a thing the iron hinges will do in six months unless they are kept well greased or tarred.

Suppose the stop moulding of a big circular window is so made. This moulding can be got out straight, and bent into place by sawing into one side at regular intervals. With the steam box this moulding can be got out straight, steamed half an hour, and forced upon a form there to remain until cold.

A convenient way to make a form or mould is to cut out of plank, with a band saw, the shape desired. Now, nail pieces of board upon each side of the plank, letting the ends of the boards project six or eight inches, and placing them directly opposite each other. These bits of board must be distributed at the parts of the mould requiring pressure to be applied, and the location of these boards will call for the exercise of considerable judgment. Get a supply of common framing pins, and bore holes through the bits of wood large enough to allow the pins to pass freely. $\frac{1}{2}$ -inch holes should be made for one inch pins, which are large enough for any ordinary work. Bore the holes just far enough from the form to allow the pin to go in, after the piece to be bended is in place. For $\frac{3}{4}$ -inch stock place the worm of the bit 15-16-inch from the edge of the plank form.

Stock to be bent should be left considerably longer than its finished length to allow plenty of room at the ends for the removal of poorly bent material. It is very hard to bend the extreme ends of the work, especially where the work is placed upon the convex surface of a mould. The convex side is usually used because the work can be easily forced into position thereon. To force work into the concave or hollow side of a mould requires enormous leverage and much time. It can sometimes be profitably done in the case of small, light work, and when the stock must be bended close to the ends of the various pieces. When concave moulds are employed, it will pay to make a follower, or convex mould to fit the hollow mould. This is forced against the stock to be bended, and when both moulds are in contact with the work, sufficient pins are inserted to hold the moulds firmly together until the work is cold.

A cheap and efficient mould can be quickly made by sketching the desired shape on a plank, then boring holes at certain points and inserting pins therein. The steamed stock can be sprung between three of the pins, then others inserted until the work is brought to the desired shape. This method answers well for thick, heavy pieces, but with thin delicate stock it does not give satisfaction owing to the liability to *knick* or bend abruptly where the pins engage the stock.

The several doors in the above described steam box, are for putting in different lengths of stock, one or more of them being opened as necessary.

A fine box nearly like the above, was seen by the writer in an eastern shop, but instead of standing vertical it lay upon its side, and the stock was inserted and removed at one end. In this case, the steam entered and was removed through wrought iron pipes five inches in diameter.

Small shops in which steam is not employed, make good use of the above described steam-box and generate steam in a 10 or 12 gallon iron kettle or pot. A wooden top is fitted to the kettle and cemented therein with "elastic cement." A pipe leads to the steam-box, and the kettle is supplied with water through a hole in the wooden top, after which the hole is closed with a plug. Although not as quick as the first box, this one will do good work.—James Francis, in *Woodworker*.

Something About Cordwood.

Ever since the country newspapers began, in a wooden country, to enlighten the hewer of the forest or to tell the agriculturist how to "tickle earth with a hoe that it might blossom into harvest," the subject of cordwood has possessed interest for the weekly writer. Abnormally-sized eggs, supernatural pumpkins, luxuriant garden-grass, even over-corpulent hogs, never seemed of so much moment in the sanctum, what ever they might be to the grower, as a good supply of hickory or beech fuel.

"The graceful elm, the energetic oak,
The red-leaved maple and the slender pine."

which a Canadian poet lovingly describes have all served, from time to time, to warm the hearts and toes of Solomon of Streetsville and others of his guild, and to awaken their thanks for such remittance in kind. But it has been reserved for the poet philosopher of the Bobcaygeon *Independent* to evolve, in a reverie, kindled by the flames of ash or elm, such a poem in praise of cord-wood as we clip from his last issue. Whether regarded from a poetic, economic or even a merely spondulic point of view, this idyl concerning one of our great staple products cannot but be interesting. Before he scans it, let the reader think of the learned and genial writer sitting, meditatively, as a Canadian-Ike Marvel, at his back-log fire,

pondering, first, the SMOKE, signifying DOWN (whether his sticks are going to burn) FIRE, signifying CHERR (at his having got even with another subscriber) ASHES, signifying DESOLATION (of fears whether he is going to have enough of such fuel for the winter.) Now he sings:

