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THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XIV. }
NUMBER 10.

TORONTO, ONT., OCTOBER, 1893

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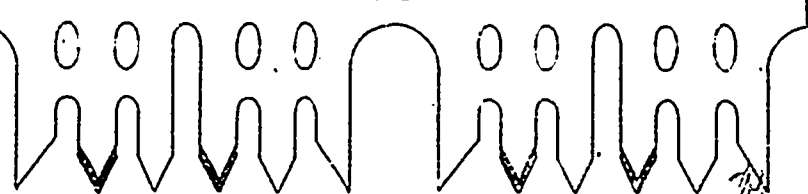


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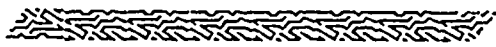
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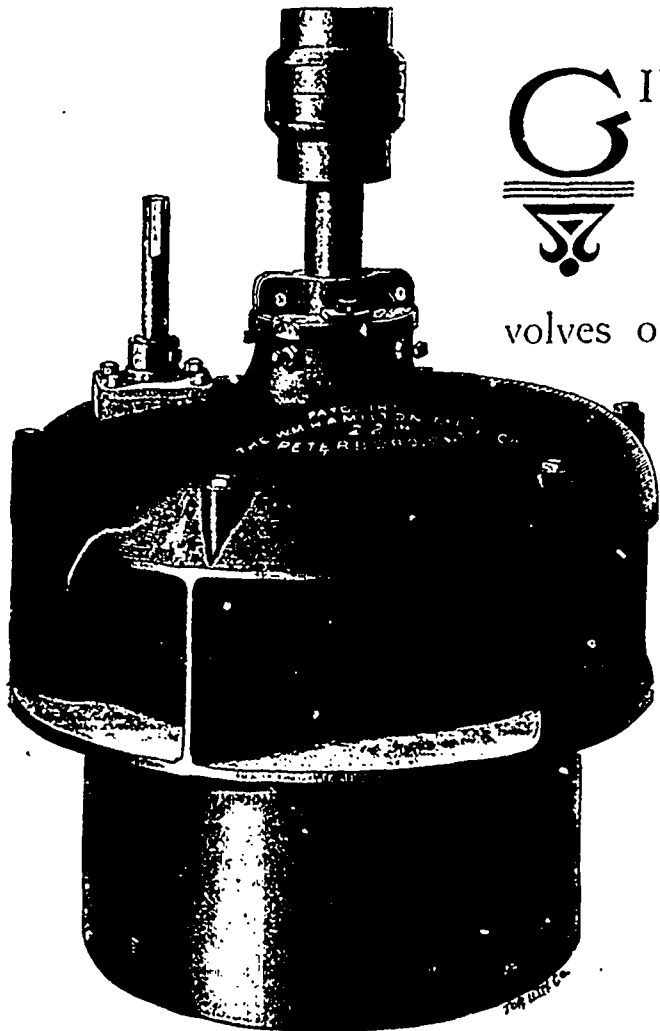
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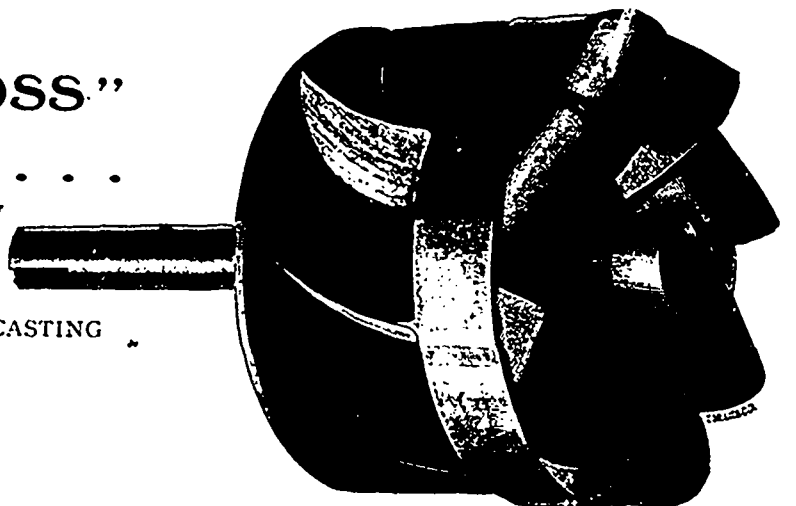
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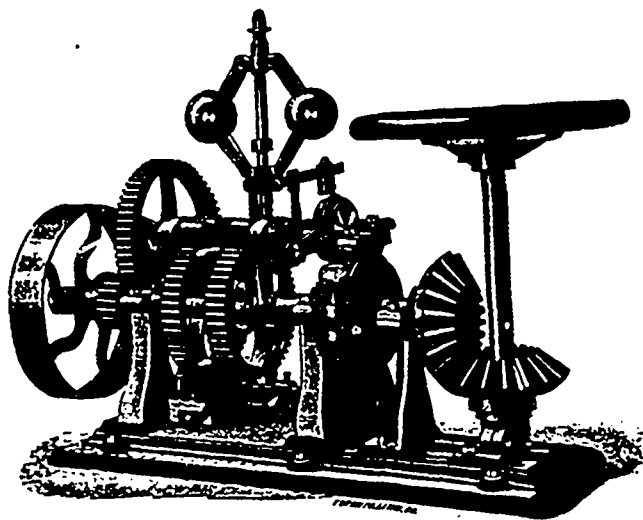
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BY THE WAY.

PULP wood operators are proving more conservative in their methods of dealing with the forest product than has been the custom with holders of pine. Realizing that the annual consumption of pulpwood is growing enormously we are told that operators in pulpwood in northern New York have posted notices at places where the product is delivered for sale or shipment, to the effect that no wood will be received that is less than four inches in diameter at the smaller end. This, it is thought, will prevent the cutting of small-sized poplar and spruce, and thus save waste of growths that are not much larger than saddles. The practice is in striking contrast to the slaughter of the innocents in the pine forests of both the United States and Canada. The capacity of pulp mills in the States has increased from 72,000 tons twelve years ago to 700,000 tons a year, calling for 3,500 cords daily to feed them. Relatively the growth has been nearly as marked in this country. E. B. Eddy, of Hull, has developed this branch of his business to large proportions during the past few years. And word reaches us of the erection of a large pulp mill at Milton, N.S., at a cost of \$50,000, and of another at New Germany at a cost nearly as large. Canada is rich in spruce, yet the suggestion here to wise economy is worthy careful heeding.

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Where brick and stone buildings are on the increase in most parts of our own land, for various obvious reasons, not the least, in the large cities, because of danger of fire, it is interesting to observe that in different parts of Europe, wooden buildings are becoming increasingly the vogue. Wooden buildings for Ireland is a recent suggestion which has been received with favor in many parts of the Emerald Isle; the latest development comes from the Riviera, where it is thought they would afford far less danger than stone buildings in case of danger. A company has been formed at Pegli, some little distance from Genoa, to lay out a small town, the villas being imported from Sweden. Beams, flooring and roofs are exempt from duty, but doors, window frames and carved woodwork pay a duty of 13 lire per 100 kilos. Another custom that is favorable to lumbermen in European cities, and in contrast with a growing custom in Canadian and American cities, is the construction of wooden pavements, where here we are using more and more asphalt and other forms of concrete.

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Men will make mistakes. There are few who don't. The foolishness is in not profiting by the mistakes made. Experience ought to be made valuable and yet it is the case that one may place too great importance on the experience of the past. The lumber trade has suffered before to-day from over-production, and for the past few years dealers have carefully avoided a repetition of the blunder. Now there has come an unexpected depression in the trade. Greater quantities of lumber than had been anticipated will be carried over the winter, and the policy would appear to be to level up these conditions by curtailing the cut the coming winter. This would appear a wise decision. But is it? It would be a serious blunder to find the stock of logs cut come largely short of the demand that would exist in the spring. This may not, on the surface, seem probable, and yet it is a view that is taking a strong hold of some lumbermen. It is a case where a careful weighing of many probabilities is needed on the part of lumbermen. And now is the time to do the weighing.

USE AND ABUSE OF BELTING IN SAWMILLS.

THE use of belting is one of those subjects that can be discussed to almost no end in a journal devoted to a consideration of mechanical affairs. To the sawmill owner it is a subject of very practical importance for, as the Southern Lumberman remarks, no institution pays out more for belting than the sawmill. Such belts, our Nashville cotemporary goes on to say, are naturally subjected to severe use from exposure, dust and grease. The nature of the work is very severe and belts should run as slack as possible to do their work. Only belts of ample width over larger pulleys can be run slack without slipping. The unequal work and severe strain put on belts running saws, etc., necessitates that the belt be protected from dust. This can generally be done by the use of hoods or other means. Oils and dust are the belts' worst enemies. There is no institution that uses or wastes the oil as a sawmill does. By centrifugal force and other mechanical influences, oil is transmitted to belts and soon ruins them. On rubber belts the gum peels off with lumps accumulated on the pulley and in spots on the belting. The rubber surface was put there for adhesion and strength and when destroyed the belt is damaged.

