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# THE CANADIAN LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XIV. NUMBER 11.

TORONTO, ONT., DECEMBER, 1893

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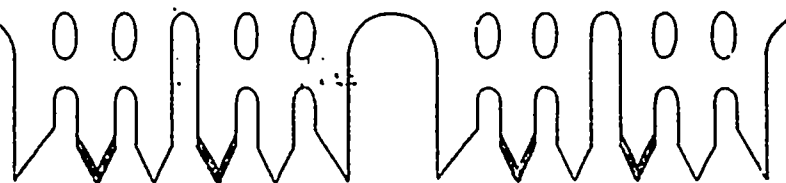
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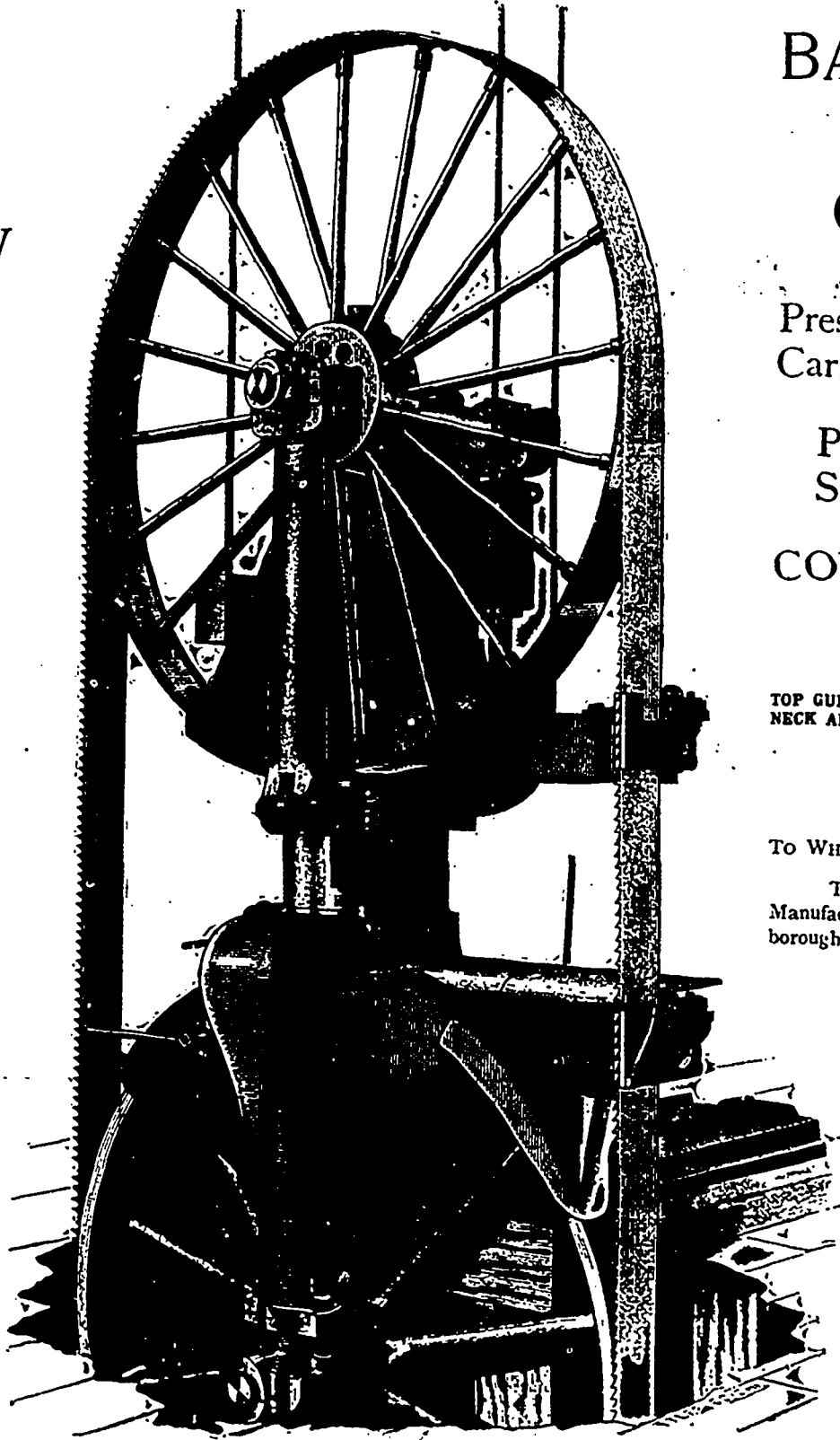
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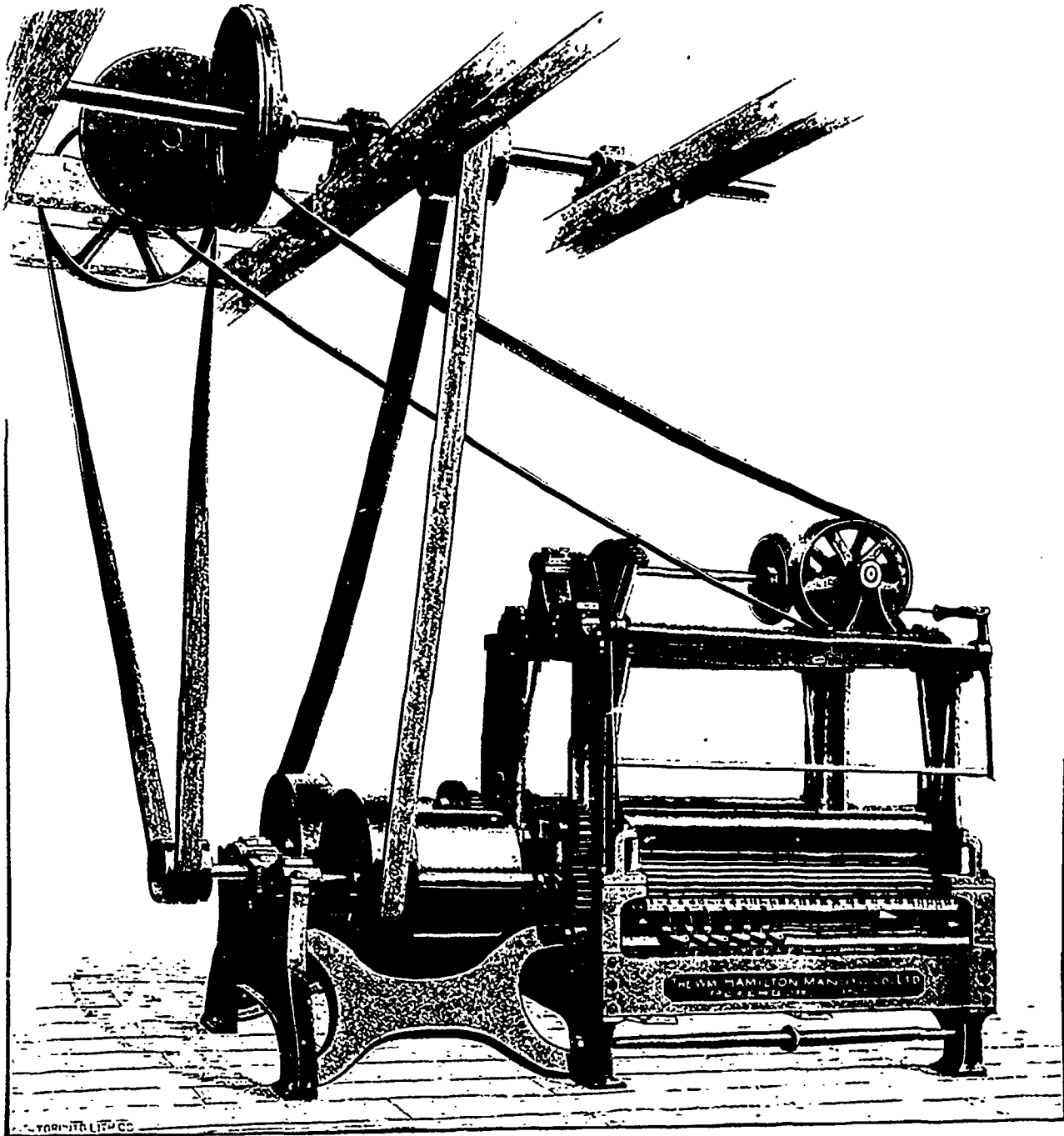
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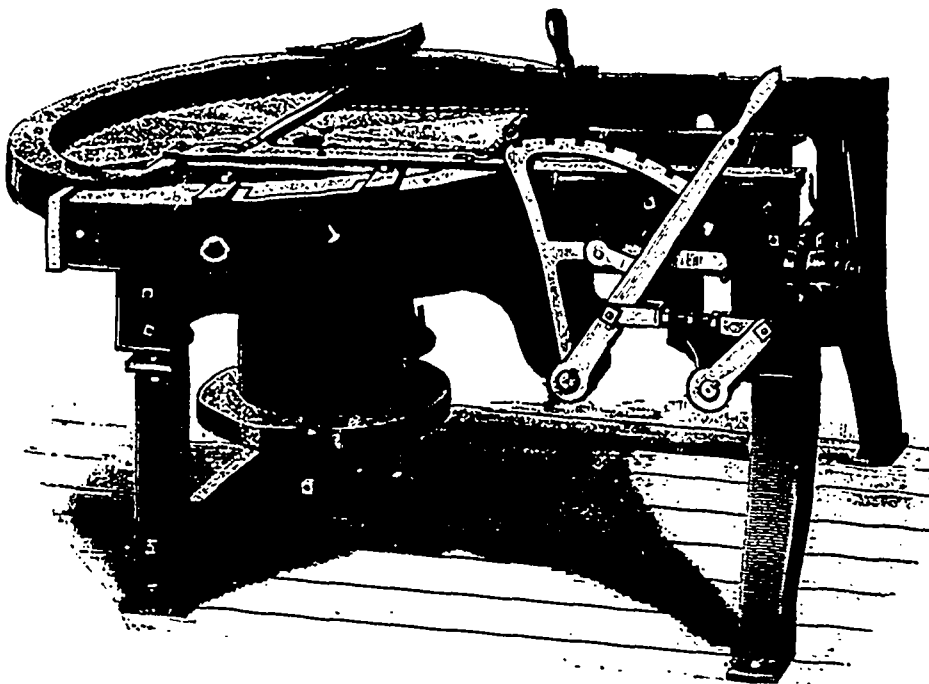
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# THE CANADA LUMBERMAN

VOLUME XIV.  
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## THE ORGANS ON THE LUMBER TARIFF.

THE *Globe* and *Empire*, representing opposite views on tariff matters, have given editorial space to a discussion of the question specially as touching lumber.

The changes in the lumber duties proposed by the Ways and Means Committee of Congress, are, in the judgment of the *Globe*, among the most important directly affecting Canadian trade. "All lumbermen" says the big Yonge street daily, "remember the boom that followed the reductions made by the McKinley Act, and the proposed changes will be still more effective in the same direction. Of course, the line between manufactured and so-called unmanufactured articles was necessarily drawn without system or reason." Having given particulars of lumber duties and the McKinley tariff the *Globe* then says: "The proposed tariff makes a clean sweep of the duties on lumber and wood of all kinds. The free list includes logs and unmanufactured timber, round, square or sided, firewood, hand bolts, heading bolts, stave bolts and shingle bolts, hop poles, fence poles, railroad ties, ship timber and ship planking, timber hewn and sawed, and timber used for spars and in building wharves, timber squared or sided, sawed boards, planks, deals and other lumber, pine clapboards, spruce clapboards, rough, hewn or sawed blocks for various manufacturing purposes, laths, pickets and palings, shingles, staves of wood of all kinds and wood unmanufactured. The benefits of these changes will be felt chiefly in the Eastern States, where the people almost entirely depend on Canada for their supply of lumber. The present tax is heavy on many of these lines. On blocks for hubs and other purposes it is 20 per cent., on staves 10 per cent., and on pine and spruce clapboards it is \$2 and \$1.50 a thousand, respectively. Canadian lumbermen will also share in the benefits, as the freedom will enable the people of the Eastern States to become greater consumers of their products. This class of goods is put on the free list, on condition that no export duty be imposed by the exporting country, on the articles mentioned. An export duty imposed on any of them will subject the entire list to the present American duties, when imported from the country imposing such duty. This, it is hoped, will settle the agitation for a Canadian export duty on logs. On manufactured or planed lumber there is still a duty of 25 per cent. This is more than sufficient to perpetuate the expensive necessity of unloading and reloading at the border, and of carrying lumber through Canada its heavy and bulky form. The people of the Eastern States will still be paying, not taxation to the Government, but the price of wasted labor in Canada and at the border. A smaller tax that would be paid would lighten the burden and at the same time make a contribution to the revenue. The money taken from them by the impost might as well be spent in employing men to dig holes and fill them up again. Yet the protection theories are dying with encouraging rapidity."

The *Empire* points out that such strong pressure is being exerted by the owners of Southern pines upon Congress as against the free admission of sawn and manufactured lumber to the United States that the present duty upon Canadian lumber may be retained. "In such event" says the Government organ, "the only thing to be done by our Government, as foreshadowed by Mr. Foster the other day, is to seriously consider the question of reimposing the duty upon logs. At present, under the free removal provision, immense quantities of logs are annually towed from Canada to the mills in Michigan and Wisconsin. Mr. Aubrey White, of the Ontario Government service, has reported this draught at 250,000,000 feet, but prominent lumbermen say that 500,000,000 feet will be the better estimate. Then if the

country gains nothing else it will have such profit as may come from the sawing of the logs upon this side, and the American owner, who for some years past has been basily depleting Canadian forests, will stand upon the same plane as the native lumberman. The owners of Canadian limits who live in the northern states are in favor of free lumber. They have lost so much by tows breaking away and by the wreck of boats that they would much rather prefer to saw the logs on their own limits. But while they can get logs into the States free of duty they would have to pay the impost duty upon lumber shipped from this side. Therefore while the question of the free entry of lumber is in abeyance in the States some of them regard with disfavor the proposition to reimpose the duty upon exported logs. If the American Government grants free lumber, all well, but if it does not then Canadian interests should be protected. If our forests must be sacrificed, and they furnish the only timber supply upon the continent worth speaking about, then Canadians should have the full advantage. Left to the Ontario Government, which is always impetuous and seldom economical, the timber lands would be stripped in a few years by foreigners and all the return which would be got would be a few figures in the annual report of receipts and expenditures. It, therefore, behooves the authorities at Ottawa to regard closely the progress of the Wilson Bill through Congress and, if free lumber is not accorded Canadians, to force American lumbermen who own limits upon this side to cut their lumber on their own limits and to employ Canadian hands to do the work."

## LUMBERMEN'S VIEWS ON THE TARIFF.

ELSEWHERE in this issue of the CANADA LUMBERMAN we have discussed the proposed changes in the United States lumber tariff. Below will be found the views of prominent lumbermen in various lumber centres.

Mr. H. H. Cook, of the Ontario Lumber Co., said: "As the law stands to-day if Canada imposes an export duty on saw logs, the Americans will charge us an import duty of \$2 a thousand feet, board measure. We now pay \$1 a thousand feet. By the draft tariff manufactured lumber, from Canada, or foreign countries, will be admitted free. If manufactured, it will pay a duty of 25 cents per 1,000 feet. Unmanufactured lumber means sawn lumber, manufactured lumber means lumber that is planed and made ready here for building purposes. Should the talked-of export duty on saw logs be imposed, we would have to pay \$1 per 1,000 feet. The McKinley bill took off \$1 on condition that there should be no export duty on saw logs. In my opinion, such an export duty would be most unfortunate for the Canadian lumber trade. If the new tariff were to pass, it would be a great thing for Canada's lumber trade. I don't think there will be anything more about this proposed export duty. I hope not."