"The summer is over; the autumn leaves have fallen; the pulse of Nature beats feebly and slow; Arcturus is poised high in the northern heavens; Aurora has flashed her gleaming rays of violet and of gold from pole to zenith; the icy breath of the paleocrystal seas has been borne in upon us, and what about our cordwood? Ay, what about our cordwood? That is a very important matter, and every year it increases in importance, for the sources of our cordwood become fewer and more remote. There is not so much cordwood left in Canada as is commonly supposed. Of the thousand of miles of railway operated by the Grand Trunk Company the Midland is the only division that runs through a cordwood country, and only a portion of that division can supply fuel in considerable quantities. The city of Montreal is even now suffering from a dearth of cordwood. The price of wood in Montreal last week went up 50 cents a cord owing to its scarcity. Maple in Montreal is selling at \$8 a cord, birch at \$7.50 and beech at \$7. A large dealer has publicly declared that there is no cordwood to be bought throughout the country. Toronto has for its chief sources of supply the Victoria branch of the Midland, the district around Penetanguishene and the new extension of the Northern Railway. Two or three years will make a great reduction in those sources of supply, and then there will be the same condition of affairs in Toronto that now exist in Montreal. There are several facts connected with the cordwood trade which deserve notice. The wood itself is of no value. It realizes nothing. The man who cuts the cordwood, let us say on the Victoria branch, obtains \$2 a cord delivered on the railway. That \$2 is merely the value of the labor expended in cutting the wood and hauling it to the line, the wood itself counts for nothing, the man who cuts it giving the wood gratis. When the wood reaches Toronto it sells for \$5 a cord, the \$3 being consumed in freight and profit to the dealers. This is a subject upon which Toronto citizens would do well to reflect. The wood difficulty is becoming serious. They require a great heap of wood. Let them lay their heads together and the difficulty will be overcome."

But again, if cordwood as the years roll on, is growing scarcer, —and our worthy statistical brother in the neighborhood of Cobocook University, has shown that it is, he should be glad to find it growing more valuable to the farmer, the druggist, the builder, the scientist. The possibilities of cordwood are not yet all grasped. Paper, we know, is made from it; works of art are modeled from the dust of it; chemistry has found many recondite qualities in it. But there are more wonderful things still. Talk of dainty butter made from the scrapings of the London sewers, of handkerchief perfumes from crude petroleum! Something quite as remarkable is going on to-day at Cadosia, in New York State. At that place, hardwood is now distilled in large works erected for this purpose. From the distillation there is produced, 1st alcohol; 2nd acetic vapors which being mixed with lime, forms acetate of lime; 3rd, tarry matters and naphtha; 4th heavy tar used as fuel, and 5th, the refuse, which is fine charcoal. No more let the Northern sage say there is no value in wood that "it counts for nothing." In the light of what has here been said (and sung) about the hard timber of the forests, surely there is, within the reach of every possessor of a belt of wooded land, to quote the words of another sage "a potentiality of wealth beyond the dreams of avarice." *Monetary Times*.

Grinding vs. Filing Saws.

The majority of sawyers now grind their saws. It is quicker than filing, is cheaper, and leaves the saw in good shape. Some say "grind square across," and we have tried it, but we think it is better to have the front teeth a little "fleaming," even for hardwood, and more so for soft. According to our principle, as laid down in our cutters, this should be so. Saws that are filed by the average shop hand often look as though they could "gum it" better than they could cut with their teeth. Don't run a saw with the teeth half filed down; gum your saws and keep them gummed. Some room must be left for the sawdust to fall into as the teeth cut it out. Give the saw a liberal set. If you are afraid of using up too much lumber, get a thin saw. Thin saws are the ones to do the work, but they must be kept out of the hands of cheap men. Many shop-owners have the idea that it is a saving to have one man furnish the brains to run the shop, and hire seventy-five-cent men to run the machines. This works well enough in theory; but in practice cheap hands will run every knotty or poor piece of stock available, and the cost of keeping their machines in order is more than equal to the amount saved from their pay. Put the best men in the shop that you can get. Establish a set of premiums for better work, and better methods of doing it, and your shop will pay. *Mining and Scientific Press*.

TRADE REVIEW.

Toronto, Ont.

Nov. 29th, 1887.—During the current month correspondence interesting to lumbermen passed between Mr. Wragge of the G. T. R. and Mr. Wilson of the C. P. R. regarding the length of time allowed for the unloading of cars, as also the number of cars that the C. P. R. can place on Esplanade.

The length of time given to consignees to unload cars is from 7 a.m. to 5 p.m., or 9 hours, at the expiration of which the cars loaded, partly loaded or empty, will be withdrawn and replaced with fresh cars. Should any cars remain loaded or partly so a charge of \$2.00 per car is made for replacing—all of which means that the city traffic of the G. T. R. has increased beyond the siding accommodation at the Company's disposal.

This arrangement does not commend itself to those lumbermen who have long distances to move their lumber. It is unfair to those in the northern part of the city to expect them to unload cars of lumber in so short a time. The condition in which the back streets are, the difficulty of getting teams at busy seasons and the hundred and one hinderances all go to consume the allotted time. The R. R. Co.'s exact too much and make no allowances in turn.

Trade has been fairly active, almost as good as the last month. Vessel lots are about done for this season. Prices remain firm and are about the same as in your last issue.

CAR OR CARGO LOTS.

Table listing various lumber products and their prices, including items like '1 1/2 and thicker clear picks, American inspection' and '1 1/2 and thicker, three uppers, American inspection'.

YARD QUOTATIONS.

Table listing yard quotations for various lumber products, including 'Mill cull boards & scantling', 'Shipping cull boards', and 'Scantling & joist'.