It is astonishing the amount of waste in belting about a mill from carelessness in the fastenings. In many cases the life of a new belt is partly gone before it has become adjusted. It is put on either too tight or too loose—the latter most frequently, and with its powdered surface, it has but little adhesion. The belt is expected to perform its function and is allowed to slip: the edge is badly worn, damaged and stretched, and often the belt is run off the pulley and great damage done. Care should be exercised to get a belt right; if the right tension is not had, no chances should be taken. The practice of punching large holes and pulling the lace through two or three times for "strength," is really weakness, and the belt will not run as long as it would if small and closer holes were punched and the hinge lace used. A belt will run for years with this lace on line s. afts, without replacing. It is astonishing how men will be contented with replacing lacing every few months, wearing out and wasting belting, when it can be made to last nearly twice as long. Good belting should be used by men who take some care of belting.

Small pulleys are hard on belts, and, where steel rim pulleys can be had, it will be found more economical to increase the size of the pulley over cast iron, thus reducing the demand on the belt through increasing the velocity. We often see good gang edgers with too small a pulley. The result is never satisfactory. It is simply a tight belt and hot bearing, with 50 per cent. more outlay for belts than would be required with a larger pulley. Fast belts require neat fastenings, and where the skill at hand can not make a belt practically endless at the joint greater speed can not be successfully used. Good rubber belting is superior to leather, but, as the qualities differ much more than that of leather, mill men are often put off with a second grade as a substitute for an extra quality. If there is any objection to good rubber belting I have not found it. It is better balanced and will run truer on the pulleys, which always adds to the life and adhesion of the belt.

Belts should be kept as free from dust as possible. It will pay mill men to protect their belting. A belt should not require any oil if protected and is not over-taxed. The rubber surface is damaged by any kind of foreign substance. On saw mandrels the pulley should be half the diameter of the saw. On fast mills nothing less than a 36-inch pulley should be used. The trouble in heating is often caused by excessive tension. No belt should be allowed to slip, as it will run to one side

and injure the edge as well as the surface in rubber.

Many mills throw away hundreds of dollars annually in belting, and are contented, as is the fashion. A practical mill man, some time back, remarked that he added two inches in width when he could in replacing belts, and found his belt bill fast decreasing. A few dollars more outlay, and a little care and protection to belting will save many dollars yearly in the belting bill and as much or more from delays. Such expenses as these and a multitude of others, are what prevent many in the saw milling business from "working to figures."

SAW-GRINDING WHEELS.

AN English authority says: "The peripheral velocity of discs for saw sharpening is from 4,000 to 6,000 feet per minute. The disc, before being put on its mandrel, should be examined to see that it is perfectly flat. Care must be taken that it does not fit too tightly on the mandrel. Wooden collars or India rubber should be inserted between the disc and the flanges or washers should retain it in place, and these must not be too tightly screwed up. Neglect of these precautions is oftener a source of fracture than any inherent defect in the disc itself. A well-made and mounted disc, properly worked, and running from six to nine hours a day, will last some three months, and will gullet, sharpen and top on the average 200 deal-frame saws each day of nine hours. It is found in practice that the action of the disc on the teeth hardens the cutting points, with the result that the saws last longer when machine than when hand-sharpened. No sawmill can be fully equipped which is without a saw-sharpening-machine; it pays when there is only one frame or saw-bench. A great economy is effected in labor and files—a man with the machine will do as much work as six sharpening by hand simply. In respect of the cost of files it may be said that this is almost entirely saved, each disc costing only a few shillings, and lasting in constant work for two or three months. Some workmen are so skilled in the use of the machine as to be able to turn out the saws topped ready for working. Another great merit of the machine is that the tooth spaces or throats can easily be maintained at a uniform depth, so that not only does the saw work better and quicker, but less power is required to drive it, and the risk of buckling in regulletting or toothing it, which is necessary when the teeth are permitted to become stunted or stumpy, is absent.

ALWAYS A GOOD REASON.

IT is indisputable that the number of boiler explosions in this country is alarmingly great, and it is equally true that a boiler does not explode without there being a very good reason for it—a very good reason and a very simple one. There was a time when it was believed by many that there were hidden causes for boiler explosions, and a rather flourishing, if not remunerative, business was done in the theoretical manufacture of some mysterious gas that could never be made to materialize except just at the time when no one had time to detect its presence, and the boiler went to pieces. There are, perhaps, still a few left who believe in the gas theory of boiler explosions, but their number is very small indeed, so small as to make no impression on current opinion. An overwhelming majority of engineers at the present day believe that if the cause of a boiler explosion is looked after in the right way, it will be found without the necessity of making some old gas theory do service, or inventing a new one; without bringing into the argument any unaccountable or unheard-of action of the water, or in any way going outside of what plain people can understand.

A LUMBER LESSON FROM MICHIGAN.

BY WILLIAM LITTLE, MONTREAL, QUEB.

IN corroboration of what I have already written you on the subject of the export duty on saw-logs you will find, in the Saginaw Board of Trade Review for 1892, a number of object lessons that must dispel any doubts if such existed in the mind of any Canadian of the serious mistake made by the Government in removing the export duties from logs and the imprudence of not immediately re-imposing them. This review clearly shows what I have already informed you, that the cost of towing and risk attending the existing method of draning away our timber, instead of being as claimed by interested parties expensive and hazardous, is just the reverse, and also that the Saginaw district of Michigan is now almost wholly dependent on Canada for supplies of white pine timber to stock its sawmills.

You are, I presume, aware that the chief source of profitable industry of Saginaw, now said to be a city of 62,000 people, has been the white pine lumber trade—this city annually producing about one half of the lumber sawn on the Saginaw river—and the great question was what could be done when the pine timber tributary thereto and on which its prosperity depended became exhausted, as is practically the case. This question you will see has now to the satisfaction of the Saginaw lumbering industry been successfully solved by the repeal of the export duty on logs by the Canadian government. And for this solution the compiler of the review does not even require us to open its pages, for it is disclosed on the outside cover where a map is presented showing the city of Saginaw at the head of Saginaw Bay, Mich., having a dozen or more railway and vessel routes diverging therefrom, and you will find the source of pine timber territory that is expected to furnish supplies necessary for her sawmills, not as might be supposed in Michigan or even in Wisconsin or Minnesota, but actually in two sections of the Georgian Bay district of Canada, where everything is elucidated by those three portentous words — "Pine Timber Region," thereby intimating in the plainest possible manner entire dependence on Canada for future supplies of white pine timber. And lest there should be any doubt in this matter we are informed, as you will see on page 11, that from this source, and by the existing method of log towing, are supplies for many years to come to be obtained to sustain the sawmilling industry of Saginaw, where it states: "Although the pine log supply has been diminishing during the past ten years, in the territory reached by the rivers tributary to Saginaw, a new source of supply has been opened in the Georgian Bay and Lake Superior districts, and the rafting of logs upon the great lakes to the Saginaw river mills, which was regarded a few years ago as impracticable, has now become one of the permanent business interests of the Saginaw Valley. The rafting of logs across Lake Huron is rapidly increasing each year, as experience has demonstrated that the new method of using bag-booms for this purpose is entirely safe. Those who are best acquainted with this industry assure us that it is only in its infancy, and that the Saginaw river mills will be supplied for many years to come in this way."

This is, however, merely the introductory lesson, other practical ones are to be found within, represented by three nicely executed photographic illustrations. The first on page 30 represents

A TUG-BOAT PUFFING AWAY

in front of a dark looking object covering a vast expanse of the lake and resembling in the distance a pear shaped island, which a close observation discloses to be about 50 acres in extent and to consist of 5,000,000 feet of Canadian pine sawlogs on their way across the lake to satisfy the insatiable maw of the Michigan sawmill. And rafts of a much larger size even than this one are by no means uncommon, for those of 10,000,000 feet have been safely towed through the lakes. In this connection it may not be amiss to give the statements made in this review which show that towing rafts through the lakes is not attended with either the cost or the risk that was claimed by an hon. gentleman engaged in the business in his speech in Parliament last session, where it says: "The business of rafting logs on the lakes has

been successfully conducted for many years on Lake Huron, immense quantities have been handled. The invention of the bag-boom has made log-towing on the lake practically as safe as on the river, and by this means rafts of 3,000,000 to 5,000,000 feet each are brought to the Saginaw river. The picture on page 30 represents one of Sibley & Bearing's rafts on Lake Huron, containing 5,000,000 feet of logs. The repeal of the export duty on logs, exacted by the Canadian government, greatly stimulated the rafting of logs across Lake Huron to Michigan mills the last two years. In 1891 no less than 80,000,000 feet were brought to the Saginaw river and in 1892 a much larger quantity came over as figures below will show—184,500,000 feet."