"I never was in favor of an export duty on logs," said Colonel John I. Davidson, ex-President of the Board of Trade, and of the firm of Davidson, Hay & Co, lumbermen. "I never was in favor of it, and I trust that in the face of the abolition of the American duty on lumber, no export duty will be put on logs by Canada. I was pleased to see that the new bill is intended to take off the duty on timber. It will prove of the greatest possible benefit to the Canadian trade."

Mr. David Gilmour, lumberman, Ottawa. "The lumbermen of Ontario just now are not saving much but keep on sawing wood. Four or five years ago free pine lumber would have been regarded as a great boon. To-day here's not many of us who care whether or not it is

made free. We have the pine, and the Americans are forced to buy from us to supply their own market. The abolition of the duty will give us a market for the poorer grades of pine lumber. If the Yankees want the higher grades the duty of \$1 per thousand does not cut much figure, in fact it has not kept them from buying so far. A few years ago we thought the taking off of the export duty was a blow at our industry. Since we have got to regarding it in a different light. New Brunswick and Eastern Quebec will be the chief beneficiaries, as they will be enabled to market their spruce."

Mr. John Donogh, Donogh & Oliver believes the proposed changes in the tariff would be beneficial to Canada. As he read the newspaper reports he took it that unmanufactured, that is sawn, lumber would be free. On manufactured, that is planed lumber, there would be a duty of 25 cents per 1,000 feet if there is no export duty on logs. If there should be such an import, the duty would remain as at present, \$1. He did not expect the Government would impose an export duty on logs now; there would be nothing to be gained by it. The proposals now made will tend to open still more the eastern and central markets of the States to the Canada lumber trade. The reduction two years ago of \$1 a thousand made a wonderful difference to the Ontario lumber trade, for it opened up a market for the coarser grade of lumber. The new tariff ought to be still more beneficial. I do not see what object American purchasers of timber would have to gain now by towing their logs. They would saw them on the Ontario side if the duty were taken off."

Mr. William Hurdman, Ottawa: "A decidedly good move, I am glad to hear, for it means better things for the trade. The striking off of that \$1 on unmanufactured lumber don't mean that the Canadian manufacturers will get the whole dollar to themselves. The American buyer will likely get half and the lumbermen here the other 50 cents. With regard to the manufactured lumber, the change will have the effect of causing more lumber to be dressed here, and consequently will give more employment."

Mr. G. B. Greene, manager of the Upper Ottawa Improvement Company, said "Reducing the duty on planed lumber will certainly be beneficial, inasmuch as it will give more employment and keep our planing mills employed all winter as well as summer."

Mr. John Bryson, M.P., of Fort Coulonge, Que., said. "I am glad to hear that the duty is taken off the unmanufactured lumber, and it should be the same with the manufactured, on which I see they retain a duty. It will undoubtedly be beneficial to the trade here. My idea is to do away with all duty on timber."

Mr. E. B. Eddy, of Hull, says that despite the general reduction of United States duties, the Canadian Government should reimpose the export duty on logs. "Put on the duty on spruce logs," says Mr. Eddy, "and the Americans must pay the duty and keep on buying our logs. They have no logs of their own worth talking about. The mills in New York State are getting 70 per cent. of their logs from Canada. The spruce trade is going to be the future lumber trade, not pine. Put the duty on spruce and you will make miles of spruce land in Ontario and Quebec worth millions which to-day are not worth the bite of the bumble bee."

Mr. Hiram Robinson, president of the Hawkesbury Lumber Company, is not enthusiastic over the proposed changes in tariff. He says the changes may spur Canadian business slightly at present, but that they mean the more rapid destruction of Canadian forests for the preservation of the U. S. It will give the Americans cheaper lumber at the expense of Canada.



## THE BY-PRODUCTS OF SAWMILLING.

IN the early days of lumbering in this country lumbermen could, with some reason, perhaps, exercise less or more prodigality, both when at work in felling the tree and likewise when cutting it into lumber. At a more remote time when the primary matter was to clear the land, that it might be seeded down to provide sustenance for man and beast, there was little else to do than to get rid of the timber in the quickest way possible, which was usually to cremate it. Time has worked many changes, and the small economies of business need to be exercised to-day by the lumbermen as much as by any other class of business men. Under the caption of "By-Products of Sawmilling" a writer in *Hardwood* enlarges quite profitably on this subject. He says: "The average operator of a sawmill relies for his profit on the good lumber he is able to turn out. He measures the chances of loss and gain wholly by the percentage of clear stock his logs will cut, and the price of such lumber in market. The mill culls are waste anyway, and if he gets within a moderate percentage of the cost of his common and shipping culls, he congratulates himself upon his closeness in figuring and economy in operating his mill. His profits necessarily depend upon his ability to get enough for his high-grade lumber to cover the greater part of the cost of his logs and all his profit.

"It is not difficult to figure out something ahead in this, by assuring his lumber so that it will run well to good, but such liberality not uncommonly defeats itself, for when the stock gets into market, and is inspected under the buyer's severer construction of the rules, the unlucky shipper very likely finds that he has a heavy freight to pay on much of it that will not bring cost at the delivery point. More than one saw mill enterprise that promised fairly enough in the beginning has landed the owner in bankruptcy because the timber would not make enough clear lumber to carry it. And are they not falling around us every day for a like reason?

"This result is largely due in nearly every case to the neglect of the by products of the saw mill. Many mill operators look upon anything but lumber as unworthy their attention, and so they run everything that will not make boards or plank of dimension stock that is fit to ship into the conveyor and up the incline, to the slab pile or refuse burner.

"Thousands yes, millions of dollars of as good profit as was ever made has been thrown away in this fashion, and few that lost it could tell where it had gone. They may know that they got back for their lumber less than the timber and sawing cost, and that their operation as a whole was a losing one, but they do not realize that the gain which would have served to turn the scale might readily have been made out of the stuff they burned up to get out of the way.

"No saw mill man can be said to have fully mastered his business until he has learned that every cent he is able to get out of stock that will not bear shipment, or sell at a profit, is so much made. It all goes to swell the profits, because the stuff must be made in order to make the good lumber of which it is the refuse. All the by-products of the saw mill have this advantage, that they are the savings from what is practically worthless, and hence their cost represents only the labor put into them after they pass the saw. It is the conversion of the useless into the valuable, and so long as the bare expense of the manipulation costs less than the value of the resulting product, there is money in it.

"This is a matter which has received more attention in the pine mills than among those sawing hardwoods, for one reason because the former are larger establishments as a rule, and are operated in a more scientific way. With many hardwood producers, the sole problem they undertake to solve is to get a certain quantity of logs into such shape that they are marketable, and to get the money for them. Their prime object does not seem to be so much to make the largest possible profit, as to turn their investment into cash quickly. This is a condition made necessary sometimes by the limited capital available, but it rapidly grows into a habit, and many never get beyond it. They begin and end their career as saw mill men without developing the scientific side of their business at all, being content with merely buying trees and logs, cutting them with more or less

economy into boards and plank, and burning everything that will not make such lumber.

"The notion is widely prevalent among such operators that small mills are incompatible with the requirements of economy, and that in order to take advantage of the chances for profit in the close utilization of material a big mill with all imaginable appurtenances is a necessary prerequisite. This a mistake. The man cutting five or six thousand a day is just as able to take care of the waste as one cutting four or five times as much.

The writer has in mind now a little single circular mill, located at a place which it has practically created, and where there is no other business, cutting from six to eight thousand feet a day, where the principle of working up the waste is carried out in detail. Besides the regular outfit of machinery, it has a band saw for making felloes, a sawing table, a lathe for making chair legs and for turning wood into various irregular shapes, cross-cut saws, etc. The result is that no cull stock is shipped from this mill, and what is left of the slabs and edgings needs very little grinding to make it as fine as sawdust. The owners have no difficulty in realizing a good profit from rather inferior logs, and their books show that a good deal of it comes from what they save out of the waste.

"In some large mills what is ordinarily regarded as the refuse becomes the basis of a distinct business. The waste is sold by the saw mill man at a certain price, small of course, and the buyer takes it and works it up. Every piece big enough to make a pill-box is saved and utilized, and even when the cost of the material is added a good profit remains. In many cases this plan of utilization will prove practicable and economical, relieving the mill man of the details attending the working up of his refuse stock, and furnishing another man with the means of making money.

"Another way is for the mill operator to furnish the machinery and the stock, and let out the job of working it up on shares or at an agreed price for the product. A shrewd, enterprising mechanic can usually be found who will gladly supply the skill, push and all needed help in keeping up the department for an interest in its results. By such methods as these, and others that will suggest themselves to a practical mill man, a deal of good money may be recovered from the slab pile that now represents nothing but loss to the owner. The machinery for working up wood into small shapes is not expensive, and it does not require such skill in handling as to make it difficult to secure competent men to operate it.

"The hardwood mill men are fortunate in having a larger variety of by-products than pine, where they are mainly lath and pickets, small pieces of pine being of little use for anything but kindling. But hardwoods of nearly all kinds can be worked up very closely, and made to yield a handsome revenue. They are used in so many shapes, and so largely in small pieces, that attention to the utilization of everything about a hardwood mill becomes of first importance. All mill owners cannot adopt the same plan, of course, but all should have some method of working the refuse into valuable by-products, as they may if they will but give the subject proper study.

"When everything possible has been made in the way of small articles of wood, there will still remain something of value in the residue—the sawdust, bark and chips that go into the furnace or the refuse burner. All this is material, just as good as an entire tree, for the manufacture of the numerous products derived from the destructive distillation of wood.

"In several places already large works are in operation turning out such things as wood alcohol, creosote, acetate of lime, pitch, ether, wood oil, and other things which sell readily and bring prices that show a large profit over the cost of making. There was an exhibit of an apparatus for this work, and of its products, in the Forestry Building at the World's Fair, which showed that remarkable results can be obtained with a comparatively small investment and at little cost. Figures are given in connection with it which indicate a profit of \$5 on the carbonization of one cord of wood, allowing \$2 as the cost of it, and a further margin if the wood-tar obtained is re-distilled. Using the refuse of saw mills,

which could be placed in the apparatus as cheaply as in a refuse burner, the margin ought to be large enough to make the process one of value to lumber makers. Possibly all mill owners might not find it practicable or advisable to carry the utilization of their waste material to this extent, but many of them might do so to their own profit and to the general advantage of the business."

## BOILER EXPLOSIONS.

By E. W. LOCKWOOD, IN "TRADESMAN."

THE fundamental cause of explosion in steam boilers when traced to its origin is most generally found to be the result of foul and dirty boilers. By reason of mud, sediment and scale, the engineer is unable to properly secure the results desired, he must consequently force things, and as a result the shell of the boiler is overheated, expansion causes scale to give way, and the water striking the overheated plates creates a reaction which suddenly produces a strain upon the boiler. Something must give way and an explosion is the result. All this is due to the fact that the boilers were foul and in an unfit condition to do the work required of them. I lay down as a text this one fact: keep your boilers clean and you will have overcome the primary cause of explosions.

The world is constantly securing the results of brain energy of thinking men; improvements are daily being made; there is a constant and steady advance along the whole line of mechanical construction, which in the past decade has been so great that it is almost impossible to enumerate. Those improvements and inventions which have secured the most satisfactory results have been the simplest in construction and operation, and comparatively inexpensive to the user when the risk and loss of time are fairly considered.

One of the simplest in construction and operation for use in steam boilers, and the only one which will keep steam boilers absolutely clean and furnish pure water, has passed beyond the era of experiment and is an accomplished and recognized fact, and is the only appliance in the world which does and will do complete work to this end. Such an appliance is of inestimable value to the engineer, as it enables him to have complete control of his boiler and secure from it the best results possible and that without risk or danger.

The boiler being kept clean gives to the engineer a sense of security which he can never feel when operating foul and dirty boilers, and the time is not far distant when the demand for security from loss and risking of lives of engineers will become so strong that the proprietor of any establishment, who, from a miserable parsimoniousness, shall fail to have the life of his engineer properly protected in this and all other directions, will be looked upon by all right-thinking citizens as a criminal, and I am much mistaken if he shall not be so considered under the law.

## TO COVER SUCTION PIPES.

IT is a very good plan to cover the end of the suction pipes to pumps or injectors, and, in fact, it is very necessary in most cases, unless the water is very clear, as it does not take much to clog up an injector, especially a small one. But do not make the mistake of putting a flat screen over the end of the pipe, as this does not give opening enough for the water to flow through. This must be very plain when we think the wires of which the screen is made occupy a portion of the space that the pipe covers, and, besides this, there is the friction of the water passing through the numerous holes through the screen, which is considerable if the water is passing at a great velocity. To be sure, at slow speed the friction may not be noticeable, but as the speed or velocity increases, it is very noticeable and must be taken account of or trouble will ensue from not having sufficient water for your pump or injector. The best form of a screen in a place of this kind, and the one recommended by injector makers, and others in similar business, consists really in a hemisphere of brass wire netting, the diameter of which is the same as the pipe which it covers. This makes a very cheap screen and one which gives a good margin for the friction of the water and for the clogging up of the holes in the screen by floating particles of dirt in the water.

## VIEWS AND INTERVIEWS.

### Orderly Disorder

There are certain peculiarities which not only affect mill operatives, but mechanics in other trades. One of the first things that is impressed upon the young man who learns a trade, says the Woodworker, is the necessity of good habits, such as punctuality, order in the way in which he does his work, neatness in finish, etc. Comparatively few persons, however, save those specially endowed by nature, succeed in exemplifying, in the best manner, the idea of order until they have gone through a long course of discipline. Very fortunately their affairs for a considerable period are in such a condition as to merit the term "systematic disorder." Take it in the matter of the keeping of their tools. Instead of having an apartment of some kind with a place for everything and everything in its place, their tools will be in various places and so scattered about that gathering them together for any purpose whatsoever is a matter of no small labor. "Orderly disorder" is the term perhaps that describes the condition in which they keep things. Now disorder of this kind is worse than the usual form, for ordinary disorder is so baneful that sooner or later an effort is made at reformation; but orderly disorder on the other hand frequently deceives the victim into believing that he is orderly, so it remains unchecked and works the greatest harm.

### European Cork Forests.

According to a recent report of a visit to the cork forests of Spain and Portugal made by M. Hiekel, of the forestry department of France, the area of the Spanish cork forests is estimated by the Forest Department of that country at about 620,000 acres, distributed as follows: Gerona, 198,000; Huelva, 134,000; Caceres, 80,000; Seville, 74,000; Cadiz, 55,000; Ciudad Real, 28,000; and Cordova, 23,500 acres, the remainder being in ten provinces, of which the principal are Badajoz, Jaen, Malaga and Toledo. The cork-tree is only found in any considerable quantities in the northern provinces of Burgos, Santander, Zamora, Salamanca, Avila and Saragossa. As regards the volume of production, it appears difficult of estimation, more especially in the absence of any data relating to the home consumption. Some idea may be formed when it is considered that the quantity of prepared cork exported to France in 1891 amounted to 85,811 hundredweights, representing about 172,000 hundredweights of raw cork. Cork in the rough is represented by a quantity of about 20,000 hundredweights, thus making a total of about 200,000 hundredweights. To this amount must be added the total quantity devoted to home consumption and the amount exported which does not pass through France. According to the Spanish trade accounts, the total value of the cork exported from Spain to all countries in 1891 was \$5,370,000. Some Spanish authorities have estimated the total quantity produced at 275,000 hundredweights. As a cork-producing province Gerona holds the first rank in Spain, and Barcelona the last. The cork forests of Catalonia are concentrated in these two provinces. As regards the yield of the Portuguese cork forests, the trade returns of that country show for the year 1890 a total export of 453,650 hundredweights of cork in the rough and 42,427 hundredweights of cork manufactured.