Montreal, Que.

Nov. 29th, 1887.—At the beginning of the month operations in lumber were, on the whole, satisfactory, having almost exceeded expectations, particularly for local and country trade. Stocks were low, and prices inclined upwards. Towards the middle of the month we find the market in good condition, although not quite up to previous expectations.

The long continued complaints by shippers of lumber and other merchandise, of lack of cars and poor despatch on the railways, have attracted attention from railway men. The Freight Agents Association met in the Windsor hotel, last week, when the subject of delayed cars was discussed.

From the annual circular of the Export Lumber Company, Montreal and New York, we learn that during the season of 1887 40 vessels loaded with 25,879,330 feet of pine, sailed from Montreal for the River Plate, and that 15 vessels loaded with 7,719,058 feet of spruce sailed for the same destination from other ports on the St. Lawrence river.

output from that river to the River Plate 33,598,388 feet of pine and spruce, a larger quantity than has been shipped during any previous season, with the exception of '84, when 36,938,548 feet was the output.

Table listing prices for various types of lumber such as 'Pine, 1st quality', 'Pine, 2nd', 'Pine, shipping culls', etc.

Ottawa, Ont.

OTTAWA, Nov. 28.—It is now estimated that the lumber cut at the Claudiere for this season will be about 360,000,000 feet, a falling off of about 10 per cent. from last year's cut, which was the largest for many years.

Table showing lumber statistics for Ottawa, including 'Sawed lumber, feet', 'Lath, pieces', 'Railroad ties, pieces', etc.

This shows a decrease in values as compared with October, 1886, of \$28,000.

The distribution of the lumber was as follows:

Table showing distribution of lumber: 'For consumption, feet', 'In bond for export'.

Of the lumber 10,426,876 feet was shipped by water and 8,046,567 by rail.

Table listing prices for various lumber products in Ottawa, including 'Mill culls', 'Cull strips', 'Scantling', 'Laths', 'Stock shorts', etc.

This good stock is not for local trade and cannot be purchased except by the million feet. Small quantities of good stock and good siding are sold locally by McLaren & Co. only as high as \$40 per thousand feet.

Hamilton, Ont.

The following are the ruling prices of the yards here:

Table listing prices for various lumber products in Hamilton, including 'Mill cull boards and scantlings', 'Shipping cull boards', 'Scantling and joist up to 6 feet', etc.

Goderich, Ont.

PRICES IN CAR LOTS.

Table listing prices for various lumber products in Goderich, including '1 inch Mill Culls', '1x6-8-10 & 12, common', etc.

Chicago, Ill.

Nov. 29.—The recent hurricane snow storm knocked the lumber fleet flat, so far as getting lumber into port went. The squadron was scattered all over the lake, driven into port wherever harbor could be reached, and on to shore in some instances.

Up to the time of going to press, there had practically been no market this week, on account of a lack of cargoes to make one. Some lumber was sold to arrive. One cargo of White lake lumber, all common inch, with the better picked out, sold for \$12.50 a thousand.

As near as the commission men can figure, there are about 25 cargoes more to come on the market, and that will wind up the season's bobbin.

CARGO PRICES.

Table listing cargo prices for various lumber products, including 'Dimensions, short green', 'Long joists', 'Cull piece stuff', etc.

Receipts of lumber and shingles for the week ending November 23, as reported by the Lumbermen's Exchange:

Table showing receipts of lumber and shingles for 1887 and 1886, including 'Increase' and 'Decrease'.

STOCK ON HAND NOVEMBER 1.

Table showing stock on hand for November 1, 1887 and 1886, including 'Lumber', 'Shingles', 'Lath', etc.

Saginaw Valley.

SAGINAW, Nov. 29.—The Courier says: The cargo market is at a standstill, no sales having been reported during the week. There is some little inquiry for stocks to hold over of certain grades, and no changes in quotations are reported.

The car trade is active and business seems to be limited only by the ability of shippers to obtain cars. One thousand are wanted where 100 are secured, and the indications all point to an exceptionally large movement during the winter months.

Shingles continue firm at previous quotations with limited stocks on hand.

CARGO LOTS.

Table listing cargo lots for various lumber products, including 'Uppers', 'Common', 'Shipping Culls', etc.

YARD QUOTATIONS—CAR LOTS DRY.

Table listing yard quotations for various lumber products, including 'Clear, 7/8 in.', 'Floored and Siding—Dressed', etc.

Finishing Lumber—Rough.

Table listing finishing lumber prices, including 'Three uppers, 1 in.', '1 1/2 & 1 3/4', etc.

Joist, Scantling and Timber.

Table listing prices for joist, scantling, and timber, including '12 to 18 feet', '20 feet', etc.

Buffalo and Tonawanda, N. Y.

TONAWANDA, N. Y., Nov. 25.—Tonawanda is rapidly assuming the air of quietness, that usually characterizes it when barges begin to lay up and canal boats cease to run.