From the foregoing we may reasonably assume since "log towing on the lakes is practically as safe as on the river," that the risk of log towing amounts to a mere trifle, while the immense size of the rafts that are thus safely and successfully towed over greatly reduces the cost of towing, so that investigation will probably show that, instead of \$1.50 for lake towing, 50c. for river towing, and 75c. for risk, or \$2.75 per thousand feet, as was stated by the hon. gentlemen in his speech in Parliament, the whole cost of towing and risk did not much, if at all, exceed \$1 per thousand feet, instead of \$2.75, as stated. In this particular instance probably 50c. per thousand feet covered all cost of towing and loss on the 5,000,000 feet contained in this raft.

Referring to this subject the July number of THE CANADA LUMBERMAN contains the following: "A writer in a recent number of the Manitoulin Expositor, published in Little Current (Georgian Bay District) expresses himself in vigorous fashion, thus: Last year 175,000,000 feet of lumber was exported in logs (actually over 250,000,000 feet) and this year there is to be 455,000,000 feet taken over to the States, showing that the annual shipment is increasing. This may look well, but how does it affect our country? In the first place, if these logs had to be manufactured in this country we should hear the busy hum of sawmills all along the shores of the Georgian Bay, see thousands of men busily engaged in these mills, see little villages in a prosperous condition and everybody enjoying life. Again, the fact of logs being towed across the lakes materially affects the shipping and the work to be done by Canadian vessels. This means a

HEAVY LOSS TO VESSEL OWNERS

in our country. As it is now, our mills are to a great extent shut down and standing there rotting, men are complaining of hard times and no work, the merchants in the towns have a great difficulty in getting a living, and on the whole the country is dead. No wonder that there is such an exodus from our country of the best of Canada's sons." And concludes: "By all means put on the duty and save our pine."

The foregoing is no fancy picture, but is patent to the observation of anyone who may take the trouble to enquire into the conditions. Not only are mills being shut down but every few weeks we hear of mills being burnt down, no doubt from the carelessness or indifference of those owning such property, which are thus made valueless by the direct action of the Government in legislating as it has done in the interest of foreigners.

For our next object lesson we have on page 50 the representation of a Saginaw sawmill apparently actively at work converting the logs into lumber, and said to give employment to 150 men for six months in the year.

The product of the 26 sawmills operated last year in Saginaw is given at 321,831,312 feet. (This is, of course, exclusive of the product of the mills at Bay City and elsewhere on the river which cut 386,633,715 feet, and made a total product for the Saginaw River of 708,465,027 feet) which is equal to an average cut of about 12,250,000 feet for each mill, or to the out-turn from 2½ rafts such as represented.

The 455,000,000 feet of sawlogs, equal to 91 such rafts, purposed to be towed over to Michigan this year from Canada, being over 40 per cent. more than the entire cut of the Saginaw City mills last year, would consequently give employment to 37 such mills, and turn out an amount of lumber greater than our whole export of white pine lumber to the United States last year, so that

you may see this is not the trifling matter that ignorant or interested parties try to make it appear.

I know that hon. gentleman scoffed at the idea that any such quantity as 455,000,000 feet is to be towed over this year, but the same gentleman ridiculed the statement made that anything like 200,000,000 feet had been towed away last year, when here we find it stated that the Saginaw River district alone received last year from Canada 184,500,000 feet, or within eight per cent. of this whole amount, without taking into account the large receipts of Canadian sawlogs at Alpena and Cheboygan, which are extensive manufacturing points, and situated only one-half the distance from Canadian sources of supply, or those rafted to other points in Michigan and elsewhere; so that it would be found, if correct figures are obtained, that the

QUANTITY OF PINE LOGS EXPORTED

to the United States from Canada last year was over 250,000,000 feet, instead of 200,000,000 feet, which was said to be excessive.

Then we have the third and last object lesson which if properly considered is of even greater importance than the others, for it represents an immense manufacturing establishment covering several acres in extent surrounded by piles of lumber to be converted into the many useful articles for which lumber is a prime necessity, and which is said to give employment to over 300 men for twelve months in the year, mostly skilled mechanics.

A tabulated statement mentions that such factories of which there are 18 in all—the one represented being, however, of greatest extent—employ 2,302 persons, as compared with 1,890 employed in the 26 sawmills, 292 in the 15 shingle mills and 296 in 8 furniture factories, and turn out products to the value of \$5,208,634, the sawmills, \$4,824,826, shingle mills, \$530,592 and furniture factories \$374,500, or a total of 4,780 men employed turning out wood products valued at \$10,738,552.

On a similar basis the products of the 455,000,000 feet of sawlogs to be exported from Canada free of export duty this year would give employment to 6,650 men and produce products of the value of over \$15,000,000, a sum in excess of one-half our whole exports of forest products. I do not, however, claim that the value would be so great as this, for the compiler of the review has probably included the value of the lumber which entered into the other manufactures, but it would reach a value of at least \$10,000,000, instead of less than \$2,000,000 expended in getting out the logs, and this last amount would be spent in like manner in this country whether the logs were manufactured here or elsewhere. So that our country is deprived of this amount of profitable industry, and a large additional amount in the subsequent traffic to railways and vessels of these manufactured products, which is now wholly lost to us not only without any valuable compensation, but with direct injury to our own manufactures.

In my opinion it is in this manufactured condition the products of our forests should leave our country, not in that as at present of immense rafts of pine sawlogs, of which we have only a limited supply, and from which our people derive neither employment nor revenue.

The artist has not favored us with any illustration showing the condition in which that part of our country is left whence these logs were obtained which give Saginaw all this business prosperity, for

THIS BEING CANADA'S INTEREST

in the matter did not of course concern Saginaw, but it would no doubt be found to be in that state as an intelligent observer recently remarked one of our western cities might find itself under certain conditions, "with its whole insides jerked out," and nothing but the abomination of desolation remaining. Under conditions such as those now existing, wherein Michigan lumbermen have advantages over our home operators in the Georgian Bay district of fully \$3 per thousand feet, one need not go so far to find the reason why new mills are being erected in Michigan to saw Canadian logs, while many of those in Canada are allowed to be closed down or cremated.

Almost identically unsatisfactory conditions exist in the Canadian pulp industry, which was beginning to

become a very important one, for we find that, in the Eastern Townships and on streams entering the St. Lawrence River, as well as in the Georgian Bay and Lake Superior districts, large amounts of spruce and other pulpwood are being likewise exported free of export duty to the United States, while heavy duties are exacted on the American frontier on any pulp exported from Canada; so that on all sides we are frittering away our heritage of timber with little benefit to our own people, when a proper policy on this subject would at once make us masters of the situation, since our American neighbors have now so far exhausted their immediately available supplies of white pine and spruce timber, from which to make lumber and pulp, that they must in the future depend largely on Canada for such material, and we would be enabled to get satisfactory prices therefor, instead of as we have heretofore been simply hewers of wood for others, whence our country barely derived compensation for the labor expended in our efforts "to get rid of the timber."

Apart, moreover, from the serious loss to Canadian labor in being deprived of its manufacture, there is, in the transfer of such a vast amount of manufactured timber to the United States— an amount that would give employment to fifty ordinary Canadian mills— a loss of revenue to be sustained this year of probably a million dollars, when all logs and pulp wood are included, while at the same time our railways and vessels are wholly deprived of any participation in the freighting of these products, sufficient to give a railway traffic of 50,000 car loads or a vessel tonnage of 700,000 tons in a single year; every foot of this not only to give employment to American mills, but go to swell the traffic of American railways and vessels, and to stock the American market with the great amount of lumber and pulp made from our timber, to supplant an equal amount that would otherwise be profitably supplied by our own manufactures.

Not only is this policy ruinous to our own people, but it is unjust to the Americans to allow it to be continued any longer, for it is leading them into expenditures that will be valueless when it is changed, as soon it must be, and in justice to all it should be now.