### What is Electricity?

The rapid advances that have been made during the past ten years, both in the practical application of electricity to the service of mankind in the knowledge of the principles of the science, have brought us in the opinion of S. F. Walker (in the London Electrical Engineer) to the point at which we are obliged to ask ourselves, What is electricity? If the advance is still to continue? Up till very recently, notwithstanding the wonderful guesses that have been made by those not actually engaged either in the study or the practice of electricity, and the closer and closer approximations that have been made by those mathematicians who have given attention to the subject, it may fairly be said that we knew absolutely nothing as to what the mighty force we dealt with was. And, in addition to this, it has not been necessary that we should know what electricity

was, so long as we were thoroughly cognizant of what it could be made to do. As far as the writer is able to understand the matter now, electricity is simply motion of the molecules of the different systems which are the subjects of electrical action, just as heat, light and sound are, and the only difference between these forces is the rate of the motion. The motion of sound, as we all know, is comparatively slow; that of heat and light very rapid. That of electricity would appear to be somewhat between the slow motion of sound and the rapid motion of the heat waves, whose motion is slowest. And it would appear that the wonderful adaptability which electricity shows for every kind of work is due entirely to the position which its rate of motion occupies in the scale of the energies. It would also appear that the reason this wonderful agent lay dormant for so many ages, and is even now only partially developed, is very largely, at any rate, because we have no sense which responds to the particular periods of vibration comprised within the electrical range. The writer will conclude this brief notice by remarking that heat currents would be far more efficient than electric currents if we could make use of them as we do the latter, and that, as he before remarked, the reason electricity is such a useful agent appears to be because its rate of vibration is sufficiently high to admit of rapid transmission, yet not sufficiently so to be destructive. It only becomes destructive when it is transformed into heat.

### HEATING BY EXHAUST STEAM.

THE idea is very prevalent that it is expensive to heat a mill or factory by exhaust steam, says a paper devoted to steam matters. By this we mean that many mill owners, superintendents and shop hands believe this to be true, and this belief is founded on the fact that it is often expensive in practice; but we maintain that where this is the case it is due to an improper application of the system and not because the system itself is defective. A few days ago we indicated an engine where the whole of the exhaust steam is used for heating the feed-water. Under these conditions there is but one pound back pressure above the atmosphere; and even with a heavier load this was increased but little.

At not a very great distance from where this engine is located there is another, where the exhaust from it is used for the same purpose, but in this case the back pressure amounts to nearly fifteen pounds above the atmosphere, simply because the arrangement of the pipe is defective. The idea is that the exhaust steam must have free access to the atmosphere, and where the pipes which convey it do not incline downwards from the engine, suitable drips must be provided. If this is done, it matters not whether the exhaust pipe is ten feet or 5,000 feet, so far as creating a back pressure is concerned. When some men put up pipes for steam heating, it seems to be one of their objects to save in the first cost of pipe as much as possible, without much regard to what the results will be when they come to put them to practical use. This is worse in the case of heating by exhaust steam, for a small exhaust pipe means unnecessary back pressure, and this in turn means an increased forward pressure on the piston, which means more steam used, and more steam means more fuel, which costs money. Thus we can reason from cause to effect in a way that any one can understand if they will give it a little consideration.

Suppose the steam is to be carried from the engine room to the mill where it is to be used, the distance between the two buildings being 50 feet. Now, if we are to use live steam, the pipe in this open space should not be any larger than is actually needed to convey the necessary amount of steam, in order that the passage may be made as quickly as possible, to avoid excessive condensation; but if exhaust steam is to be used, then the pipe should be as large as the size of the cylinder calls for, or else the increased back pressure will far overbalance the benefits derived from a rapid passage of the steam. In either case they should be well protected from the cold air.

Valves and elbows are an obstruction, as a matter of course, but not to such an extent as some engineers would have us believe, provided they are large enough for the duty required and the valves have a full open-

ing; or, in other words, if the passage through the valves is equal to the capacity of the pipe. If the exhaust steam will not go through the pipes in the system with a light pressure, study out the cause of the trouble and apply a remedy in an intelligent manner.

### WOOD TOOL BELTS.

ONE of the largest items in the bill of running expenses, aside from knives and cutters, is belting, says a writer in the Age of Steel. It is only necessary to look over the pile of old and so called worn out belts to be found in almost every wood working establishment, to satisfy one that not one in ten of the belts that are thrown aside as worthless are half worn out, but are simply rotten and spoiled by bad use and neglect. There are so many causes that contribute to destroy a belt before it is half worn out that it is impossible to enumerate them all. One of the most fruitful causes is improper tension. A belt is just as liable to be injured by running it at too great tension as by running it too slack, but some operators are never satisfied unless it is strained to its utmost strength, while others will never take up a belt so long as it can be coaxed to remain on the pulleys. In some cases of over-tension, however, it may not be wholly the fault of the operator. The driving pulleys may be too small, or too narrow face, to transmit the necessary power without submitting the belt to a ruinous tension. In such cases the only effectual remedy is to substitute either a pulley of greater diameter upon both the machine and line shaft of the same face, thereby increasing the speed of the belt or substitute a pulley of the same diameter, but wider face, thereby increasing the power.

In many cases, where there is ample belt power at a proper tension, belts are neglected and allowed to run too loose, and slip and burn. The operator should fully understand that the slipping of a belt generates heat, and heat has a tendency to rot the leather, just in proportion to the temperature. Another practice to be condemned is, whenever a belt becomes loose and begins to slip, instead of taking it up at once, to begin to dose it with rosin, machine oil, soap or anything else that may come to hand. Such materials may cause the belt to adhere to the pulley for the time being, but soon cease to act, and the belt is left in a worse condition than before. A belt of proper size and proportion to transmit the power required at a tension not exceeding 100 pounds to the inch in width, should last and do good service until it is worn down to one half the original thickness.

### DANGEROUS PRACTICE.

IT is always dangerous, says Locomotive, to calk leaky joints, or screw up nuts, about boilers that are under pressure, and many accidents result from doing so. The other day we learned of an accident of this kind. The engineer undertook to tighten up a leaky cap on a sectional boiler while the boiler was under steam pressure. A slight twist did not seem to do any good, so he gave the cap a good, vigorous wrench. Immediately steam and boiling water began to pour out, increasing in quantity every instant. He could not get away quickly enough and was severely scalded all over the upper part of his body. His assistant was down in a pit in front of the boiler and was immediately overcome by the scalding cloud. The assistant was dead when the cloud had subsided enough to allow of his removal.

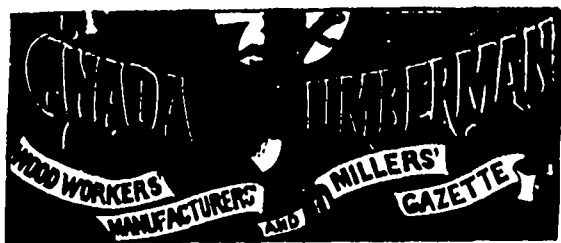
### DON'T PUT IT OFF.

DON'T let anything connected with the boiler in your charge run from bad to worse, with the idea that at some certain time you will have a general overhauling and repairing, because an accident may occur at any moment, involving serious loss of life and property.

### NOISY OIL FUEL.

IF oil is to be the future fuel for steam making, some inventor who will devise an easy way to get around the noisy part of the burning, will be a benefactor if he doesn't make a cent, says an exchange.





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J. S. ROBERTSON, EDITOR.

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

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

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

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

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

FREE LUMBER BILL.

ON another page of the LUMBERMAN we publish the views of a number of prominent lumbermen on the proposed changes in the United States tariff making lumber in a large measure free. We also place elsewhere the editorial comment of Empire and Globe, as representative of the two great political parties holding opposing views on the tariff question.

The subject has been prominent in the trade discussion of the month. About the middle of November a despatch from Ottawa contained the announcement that the Government were seriously considering the matter of reimposing the duty on logs, and alarm was felt in certain lumber quarters, and there were members of the trade who did not hesitate to express themselves strongly on the imprudence of this disturbing element being thrown into business at the present time. It was not many days, however, before news came from Washington that the Ways and Means Committee had brought down their long-expected tariff bill, and in this lumber was placed on the free list. The exception is made of manufactured or planed lumber on which a duty of 25 per thousand will be exacted. Otherwise the bill, as covering the requirements of a free lumber bill, is quite complete. Spruce, which had been taxed before, is on the free list, and by this step what was considered by many an invidious and inexplicable distinction in the tariff as between pine and spruce, has been removed.

Whilst lumbermen are in some measure still divided in their opinion on the benefit, if any, likely to come to Canada from the proposed changes, there is no doubt that the measure is in a very general sense acceptable to the Canadian trade. The Finance Minister, Hon. Mr. Foster, has said himself in a recent interview that any movement in the direction of reimposing the log duties would be contingent upon the United States continuing their present heavy duties on Canadian lumber and pulp. The proposition is now in a different direction, and the bill, if it becomes law, will have re-

moved the ground for action by the Canadian Government.

The bill may not become law, and certainly not without opposition from the lumbermen of the Southern States and some other points. But the committee have no doubt weighed the case carefully, and late despatches state that the disposition in Congress is to hurry through the measure, so that in its various details it may become law in March.

Quite likely by another issue of the LUMBERMAN some developments may have taken place and a more perfect knowledge obtained of the exact interpretation of the measure. Any views from our readers will gladly be given place in these columns.

EDITORIAL NOTES.

SHINGLE men in the Puget Sound country have experienced some difficulty lately in securing cars enough on the Northern Pacific. The trouble is being overcome by the completion of the Soo line, which gives the Canadian Pacific a line of its own to Minneapolis and St. Paul, enabling it to haul lumber and shingles east.

A DULUTH despatch reads: "Careful estimates show that 235,000,000 feet of logs, are being cut this winter by the lumbermen of this district, besides some 50,000,000 feet that are put in by local men for outside mills, the Meyerhausers, the Rat Portage mills and others. About 124,000,000 feet of logs are on hand, giving about 350,000,000 feet for the mills next summer."

J. W. HOWRY & SONS, of Saginaw, Mich., who recently bought a large tract of timber near Peterboro' Ont., will, it is said, erect a saw mill at or near Peterboro, and by building a short line of railroad will connect with a line running to Toronto, and will move the manufactured product to market that way. They are at present building two large shanties near the Peterboro' limits, and will give employment to a large number of men.

WITH the enormous railway development now going on in South Africa it is believed that there might be a good demand for Australian woods for sleepers and other purposes. Mr. Walter D. Davis, of Western Australia, who has recently been in South Africa pushing trade in Western Australia jarrah and karri timber says he obtained at Durban a photograph of some piles, formed of karri wood, showing them to be as sound and solid as when driven in twelve or fourteen years ago.

OTTAWA lumbermen are rapidly completing plans for the winter's work. Messrs. Bronson & Weston have nearly all their men up the river which they will send this year except positions for a few of their reliable mill hands. Their shanties are on Big Lake Schyan, Rockliffe, Mattawa, Quince and the northern tributaries of the Madawaska. There are two shanties in each of these districts. Mr. J. R. Booth continues to send up large gangs of men to his valuable timber limits in the Nipissing district. Mr. Booth's other shanties are pretty well scattered. Messrs. Buell, Hurdman & Co. will have about the same number as last year scattered in their different shanties up the river.

THE loss of the steamer Fraser on Lake Nipissing, to which reference is made in our news columns, was a lumber casualty of more than ordinary sadness. There is a pleasure in all this sadness, however, in noting the very ready and kindly manner in which the owners of the vessel, Messrs. Davidson, Hay & Co. have set about to relieve the bereaved relatives. In this work of love they have had much practical sympathy extended to them by residents of Toronto and elsewhere. Wm. Ryan, commission merchant, Toronto, subscribed \$200; W. R. Johnston, wholesale clothing, Toronto, \$100; Messrs. Geo. S. Thompson & Co., lumber merchants, Lindsay, \$100; and others besides these have been thoughtful in a like direction. Storekeeper Douglas, who was one of the drowned, left a widow and six children. Two of his daughters have been placed in the position occupied by their dead father at Cache Bay.

CONSIDERABLE interest has been manifested in the sale of timber limits at the Crown Land Office, Fredricton, N. B., during the past month. Among the purchasers were the Muskoka Mill & Lumber Co., of Toronto, who acquired rather more than 200 miles of limits. Other buyers were Kilgour Shives, A. E. Alexander and George Moffatt.

ENCOURAGEMENT is given to lumber shippers in British Columbia by Mr. J. A. Curtis, of New South Wales, who has been visiting the Pacific coast, and whose views on lumber matters are given in our 111th page. He says that ten-elevenths of the lumber that reaches that Australian colony comes from the United States. He would like to see the sister colony Canada control the major part of this trade. It is pointed out, however, that in order to do this British Columbia lumbermen must improve their methods. The lumber will need to be more carefully cut and dried, and doors and other articles must be made in a style to compete with those made in San Francisco. This is a condition of success in any business and we have no doubt that our western brethren will do all that is needed in these respects.

A MECHANIC who has occupied a number of responsible positions, in which he had followed others in conducting manufacturing operations, and been obliged to accept things pretty much as he found them, shaping his course largely to suit what had been previously done, got to wishing finally that some day he might happen to be the first man in a new enterprise where he could lay out things according to his own ideas, and have none of what he regarded as the mistakes of others to either continue or correct. He finally secured such a place, and after some experience in it, declared that he had never before fully understood the difficulties of the pioneer, his multitudinous chances for mistakes, and for leaving the bars down for future criticism by others. He now thinks it is easier to follow after others, do as well as you can, and then have your predecessors to blame for shortcomings; all of which again illustrates the truth that each man best appreciates the difficulties of his position, can in the nature of things never fully appreciate the difficulties of others, and is apt to conclude that they haven't any to speak of.

THE fact that a number of United States lumbermen owners of considerable timber limits in Ontario, met together in the city a few weeks ago, gave rise to less or more speculation by the newspapers as to the purpose of the meeting. These might have come together for consultation touching various matters of business in which they would have a common interest, but a despatch which was immediately sent broadcast throughout Canada and the United States stated that it was the unanimous opinion of the meeting that the duty imposed on Canada on lumber imported into the United States should not be disturbed. A Michigan correspondent of the Northwestern Lumberman commenting on the report remarks: "The report may be true, but if the retention of the duty will have the effect of inducing the Canadian Government to reimpose the export duty on saw logs, there is no question that Saginaw valley lumbermen who depend upon Canada for logs will not stick for the retention of the \$1 duty on imported Canadian lumber. At least this opinion is expressed by a number who have been seen on the subject. And it seems to be the opinion among them that if the lumber duty is retained, it will result in some action on the part of the Dominion authorities to prevent the continued export of logs." This comment, taken along with the statement made by the Hon. Mr. Foster that if lumber is not made free by Congress the Dominion Government are likely to re-impose the log duty, seems to size up the situation just about as it exists. Among those present at the meeting in question were A. K. McIntosh, of the Shepard & Morse Company, of New York and Burlington, Vermont; E. T. Canington, of Bay City, president of the Spanish River Lumber Company; H. A. and J. F. Batchelor, of Saginaw; Thomas Cranage and S. G. M. Gates, Bay City; Green B. Peck, of Cleveland, Ohio; John M. Howry, Col. T. A. Bliss, and John Quinn, the representative of ex-Gov. Alger.



A WRITER in a lumber contemporary criticises the proposed method of an Ottawa firm of seasoning beech and birch. Having described the method he then says: "After all is done, this wood is neither beech, nor birch, nor walnut in appearance. Neither has it taken on any new quality that makes it superior to either beech or birch, both of which are handsome woods, or that makes it equal to walnut. These bogus, imitation, artificial, counterfeit and filled woods make a lover of fine natural grains, hues and other characteristics very tired, in fact, fatally tired."

"We are busy cutting railway ties and shingles," said Mr. W. J. Brooks, of Grimesthorp, in the Algoma district, "and are finding a demand for all we can cut. I have no thoughts that the cedar shingles of British Columbia will come into serious competition with our pine shingles. I have an idea that the cedar shingles of the coast are injured by the process of kiln drying that seems necessary to them."