The yards will all be piled up in good season, and the inventories be taken early. Then the grave subject of the year's profits will absorb the dealer's mind to the exclusion of everything else, and I do not doubt but that, in most instances, the results will be pleasing; for while the season of 1887 has had many drawbacks and plenty to contend with, the result of it all is as favorable as perhaps most sanguine anticipated.

A visit to the different yards shows lots of lumber on hand. And Tonawanda is in pretty good shape to meet the winter's trade. But in some thicknesses and grades there is not the stock we wish to have.

Table listing lumber prices for Norway Pine-Rough, White Pine-Rough, and Dressed Lumber. Includes items like No. 1, 1 & 1 1/2 in., 1 1/2, 1 3/4 and 2 in., etc.

Table listing Shingles and Lath prices. Includes items like Shingles, 18 in. XXX, Lath, pine No. 1, etc.

Duluth.

DULUTH, Nov. 28.—The lumber cut of the season is now about determined, though one mill is yet running and detailed statistics are not yet in.

Table listing lumber prices for Duluth, including R. A. Gray's, Peyton, Kimball & Barber, Peck & Sons, Hubbard & Vincent, Gaff, Murray & Co.

Exact figures may make the total somewhat larger than this. The estimate at the beginning of the season was from 55,000,000 to 60,000,000 feet.

J. P. White & Co. have leased the Tower mill of Sellers & Owens, which cuts about 5,000,000 feet a year.

New York City.

Nov. 28.—The date is fast drawing near when the river and canals will be closed to navigation, and for that reason supplies are rushed forward as fast as possible.

There are no special features concerning prices. The same

quotations covering the market for the last three months still exist, and the decline in orders is certainly not conducive to an advance.

Export trade is still quiet, and the condition of affairs is at least annoying to shippers. While a few vessels are loading for ports in various directions, much of the stock is for filling out cargoes, and not on actual order.

Black Walnut. 3 1/2 in., all clear. \$32 00 @ 85 00 Culls, 1 inch. \$36 00 @ 38 00

Poplar, or White Wood. 3 1/2 in. 10 inches and over. 22 00 @ 24 00 1 1/2 to 2 inch. 29 00 @ 30 00

Dressed Poplar. 3 1/2 inch panel. 24 50 @ 25 00 1/2 in. cullin boards. 27 00 @ 28 00

Ash. 1 inch, white. 37 00 @ 39 00 Strips, clear. 28 00 @ 30 00

Oak. 1 inch plain sawed. 37 00 @ 39 00 1 1/2 to 2 inch. 37 00 @ 40 00

Cherry. 3 1/2 in., white & clear. 65 00 @ 70 00 1 inch. 70 00 @ 75 00

Miscellaneous. Chestnut, clear. 35 00 @ 38 00 Redwood California. 35 00 @ 38 00

Philadelphia, Pa.

Table listing lumber prices for Philadelphia, Pa., including Mich. uppers, 1 to 2 in., 2 1/2, 3 & 4 in., etc.

Cargo Lots.

Table listing cargo lot prices, including Yellow pine edge bds, Heart face boards, Hemlock Boards and Scantling.

Shingles and Posts.

Table listing shingles and posts prices, including Cypress shingles, Cedar shingles, etc.

HARDWOOD.

Table listing hardwood prices, including Walnut, Nos. 1 & 2, 1 in., good dry, Indiana, etc.

Oak.

Table listing oak prices, including Nos. 1 & 2, 1 in., good western, straight, etc.

Ash.

Table listing ash prices, including Nos. 1 & 2, 1 in., good western, etc.

Yellow Pine—Yard and Wholesale.

Table listing yellow pine prices, including Sc'tlg, 2x4 to 12x14, Plank, 1 1/2 to 2 in., etc.

Cherry.

Table listing cherry prices, including Nos. 1 & 2, 1 in., good up, good western, etc.

Minneapolis, Minn.

Nov. 28.—The Lumberman of the 25th says: The last saw mill shut down on Saturday as was anticipated, the cold snap of Friday filling most of the mill ponds with ice and prohibiting any further operation.

There are no new features in the local market. Trade is

gradually reaching the winter level, and the record from week to week shows a steady decline in the output by rail. This statement applies equally to Minneapolis and to the north Wisconsin points, the movement from which is indicated in the shipments from St. Paul.

Detroit, Mich.

Table listing lumber prices for Detroit, Mich., including Uppers, Selects, Stocks, etc., Uppers, 4-4, 5x4, 6x4 & 8x4, etc.

Flooring, Siding, Ceiling, etc.

Table listing flooring, siding, ceiling prices, including Flooring, select common, No. 1 common, etc.

Bill Stuff and Culls.

Table listing bill stuff and culls prices, including Bill stuff, ordinary sizes, 12 to 16 ft, etc.

Shingles and Lath.

Table listing shingles and lath prices, including Shingles, clear, 18 in. Ex, 10 in. clear, etc.

Glasgow, Scotland.

Nov. 27.—Nothing of very great importance has transpired during the past week. The import list is a very small one, comprising two small parcels of deals from Montreal, and staves and oak lumber from New York.