In connection with this subject, as it was a matter of debate in Parliament, I may here state that the pretensions made by some persons of a great amount of American whitewood (called yellow poplar) still existing in the United States, which was to be a substitute for our white pine, do not appear to be based on a correct knowledge of the situation, for at the recent meeting of the Poplar Manufacturers' Association, the Secretary, Mr. A. H. Winchester, gives estimates made largely from personal explorations, and places the total United States' supply of merchantable poplar timber available at 6,500,000,000 feet, and adding small and remote timber, the whole not to exceed 10,000,000,000 feet, which is less than the amount of pine timber cut in a single year (1890) in the three states, Michigan, Wisconsin and Minnesota. And he directly scouts any supposition that this wood exists in such quantity as to furnish

A SUBSTITUTE FOR THE WHITE PINE,

for he says: "No remark is so irritating to one who knows the true condition of the poplar field as the one we so often hear as to poplar being the coming substitute for white pine when the fact is, as we see it, that the last poplar log will have become a tradition before the output of white pine has been materially curtailed. Every day sees us looking for new uses for poplar, when we cannot supply our existing demands. Our grand poplar field is obliterated. Stranded, detached bunches of stumpage remain, but are fast disappearing."

Here also permit me to say that fresh evidences are constantly appearing to show how limited our own supplies of white pine are becoming. In the last Crown Lands Report of Ontario, the Hon. Mr. Hardy clearly shows that nearly the whole remaining timber reserves in the Nipissing district south of the Ottawa and east of the Georgian Bay have been sold, for although he does not so state it, yet this is evident from a consideration of his remarks, for he says: "Of the total area (of limits sold), 410 miles were in the district of Nipissing on the headwaters of the Muskoka, Madawaska and

Petawawa rivers, surrounded by licensed lands upon which lumbering is being actively carried on." For when you consider that the waters of the Muskoka flow into Georgian Bay, while those of the Madawaska and Petawawa run to the Ottawa, and that the most valuable of those limits were purchased with the intention of taking the timber across this height of land to the waters of the Trent flowing into Lake Ontario, and as he says, they are surrounded by licensed lands upon which lumbering is now being actively carried on, it becomes at once apparent that the whole intervening country, up to the headwaters of these rivers, has been overrun by our lumbermen for supplies of white pine timber, and this last block of limits is now to be lumbered on. There is then left in that province only that portion bordering on Georgian Bay and Lake Superior, from which the Michigan lumbermen are now deriving a large amount of their supplies, together with insignificant patches here and there in the Lake of the Woods district on islands and in small groves, most of which is tributary to waters flowing into Hudson Bay, and being in many instances of little greater value than the Banksian pine (cypress) of this province, which has hitherto been considered valueless. In rear of the streams on the north shore from which the Michigan mill men are now getting stock, the character of the country is correctly represented in the same report by Mr. John McAree, O.L.S., who made an exploration along the line of the Canadian Pacific Railway for 79 miles, from Woman River to Windermere, when he says: "The timber is that which is common to this whole northern country, viz., spruce, tamarac, banksian-pine, white birch, balsam, poplar, cedar, etc., and extensive fires appear to have swept over the country in former years, so that over most of the land that we saw the trees are of second growth and small in size."

And lest it might be thought that his failure to mention the white pine was an oversight he says, in concluding his report: "I beg leave to add by way of addenda that we saw not more than two score trees of red or white pine in the whole survey."

And this is unfortunately for us the character of most of the country of which an hon. gentleman informed Parliament,

THE ONTARIO GOVERNMENT,

with that wise regard for the future which has characterized almost all its policy, has reserved out of its entire area of timber limits, 150,000 square miles," and which are to "furnish supplies for three hundred years."

The fact is the more this matter is enquired into the more serious appears the effects of our lack of any judicious policy on the subject of our timber, which we have frittered away in the past in a manner that has not been incorrectly styled wanton vandalism, while our present policy, which includes the evils of the past, actually offers a premium to strangers to "rob" us of what little pine timber is left, and the Canadian public supinely looks on with apparent indifference at this national suicide.

While by no means desirous of depreciating in any way the value of our country's resources, my own judgment assures me that they are not so great that we can afford to sacrifice one of the most valuable we possess—the timber—without reasonable compensation, which we have been doing in the past and which, I regret to have to add, we are still doing with apparent satisfaction on the part of both government and the people.

A CONSUMING TOPIC.

SOME one in Germany has lately revived the old idea of using coal in the pulverized form for the prevention of smoke. This idea comes up at frequent intervals, but never amounts to anything except considerable talk on the subject. The frequency with which this plan is advanced shows the desirability of smokeless combustion, but as there are numerous devices on the market at the present time, which, if applied and intelligently handled, will give smokeless combustion with soft coal, there is no necessity for a scheme which involves the handling of the fuel three or four times more than at present.

THERE is only one wood known to be better for pump stocks than poplar, and that is cucumber, a kind of magnolia, and not very plentiful.

VIEWS AND INTERVIEWS.

A Pinch of Dust.

The dangers that lurk in the air form the subject of an essay by M. de Nansouty on "The Atmosphere of Large Towns and Micrography." He points out the increased pollution of the air in Paris from the factories worked by steam machinery. An analysis of dust and rain particles reveals that a remarkable collection of divers objects may be absorbed at every breath in the street of a large city; silex, chalk, plaster, pulverized rock, charcoal, hairs, fibres, vegetable refuse, starch, pollen cells, etc. A specimen of dust collected from furniture on the third floor of a street in Rennes contained all this and nearly three million bacteria in addition. A gramme of dust (about fifteen grains) in movement in the streets encloses about 15,000,000 bacteria.

Sawdust as Horse-Fodder.

Stories have been told of experiments made in bread-making from sawdust, and it is possible that in Russia, when dread famine has threatened its thousands, and the inhabitants have been glad to eat bread made of the bark of trees, that a loaf of sawdust bread might be accepted. But further than this the stories of sawdust bread-making are very mythical. It is from an Englishman, however, in Sussex county, that comes the information that owing to the scarcity of fodder in that part of the country cart-horses are being fed on a mixture of one half fresh elm saw-dust, the other crushed oats and bran. They heartily enjoy it, so it is said, and appear to thrive upon it. Fable has depicted the horse fed on shavings, though we never learned that he thrived on the diet. Sawdust, it may be expected, will no longer be procurable at about the cost of carting it away.

Emergency Surgeons.

A glance at the news pages of the LUMBERMAN each month will tell its own tale of the number and serious nature of the accidents that occur in the various saw and planing mills of the country. What to do till the doctor comes is worth knowing and may often mean the saving of a life. An emergency surgeon, says the Tradesman, should exist in the person of the foreman of every shop or factory where accidents are liable to occur. "He should be required to know enough of surgery to give the injured employe immediate and temporary relief until skilled aid can be summoned. If an artery is cut, the foreman, or some one else in the shop or factory should know how to apply a tourniquet to stop the flow of blood and perhaps save a life. A workman may be prostrated with heat; may have a finger, hand or a foot mashed, and a little timely knowledge may save a great deal of suffering and, possibly, fatal results. It will require but little time and study for anyone to acquire sufficient knowledge of surgery to be of great help in an emergency. A foreman is hardly fitted for his duties unless he possesses some knowledge of the simple forms of surgery that can be used in a case of accident."

Tree of Solid Agate.

A mining expert sent to investigate some Arizona properties for Denver capitalists recently returned and reports the finding of a most remarkable natural bridge, formed by a tree of agatized wood, spanning a canyon forty-five feet in width. The tree had at some remote time fallen and become imbedded in the silt of some great inland sea or mighty overflow. The silt became in time sandstone and the wood gradually passed through the stages of mineralization until now it is a wonderful tree of solid agate. In after years water washed and ate away the sandstone until a canyon forty-five feet in width has been formed, the flint-like substance of the agatized wood having resisted the erosion of the water-flow. Fifty feet or more of the tree rests on one side and can be traced, but how far its other side lies buried in the sandstone cannot be determined without blasting away the rock. The trunk visible above the canyon varies in size from four feet to three feet in diameter. Where the bark has been broken and torn away the characteristic colors of jasper and agate are seen. To the naked eye the wood is beautiful. Under a microscope or miner's magnifying glass the brilliancy of the colorings is clearly brought out in all its wondrous beauty.



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—BY—

ARTHUR G. MORTIMER

OFFICE.

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J. S. ROBERTSON, EDITOR.

THE CANADA LUMBERMAN is published in the interests of the lumber trade and allied industries through- out the Dominion being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing them 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 or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

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

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

FREE LUMBER.

ARE we to have free lumber? A dispatch from Washington a few days since, purporting to outline the programme of the Committee on Ways and Means, places lumber on the free list. The words of the report are these: "Timber, hewed and sawed and unmanufactured." Just what this may mean is a little uncertain without a clearer definition of the terms. It has been pointed out by Mr. H. H. Cook, of the Ontario Lumber Company, in an interview on another page, "that lumber is only lumber up to a thickness of two or three inches. Beyond that it is timber." In any case we have nothing more than the suggestion of the Ways and Means Committee naming the articles, that they are prepared to see on the free list. Congress must yet deal with the whole question and the modifications may be few or many. This is to be said, however, that before any announcement was made by the committee the impression had been growing steadily stronger that lumber would, almost certainly, be made free. This has been taken for granted even in those lumber sections where it could hardly be said that the wish was father to the thought. The matter has been one of concern to Michigan manufacturers, and a lumber correspondent from Saginaw, discussing the subject, anticipating that Congress would abrogate the dollar duty, intimates that the only way "for the Michigan and other manufacturers who ship lumber east to meet this Canadian competition will be to reduce the wages of the men to the same scale as that paid by the competing Canadian manufacturers." Doubtless there is some attempt in this statement to show to congressmen the unwisdom of taking any step, that would be prejudicial to the laboring classes, who, of course, have votes. The view, nevertheless, has been quite generally entertained by United States lumbermen that free lumber was coming.