The statement is made in a trade contemporary that a United States lumberman who has devoted some consideration to the question of lumbering in Canada believes that the main opposition to the export of logs free of duty from the Georgian bay district to Michigan mills comes from mill owners in that district, for the reason that at present there is very little demand for the product manufactured in that section. Eastern buyers will not visit isolated mills for stock if they can avoid it, preferring to purchase at large manufacturing centres. The Canadians think if the logs did not go to Michigan the mills in eastern Michigan would be forced out of commission, the American owners of Canada limits would be forced to erect mills in Canada, and in this way a trade would be built up.

An Ottawa millman has placed the output of the Chaudiere sawmills this season at 200,000,000 feet, distributed as follows:

J. R. Booth's large mill.....	65,000,000
The old Perley & Pattee mill.....	15,000,000
Bronson & Weston.....	50,000,000
Buell, Hurdman & Orr.....	30,000,000
Gilmour & Huston.....	15,000,000
W. C. Edwards' N. E. Mill.....	25,000,000
Total.....	200,000,000

The mills would close down about the first of December, he thought, and he considered the outlook in sawn lumber for next season as fairly good. He believed the Chaudiere men will have as many men cutting logs in the woods this year as last, and wages he thought would be about the same.

The timber limits of the Nipissing district have been inspected during the past few weeks by a number of Buffalo capitalists, who have been under the guidance of Mr. Geo. S. Thompson, of the firm of G. S. Thompson & Co., whose headquarters in the timber business are at South River, Lake Nipissing. The party consisted of Mr. Geo. W. Partridge, ex-president of the Buffalo City Council, Ald. John Kamman, Mr. Frank L. Bapst, and Mr. Edward Beck. Mr. Partridge said. "We are going to Lake Nipissing at the instigation of Mr. Thompson, and have reason to believe that there are good chances for investment there. We intend going to Powassan and across Lake Nipissing into the timber district. If we find that everything is as we expect we will accept the free grant rights given by the Canadian Government, which consists of 200 acres for married men and 100 for single. Should we decide to invest it will be necessary for us in future to spend about six months of the year in Toronto."

When the Hon. Mr. Foster, a fortnight ago, intimated in a newspaper interview that the Government were

likely to re-impose the export duty on logs, the Ottawa lumbermen were quick to protest against the step. Alex. Fraser, of Westmeath, said "It would be an act of madness to put an export duty on logs now." G. B. Pattee remarked. "Imposing an export duty on logs is not the way to induce the United States Congress to give us free lumber." Said a member of Buell, Hurdman, Orr & Co.: "We are not favorable to a policy that would drain our pockets." Hon. E. H. Bronson, M.P.P. said. "Such a step would involve a serious loss to lumbermen, and would limit the output considerably. It would also necessitate a reduction in the staff of employees and very likely a reduction in wages. It means a loss any way you look at it." Mr. Levi Crannel states that the re-imposition of an export duty on logs would mean a loss of at least \$250,000 a year to the lumbering industry of the Ottawa valley.

Mr. J. A. Curtis, who has been engaged in the lumbering business in New South Wales for thirty years, is just now visiting in British Columbia. To an interviewer he said that during 1892, not one of the best years, about 22,000,000 feet of lumber were imported to New South Wales from Puget Sound and other United States ports. "There is no reason," said Mr. Curtis, "why all or most of the lumber used in New South Wales should not come from British Columbia. We are Britishers over there, and consequently would prefer to deal with Britishers. The object of my trip is to endeavor to arrange with British Columbia mills to supply us with lumber. I have had one shipment from here, but it was not equal to Tacoma lumber. There was a great deal of sap in it and it appeared to be carelessly cut. The lumber is just as good as the best, and I think I will probably make arrangements with some mills. They will be able to remedy the defects when pointed out to them. You might also supply some of the doors used in Australia, which comes from San Francisco. San Francisco doors are made of sugar pine which is expensive. Cedar doors should be just as good and could be supplied more cheaply. But they must be made of the same style, as the people have become accustomed to it." Mr. Curtis will visit the different mills of the province during his stay and expects to make arrangements with them.

Chatting a few days ago with Miss Lillian Phelps, the talented lecturer of the Women's Christian Temperance Union, I learned something of the work of this excellent organization among the shantymen of the Ottawa district. I am told that the society employs a missionary at an outlay of \$50 a month to spend the winter around the camps, holding religious services on Sundays, and as occasion throughout the week will permit. A good deal of time is also spent in conversation with the men in their shanties after the business of the day is over and in reading to them, an exercise that is much appreciated, especially when the missionary is a good reader, a qualification that is sought for in such an office. It had been the practice to send to the camps quantities of newspapers for the men to read in spare time. Experience has shown, however, that the men did not always possess the reading habits to select from the papers as wisely as had been hoped for. The difficulty has been very successfully overcome by the ladies, though at a good deal of labor, by making selections of stories, sketches and illustrations from the papers before they are sent to the camps, and having them made up into scrap books on linen. I am told that the shantymen take a large amount of enjoyment out of these cleverly-constructed scrap albums. As is the case with not a little work of a philanthropic character its more perfect development is hampered for want of sufficient funds. I believe that lumbermen appreciate such work as the W. C. T. U. are doing for their employees, and, whilst it has not even been suggested to me, I have no doubt that Miss Phelps and her co-laborers would appreciate any assistance that would come to them for this work.

"Yes," said Mr. W. C. Edwards, the genial Rockland lumberman and M. P. for Russell county, "the old McClymont milling property, the site of one of the first saw

mills in the Ottawa valley, now belongs to our firm. The property is valuable to us, being near our new mill on the western side of the Rideau river. It has been in the market for some time, but the transfer agreement was completed on Monday last." Asked as to the price paid, Mr. Edwards declined to name it. The McClymont property in New Edinburgh includes the old woollen mill, the saw mill and grist mills at present run by the McKay Milling company, and office on the other side of Sussex street at the end of the second New Edinburgh bridge. The present sawmill was built in 1872 and is consequently an old mill, yet by no means the most aged in this neighborhood. The sawmill has passed through the hands of many different owners, and has undergone but little change since the time of its inception. For the past few years the McLaren estate has controlled the mill, but their Gatineau limits being all sold to W. C. Edwards & Co. they had great difficulty in securing logs sufficient to keep the saws going. This year the mill did not run for more than six weeks, when it was compelled to close down for scarcity of logs. All three of these concerns are run by water power secured from the Rideau. The flume into the saw mill underwent extensive repairs this past summer and is now in better shape than for years past. The eastern channel of the river is said to be the deepest although the difference is not very much. The western channel generates power for the new mill on the site of the McLaren mill which was burned a couple of years ago. Mr. Edwards controls the power of the Rideau river on both channels, thus guaranteeing power for all his concerns which might be cut off under other circumstances. The McLaren lumber which is piled on the lately purchased property, will be removed during the present winter. Mr. W. C. Edwards would not say what his intentions were concerning his recent purchase, but it seems to be understood that the present industries will continue at least for some time to come. The property is valued at over \$100,000.

How true it is that business is made up of details. And yet it is equally true that it is the details of business that are constantly neglected by business men. A contract is taken and before the contractor is half way through with his work he discovers that a mistake has been made. He looks into his figures again, with a little more care than he did the first time, and finds that in certain details, in place of making careful calculation he took things for granted and now finds himself out. As a writer has said in a clipping that has come under my notice, he "guessed" that certain things were all right, but did not attempt to square his guesses with facts. To illustrate this the writer says. "One day last week I saw two sets of figures on one contract. One of the men who figured understood his business, and his figures were to a cent. The other one guessed at the cost. Their figures were not far apart, for the job was not large. The guesser's bid was below the exact figurer's bid, and he got the job. He has since told me that "there is no profit nowadays in this line of work." The other man assured me he knew "exactly how much Mr. Guesser would lose on the job." His figures agreed almost to a cent with what the "lucky" bidder confessed he was "out" on the work. These two men represent the two classes of mechanical workers, those who fail and those who succeed. These classes are distinct. The guessers "get the work at any figure." They soon do enough work to lose all they possess. The exact figurers "get a fair profit or let the job go to someone else." They may work less, but they make a profit on all they do, and they soon do little enough to roll up a good bank account. It may sound paradoxical to say that one man succeeds in getting so much work that he fails, and another succeeds in getting so little that he grows rich, but there are enough examples of both to prove that the seeming paradox covers an important business truth. The man who is master of the details of his business is a powerful competitor. He knows when he reaches the point in bids below which he will not, cannot go. His guessing competitor has only one limit in view. He aims to go below his competitor, no matter how low the competitor sets his figures. How many men can tell to which class they belong."

## OTTAWA LETTER.

(Regular correspondence CANADA LUMBERMAN.)

**W**INTER dullness has not yet settled down on the lumber district of the Ottawa. In fact there has been a good deal of stir throughout the month, and shipments have been going forward with fair alacrity. There is an improvement in the South American markets and one firm has been busily engaged shipping a cargo of 12-inch stock, about 1,250,000 feet, to Buenos Ayres. The freight will run something under \$9.00 a thousand. Shipments for a good part of the month have averaged 2,000,000 feet a day. Many of the mills are still running, though there is a general desire on the part of the men to get off for the woods. For road cutters, from \$14 to \$16 a month was offered, according to the men; for teamsters \$16 and \$18, and choppers from \$18 to \$22.

## INDIFFERENT LENGTHS.

Senor Achilles Chiesa, lumber dealer of Rosario, in the Republic of Argentina, South America, has been visiting in Ottawa, and believes there is good opportunity to develop the lumber export trade with his country.

It is estimated that about 500 barges have carried lumber cargoes from here this summer, which will represent in the vicinity of 250,000,000 feet that has gone forward by water, while about 100,000,000 feet so far has gone forward by rail.

The depositing of mill refuse in the Ottawa will give rise to further litigation in the case of J. Ratte, who claims that his business as boatman has been seriously interfered with from this cause. He is suing the Chaudiere mill men for \$50,000, which he claims is the damages his business has sustained. In a previous suit Ratte recovered \$5,500. The result of this suit is looked forward to with considerable interest all over Canada where mills are located on navigable rivers, as it will establish a precedent as to the right of mill men to deposit their sawdust and mill refuse in these rivers and streams.

The logs which broke loose from the Deschenes boom in the gales of last spring and went over the Chaudiere falls, have all been picked up and towed to land. Some one thousand and five hundred belonging to Buell, Hurdman & Co. have been stacked opposite Nepean point in large piles ready to be drawn up to the mill pond this winter. There are also about five hundred in the boom at Duck Island which will be drawn up this winter by the same firm. The other logs which went over the falls, some thousand in number, belonged to a firm down the river, and have long ago been delivered to their respective ponds.

OTTAWA, Can., Nov. 27, 1893.

## NEW BRUNSWICK LETTER.

(Regular correspondence CANADA LUMBERMAN.)

**R**AILWAY ties are being bought in the province for the New York Central railway. George Hubbel, representing the railway company, and George Keefer for a New York lumber firm, are here in connection with the business.

A saw and shingle mill is being erected at Andover by Thos. Goshine.

F. W. Swezey, sawmill, Nappan, N.B., has assigned. The estate is a small one.

Amos Oxley, of River Phillip, N.S., intends putting up a lumbering mill on the Sugar Loaf.

Elias S. Weeze, for many years a leading lumber operator in Kings Co., having a mill at Penobscot, is dead.

There has been shipped to St. Pierre island, near Newfoundland, 235,205 feet of boards, by Miller & Woodman.

It is very generally conceded that this year's cut on the Miramichi will not reach one-half the cut of last year.

Clarke, Skilling & Co., of Glasgow and Boston, have purchased a site near Newcastle, on the Miramichi, and purpose erecting a mill to cut spool wood. The mill will run summer and winter.

Considerable shipments are being made to the United Kingdom. Three cargoes have been shipped within the past week by Alex. Gilson, and one each by W. M. Mackay and George McKean.

On the 16th inst. a fire broke out in rear of Humphrey & Trites' sawmill, at Petitcodiac, and in very short time

the mill, together with large piles of different kinds of lumber, was totally destroyed. Cause of fire supposed to have been hot box. Loss probably in the vicinity of \$15,000.

Richards & Hickson's mill at Newcastle, is to be fitted up next year for sawing long lumber, the manufacture of shingles to be curtailed. It is believed by some that the production of shingles in the province has been overdone.

It is not thought that much encouragement will be found in lumbering this winter. Hundreds of men, it is anticipated, will not be able to get work at all, and good choppers would be glad to get \$13 per month. The average wages are \$17 as against \$20 last winter.

The official report of the Fredericton Boom Company shows the following amount of lumber rafted last season:

Hemlock	139,300
Pine	7,375,100
Cedar	21,628,220
Spruce	109,411,160
Total	138,553,780

St. JOHN, N.B., Nov. 24, 1893.

## MICHIGAN LETTER.

(Regular correspondence CANADA LUMBERMAN.)

**T**WO conditions are paramount in lumber in the Saginaw district: (a) decided dullness in trade, (b) unquestioned stability and firmness in prices. These are not usually concomitant conditions. When business sags, prices, ordinarily, show a sympathetic depreciation. Why this is not so in Saginaw is a question that is giving rise to various opinions among lumbermen here. Mr. Mershon says that probably 50,000,000 feet of lumber have been brought from Duluth and Canada by Saginaw yard, planing mill and box factory men for the simple reason that they could lay the lumber down at their mills cheaper than they could buy sounder stock at home. This condition gives ground for the contention that Saginaw prices are abnormally high considering the state of trade. The contention of those who hold the lumber is that there is nothing in the present depression to warrant a break in lumber prices; that an anticipated revival of business in the spring will prove this, and, fortunately, the men who own the lumber are strong financially, and can afford to hold on. Less sanguine men are predicting not simply that there will be no boom in the spring, but that there will be a further decline. Business will not recover as speedily as some may think from the present depression. Time will show who is correct. One thing is quite certain, that logging operations will be less brisk than a year ago. This is shown in the overstocked condition of the labor market, in a shrinkage of wages, and a depreciation in charges for supplies. Lumbermen will reap the gain in a reduction in the cost of logging operations for the winter.

## A CUTE LOG STEAL.

The story is being told of a slick log stealing job on the Saginaw. About two weeks ago a raft of 1,800 logs from Georgian Bay was towed at night to the mill boom of James Patterson of this city. The raft was the property of Hitchcock & Bialy, of Bay City, and contained approximately 200,000 feet. A man representing himself as L. E. Smith, of Bay City, went to S. W. Tyler & Son, Saginaw lumbermen, to whom he stated that he was the agent of the firm who owned the logs, and that they had been sold to James Patterson, who found himself unable to pay for them as agreed, and, therefore, he desired to sell them to Tyler. The story was given an air of plausibility by the fact that one end of the raft rested on Patterson's boom, and so Mr. Tyler told Smith that he would take the logs, and advanced a small sum of money for towing purposes. S. W. Tyler & Son arranged with the Michigan Lumber Company to saw the logs, and they were taken to that mill and work was at once begun on cutting them. In the meantime a man engaged in the log towing business happened to be in Hitchcock & Bialy's office at Bay City one day and mentioned that he had lately been to Saginaw and had there seen some logs with the firm's mark on them. Of course Hitchcock & Bialy had not sent any logs to Saginaw as they had needed all they had purchased and were in the market for more. They at once went to Saginaw, and after some search found their logs at the Michigan Lumber Company's mill. Ninety thousand feet of logs had already been converted into lumber, and both lumber and logs were seized on a writ of replevin. A warrant is out for the thief, but at last accounts he had not been apprehended. The robbery is regarded as one of the most impudent and bold of any ever attempted in the lumber business of this section.