I understand, says the corresp. of Timber, that, with the exception of one steamer cargo, the import of deals from Quebec is all but closed. This being so, merchants will soon be "comparing notes" with stocks at the wharf and their own in view of requirements for the next six months of close time.

Only one auction sale has been held since last writing, Messrs. Allison, Cousland and Hamilton's at Yorkhill Wharf on Wednesday. There was a fairly good company present, but the business done at auction was moderate, the brokers holding firm for better prices.

Prices on the whole are firm, and although several old lots are reported to have been sold cheap, newly-imported goods are evidently not parted with unless at an advance in prices.

Note of Messrs. Allison, Cousland and Hamilton's public sale at Yorkhill, November 16th:

1ST QUEBEC PINE DEALS.

Table listing 1st Quebec pine deals, including Pcs., 287, 481, 220, 169, 301, 675.

2ND QUEBEC PINE DEALS.

Table listing 2nd Quebec pine deals, including Pcs., 264, 703.

3RD QUEBEC PINE DEALS.

Table listing 3rd Quebec pine deals, including Pcs., 610, 400, 218, 136.

4TH QUEBEC PINE DEALS.

Table listing 4th Quebec pine deals, including Pcs., 280, 307, 292, 771, 234, 179, 1241, 1672.

QUEBEC RED PINE DEALS.

Table listing Quebec red pine deals, including Pcs., 93, 8 Broken.

—Notwithstanding the fact that it is believed there will be 400,000,000 feet of lumber in pile on the Saginaw river at the close of the season, a prominent manufacturer and shipper expresses the conviction that the rail shipments would be so extensive the coming winter that the docks would be cleaner when the navigation season of 1888 opens than they have been for years.

—Emigration to America of the laborers at the saw mills in the Sundswall district is on the increase, says an English exchange. Last Sunday, for instance, a considerable number of men, mostly married, left Stockholm for Stockholm by steamer, in order to reach the other shore of the Atlantic, via Gotenbergl.

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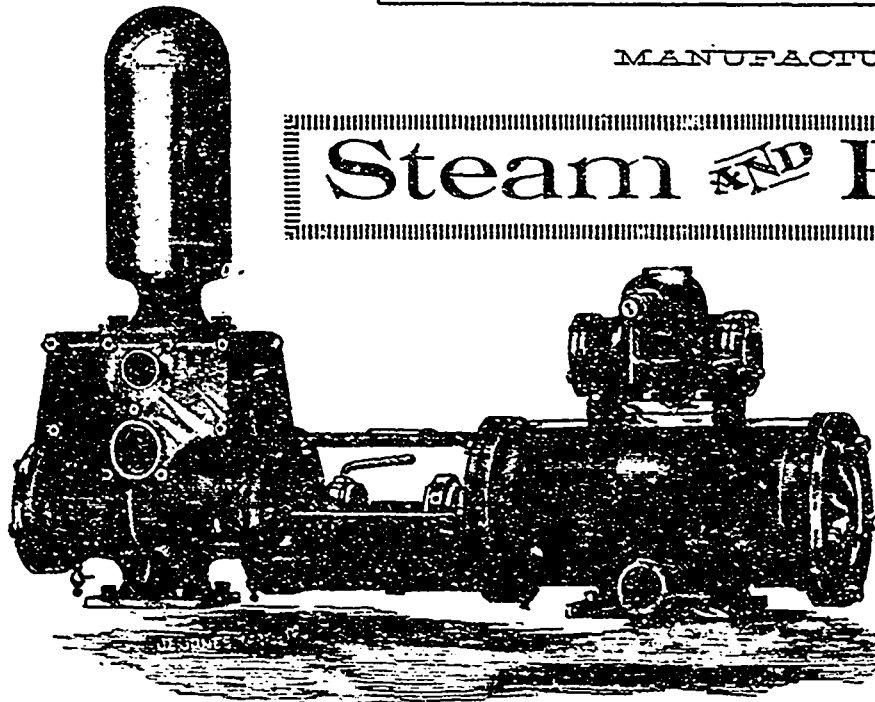
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AMERICAN * CHOPPING * AXES.

From the HUBBARD & BLAKE MFG. CO., DUNN EDGE TOOL CO., and PLANT BROS., warranted to be the best in the world.

THE RUNNER CROSS-CUT SAW

Each Saw of Warranted Temper and Fast Cutting.

MACHELL & TOMPKIN'S * FILES * COMPOUND CUT

Especially adapted to Lance Tooth and Patent Cross-Cut Saws.

GEORGE STETHEM, * * * PETERBOROUGH, ONT.

Dealer in Lumbermen's Hardware and Tools.