Tariff reform is in the air, and the position taken by the Democratic party at the Cleveland election, clearly pledges it to changes that will be in the direct line of more liberal trade relations. A tariff battle is soon

to be fought at the polls in our own country. The Liberals are pledged to a removal of protective duties, and to the cultivation of freer trade relations with the people to the south of us. The Conservative party has been the party of high tariff, and its Ministers in their late stumping tours have told us that they have no intention of deviating from the principles of the National Policy, yet they are prepared to modify the tariff. More than this the Premier has stated in his Belleville speech, so far as the United States is concerned, "that if they are disposed to make fair tariff concessions, based on legislation, these fair tariff concessions will be responded to in a proper spirit by the Canadian government." The promises from either side of politics, therefore, plainly point to a relaxing of trade relations with the neighboring republic. The sentiment of the people of the country, if one may judge by the intelligent and studious interest shown, as much by one class of the community as the other, the business or the rural, is keeping fully abreast with the programme of the politicians, and we do not know but what the people are in the advance.

Writing specifically of lumber, however, in which our readers have a direct interest, a careful study of the question from all sides, and it cannot be said, in anything the LUMBERMAN has written on the question, that an unfair bias has been shown in any one direction, would seem to make very clear that lumbermen, whether owners of limits or manufacturers, are prepared to accept free lumber as a fair solution of the duty problem. Even Mr. Wm. Little, of Montreal, from whom we publish a valued article this week, and who has strong and intelligent convictions on the side of protection to our forest products, has intimated that he would be willing to accept a policy of "free logs, free lumber," as a means of leveling up the injustice that he believes exists under present conditions.

EDITORIAL NOTES.

NEWFOUNDLAND is to manufacture pine lumber for the British markets. Mr. W. F. Sterrit is having a complete rotary sawmill placed in the interior of a pine district in the island and believes he can manufacture pine for export with profit. Log driving is claimed to be easy, the mill being located in a part where pine is abundant; and the lumber is to be floated without any great labor to a seaport for shipment. The winters are also considered favorable, not being severe and though late in making the start, Mr. Sterrit expects to get in a month's work with a crew even yet before the winter sets in.

EVEN with the severe financial depression across the line, and the talk of lumber being sympathetically slow, some large sums of money are being paid for timber limits in Canada, showing a strong confidence in the real position of the lumber trade. Within the past fortnight a big lumbering deal has been completed, when the timber limits in townships of Anstruther, Cavendish and Harvey, in Peterboro' county, known as the Scott limits, were sold to J. W. Howry & Son, of Saginaw, Mich., for \$450,000. These limits were in litigation about 15 years, and were bought nearly four years ago by the Dickson Company. The limits comprise about 105 square miles. It is expected that the lumber will be worked by the new owners on mills recently purchased near Bobcaygeon. Messrs. Howry are already large owners of Canadian limits.

WHAT the three lumber merchants from Turkey say of Canadian lumber—their utterances are given on the 111 page of this issue of the LUMBERMAN—is a flattering compliment to Canadian forest products. Our lumber first came under their notice at the Canadian exhibit at the World's Fair, where they had an opportunity of examining the timber exhibits of all countries. And their preference for Canadian timber is decided after having made a critical "look all around." An earnest of their desire to make their decision of practical service to their business is found in their visit to the lumber mills of the Ottawa and the effort they have since put forth to secure such freight rates as would make it profitable to become customers for Canadian lumber. Canada has every reason to feel satisfied at the high place her native products of all kinds have taken at the World's Fair. To what extent tariff regu-

lations can be made to help to a widening of the markets for these products is a question that cannot be too carefully considered by our people.

MORE than once there has been talk of Michigan manufacturers importing lumber from Canada, a practice, that as a lumber cotemporary has remarked, may seem like bearing coals to Newcastle. It has remained, however, for W. B. Mershon & Co., the extensive planing mill men and box manufacturers, of Saginaw, to make of the proposition an actuality. During the past month this firm brought 393,659 feet of lumber from French river, valued at \$4,723.91, and on which they paid a duty of \$393.66. The Mershon Company have been buying lumber in Duluth and other West Superior points, but the great distance was more than an offset to the Canadian duty. So that the Saginaw firm has demonstrated to their own satisfaction that notwithstanding a duty of one dollar a thousand there is money to even a Michigan manufacturer in importing lumber from this country. The fact would seem to give strength to the contention that the States must have our lumber, duty or no duty. There is another view of the question suggested, also: To what extent might not the exportation of manufactured lumber to the States be extended, if the lumber, as are logs, were altogether free of any tax?

THE New Brunswick sale of timber licenses, which was in progress as the LUMBERMAN was on the press for last month, fell much short of what had been anticipated. The sale took place at Fredericton. The licenses offered covered 4,400 square miles or 2,800,000 acres of government timber, and nearly everything was sold. The sales realized \$72,961, and the leases hold for 25 years. Of the total \$6,000 is for new berths not sold at the last sale. In 1883 the old berths realized \$38,000 for a ten-year lease. At the same rate they should have realized \$95,000 less the discount for present value, or nearly \$28,000 more than they did for the 25 years. In the main the sales were confined to a few hands. Senator G. B. Snowball came in for 438 square miles, paying an average of \$15 a square mile. The Bank of Montreal, which was forced into the bidding in an effort to protect itself, paid \$7,179 for ten berths of varying size, aggregating between 50 and 60 miles at about \$130 a mile. Ernest Hutchinson, of Miramichi, was one of the new bidders, securing about 240 miles at a price of over \$10,000. A contrast of this sale, as also that of Quebec, with the Ontario crown lands sale, all held within a year, is very marked. Minister Hardy was in extreme good luck.

INDICATIONS point to a severe winter in the States for the laboring classes. It is well known that in all large cities at the present time the plaint of the unemployed is fast becoming serious. The statement has been made in the press that in Chicago alone there are 70,000 fewer people under employment to-day than when the World's Fair was first opened. The explanation is probably to be found in the reaction from the inflation that existed in all classes of business when the Fair was projected. Everywhere, the anticipations of even those who were moderate in their expectation of results from the Fair have been largely discounted, whilst those who went wildly mad in their anticipations of the big things that were sure to take place may well ask themselves, where am I at? What will take place when the Fair is closed will give thoughtful citizens of the Republic much concern. The depression from all accounts, will be felt in part in lumber circles. The word from Michigan, Minnesota and Wisconsin is that there is comparatively little call for men for the woods, and that wages will range from \$5.00 to \$8.00 a month less than a year ago. The highest wages offered now is said by a Michigan correspondent of the Northwestern Lumberman to be \$14 to \$20 a month against \$18 to \$28 a month last year. The effect of these conditions, if they continue to prevail, which seems altogether likely, is almost certain to be felt in Canada. Our Ottawa correspondent in his letter this month intimates that few men have as yet been employed for the shanties for the reason that an influx is anticipated from the States, and wages will thus be lowered. Fewer men and lower wages would seem to be the outlook.



IN this page have appeared not a few stories of peculiar finds, and strange growths in trees and woodlands. The following from Ottawa I may give as a fitting addition to the others. A curiosity was discovered lately by Mr. Robert Burland while walking by an inland lake on Mr. Booth's property at Britannia. A tree of peculiar appearance was found to have a chain fastened around it, the wood having grown so completely over the iron as to cover all but a few loose links at the end, which the growth of the bark had almost obscured. The chain had evidently been placed there many years ago to preserve a valued young tree from splitting apart and had held its grip while the woody growth had spread all over it in the progress of perhaps half a century. Mr. Burland secured the iron-bound section of the tree and will preserve it as a memento of his lake-side meanderings.

* * * *

"The lumber stringency is relaxing," said Mr. Thos. Meaney, manager for Robert Thomson & Co. "I was in Buffalo, Tonawanda and other points during the month and found things much easier than a month earlier. What is very satisfactory to lumbermen is the continued firmness of prices. There does not appear to be any disposition to break prices. It is not unlikely, however, as a result of the monetary scare, that there will be less work in the woods the coming winter than had in the first place been planned."