## HITS OF LUMBER.

A light output of cedar is anticipated in Northern Michigan this winter.

Colonel Bliss, of Saginaw, has closed up the mill run by him at Carrollton.

Not a few mills along the Saginaw are still in operation.

Sibley & Beringer, of Saginaw, will harvest about 2,000,000 feet of logs adjacent to Duluth this winter.

The largest shipment of lumber by one concern this season to November 1 is that of 70,000,000 feet from the Kirby Carpenter mills.

Turner & Fisher, of Bay City, will stock their new mill, known as the South End Lumber Company, with 20,000,000 feet of Georgian Bay pine.

Wylie Bros., who have been large manufacturers of shingles for a score of years, will convert their shingle mill into a band saw mill. They say there is no money in shingles.

Where the Michigan Central, Mackinaw division, and the Flint & Pere Marquette, handled 311,000,000 feet of logs last winter, the work this season will, it is expected, be comparatively light.

There is very little sale for hardwood lands in Northern Michigan just now. A party who owns 23,000 acres in Misaukee county alone, and large tracts in other localities, states that there is practically no demand.

Flatt Bros., a Canadian firm, have a large force near Pori getting out square timber for shipment to England. Over 1,500,000 feet have been skidded. They also have several camps on the Duluth, South Shore & Atlantic road in Ontonagon county.

The larger part of the logs brought over to these shores from Canada by J. W. Howry & Sons have been manufactured at the mill of Green, King & Company. This firm count on banking in Canada the coming winter about 20,000,000 feet, which will be about the same output as last winter.

H. G. Emery, one of the well-known lumbermen of West Bay City, has been stricken with paralysis at Mobile, Ala. Some years ago Mr. Emery invested in southern pine with Mr. H. W. Sage, and considerable of his time has been given to operations in that part of the Union. Hopes are entertained of his recovery.

A number of disastrous fires have occurred with Michigan lumbermen lately. On 5th inst., a large quantity of lumber on the dock of Melchers & Nerreter, on Crow Island, was destroyed. Loss about \$16,000; insurance, \$8,000. The sawmill of S. M. Lear & Co., one of the largest lumber plants of the Saginaw river, was also completely wiped out by fire.

The shipments of lumber and other forest product from this port by water during the month just passed amounted to more than that of any other month this season. Of lumber there were 12,000,000 feet; 700,000 shingles; 400 cords of sawdust; \$55 cords of slabs and 15 tons of barrel staves. The shipments of lumber during the season have reached a total of about forty-five million feet, which is a very small figure for the lumber business in this city.

The lake shipments from the port of Menominee the present season to the first of November, according to the custom house record, were 180,000,000 feet, and from the port of Marinette 215,000,000 feet, making a total of 395,000,000 feet. The Kirby-Carpenter Company has, in addition to its lake shipments, sent out upward of 30,000,000 by rail, which added to other rail shipments by other mill companies brings the total shipments of lumber from the Menominee river to November 1 up to not less than 500,000,000 feet. Judging from present appearances and the extensive fleets of lumber carriers that are arriving, the total shipments at the close of navigation will reach at least 600,000,000 feet.

SAGINAW, Mich., Nov. 25, 1893.

## BRITISH COLUMBIA LETTER.

(Regular correspondence CANADA LUMBERMAN.)

**T**HE shingle manufacturers and dealers of the Puget Sound district have, I understand, formed an organization, which they hope may be worth more to them than some previous efforts in a similar direction. All must put up a forfeit, dealers and manufacturers, and this factor in the combine is expected to keep possible refractory members in the traces. A canon is to be made of the whole trade in Washington and Oregon so that there may be perfect unanimity in the step. Conditions of the agreement are to go in force at the first of the year when prices for 1894 will be adopted. Shingle men of British Columbia will watch with some interest the outcome of this combine. Prices here have been anything but satisfactory, but there has been nothing approaching the demoralization that has existed among the cedar shinglemen of Uncle Sam's domain. A strengthening of conditions there will no doubt be helpful to conditions here if they can be made to prevail.

## COAST CHIPS.

A. Grant has started a wood planing establishment in Vancouver.

The R. C. P. Mill Co. and B. S. Mill Co. keep shipping to our Northwest.

The American schooner Salvador has sailed from Brunette mills for Adelaide.

Daniel McIntyre, lumberman, Duncan's, has assigned to Philip Chapman Butts, also of Duncan's, lumberman.

Legal action is likely to be taken against a local logging company for damage caused in Central Burnaby by the damming of the lake.

Local trade continues very quiet, but export is improving. The Hastings mill, Vancouver, has a number of charters completed, and will be kept busy most of the winter.

Capt. Libby, manager of the Puget Sound Tow Boat Association, is spending a short holiday with us after an absence of five years. He says lumber business on the Sound is very dull at present.

A new lumber company has just been formed and registered "The Burrard Inlet Red Cedar Lumber Co." The mill will be built on Burrard Inlet. J. N. Kendall, of saw mill fame, is the builder. It will most likely be a band mill.

The Buse saw mill, at Hastings, with all buildings and appurtenances, has been sold to a syndicate of Japanese. The purchase price was 45,000 yen. These Japanese have extensive timber limits on Howe Sound, and on their property there is considerable hardwood, including oak. This they intend to cut into dimensions suitable for shipping to Japan.

NEW WESTMINSTER, B.C., Nov. 20, 1893.

## FIRES AND CASUALTIES.

## FIRES.

—Robert Bram had his arm badly mangled in Young's saw mill, Warton, Ont.

—The sawmill of Wm. Milne, at Ethel, Ont., was destroyed by fire on 18th ult.

—Murray Bros, of North Bay, Ont., had their sash factory and two million feet of lumber destroyed by fire.

—The shingle mill at Magog, Que., owned by Boright & Manson, of Mansonville, has been destroyed by fire.

—The steam sawmill of T. G. McMullen, at Ryan's Creek, N. S. has been burned to the ground. Loss about \$3,000.

## CASUALTIES.

—A young man named Godburt, an employee of Gilmour & Hughson's mill, Hull, Que., has had a leg broken in two places.

—Solomon White, a saw filer in Gilmour & Co.'s mill, Trenton, Ont., was severely crushed between a lot of logs, and injured internally.

—A young man named John Lebeck, belonging to the township of Willerforce, was killed at Davidson & Hay's mill, at Cache Bay, Ont.

—A young man named Boucher, employed in Booth's large mill, Ottawa, Ont., was severely bruised by a load of lumber falling on him.

The sawmill at Norvar, Ont., which has been operated by the Dominion Bank for the past season was destroyed by fire a fortnight ago. Loss \$2,000.

—A painful accident happened at Bronson & Weston's mill at Ottawa, Ont., by which a young man named Duquette lost four fingers of the right hand.

A man by the name of Sharkey, who worked in one of Gilmour's shanties, was killed a few days ago by the falling of a limb that struck him on the head.

—Cleophus Charon, who was at work in the Hawkesbury Lumber Co.'s shanties near Dieux Rivers, was drowned a fortnight ago while playing on some logs.

—John Firth, an employee in Davidson & Hay's mill, at Cache Bay, Ont., while working at a lathe machine was struck in the face by a splinter, it penetrating about two inches into the brain.

—A man named Leroux while working on one of the highest lumber piles in J. R. Booth's yard, Ottawa, Ont., slipped on a thin coating of ice, and fell, breaking one leg and sustaining severe internal injuries.

—The hospital at Ottawa contains a number of sufferers who have been brought to the Capital from the various lumber camps. Among these are: J. Gagonon, from Wahnapitac, who is suffering from an ugly cut from an axe having severed two toes, and a third partially, while chopping. F. Cote is here from Bronson & Weston's camp, four miles out, suffering from an injured back, having been struck by a falling tree.

## THE NEWS.

## CANADA.

—Moiles Bros., John's Island, Georgian Bay, cut 10,000,000 feet of lumber the past season.

—Mickle, Dymont & Son are erecting a new machine shop in connection with their mill at Severn Bridge, Ont.

—The revenue from Quebec crown lands has increased under the present administration from \$623,997 to \$999,722.

—Neil McLean and Alex. Gow, of Fergus, Ont., will operate a portable sawmill in Eramosa township this winter.

—John Doig, of Tuckersmith Township, Ont., has purchased a portable sawmill, and will operate it in the district.

—George Wilson, of Wilson's Corners, a village some fifteen miles up the Gatineau, is building a saw mill on the Blackburn Creek.

—The Schulu Lumber Co. have purchased the mill and lumber property of N. N. Bentley at Five Islands, near Parrsboro, N.S.

—Drake & Co., Selkirk, Man., have sold their saw mills, logs, etc., at Rice River, Lake Winnipeg, to Messrs. Robinson & Co.

—Work on the mills of Dunn Bros., at Grand Bay, and W. H. and J. Rourke, at St. Martin's, N.S., is being pushed ahead with vigor.

—McLeod & McCormack, of Peterborough, are sending a large number of men into the woods, paying from \$18 to \$22 a month with board.

—Arch McMullen, of Folly Lake, N.S., who got into financial trouble last mid-summer, has effected a settlement with his creditors.

—The Hawkesbury mills is becoming one of the big lumbering concerns of Eastern Ontario, the cut this season having run up to 50,000,000 feet.

—Wm. Goodwin, who had his hand cut off a few days since by falling on a circular saw at the lumber mills at Digby, N.S., is dead. He was seventy years of age.

—The sawing season in the Norman district is now over, the last mill to close down being that of the Western Lumber Company, formerly Cameron & Kennedy's at Norman, Ont.

—H. B. Mitchell, who proposes building a large saw mill at Selkirk, Man., next spring, reports everything in readiness to commence a heavy winter's work in the camps at Lake Winnipeg.

—J. Bower, formerly of Paisley, Ont., is now a partner with G. L. Keeling, the firm doing business at Warren under the name of Keeling & Bower, as manufacturers of lumber, lath and shingles.

—W. H. McAlpin, lumber merchant, Montreal, Que., bought in his stock recently at 63c. on the dollar. All Savignac purchased book debts for 23½c. on the dollar. McAlpin will resume business.

The number of vessels clearing from Quebec to Nov. 3 shows a decrease in sailing vessels of 118,903 tons, as compared with last year, while in the tonnage of ocean going steamships there was a slight increase.

—It is said that Capt. Robinson, who has several mills on Lake Winnipeg, will consolidate them and build one large mill at Selkirk on the Red river, to which the logs will be towed from points along the lake.

—M. M. Boyd, of Bobcaygeon, Ont., has purchased 9,980 acres of timber limits at Nitinat, from H. R. Morse. Mr. Boyd has also purchased the West Bay sawmill, from Drake, Jackson & Helmecken, executors of the Heathorn estate.

C. R. Peterkin, planing mill, Toronto, has a 14-in. leather belt made more than twenty years ago by F. E. Dixon & Co., and which is still in operation and used in driving his main shaft. Says a good deal for the Dixon belting.

—The statement is made that the Grand Trunk railway will shortly extend the Victoria Branch to the Ottawa, Arnprior & Parry Sound railway to reach the large areas of birch and maple forests, which have been comparatively little worked in that district.

—McArthur's saw mill, at Birtle, Man., has closed after one of the largest season's work ever done there, cutting about 75,000 ties and nearly two million feet of lumber. The outfit for the lumber camp have gone to the woods for the winter, where they expect a heavy season's cut.

—E. W. Dolloff, saw-mill, Magog, Que., is an absentee, and a meeting of creditors is to be held to appoint a curator to his estate. He was formerly at Fitch Bay, but last spring succeeded Taylor & Beech at Magog. He has not done well, having been sued in several instances within the last few months. Liabilities are not large.

—McConachie & Co. are rebuilding the shingle mill at the portage near Huntsville, Ont., on the ruin of the mill recently burned.

—J. Whiteside, of Huntsville, Ont., has shipped six horses, sleighs, and a lot of other lumber supplies to Duluth, Minn., where in connection with others he will take out about 15,000,000 feet of logs in what is known as the iron range district north of Duluth. His company is erecting a \$15,000 mill.

—A Midland dispatch says: "The large tow of logs belonging to Merrill & Ring that went adrift a few weeks ago has been gathered into small booms in sheltered spots, and will not be towed to Michigan this year because of the difficulty in securing storm booms. The gathering of the logs was made with difficulty and hardship.

The Sable River Milling Company have erected a portable sawmill at Mitchell's Brook, between Port le Bear and Port Jolie, N.S., and have contracted with Mr. Thos. Nicoll, of Mahone Bay, to saw and place on the wharf at Port le Bear one million feet of lumber. The concern have a number of men at work in the woods.

—A Rat Portage correspondent of the Winnipeg Commercial says: "One by one the different saw mills in this vicinity are closing for the season. The Keewatin Lumber Co.'s mill has shut down, and the others will follow. The season's cut with them all has not been as great as former years, as there seems a slight depression in the lumber trade. The lumbering firms in Rat Portage and Norman, which are co-operative, will not send any men to the lumber camps this winter. This means that Rat Portage and the vicinity will harbor a large number of idle men this coming winter unless they find employment elsewhere."

—A despatch from Burk's Falls, Ont., says: "Messrs. McCormick and McLeod have taken from the Emery Holland Lumber Co. a contract to take out of the township of Burton and Ferric this fall and winter, from thirty to thirty-five million feet of sawlogs. They have sublet contracts to jobbers who will operate seven camps in the township of Burton and ten in the township of Ferric. The jobbers employ at present about 300 men and the contractors about 150 in two camps they are operating in township of Ferric. In a short time jobbers and contractors expect to increase their force to 600 men. Messrs. McCormick & McLeod will make their headquarters at Ahmie Harbor.

—The failure of the Toronto Wood and Shingle Company is proving a rather mixed-up affair. The assets figure at about \$110,000, while the liabilities amount to \$150,000 or thereabouts. The Toronto Bank is the heaviest creditor, holding, it is alleged, the company's paper for between \$50,000 and \$100,000. Wm. J. Keiran, the company's manager, together with Mrs. Kieran and Edward E. Rush, executed a guarantee to the bank on the 30th of September, 1892, for this amount. Upon this guarantee the bank have filed a writ against the members. Another writ in this case is issued against W. M. Buchanan, of Thamesville, Ont., for \$3,000 damages and an injunction. Mr. Buchanan had just sold 875 cords of wood to the company on their promissory note. He supposed that he could now retain the wood, and the writ has been issued for possession of it. Henry Barber has been appointed liquidator of the company.

—The loss of the steamer Fraser, belonging to Davidson & Hay, lumbermen, on Lake Nipissingon, Nov. 7, was one of the most calamitous accidents of the past shipping season. A total of sixteen men lost their lives by the accident. Mr. John Adams, of Toronto, one of the survivors, has given the following account of the accident. He said: "Some time after the departure of the boat from Callender heavy volumes of smoke were noticed coming up from between the smokestacks, and on the manhole above the boiler being opened to locate the trouble, the bursting flames drove all hands back from the opening. In an incredibly short time the boat was a mass of fire. A signal to reverse the engines was given but no response came, the engineer being probably already suffocated by the heat. Only one boat could be lowered, that on the port side, the heat already too intense to permit of the other being worked. The yawl was lowered, and several men got in her, but her bow striking the revolving paddlewheel they were all thrown into the water. Some, however, including Adams, managed to make the scow, and picked up all whom they could reach. It was soon after this that Captain Burritt came to the rescue of the exhausted men. Captain Carr and Mate Barbeau endeavored to hang by the anchor at the bow, but they could not hold on, and one by one they gave up the effort, and dropped off." The boat was engaged in taking timber supplies to the lumber camps of the firm, and the accident will cause them considerable trouble in completing the work before navigation closes. The loss is a heavy one to the owners, the insurance of \$6,000 not nearly covering the entire loss.



TRADE REVIEW.

Office of CANADA LUMBERMAN, (November 30, 1893.)

THE GENERAL SURVEY.