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CHAMPION STUMP and STONE

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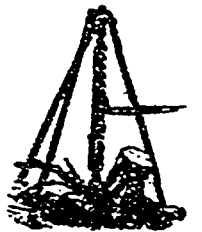
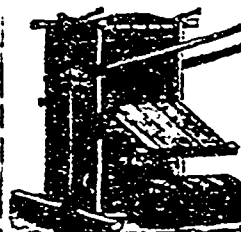
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CANADA DOCK,

LIVERPOOL, - - - ENGLAND,

Are prepared to buy all classes of

HARDWOOD LUMBER

Either in Log or Dimension Stuff for Prompt Cash.

OFFERS INVITED.

IMPORTANT NOTICE TO THE PUBLIC.



I am patentee and owner of Canada patent, No. 42,357, Improvement in Band Saw Mills, which covers a Band Mill with two columns. I am also patentee and owner of Canada patent, No. 42,377, Improvement in Band Saw Guides, which covers wheel guides for a Band Saw. I am informed that a Band Mill is being offered to mill men in the Dominion, containing two columns that is an infringement of the above patent. The public is hereby warned against purchasing such Band Mill, as I shall hold the purchaser responsible for the infringement of my said patents, and for all damages which I may have, or may hereafter sustain, on account of any unlawful use of said patents.

The Wm. Hamilton Mfg. Co., of Peterborough, Ont., is authorized to build and sell Band Mills under my patents.



FRANK W. WHEELER.

[A TRUE COPY.]

SHIP BUILDER.
Specifications and Estimates Furnished
on application.

WEST BAY CITY, Mich., June 26th, 1886.

Mr. D. K. Allington, East Saginaw, Mich.

I have been running your Pat. Band Saw Mill in my new ship yard mill for over one month, squaring up large and long hewn oak timber which has been hewn a sufficient time to be dry and hard on the surface and sawing long plank from same kind of timber. The timber or Keelsons squared was laid up in a vessel, one on top of the other, and fitted as well as could be done by hand, it being square, straight and out of wind. I have had a large amount of this plank and timber sawn, and have not yet found a bad cut. I have squared timber where the saw here and there barely cut the thickness of the saw kerf, yet the saw did not deviate the least from a straight line. From the nature of my work I cannot give any idea of the amount cut in a given time, but the speed of cut should be satisfactory to any one. The most difficult part of my work is in sawing taniarac ship knees, yet the machine has given me entire satisfaction in this respect, sawing a root having a cut of from 2 to 4 feet, making in every case a true cut.

I do not believe that a saw has been put on the machine in good order, as I have not a sufficient number of saws to give time to dress them well and keep the mill running, yet there has not been one broken or disabled, in fact, a saw must be in bad order that will not run in a straight line when run over your guide wheels.

Yours, truly,

F. W. WHEELER.



[A TRUE COPY.]

BAY CITY, Mich., Nov. 15th, 1887.

Mr. D. K. Allington, Saginaw, Mich.

DEAR SIR:—Having had considerable experience with Band Mills, I consider myself competent to judge the merits of the same. I started and run one of your Band Mills at Victoria Harbor, Ontario, which was manufactured by the Wm Hamilton Manufacturing Co., of Peterborough, Ont. I also started and run your two Band Mills in William Peters' mill, at Bay City, Mich., and must confess they are superior to any Band Mill I have ever seen, for quality and quantity of lumber produced.

Respectfully, yours,

W. A. McCLENATHAN, Filer.

[A TRUE COPY.]

F. W. WHEELER'S SHIP YARD.
WEST BAY CITY, Mich., June 24th, 1886.

Mr. D. K. Allington, East Saginaw, Mich.

DEAR SIR:—I have been sawing on your Band Saw Mill for the last month, making plank from long square oak timber, partially seasoned, and being short of saws, do not have time to have them put in in the best of order, and have to run them five hours without changing, yet I have not broken a saw or made a bad cut, the machine running smoothly, and not having cause to stop for any reason but to change saws, and cutting as fast as other hand saws I have run.

Yours truly,

THOMAS GRAHAM.

[A TRUE COPY.]

F. W. WHEELER'S SHIP YARD.
WEST BAY CITY, Mich., June 25th, 1886.

Mr. D. K. Allington, East Saginaw, Mich.

DEAR SIR:—I have been engaged in running band saws for the past five years, and I never before found anything equal to the Band Mill built by you, that I am now filing for I must say that it is almost impossible to made a bad line if the saw is in any kind of order. We are cutting hardwood, principally long oak, and on account of being scarce of saws we have run our saws for five hours and cut as fast as we could conveniently handle, without making any perceptible variation in the cut. I have run various kinds of mills, but never before saw anything to equal it. There has been quite a number of millmen examining it, and all give it up to be the best and truest cutting mill they ever saw.

Respectfully yours,

JOHN A. GREGG.



D. K. ALLINGTON,

MANUFACTURER OF IMPROVED BAND SAW MILLS

WEST BAY CITY, MICH., U.S.

The Ontario Canoe Company, Limited.

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Manufacturers of all kinds of PLEASURE, FISHING and HUNTING

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Patent Cedar Rib Canoes, Patent Longitudinal Rib Canoes, Basswood Canoes, Folding Canoes, Paddles, Oars, Tents, etc., etc.