* * * *

A Southern lumberman, Mr. Henry J. Lucher, of Orange, Texas, has been delivering himself on the tariff question, and is one of the men who is not afraid of Canadian competition injuring United States lumber markets. "As far as the lumber business is concerned," he said, "I do not believe that the tariff makes any difference to the lumbermen one way or the other, except perhaps, to a few immediately adjoining Canada; but the standing timber of this country is disappearing altogether too fast, and in behalf of the people of the country I would be in favor of a measure which would let the Canadian timber and lumber in so as to save our own resources."

* * * *

A Michigan lumberman, who owns many millions of feet of Canadian timber, discussing the probable placing of lumber on the free list by Congress is reported to have said, that to put lumber on the free list, cutting off the duty at present levied, would not lessen the cost of lumber to the consumer a single cent, but that dollar taken off would be added to the price of Canadian stumpage, and would thus enhance the value of his holdings to the extent of the duty removed, as well as that of every other Canadian timber owner; and he could, therefore, view the prospect of free lumber with the greatest equanimity. To those who own timber in the States, the cutting off of the slight duty on imported lumber would stimulate competition, and the result would be a decrease in wages to meet it. He was willing to pay the duty on his Canadian timber when he should get ready to market it in the states, in order that labor here might derive the benefit, and for that reason only.

* * * *

A scribe of the Northwestern Lumberman has been sizing up Mr. Claude McLachlan, of McLachlan Bros., of Arnprior, Ont. "He is a quiet gentleman," says the writer of the Windy City, "but a mighty keen observer, withal." Speaking of the number of people attending the Fair, Mr. McLachlan said: "I think it safe to say that there are every day fully as many people—visitors—in Chicago outside the fair grounds as inside. I stop at the Palmer House and at the boot-blackening stand I learned from the master of ceremonies that they were

giving an average of 600 shines a day as against 150 in ordinary times. The men who would have picked up an item of information of that kind, thinks the Northwestern, are very few. Mr. McLachlan says the financial squeeze has not yet affected Canada, and the lumber output of this year will be fully up to the average, but he looks for a material falling off next season. The McLachlan mills at Arnprior, as everyone knows, are among the most extensive in Ontario.

* * * *

Hon. Theo. Davie, Attorney General of British Columbia, said to an interviewer recently: "The province of British Columbia is so closely identified with Washington, Oregon and California that the slightest depression or increase in business affairs affects both Vancouver and Victoria to a remarkable extent. What the people of our province would appreciate would be the abolition of the American tariff on lumber and coal. The commerce between the United States and British Columbia is large, constantly increasing, and were the tariff laws repealed to a certain extent, the trade between the two countries would be greatly benefitted. An overwhelming majority of our people do not want to be annexed to the United States, but they do want to establish a closer commercial relationship with the United States. The commerce between Australia, Asia, Europe, Central and South America and British Columbia and Puget Sound has assumed gigantic proportions in the last ten years. By the united efforts of the State of Washington and our province the trade of the western world could be made to pass between the Straits of Juan de Fuca, and a great commercial metropolis will center in this Northwest territory."

* * * *

Three prominent lumber merchants of Beirut, Turkey, Abdalah Sayih, Nicola Sahion and J. F. Afmus, who have been visiting the World's Fair were very much impressed with the Canadian exhibit of lumber, and a few weeks ago visited Ottawa to ascertain what arrangements might be made looking towards an opening of trade between the two countries. Mr. J. F. Afmus, who is spokesman of the party, said: "The three of us are lumber merchants from Turkey and have an exhibit at the World's Fair. We think the exhibit of Canadian lumber at the fair is ahead of any country in the world, and we were advised to come on to Ottawa, as it was the greatest lumbering city in Canada, as we hope to build up a trade between this country and our own if reasonable shipping rates can be had. We supply all Syrian Turkey and part of Egypt with lumber, most of which we get from the north of Russia. Every year we sell more than a hundred shiploads of lumber, 35 ship loads being sold in the city of Beirut alone. No Canadian lumber reaches us at all, but we want to get Canadian spruce and pine. We do not require any hard lumber because we have the olive and the oak at home. If we can open a trade with Canada it will be greatly in the interest of both countries."

* * * *

"This season," says a prominent lumber shipper, of Ottawa, "has been the poorest for many years. There has been absolutely nothing doing in the lumber trade to the United States, as well as to the English market, compared with other years. Since, however, an improvement has taken place in the former the fall rush may make up slightly for the summer slackness. The firms across the line who have purchased the cuts for the past season will take all their lumber away but not so quickly as they would if the market had been brisker. Next year's cut in the Chaudiere mills will likely be somewhat curtailed owing to the fact that their yards are full. The piling grounds everywhere around the city have been filling up all season so that several new properties have been purchased. The depression of this summer may cause a double rebound, which will take all the lumber that can be cut next year on the Canadian side, for the Americans are a queer people, by no means disposed to low spirits, and next season may see a boom in the lumber trade, as well as in all branches of commerce. The large American lumber yards owned by the middle men in different states are pretty well choked, so that they could stand a big boom next summer. Just now

Bronson & Weston have orders from their Stewarton yards for over one-half a million feet of lumber to be shipped part to Rouse's Point, and a great deal to Burlington, Vt. Many of the other lumber firms have immense orders which will take them a long time to fill. In several of the yards there are not nearly men enough to handle the lumber, and many are leaving every day, some for the shanties and others for the country where the crops are being reaped."

* * * *

"At the time I was in New York and other United States lumber points the early part of September," said Mr. C. H. Clark, of Barrie, "business men were smarting severely under the financial depression. There was no moving business, and yet nobody was breaking his heart over conditions. The feeling was general that the depression would only be temporary. There would be some after-claps, of course, and some one would be hurt, but so far as lumber is concerned, confidence is strong." "Do you know," continued Mr. Clark, with enthusiasm, "I have been studying conditions in Washington territory and watching developments in that part of the country. I think I know something of that country and believe it has a great future before it. The lumber supply is almost unlimited. As far west as Chicago I found the cedar shingles of Puget Sound, and with the favorable freight rates that are being secured I see no reason why shingles and lumber from that point cannot be laid down at Albany, Buffalo and Chicago with profit to all concerned. Talk about a timber famine; there is supply enough in Washington to last for a few generations yet." I reminded Mr. Clark that so far as the present was concerned lumber, and especially the shingle market, was very rocky in the very part of country he named. Shingle men had been over-producing to such an extent that the bottom would seem to have completely fallen out of prices, and there are some nice stories going of the slaughter that has been made. It is stated as an instance in point that there are lying at the one little port of New Whatcom, Washington, alone, millions of feet of lumber and millions also of shingles, that are at present as they have long been, unsaleable in default of a market.

* * * *

Referring to the announcement made in the daily press that the committee on Ways and Means, at Washington, had decided to place lumber on the free list, Mr. H. H. Cook, of the Ontario Lumber Company, said: "As I interpret the message, it does not remove the duty from our lumber. The report says, 'timber, hewn, sawed or unmanufactured.' Lumber is only lumber up to a thickness of two or three inches. Beyond that it is timber. Americans need our timber; they cannot do without it. They need it for their dock buildings and so on, and Canada can supply far better timber than they can. It is very kind of them to take the duty off our timber, which they cannot do without, and by ensconcing themselves behind their limited Michigan lumber resources, exclude our lumber. I consider the move is only one of advantage to themselves and not Canada. Of course there is a large timber export trade done, but the Americans have always profited by it. They exclude our lumber, because they can saw their own. They will not allow us to compete with any industry they themselves can carry on, but just as soon as their timber supply falls short, they are only too glad to remove a duty that will enable them to scoop in our timber." Mr. J. B. Smith, wholesale lumber dealer, said: "The removal of the lumber export duty, if lumber were to be included, was a most desirable change, and would doubtless serve as a stimulus to the trade. It will likely add to the price of lumber per thousand feet, just the amount of the duty, which is \$1 on white pine, and \$2 on red pine" said Mr. Smith. "The export trade has been very dull of late. After paying the export duty, American dealers could not afford to pay Canadian dealers enough to make it pay them to ship if they could find a ready market in Canada. Now, if the duty is paid to the seller instead of the Government, it will have the effect of making Canadian lumbermen anxious to place their lumber on the American market. No doubt the removal of the duty will greatly increase the export trade."

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE feeling is growing that the financial depression that has prevailed in United States lumber markets for a few months will not affect conditions here as seriously as was anticipated a month ago. Reports from across the border indicate that confidence is being slowly restored and with it an increased demand for lumber. At the same time lumbermen are moving cautiously so far as work in the woods for the approaching season is concerned. The city is full of shantymen; a number of camps have been started and the men dispatched, yet a holding-off policy prevails. It is anticipated that if the cut is light in the States, as is likely to be the case, that a number of the unemployed will drift to Canada and there will be a slump in wages for the winter. Besides the disposition is to further wait events and learn how large the demand may be for lumber.