BUSINESS, as the year draws to an end, is always in something of a state of uncertainty. There is the natural anxiety in regards to the outcome of the yearly stock-taking and striking of the trade balance for the year. This anxiety is accentuated this year by the depressed conditions of the past summer, especially in the United States lumber markets where much Canadian stock goes. The volume of trade was no doubt curtailed by the depression; it certainly figured less than the anticipations of early spring, when everything started off with a boom. Whether, taking the season throughout, trade will show any marked abridgment compared with other years is a point that will be more accurately reached when the annual summarizing of events has been finally completed. Then there is the natural speculation towards the close of the season as to the probabilities of the new season's trade, and on this point, while lumbermen realize that the next few months might alter conditions considerably, yet the impression is favorably entertained that a good spring trade will be done.

Mills generally are closed down, and "to the woods" has been the order of the month. Logging operations will be less than last year and yet will not be circumscribed to any great degree. Logging in the United States will, relatively, be carried on with less vigor than in Canada.

Lumber values in Ottawa are improving. For thick lumber prices are \$2 to \$4 a thousand feet higher than last year's rates and fifty cents more than a month ago. Local trade throughout Ontario is quiet.

Late returns of the quantity of timber measured and culled by the Supervisors of Cullers' office at the port of Quebec show a falling off in almost every kind of timber. For instance, there was only 2,460,541 feet of waney white pine, as compared with 2,659,166 feet in 1892; 1,120,697 feet of white pine, as compared with 2,310,081 feet in 1892; 393,391 feet of red pine, against 392,196, feet in the previous year; 573,079 feet of elm, against 198,806 feet; 158,285 feet of ash, against 198,896 feet, and 140,909 feet of birch and maple, against 425,927 feet. In the item of oak alone there was an increase, the figures being 1,150,087 feet for the present year, as against 915,913 feet last year.

In New Brunswick trade is quiet with preparations for only a limited cut in the woods this winter. Of imports of New Brunswick and Nova Scotia spruce and pine deals to the United Kingdom, the current wood circular of Farnworth & Jardine, of Liverpool, Eng., says: "The import has been in excess of the same time in the previous two years, viz., 7,809 standards, against 4,891 standards in October, 1862, and 6,199 standards in 1891, the bulk of the recent arrivals have gone direct from the quay into consumption, prices, however, show little improvement, and the present stock is quite sufficient for the probable demand during the next few months. Pine deals are dull of sale." British Columbia trade is fair.

UNITED STATES.

Rather more buoyancy has existed in lumber during the month than for some months previously. To some extent this has been a result of the nearness of the closing of navigation, making shippers anxious to get out supplies as speedily as possible. There have been large shipments from Michigan and Wisconsin ports to Buffalo and Tonawanda. It is not thought that stock to be carried over the winter will be unnecessarily heavy, perhaps not more than will be required to meet a fairly active winter and spring demand. The new tariff bill, placing lumber on the free list, is causing some anxiety; of this we have something to say elsewhere.

FOREIGN.

There is good reason to believe that trade in South America is improving, and lumbermen are likely to feel the effects at an early day. Australian conditions are mending, though slowly. English correspondents continue to write despondingly. Denny, Mott & Dickson,

of London, Eng., say: "Business during the past month has presented little feature for comment. The delay of any real revival in trade is producing a monotonous apathy, which leaves little room for speculation, excepting, indeed, as to how long the strain can be borne by those whose resources are not sufficiently strong to make them independent of profits—at least, until the "survival of the fittest" once again gives the painstaking trader a reasonable return for his time and capital." Of Canadian timber the same firm say: "The demand for oak and elm has been of the scantiest description, square yellow pine is also difficult to move but there has been sufficient enquiry for first-class Waney to justify moderate consignments to this market, whilst still practicable, as none of this timber remains in first hands." Farnworth & Jardine, Liverpool, Eng., report in their wood circular of Canadian woods: "Yellow pine timber: Waney pine has moved off freely, and prices are maintained. Square is in dull demand and prices are easier; the stock of both is sufficient. Red pine has come forward too freely, the demand is very slow, and the stock is too heavy. Oak has been imported more moderately; the deliveries have been large, and consist chiefly of 1st class wood from Quebec; several large railway companies having taken their supplies during the present month; prices are firm. The stock of this class of wood is moderate. Ash has been imported in excess of the demand, which is only moderate: there is no change in value, and the present stock is now much too heavy. Pine deals have been imported freely; the deliveries, however, have been fair, and prices are unchanged; the stock, although less than the same time last year, is quite ample."

TORONTO, ONT.

TORONTO, November 30, 1893.

CAR OR CARGO LOTS.

Table listing various lumber items such as 1 1/4 in. cut up and better, 1 1/2 in. dressing and better, etc., with prices in dollars and cents.

YARD QUOTATIONS.

Table listing yard quotations for items like Mill cull boards and scantling, Shipping cull boards, etc., with prices.

HARDWOODS—PER 31 FEET CAR LOTS.

Table listing hardwood prices for items like Ash, white, Birch, yellow, etc., with prices per 31 feet car lots.

OTTAWA, ONT.

OTTAWA, November 30, 1893.

Table listing Ottawa lumber prices for items like Pine, good sidings, Pine, good strips, etc., with prices.

QUEBEC, QUE.

QUEBEC, November 30, 1893.

WHITE PINE—IN THE RAFT.

Table listing white pine prices in the raft for items like For inferior and ordinary according to average, quality, etc., For fair average quality, etc.

RED PINE—IN THE RAFT.

Table listing red pine prices in the raft for items like Measured off, according to average and quality, In shipping order, etc.

OAK—MICHIGAN AND OHIO.

Table listing oak prices for Michigan and Ohio for items like By the dram, according to average and quality, etc.

ASH.

Table listing ash prices for items like 14 inches and up, according to average and quality, etc.

BIRCH.

Table listing birch prices for items like 16 inch average, according to average and quality, etc.

TAMARAC.

Table listing tamarac prices for items like Square, according to size and quality, Flatted, etc.

STAVES.

Table listing staves prices for items like Merchantable Pipe, according to qual. and spec'n nominal, etc.

SPRUCE.

Table listing spruce prices for items like Bright, according to mill specification, \$115 to \$123 for 1st, etc.

BOSTON, MASS.

BOSTON, Mass., Nov. 30.—Not very much reason exists for complaint of the month's trade. The demand for hardwoods has been quite large.

EASTERN PINE—CARGO OR CAR LOAD.

Table listing eastern pine prices for cargo or car load for items like Ordinary planed boards, Coarse No. 5, etc.

WESTERN PINE—BY CAR LOAD.

Table listing western pine prices by car load for items like Upper, 1 in., 1 1/2 and 2 in., etc.

SPRUCE—BY CARGO.

Table listing spruce prices by cargo for items like Scantling and plank, random cargoes, etc.

LATH.

Table listing lath prices for items like Spruce by cargo, etc.

SHINGLES.

Table listing shingles prices for items like Eastern sawed cedar, extra, clear, etc.

OSWEGO, N.Y.

OSWEGO, N.Y., Nov. 30.—A fair month's trade has been done, helped, no doubt, by the early closing of navigation.

WHITE PINE.

Table listing white pine prices for items like Three uppers, 1 1/2, 1 3/4 and 2 inch, etc.

SIDING.

Table listing siding prices for items like 1 in siding, cutting up, etc.

1X12 INCH.

Table listing 1x12 inch prices for items like 12 and 16 feet, mill run, etc.

1X10 INCH.

Table listing 1x10 inch prices for items like 12 and 13 feet, mill run, mill culls out, etc.

1 1/2 X 10 INCHES.

Table listing 1 1/2 x 10 inch prices for items like Mill run, mill culls out, etc.

1X4 INCHES.

Table listing 1x4 inch prices for items like Mill run, mill culls out, etc.

1X5 INCHES.

Table listing 1x5 inch prices for items like 6, 7 or 8, mill run, mill culls out, etc.

SHINGLES.			
XXX, 18 in. pine.....	3 70	3 90	XXX, 18 in. cedar..... 3 50 3 71
Clear butts, pine, 18 in.	2 70	2 90	Clear butt, 18 in. cedar. 2 50 2 71
XXX, 16 in. pine.....	3 10	3 30	XX, 18 in. cedar..... 1 90 2 00
Stock celars, 5 or 6 in.	4 50	5 00	
LATH.			
No. 1, 1 1/2.....	2 30	2 30	No. 2, 1 1/2..... 2 25
No. 1, 1 in.....	1 80		

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N.Y., Nov. 30.—Not a little encouragement is to be found in lumber at this point. A good business has been done throughout the month, and the feeling exists that a fair winter's trade may be expected.

WHITE PINE.			
Uppers, 1, 1 1/2, 1 3/4 and 2 in.....	\$47 00	50 00	Shelving, No. 1, 13 in and up, 1 in..... 32 00 34 00
2 1/2 and 3 in.....	56 00	58 00	Dressing, 1 1/2 in..... 26 00 28 00
4 in.....	60 00	62 00	1 1/2 and 12..... 28 00
Selects, 1 in.....	38 00	40 00	1 1/2 in..... 24 00 25 00
1 1/2 to 2 in.....	40 00	42 00	2 in..... 26 50 28 00
2 1/2 and 3 in.....	51 00	53 00	Mold s'ps, 1 to 2 in..... 33 00 35 00
4 in.....	54 00	55 00	Barri, No. 1, 10 and 12 in..... 21 00 24 00
Fine common, 1 in.....	35 00	38 00	6 and 8 in..... 22 00 23 00
1 1/2 and 1 3/4 in.....	37 00	38 00	No. 2, 10 and 12 in..... 19 00
2 in.....	39 00	40 00	6 and 8 in..... 18 00 19 00
3 in.....	47 00	48 00	No. 3, 10 and 12 in..... 14 00 15 00
4 in.....	47 00	48 00	6 and 8 in..... 14 50 15 50
Cut'g up, No. 1, 1 in.....	28 00	30 00	Common, 1 in..... 16 00 18 00
1 1/2 to 2 in.....	35 00	36 00	1 1/2 and 1 3/4 in..... 18 00 20 00
No. 2, 1 in.....	19 00	20 00	2 in..... 20 00 22 00
No. 2, 1 1/2 to 2 in.....	25 00	27 00	
No. 3, 1 1/2 to 2 in.....	18 00	19 00	

NOV.			
1x10 and 12 in. (No 3 out)	14 00	14 00	Narrow..... 13 00 14 00
1x6 and 8 in. (No. 3 out)	13 50	13 50	1 1/2 in..... 15 00 18 00
1x13 and wider.....	18 00	18 00	1 3/4 in..... 15 00 18 00
			2 in..... 15 00 18 00

SHINGLES.			
18 in. XXX, clear.....	3 75	4 00	16 in. "A extra..... 2 50 2 60
18 in. XX, 6 in. clear.....	2 75	2 75	16 in. clear butts..... 2 30
LATH.			
No. 1, 4 ft.....	2 50	2 60	No. 1, 3 ft..... 1 10
No. 2, 4 ft.....	1 95		

ALBANY, N.Y.

ALBANY, N.Y., Nov. 30.—It has been all hustle and bustle here, as the date of closing of navigation has drawn near. Aside from this circumstance there is no remarkable revival of trade.

PINE.			
2 1/2 in. and up, good.....	\$56 50	\$56 50	10-in. common..... \$15 24
Fourth.....	58		12-in. dressing and better..... 23 34
Selects.....	50		Common..... 15 17
Pickings.....	45		1 1/2 in. siding, selected, 13 ft. 40 45
1 1/2 to 2 in. good.....	52 55		Common..... 15 17
Fourth.....	47 50		1 1/2 in. siding, selected..... 38 42
Selects.....	47 50		Common..... 15 17
Pickings.....	42 45		Norway, clear..... 22 25
1-in. good.....	37 40		Dressing, clear..... 16 18
Fourth.....	52 55		Common..... 11 15
Selects.....	47 50		10-in. plank, 13 ft., dressing c. c. and better, each..... 42 55
Pickings.....	42 45		10-in. plank, 13 ft., culls, each..... 23 25
Cutting up.....	37 40		10-in. boards, 13 ft., dressing and better, each..... 28 32
Bracket plank.....	22 77		10-in. boards, 13 ft., culls..... 17 21
Shelving boards, 12-in. up.....	30 35		
Dressing boards, narrow.....	19 21		
LATH.			
Pine.....	\$2 40	\$2 40	Spruce..... \$2 30 \$2 40
SHINGLES.			
Sawed Pine, ex. XXX.....	\$4 54	\$4 54	Round butts, 6x18..... \$5 90 \$6 00
Clear butts.....	3 15	3 25	Hemlock..... 2 15 2 30
Smooth, 6x18.....	5 50	5 60	Spruce..... 2 20 2 30

SAGINAW, MICH.

SAGINAW, Mich., Nov. 30th.—Lumber is decidedly slow, and will likely continue so over the end of the year. The proposition to place lumber on the free list is not over welcome news in this quarter.

FINISHING LUMBER—ROUGH.			
Uppers, 1, 1 1/2 and 1 3/4.....	45 00		Fine common, 1 in..... 35 00
2 in.....	46 00		1 1/2 and 1 3/4 in..... 36 00
Selects, 1 in.....	40 00		2 in..... 36 00
1 1/2 and 1 3/4.....	41 00		C, 7, 8 and 9 in..... 30 00
2 in.....	41 00		
SIDING.			
Clear, 3 1/2 in.....	24 00		C, 3 1/2 in..... 10 00
3 1/2 in.....	24 00		3 1/2 in..... 13 00
Select, 3 1/2 in.....	21 00		No. 1, 3 1/2 in..... 13 00
3 1/2 in.....	21 00		3 1/2 in..... 23 00
TIMBER, JOIST AND SCANTLING.			
2x4 to 10x10, 12, 14 and 16 ft.....	\$11 00		20 ft..... 13 00
18 ft.....	13 00		22 and 24 ft..... 15 00
For each additional 2 ft. add \$1; 12 in. plank and timber \$1 extra; extra for sizes above 12 in.			
SHINGLES.			
XXX 18 in. Climax.....	3 65		18 in. X (cull)..... 1 00
XXX Saginaw.....	3 40		XXX short..... 2 25
XX Climax.....	2 25		XX..... 1 50
18 in. 4 in. c. b.....	1 25		
LATH.			
Lath, No 1, white pine.....	2 25		Lath, No. 2, W. pine, Norway 1 65

NEW YORK CITY.

NEW YORK, Nov. 30.—The lumber market is quiet, with indications telling of the near approach of the end of the year. A statement is made here by an agent of large Canadian mills that he has already reached a point of negotiation for next year's cut that practically engages the output, with price, however, contingent upon tariff revision.

WHITE PINE—WESTERN GRADES.			
Uppers, 1 in.....	\$4 00	\$4 00	Coffin boards..... 20 00 22 00
1 1/2, 1 3/4 and 2 in.....	40 00	47 00	Box, in..... \$17 00 17 50
3 and 4 in.....	55 00	58 00	Thicker..... 17 50 18 50
Selects, 1 in.....	40 00	41 00	Ceil'g, base, fig. No. 1..... 40 00 42 00
1 in., all wide.....	41 00	43 00	No. 2..... 35 00 37 00
1 1/2, 1 3/4 and 2 in.....	43 00	44 00	No. 3..... 24 00 26 00
3 and 4 in.....	52 00	53 00	Shelving, No. 1..... 30 00 32 00
Fine common, 1 in.....	36 00	37 00	No. 2..... 25 00 27 00
1 1/2, 1 3/4 and 2 in.....	38 00	40 00	Molding, No. 1..... 36 00 37 00
3 and 4 in.....	46 00	48 00	No. 2..... 34 00 36 00
Cutting up, 1 in. No. 1.....	28 00	30 00	Bevel s'lg, clear..... 22 50 23 00
No. 2.....	21 00	23 00	No. 1..... 22 00 22 50
Thick, No. 1.....	29 00	32 00	No. 2..... 20 00 20 50
No. 2.....	24 00	26 00	No. 3..... 16 00 17 00
Common, No. 1, 10 and 12 in.....	22 00	23 00	Norway, c'l, and No. 1..... 23 00 25 00
No. 2.....	20 00	21 00	No. 2..... 20 00 22 00
No. 3.....	17 00	18 00	Common..... 18 00 19 00

A PLEA FOR WOODEN SHINGLES.