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CANOES FOR LUMBERMEN designed to carry any amount of Goods and Chattles, and Strongly Built, made to order on Short Notice.

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ALL KINDS OF HARDWOOD CUT TO ORDER.

White and Red Oak, Hickory, Hard and Soft Maple, Cherry, Whitewood, Ash, Chestnut, Walnut, Butternut, Sycamore and Elm in Stock.

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WANTED! Black Ash, Red Birch, Red Oak and Basswood.

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Crown Jewel Flour Unexcelled for Family Use.

If your grocer does not keep it, order direct from us.

THE attention of Steam Users is directed to our preparation of CEDAR OIL for removing Scale and Sediment from Boilers, lessening the quantity of fuel used, and prolonging the life of the Boiler.

THE RATHBUN COMPANY,
DESPRINTO, ONTARIO



Auction Sale of Timber Berths.

DEPARTMENT OF CROWN LANDS.
(WOODS AND FORESTS BRANCH.)

Toronto, 15th October, 1887.

NOTICE is hereby given that under Order in Council Timber Berths in the following Townships, viz.: Livingstone, McClintock, Lawrence, McLaughlin, Hunter, Bishop, Leveine, Butt, Biggar, Wilkes, Ballantyne, Clisbourn, Canisbay, Pentland, and Boulter, will be offered for sale by Public Auction on Thursday the Fifteenth day of December next, at 12 o'clock noon, at the Department of Crown Lands, Toronto.

T. B. PARDEE,
Commissioner.

NOTE.—Particulars as to locality and description of limits, area, etc., and terms and conditions of sale, will be furnished on application personally, or by letter to the Department of Crown Lands.

No unauthorized Advertisement of the above will be paid for.