Of men already sent to the woods, there are 85 for the Sheppard & Morse Lumber Co., 40 to the Kippewa for Buell, Hurdman & Co., 46 to the Quinze for the Moore Lumber Co., and 41 for Bronson & Weston. W. C. Edwards & Co. have also made a start in the despatch of an advance gang of six men to Bois Franc.

INDIFFERENT LENGTHS.

A foreman for the firm of R. H. Klock & Co. states that they have taken out 4,600 pieces of square and "waney" timber this season on the Quinze river.

The sum of \$30,000 is said to have been paid by Alex. Gordon, for a 36-mile limit in the Wahnapatae river, Neeland township, purchased from Andrew McCormick.

An addition to W. C. Edwards & Co.'s mill at the Rideau Falls, on which contractors have been working all summer, will hardly be completed in time for cutting this season.

The statement that there will be little or no square timber cut in the Ottawa district this winter is denied by lumbermen here. The stock at Quebec is already pretty well moved.

The old Perley & Pattee mill at the Chaudiere, now the property of J. R. Booth, and which has been thoroughly remodelled and improved, is now cutting at full blast. It has four large band saws, two Wickes' gates, and two large twin circulars.

OTTAWA, Can., Sept. 26, 1893.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

SOME disappointment has been occasioned by the news that the Nicaragua Canal Company has suspended operations and might possibly go into liquidation in consequence of a failure to obtain a further loan of less than \$500,000 for present emergencies. British Columbia lumbermen have been watching with interest the progress of this canal movement, for with its completion would come no doubt an important development of our export trade in lumber. As has been pointed out in your columns on another occasion the journey from Victoria to Great Britain is about 16,000 miles. The proposed Nicaragua canal route would shorten this distance nearly one-half. But another danger has threatened the building of the canal and escape from it may possibly come through the precipitation of the first. Strong effort has been put forth by United States capitalists to obtain sole control of the canal. It would be calamitous to British interests to have this proposed highway controlled absolutely by a foreign power. The canal should be open to the mercantile shipping of all nations and on equal terms. The present crisis will likely mean the employment of British capital in the enterprise and the accomplishing of this end.

COAST CHIPS.

The last week has been rainy, but it is to be hoped our "wet season" has not set in yet.

Both export and local trade are quieter than when I reported last month, but Australia shows signs of improvement.

Messrs. Kirkpatrick & Tupper, shingle manufacturers, of Vancouver, have dissolved. Thomas Kirkpatrick continues alone.

McSween Bros., the Stave River loggers, have sustained a loss of \$600 in the destruction of one of their camp buildings by fire.

The Brunette Sawmill Co. lost part of boom of logs in a storm. The same company are loading the American barkentine Hilo, for Sydney. She will carry about 800,000 feet.

The first fire loss in wood-working establishments, for a long time, occurred to-day, when the Pacific Coast Lumber Co. had their dry kiln destroyed and the shingles with which it was filled. The dry kiln was heated by steam from the sawmill.

The American four-masted schooner William Bowden has been chartered by R. Ward & Co. to load lumber at Victoria for Adelaide, Australia. She will load at the Sayward Mill company's mill. This is the first vessel to load lumber at Victoria for a foreign port.

We are hopeful that the visit of Hon. Mackenzie Bowell to Australia will result in increased business between this province and the Antipodes. Opportunity was taken of the presence of the Minister of Trade and Commerce with us during the month, en route for Australia, to give him a few pointers that may be helpful to him and us in his mission.

NEW WESTMINSTER, B.C., Sept. 25, 1893.

NEW BRUNSWICK LETTER.

[Regular Correspondence CANADA LUMBERMAN.]

BIRCH is a lumber that has experienced a bad year. The larger part of the stock goes to England, and the demand has been poor. The season will close with a considerable stock carried over.

One of the busy places of Nova Scotia this year is Lower Stewiacke, where Dickie's sawmill is located. He has done a large business.

Dating from October 1st, the winter deck load law comes into force. This will reduce the carrying powers of vessels, making nearly \$500 less freight for a vessel of 1,000 tons.

George Prescott, formerly of Eastport, Me., has purchased a large lumbering and milling property at West River, Albert Co., and is making improvements in anticipation of a busy winter.

Alexander & Crowe, of Portauquique, N.S., are putting a shingle machine into their sawmill on the Portauquique river. The mill cuts about 1,000,000 feet of lumber, and 600,000 lath per year.

The first cargo of lumber for South America ever sent from Mirimachi river is leaving here by the Cormorant, being loaded by Wm. Richards. A number of vessels are loading for the United Kingdom.

It has been anticipated that the cut next winter will be very much less than that of a year ago. Wm. H. Murray gives it as his opinion that the cut on the St. John river will probably not be better than one-third of last year. On the American side of the river, where 115,000,000 feet was cut only 21,000,000, possibly 23,000,000, will be cut this year.

The following is given as an estimate of last year's logs still hung up: Stetson, Cutler & Co., 10,000,000; A. Cushing & Co., 5,000,000; G. R. Warner & Co., 9,000,000; W. C. Purves, 1,000,000; W. H. Murray, 10,000,000. The Fredericton Boom Company expect before the season closes to have all the corporation logs in and rafted, a total of between 130,000,000 and 140,000,000 feet. The total cut on the St. John and its tributaries, accepting the above estimate of what is hung up, is about 200,000,000. This is exclusive of Alexander Gibson's of 30,000,000 on the Nashwaak.

ST. JOHN, N.B., Sept. 21, 1893.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

CONDITIONS of trade have improved within the month. The depression is by no means entirely removed but a more hopeful feeling prevails. Banks have relaxed their purse strings and it is easier to secure discounts than it was a month ago. Lumber and shingles are in larger demand, and though it is too late in the season for business to recover itself, it is expected, that there will be a fair call for lumber this fall. Prices still keep firm. It is hardly safe, however, to say more than this. The old boom is by no means on again, and Congress is still in session. Not only is there the silver problem to solve, but there is also tariff reform to be taken in hand. Commerce at the best is sufficiently uncertain to remain sensitive to almost any change.

JOBS OF LUMBER.

Mershon & Co. are purchasers of several million feet of Canadian lumber.

The Arthur Hill Company say that they will not cut a stick of their Canadian holdings this winter.

Bay City suffers a serious loss in the destruction by fire of Eddy, Avery & Eddy's mill plant, which had a capacity of 28,000,000 feet annually. About 150 men are thrown out of employment.

Since the recent large fire of Eddy, Avery & Eddy's sawmill, at Bay city, a number of insurance companies have instructed their local agents to withdraw their lumber and sawmill business.

The Tittabawassee Boom Company has closed its work for the season. It is estimated that the concern has handled 110,000,000 feet. The charter of this Company expires very shortly and will not be renewed.

A fire at Bay City on 13th inst. destroyed 2,500,000 feet of lumber. Salling, Anson & Co., of Grayling, and Fisher & Co., of Bay City, were the owners. The fire was of an incendiary origin. The loss is \$100,000.

Shipments of lumber by lake from the Saginaw river are rapidly declining. For August they touched bed rock being the smallest since the early days of lumbering in this state. They were less than one-third of the shipments for August of last year.

Colonel Owen Bowers, of intelligence office fame, says that there is very little demand for help of any kind. The very highest wages offered for woodsmen is \$20, against \$28 a year ago, and one hundred men were wanted last year against ten at present.

Michigan lumbermen will be losers by the recent failure of Bell, Cartright & Co., of Cleveland, Ohio. Among these are: Wylie Bros., of this city, and Eddy, Avery & Eddy, of Bay City, aggregating about \$15,000. C. K. Eddy, & Sons have sold large quantities of lumber to Bell, Cartright & Co., but say that every claim had been paid in full.

Michigan mill men, who hold limits in Canada, are making preparations for the winter's work. A gang of 50 men has left Alpena for the Georgian bay district, and the statement is made that Col. A. T. Bliss has five camps running and will put in 15,000,000 feet of logs, which will be brought to the mills here. C. K. Eddy & Sons, who have likewise an interest in Canadian timber, have started camps, and they expect in future to rest largely on Canada for their supplies.

F. W. Gilchrist, of Alpena, intends to erect a shingle mill near his lumber mill the coming winter. He claims that many of the logs brought from Canada have defects which make them useless for lumber, but a considerable portion of them can be used for shingle timber. At present such logs have to be cast adrift, as most of the shingle mills running are above the dam, and the shingle logs cannot be manufactured at them. The new mill will be available in manufacturing what at present is almost worthless timber.