THE evolutions and changes of time have given creation to other shingles besides those made of the products of the forest. Whether these new inventions are an improvement on the old original is seriously doubted by a writer in the Tradesman, who enters the following logical plea for wooden shingles. He says: "The most important part of any house or building, whether erected for the transaction of business or the enjoyment of pleasure—for the abode of humans or beasts—is the roof. Whole nations of people have lived in houses without any side protection. The historian, Gibbon, states, flatly and unqualifiedly, that the marked contrast between the vigor of the men and virtue of the women of the Germanic tribes of northern Europe and the people of the cities of the Roman Empire, in its declining days, resulted from the fact that the dwellings of the former had no side protection, but were left open. The hardy pioneers of this country reared large and vigorous families on "dirt floors." Among the poorer classes of European and Asiatic people and in Mexico and South America the floors of the dwellings are the native earth. But in all climates, among all peoples in ages from the time of the cave bear to the present, a roof was considered the grand essential of a dwelling place. Every imaginable article, from plant leaves and branches, skins of animals, textile fabrics and so on, down or up, to minerals and metal, have been used for roofing purposes. In this civilized land there are several substances in use for the purpose and in the projection of any new building the main question is: What shall the roof be made of? It is hard to convince a shingle manufacturer, whether he be a cypress, poplar, cedar, white pine or a redwood man, that there is anything cheaper, better and more satisfactory in all respects, except in regard to fire risks in towns and cities, than a wooden shingle. Slate is heavy, requires extra strength, and consequent cost, of wall and roof timbers and altogether too costly for any but the better class of buildings. Iron roofing has the same objections and in addition requires repeated coats of paint. The roofs, as they are made now, are a fraud. The sheets of which they are made are rolled so thin that light can be seen through the common grades of them and the cost of alleged tin with which they are covered, by dipping the plate into an alloy of tin, lead and antimony, and afterwards squeezed off by running the plates through five successive sets of pressure rollers, is about a hundred times thinner than the plates. If not painted as soon as put on the roof will leak from the start, and the coat of paint will have to be renewed at intervals of one to three years. When a tinner is employed to repair a tin roof he has a picnic. There is no regular price on that kind of work and it is a pretty fair tinner's cub who does not make two leaks for every one he stops. The so-called tin shingles are an abomination. They are corrugated and grooved, according to a pattern some one has devised and had patented, by pressure between dies and the texture of the plate and tin coating so strained and broken that they must be painted as they come from the machine or they will rust before they can be nailed on the roof. For the great majority of buildings, where the fire risk is not too great, a wood shingle roof is the cheapest and the best. The alternate expansion and contraction of a continuous metal roof will, in time, wear loose the cleats, or the nails that hold them, and if the roof blows off in a storm, the whole concern goes at once. A wood shingle roof, properly put on, will not blow off unless the sheathing and rafters go too.

Instances are occurring every few weeks where old houses are being torn down or repaired, showing that wood shingle roofs have lasted longer and given better service than metal roofs. But these old roofs, put on fifty or more years ago, do not furnish a fair criterion by which to judge the durability of the wooden shingles now on the market. There were no shingle machines in this country fifty years ago. All shingles were riven and drawn by hand. None but the best, straight and sound timber was used. The butt ends, or that part which was exposed to the weather, were drawn with parallel thickness and consequently, straight with the grain of the wood. Hence, none, or very few, of the sap ducts were exposed. The taper of the hand drawn shingle was made from the part to be exposed to the weather to the top. Machine made shingles, whether cut or sawn, taper all the way from the butts to the top, and the butts and tops are made alternately from both ends of the bolt. This cuts across the ducts and opens every pore where the sap once flowed for the entrance of rain water. When the hardened, or dried up, sap remaining in these sap ducts is dissolved the rain water a fermentation of more or less energy is set up and tends to speedily break down the cellular structure of the wood and produce decay. The sap of all woods contains albumen; nearly all contain saccharine matter combined with acids, all of are active elements of fermentation. These are some of the reasons why a sawn shingle will not last as long as a shaved one. Cut shingles are hardly worth nailing on a roof, as the grain of the wood is broken, or loosened, in making. It is simply a thick shaving.

There is one thing that can be said about sawn shingles that has never been said, and it is very important. They will hold paint better than shaved shingles and infinitely better and longer than metal. If made thin enough, or applied hot, the paint will enter and fill the sap duct and prevent the entrance of moisture or fermentation. If a roof of sawn shingles is kept painted as well as tin or a sheet iron roof requires, it will last longer and give better service than either. It is a mistake to suppose that metal, or even slate, roof is fire-proof. A wood shingle roof can be made proof against falling sparks by using the proper paint. No metal roof is proof against heat that will ignite wood coated with fire-proof paint.

PUBLICATIONS.

The Trade Review, of Montreal, a welcome exchange in our sanctum, appears in a new typographical dress and improved and modernized in form.

Edward Bellamy has written the story of "How I Came to Write 'Looking Backward'" for The Ladies' Home Journal. He will tell, in connection with the history of the book itself, how the idea of Nationalism first suggested itself to his mind.

TRADE NOTES.

Robin & Sadler, of Montreal and Toronto, the well-known manufacturers of leather belting, are in receipt of a handsome diploma from the Eastern Townships Agricultural Association, awarding them a silver medal, for display of leather belting at the Sherbrooke exhibition in September last.

In another part of this issue Mr. R. Dillon, Oshawa, Ont., advertises the "Whiting" Saw Set for cross-cuts only. Some of the special features of this tool are, it sets the points only, and being constructed on the Swage principle, will set hard teeth. There are no springs, can be carried in the vest pocket, and are fully warranted.

PERSONAL.

Hiram A. Emery, the millionaire lumberman of Bay City, Mich., died at Mobile, Ala., a fortnight ago.

Miss Ada Rixon, third daughter of Mr. Henry Rixon, of the well-known firm of Maitland, Rixon & Co., lumbermen, Owen Sound, Ont., died a week ago of peritonitis. Great sympathy is expressed for the family, as only last summer the only son was drowned from the steamer Alberta in Lake Superior under very distressing circumstances.

Mr. Edward Newell, for many years manager of Dick, Banning & Co., at Keewatin, has removed to Norman, Ont., as more central for his duties in connection with the Ontario and Western Lumber Co. Before his departure the citizens presented Mr. and Mrs. Newell with a silver tea service and address. Mr. Newell has been a prominent citizen, having been a member of the council, the school board, and many secret societies. At present time he is reeve of Keewatin.



## EFFECTS OF TREES ON CLIMATE.

By Prof. B. E. Fernow.

AS to humidity of air, we find that the annual evaporation within the forests is about one-half of that in the open field, not only is the evaporation within a forest greatest in May and June, but the difference between this and the evaporation in the open field is also then a maximum, which is the saving due to the presence of the woods. The average annual evaporation within the woods is about forty-four per cent. of that in the field. Fully half of the field evaporation is saved by the presence of the forest.

The quantity of moisture thrown into the air by transpiration from the leaves in the forest is sometimes three times that from a horizontal water surface of the same extent, and at other times it is less than that of the water. The transpiration from leaves in full sunshine is decidedly greater than from leaves in the diffused daylight or darkness. The absolute amount of annual transpiration observed in forests of mature oaks and beeches in central Europe is about one-quarter of the total annual precipitation.

The percentage of rainfall evaporated at the surface of the ground is about forty per cent. for the whole year in the open field, and about 12 per cent. for the forest, and is greater under deciduous than under evergreen forests. The evaporation from a saturated bare soil in the forest is about the same as that from a water surface in the forest, other conditions being the same. The presence of forest litter like that lying naturally in undisturbed forests hinders the evaporation from the soil to a remarkable extent, since it saves seven-eighths of what would otherwise be lost.

The total quantity of moisture returned into the atmosphere from a forest by transpiration and evaporation from the trees and soil is about seventy-five per cent. of the precipitation. For other forms of vegetation it is about the same, or sometimes larger, varying between seventy per cent. and ninety per cent. In this respect the forest is surpassed by the cereals and grasses, while on the other hand, the evaporation from a bare soil is scarcely thirty per cent. of the precipitation.

The absolute humidity within a forest exceeds that of the glades and the plains by a small quantity. The relative humidity in the forest is also larger in the forest than in the glades or plains by two per cent. to four per cent. Forests of evergreens have from two to four times the influence in increasing relative humidity than do forests of deciduous trees. The gauges in European forest stations catch from seventy-five to eighty-five per

cent. when placed under the trees, the balance representing that which passes through the foliage and drips to the ground or runs down along the trunks of the trees, or else is intercepted and evaporated. The percentage withheld by the trees, and which either evaporates from their surface or trickles along the trunk to the ground, is somewhat greater in the leafy season, though the difference is not great.

Deciduous and evergreen trees show but slight difference in this respect. More rain is usually caught by gauges at a given height above the forest crown than at the same height in open fields, but it still remains doubtful whether the rainfall itself is really larger over the forests, since the recorded catch of the rain gauge still requires a correction for the influence of the force of the wind at the gauge. In such cases, where over a large area deforestation and reforestation have seemingly gone hand in hand with decrease and increase of rainfall, the possible secular change in rainfall must also be considered.

## TRANSMISSION OF POWER.

THE London Electrical Engineering, September 15, repeats the first part of the first Howard lecture delivered before the Society of Arts, by Prof Unwin, on the development and transmission of power from central stations. In discussing the sources of mechanical energy, he states in connection with the subject of solid fuel, that one-fifth to one-fourth of the heat escapes in the chimney; that at most three-eighths to four-fifths of the heat supplied to a steam engine can be transformed, and that three-tenths of the whole heat of the fuel which it is possible to transform by the steam engine, is further reduced by imperfections and losses in the engine itself; in connection with gaseous fuel he mentions the advantages of gas engines, including the fact that they have a higher efficiency than steam engines; gas for heating and power purposes, he states, will probably be distributed and sold at less than half the price of the present gas; regarding town refuse, as a fuel, he states that Mr. Watson calculates that in furnaces at Leeds, 4,800 pounds of water can be evaporated by the heat produced by a ton of refuse, but he discredits these figures; from the experiments at Oldham it appears that forty pounds of refuse will yield an effective horse power hour. The second portion of his lecture is published in the issue of September 22. This portion is devoted to the generation of power by steam and the conditions of economy and waste. Some interesting tables of results, diagrams and curves are given.

# STEAM PUMPS



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**NOTES ON WOOD-WORKING.**

**WRINKLES** are good, of course, but look out for some of them, all the same. Don't swallow a thing, simply because it appears in print, which you would not swallow if told to you by some one else. To illustrate the value of some of the "wrinkles" printed for the benefit of the public, I present the following, from a journal devoted to general industry: "Do you know that you can drive nails into hardwood without bending them, if you dip them first in lard?" It would be perfectly legitimate to answer that question by asking one or more others. For instance: Do you believe the holding power of a greased nail is as great as that of one not greased? Do you know what effect the acids in the lard will have on the nail? Is the aim of driving a nail to do it easily, or do it well and properly? Would you be willing to have fine hardwood wares driven full of greased nails? Do you know that, if you can not drive nails into wood without bending them, either the nails are too soft, or the wood is too hard, or you don't know enough to drive a nail, or else you would better try some other method of driving? Just think over this greased-nail-hardwood-driving "wrinkle" a bit before trying it on your wares.

When you buy light hangers, knowing them to be lighter than those you have ever before used in similar work, do not be surprised, when, having them in position and the machinery started, they "drop down dead" under the too-great strain. Have them heavy enough to make sure that they are strong enough. Rigidity is greatly to be desired in wood-working machines, of course, but rigidity is not always implied in a great weight of frame. I know some exceedingly "heavy" machines that are anything but rigid. The designer of machines has a problem always before him. It is necessary for him to use material enough to make rigidity an assured feature of a machine, and if he be a thoroughly scientific as well as practical man, he will know where and how to distribute metal so as to answer to the strains and jars most perfectly. I know one planer, in very general use, that on first acquaintance seems entirely too light in frame for the work it is built to do. Notwithstanding its appearance of extra lightness, it is an exceedingly rigid machine, one of the most rigid I have ever seen.

**FUTURE OF WOOD PULP**

THE Manufacturers' Gazette thinks if all that is expected of wood pulp is accomplished, it is apt to become much more of a king than ever was cotton. Late patents cover inventions for machines which are intended to spin and weave the fibre as if it were cotton or wool, of which, for the making of wearing apparel, it is said to be the equal in every respect. When our shirts and our pantaloons, our hats and shoes, our bath tubs and coffins are all made, as it is possible they may be, of pulp, the product will certainly have come nearer than ever did anything else of enjoying a monopoly of supplying all the ordinary wants of man.

CANADA LUMBERMAN, \$1 per year.

**WANTED AND FOR SALE**

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 27th of each month to insure insertion in the following issue.

**WE WANT ALL KINDS OF HARDWOODS.** Will pay cash. **ROBERT THOMSON & CO.**, 103 Bay Street, Toronto.

**FOR HEMLOCK, DIMENSION LUMBER,** hardwood flooring, cedar shingles, piles, sawdust, etc., write **J. E. MURPHY**, lumberman, Hepworth station, Ont.