SCRIBNER'S LUMBER AND LOG BOOK: revised, enlarged and is the most complete book of its kind ever published. It is designed expressly for Saw and Mill Men. It contains:—
1. A full and complete description of all the different kinds of LUMBER AND LOGS, containing their measurement, and the best methods of cutting, drying, and storing them.
2. A full and complete description of all the different kinds of LOGS, containing their measurement, and the best methods of cutting, drying, and storing them.
3. A full and complete description of all the different kinds of TIMBER, containing their measurement, and the best methods of cutting, drying, and storing them.
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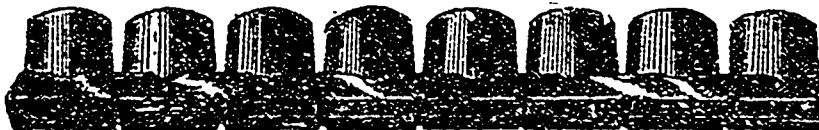
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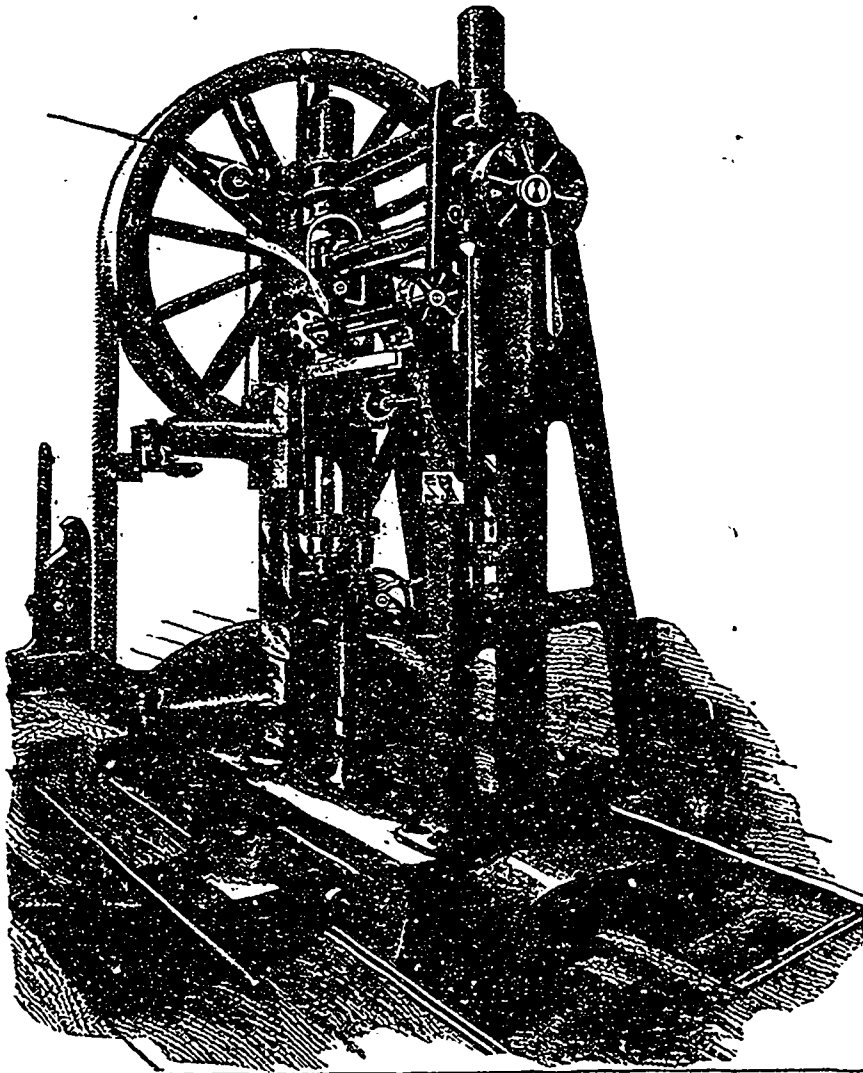
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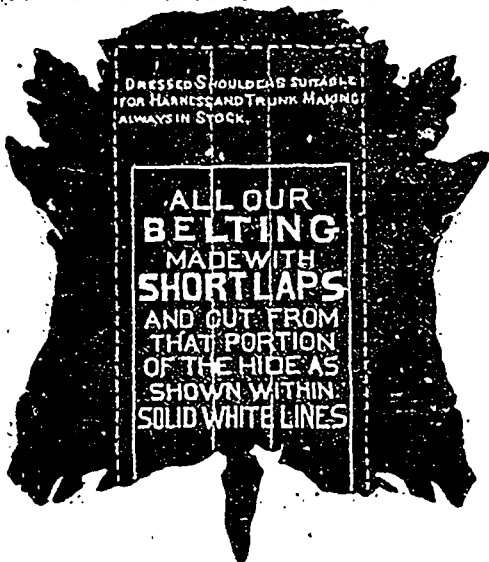
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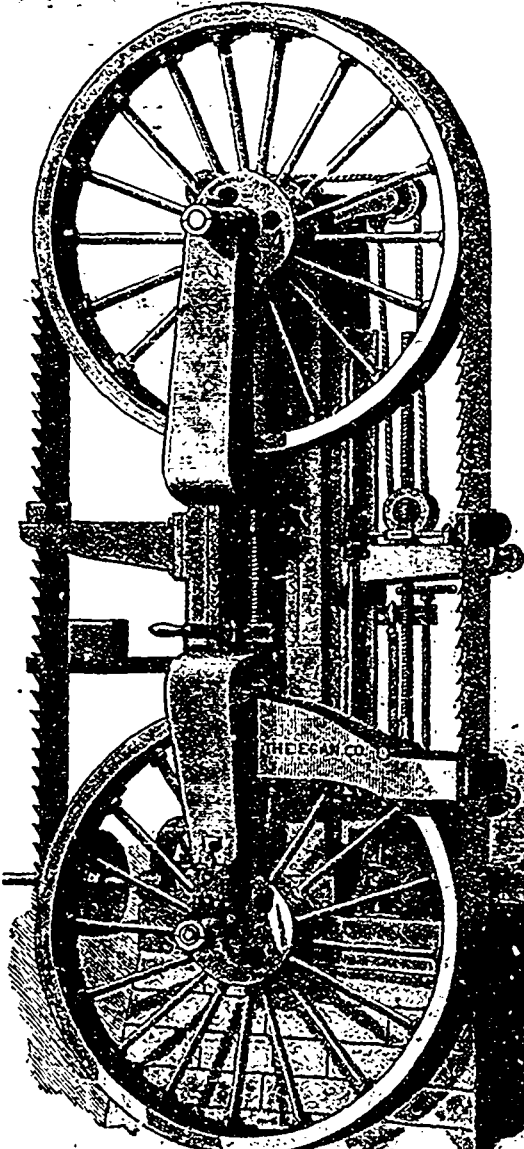
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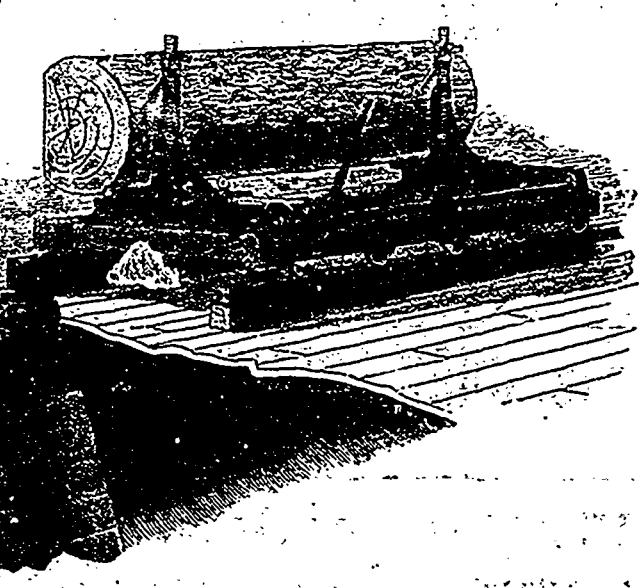
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