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Town	Railway, Express, or nearest Shipping Point	NAME	Business	Power, Style and Daily Capacity
Ottawa, Ont.	Ottawa	Booth, J. R.	Lumber, Wholesale and Retail	Steam, Circular and Band Mill
Ottawa, Ont.	Ottawa	Bronson & Weston Lumber Co.	2 Sawmill, White and Red Pine, Wholesale	Water, Gang and Band, 450m
Ottawa, Ont.	Ottawa	OTTAWA LUMBER CO.	Lumber, Pine, Spruce, Hemlock, Wholesale	Lumber, Pine, Spruce, Cedar, Hardwood
Parry Sound, Ont.	Utterson	Conger Lumber Co.	Lumber, Wholesale and Retail	Lumber, Wholesale and Retail
Parry Sound, Ont.	Parry Sound	Parry Sound Lumber Co.	Saw, Shingle and Lath Mills, Pine, Wholesale	Water, Gang, Circular, Saw 90m, Shingles 20m, Lath 30m
Muskoka Mills, Ont.	Midland	Muskoka Mill and Lumber Co.	W. Pine Lumber, Lath and Bill Stuff, all lengths	2 Mills, Water, 1 Band, 2 Gangs and 3 Circulars
Alexandria, Ont.	Alexandria	McPherson, Scheil & Co.	Cheese Box Factory, Pine, Spruce, Cedar	Circular, 3m
Almonte, Ont.	Almonte	Caldwell, A. & Son	Sawmill, Pine, Lumber, Hemlock, Hardwood	Steam, Circular, 40m
Barrie, Ont.	Barrie	Dymont & Mickie	Saw, Shingle and Heading Mill, Pine, Cedar	Steam, Circular, 16m
Barrow Bay, Ont.	Warton	Barrow Bay Lumber Co., Limited	Oak, Oak Railway Ties, Paving Blocks	Stm, Band, Cir., S. 75m, Sh. 60m
Blind River, Ont.	Blind River	Blind River Lumber Co.	2 Saw, Sh. and Lath Mills, Pine, Hem., Bl. Birch	Wauhaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Hoboynton, Ont.	Fenelon Falls	Boyd, Mossom & Co.	Lumber, Wholesale and Retail	Wauhaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Barrie, Ont.	Barrie	Burton Bros.	Lumber, Wholesale and Retail	Wauhaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Wauhaushene, Ont.	Wauhaushene	Georgian Bay Consol. Lumber Co.	Pine only	Wauhaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Calabogie, Ont.	Calabogie	Hd. office arcade 24 King St. W., Toronto	Lumber, Wholesale and Retail	Wauhaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Callander, Ont.	Callander, G.T.R.	Carswell, Thistle & McKay	White and Red Pine Lumber, Bill Stuff, Lath and Shingles	Steam, 2 Circular, 80m
Callander, Ont.	Callander, G.T.R.	John B. Smith & Sons	Head Office, Strachan Ave., Toronto	Steam, 2 Circular, 80m
Collins Inlet, Ont.	Collins Inlet	Collins Inlet Lumber Co.	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	Steam, Cir., Saw 14m, Sh. 20m
Glamis, Ont.	Pinkerton	McIntyre, N. & A.	Saw, Shingle and Lath Mill, Timber Lands, Hemlock, Pine, Lumber, Hardwoods	Steam, Cir., Saw 14m, Sh. 20m
Hamilton, Ont.	Hamilton	BRADLEY, MORRIS & REID CO.	Lum., Tim., Pine, Hem., Hwds., Whol. and Ret.	Steam, Circular, 25m
Huntsville, Ont.	Huntsville	Heath, Taft and Turnbull	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 4m
Hamilton, Ont.	Huntsville and Katrina	Thomson, Robert & Co.	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular
Keewatin, Ont.	Keewatin	Dick, Banning & Co.	Sawmill, Pine, Hardwoods, Wholesale	Water, Band and Circular, 100m
Keewatin, Ont.	Keewatin	Keewatin Lumber & Mfg. Co.	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Water, Band and Circular, 100m
Lakefield, Ont.	Lakefield	Lakefield Lumber Mfg. Co.	Lumber, Wholesale and Retail	Water, Band and Circular, 100m
Little Current, Ont.	Sudbury	Howry, J. W. & Sons	Lumber, Wholesale and Retail	Water, Band and Circular, 100m
London, Ont.	London	Gordon, James	Exp. and dir. in Am. Hwds. made to specification	Water, Band and Circular, 100m
Langford Mills, Ont.	Langford	Langford Lumber Co.	Saw and Plan. Mill, Tim. Lands and Logs, Pine	Water, Band and Circular, 100m
Norman, Ont.	Norman	Minnesota & Ontario Lumber Co.	Lumber, Wholesale and Retail	Water, Band and Circular, 100m
Louis, Ont.	Elmwood, G.T.R.	S. B. Wilson & Son	Hardwoods, Shingles, Lath, Handles	Water, Band and Circular, 100m
Toronto, Ont.	Warren, C.P.R.	The Imperial Lumber Co., Limited	Pine	Water, Band and Circular, 100m
Toronto, Ont.	Cashe Bay, Ont.	Davidson, Hay & Co.	W. Pine, Lath, Shingles, Dim. Timber, Car Silk	Water, Band and Circular, 100m
Toronto, Ont. (Mill)	Lakefield	S. J. Wilson & Co.	Pine and Hardwood, Wholesale	Water, Band and Circular, 100m
Toronto, Ont.	Toronto	F. N. Tennant	Lumber, Wholesale	Water, Band and Circular, 100m
Toronto, Ont.	Toronto	Donogh & Oliver	Lumber, Wholesale	Water, Band and Circular, 100m
Toronto, Ont.	Toronto	Victoria Harbor Lumber Co.	Saw, Shingle and Lath Mills, White Pine, Whol.	Water, Band and Circular, 100m
Toronto, Ont.	Toronto	W. N. McEachren & Co.	Lumber, Wholesale	Water, Band and Circular, 100m
Toronto, Ont.	Toronto	James Tennant & Co.	Lumber, Lath, Shingles, etc., Wholesale	Water, Band and Circular, 100m
Warton, Ont.	Warton	Miller, B. B.	3 Sawmills, Lumber, Barrel Heads	Water, Band and Circular, 100m
Buckingham, Que.	Buckingham	Ross Bros.	2 Sawmills, Pine, Spruce, Hardwoods	Water, Band and Circular, 100m
Toronto	Toronto	DeLaplante & Bowden	Pine and Hardwood Lumber, Whol. and Retail	Water, Band and Circular, 100m
Montreal, Que.	Montreal	Dufresse, O. Jr. & Frere	Sawmill, Pine, Spruce, Hemlock, Hdwds., Whol.	Water, Band and Circular, 100m
Montreal, Que.	Montreal	SHEARER & BROWN	Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	Water, Band and Circular, 100m
Moodyville, I.C.	New Westminster	MOODYVILLE SAWMILL CO.	Sawmills, P. Fir, Spruce, Cedar, Hardwoods	Water, Band and Circular, 100m
New Westminster, I.C.	New Westminster	Brunette Sawmill Co.	Saw and Planing Mills, Sash, Doors and Blinds	Water, Band and Circular, 100m
Canterbury, N.B.	Canterbury Stn.	James Morrison & Son	Fir, Cedar, Spruce, Hardwoods	Water, Band and Circular, 100m
Bridgewater, N.S.	Bridgewater	DAVIDSON, E. D. & SONS	Sawmill, Pine, Hardwoods	Water, Band and Circular, 100m
Bridgewater, N.S.	Bridgewater	DAVIDSON, E. D. & SONS	Saw, Shgle. and Lath Mills, Pine, Spr., Hwds.	Water, Band and Circular, 100m

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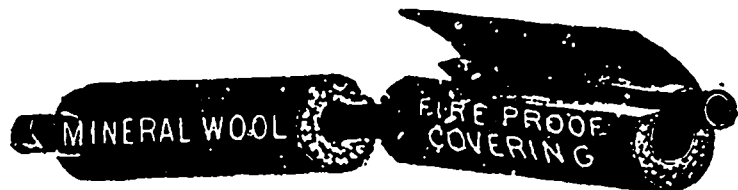
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And a man must be pretty hard up if he hasn't that much to spend every week.  
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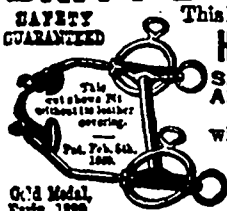
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The book is printed on fine paper, good clear type, and is handsomely and substantially bound in cloth. It will be sent to any address on receipt of the price, **ONE DOLLAR.**

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## CANADIAN

# LUMBERMAN'S DIRECTORY

AND INDEX TO THE PLANING MILLS  
 AND SASH AND DOOR FACTORIES  
 OF CANADA.

THE Publisher is now open to receive subscriptions for the above Directory of the lumber trades. No effort is being spared to make this publication thoroughly complete and reliable in every detail, and it is hoped that all LUMBERMAN subscribers interested will fill in the following subscription blank and return to this office at as early a date as possible.

TO THE PUBLISHER OF  
**THE LUMBERMAN'S DIRECTORY**  
 AND INDEX TO THE PLANING  
 MILLS AND SASH AND DOOR  
 FACTORIES OF CANADA: .....1893

Please supply.....with.....copies of the  
 above Directory as soon as issued, for which.....agree  
 to pay Two Dollars per copy.

All owners of saw and planing mills, wholesale and retail lumbermen, coopers, etc., are earnestly requested to furnish information asked for in following blank and mail same as soon as possible.

Address all communications to  
**DIRECTORY DEPARTMENT,**  
**CANADA LUMBERMAN,**  
**TORONTO, ONT.**

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TORONTO, ONT.

GENTLEMEN,

We have thoroughly tested the "Andrews" Lumber Dry Kiln furnished by you and must say that it more than surpasses our expectations. We put green spruce lumber in from the saw dripping with water and in 18 hours it was drier than lumber that had been stuck up in the yard all summer, and in four days it was as dry as a bone, and without nearly as many checks or warps as the same grade air dried.

A very important feature of the "Andrews" Kiln is that it saves so much steam over that of any other system.

You may refer any one you like to us, or send them down to inspect, and we can satisfy them that your kiln cannot be beat.

Yours truly,  
EASTMAN LUMBER CO.

## WHAT?

## WHY

CHATHAM, ONT.,  
August 25th, 1893.

A. G. MORTIMER, Esq.,  
Manager Dominion Dry Kiln Co.,  
Toronto, Ont.

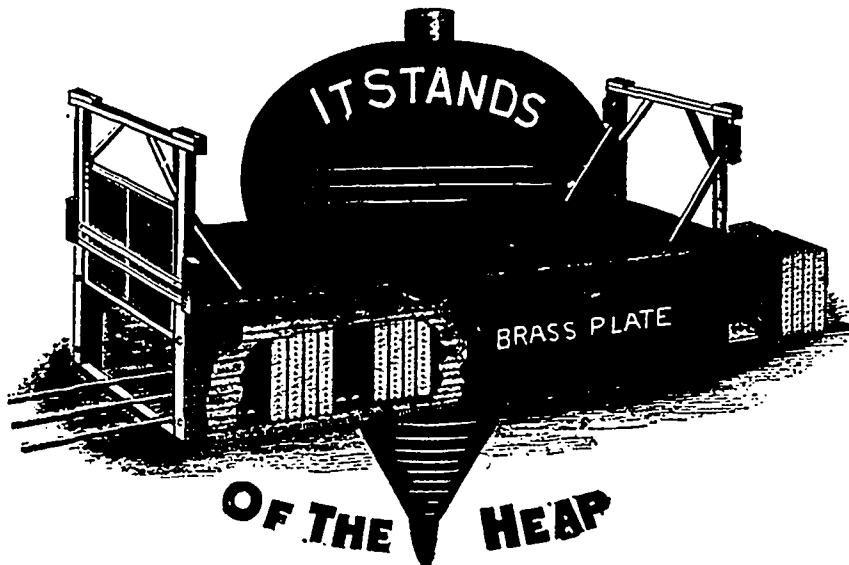
DEAR SIR,

The "Andrews" dry kiln, which I purchased from you has now been in operation over a month, and is so perfectly satisfactory that I cannot say enough in its favor.

I use very little steam and my staves come out as dry as a bone, and are not in any way injured by warping or discoloration.

Yours truly,  
(Signed) N. H. STEVENS

.....  
AWARDED  
THE  
GOLD  
MEDAL  
.....



.....  
AT THE  
WORLD'S  
FAIR  
CHICAGO  
.....

- SAVES
- Time
- Capital
- Interest
- Insurance
- Yard Room
- Freight
- Material
- Labor
- Expense

Nearly 500 Kilns  
- already -  
in Successful Operation

# THE ANDREWS DRYER

—FOR—

## Lumber, Shingles, Heading and Staves

MANUFACTURED BY

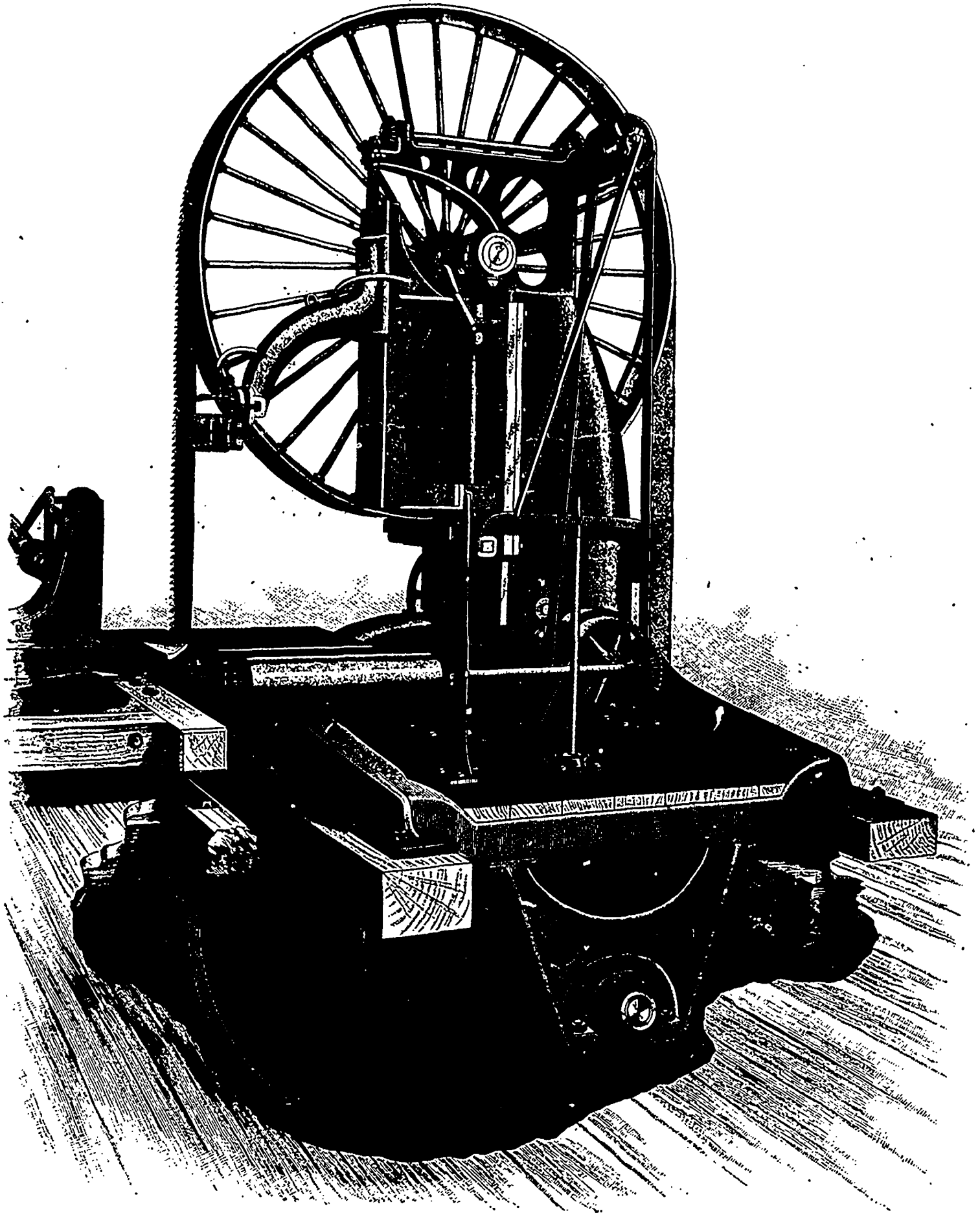
# THE DOMINION DRY KILN CO.

TORONTO, ONT.

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We have lately completed arrangements with E. P. ALLIS & Co., of Milwaukee, to build the above Band mill for the Canadian trade. We consider it the best American mill at the present time, and customers can rely on securing an exact counterpart of the Allis Mill in every particular. Our new Band Saw Catalogue will be out of the printer's hands by the first of December, when we shall be pleased to send you one. We are building a full line of the most improved Band Saw Tools, Carriages, and Steam Mill Machinery.

**WATERBROS ENGINE WORKS CO., BRANTFORD, CAN.**



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Sawmill Outfits, complete  
 Steam Drag Saw  
 Band Mill for Logs  
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 Log Haul Ups  
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 Sawdust Conveyors  
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 Double Gang Edgers  
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Re-Sawing Machines  
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 Two Block Shingle Mill  
 Swing Shingle Machines  
 Single Knot Saws  
 Shingle Jointers  
 Shingle Packers  
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 Stave Cutters  
 Stave Bolt Equalizers  
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 Double Surfacers  
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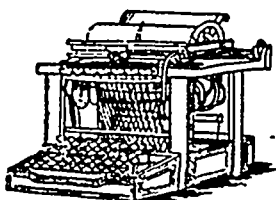
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Are open to Purchase

**Oak, Ash, Birch  
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 and Good Pine Lumber  
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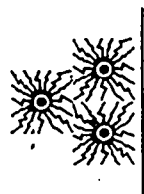
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