"The largest deal here this season" is reported from Muskegon, in which Gow & Campbell sold to W. B. Hutchinson, of Michigan City, Ind., 3,000,000 feet of lumber. Speaking of the lumber trade to-day, Mr. James Gow said: "We consider this an important deal just at this time. A short time ago we sold a million feet to another Michigan City man. If the Boom Company delivers all our logs this fall we will not be able to cut them before it freezes up. About half our stock has been cut. If they will give us the logs I can sell the lumber and get the cash for it too."

SAGINAW, Mich., Sept. 27, 1893.

CANADA AND THE WOOD PULP TAX.

THE Gazette, of Niagara Falls, N.Y., is authority for the statement, that there is a movement on foot along the border "hereabouts," among paper and pulp manufacturers, to agitate for the removal of the duty on wood pulp on the part of the United States Government.

A letter in circular form has been sent to a large number of pulp manufacturers in Canada and papermakers in the United States asking for a small contribution, say \$25 a firm, to establish a fund to defray all expenses of such a campaign at Washington. "It is doubtful," says the Gazette, "if manufacturers on this side will make such a move which has its inception in Canada unless certain concessions are granted on the part of the Canadians. In the first place, regarding most of the wood pulp which comes into Canada, the mills are controlled by American capital, and, strange as it may seem on the face of it, the Americans are not eager to have the duty removed."

A well-known pulp manufacturer, who resides not very far away and has a mill in Canada, said: "It is immaterial to us whether the United States Government takes off the duty or not. As far as I am concerned, I would just as soon go on paying duty, for I fear if it was removed the effect would be to demoralize the wood pulp market and the prices would not be maintained. Canadians would then rush over and try to dispose of their surplus stock in our market."

SAVING THE REFUSE.

A wood concrete is now being made in Germany from wood waste—chips, shavings and sawdust—mixed with casein, calcined limestone, glycerine, sodium silicate and linseed oil. The composition is pressed in molds and left to harden. When dry, it is hard and solid, and can be sawed, planed and polished. Plain or fancy woods may be taken and, if desired, stained before use.

THE NEWS.

CANADA.

—McLaren's mill at New Edinburgh, Ont., which has been closed down for a month has commenced sawing again.

—Thos. Hale, of Pembroke, Ont., expects to take out about 150,000 cubic feet of timber from the Kippewa district the coming winter.

—Five million feet of lumber to British ports and two cargoes to South America were shipped from St. John, N.B., a fortnight ago.

—Mr. Andrew McCormick has sold thirty-six miles of his timber limits on the Wahnapitae river to Mr. Alexander Gordon, for \$30,000.

—Mickle, Dymont & Co.'s fine new mill at Severn Bridge, Ont., is about ready for operation. The full capacity of the mill will be about sixty to seventy thousand feet a day.

—Michael D. Lynch, of Douglas, Ont., foreman for John McKay, at Eau Claire, is authority for the statement that no lumbering operations will be carried on at that point this winter.

—The Harbor Commissioners, of Montreal, Que., are asking for tenders for 4,000 cubic feet of square pine timber, 5,500 running feet of round and flat pine timber, and 45,000 lineal feet of round and flat hemlock timber.

—A recent gale played havoc with a number of rafts. The Charlton and Niagara were taking a huge raft of 5,000,000 feet from Georgian Bay to Michigan, but were obliged to cut a \$3,000 tow line and the raft went on the rocks in Georgian bay. It was picked up, however.

—The following are current river freight rates: Quebec to Montreal, sawed lumber, pine and spruce, \$1; tamarack, \$1.25 a thousand feet; Quebec to Burlington, Whitehall and Plattsburg, \$1.50; to New York, \$2.50; from Batiscan to Burlington, Plattsburg and Whitehall, \$1.40.

—The number of vessels on the registry books of Canada last year was 7,007, with a tonnage of 964,129, a decrease in the year of 81,364 tons. The vessels registered by provinces are as follows: New Brunswick, 969; Nova Scotia, 2,778; Quebec, 1,404; Ontario, 1,345; P. E. Island, 195; British Columbia, 246; Manitoba, 78.

—A sale of 32 square miles of timber has been made to the Whaley Lumber Company, Huntsville, Ont., by the M. Brennen Company. The property consists of 18 square miles in Bethune Township and 14 miles in Sinclair Township. The limits have been worked for the past five years. The Brennen Company has two more berths left. The price is said to be somewhere about \$20,000.

—Gilmour & Co., of Trenton, Ont., are making preparations for the coming season's operations north of Minden, Ont. They are removing the old lumber slide at Stephen's mill, Stanhope, and intend building a new one at that point; they are also intending to improve the waterway to run their logs and expect to utilize the waters of Hollow Lake to carry their logs through the Gull River waters.

—The quantity of square timber measured and culled at Quebec to date is given as follows: Waney white pine, 2,126,038 cubic feet; white pine, 919,364; red pine, 293,718; oak, 993,769; elm, 555,287; ash, 158,159; birch and maple, 140,909. The figures for 1892, during the same period, were: Waney white pine, 2,220,045 cubic feet; white pine, 1,607,469; red pine, 333,269; oak, 807,672; elm, 644,197; ash, 193,060; birch and maple, 425,164. These show a considerable falling off for 1893.

—The Georgian Bay and Lake Huron Salvage Company is the title of a new organization formed for the purpose of protecting sawmill men from dishonest persons who have been in the habit of gathering stray logs, obliterating the marks of the owners, and claiming the logs as their own. The new company intends patrolling these waters, gathering together all broken up rafts, sorting the logs according to their marks, and returning them to their rightful owners. Mr. Charles Beck, of Penetang, is president, Mr. A. Cadenhead, of Midland, manager, and Mr. A. A. Wright, of Toronto, secretary-treasurer.

—Gilmour & Co., of Trenton, Ont., who have extensive timber limits on the Muskoka waters, will solve the difficulty of getting their logs to the mills at Trenton, over "The Height of Land," separating the Muskoka and Trent waters, by the construction of a system of log jacks, combined with a sluiceway, by which the logs may be expeditiously portaged from one water to another. The work is one of considerable magnitude and calling for a large amount of mechanical skill. The entire length of chain necessary to bring the logs into action is 5,780 feet, or nearly 1½ miles of heavy chains. The system of jacks will have a capacity of 10,000 logs per day,

The Wm. Hamilton Mfg. Co., of Peterboro, are contractors for the work.

GENERAL.

—Russia makes about 30,000,000 wooden spoons annually.

Sibley & Bearinger, of Saginaw, Mich., are reported to have sold 8,000,000 feet of lumber recently to eastern parties.

—The receipts of lumber at Buffalo for the season have been 166,647,871 feet, being an increase over 1892 of eleven million feet.

—The sawmill of the A. Oka, Minn., lumber Co., was burned a week ago; loss, \$75,000. Four horses were also burned.

Three different lumber firms—from Portland, Seattle and Tacoma, respectively—are now investigating the feasibility of locating mills at Ocoosa.

A. C. Ladd, a noted lumberman, of New Orleans and a member of the Mechanics', Dealers and Lumbermen's exchange of that city, is dead.

New York city is receiving a large amount of southern pine lumber. The receipts from Aug. 25 to Sept. 10, were 25 cargoes, scaling, 10,917,052 feet.

The annual meeting of the United Associations of Lumbermen will be held at Cleveland, Ohio, beginning Tuesday, Oct. 3, at 10 a.m., in the Hollenden hotel.

—It is stated that a young woman is employed as a packer in a shingle mill at Getcheli, Wash., and that she can pack as well and as many shingles as the average man.

—It is reported that the big mill of the North Wisconsin Lumber company, of Hayward, Wis., will shut down at once pursuant to the resolution adopted by the Mississippi Valley Lumbermen's Association, at Minneapolis.

—After two years' trial with pine, oak and greenheart in the Suez Canal Co.'s arsenal basin at Port Said, it has been found that while the pine and oak are almost entirely destroyed by the "tarlet," or borer worm, the greenheart has suffered no injury whatever. The wood is a native of British Guiana.

—Lumbermen in the vicinity of Seattle, Wash., believe that the Canadian Pacific will get control of the Seattle, Lake Shore and Eastern, perhaps in connection with the Northern Pacific, in which event the Great Northern would have formidable competition in the lumber and shingle business of the Sound.

—Fifty years ago 25 per cent of the logs entered at the large sawmills in the state of Maine was returned to the rivers as waste in the state of slabs. Now there is scarcely a foot of it wasted; modern inventions have found a way to utilize everything, and the surplus seldom gets in advance of the demand.

—The great Manchester (England) ship canal is open at last—at least it is open from Ellesmere port and the full-rigged ship, Fort Stuart, of 2,313 tons, has loaded a cargo of salt for Calcutta, thus practically initiating the foreign trade of the canal. This is the canal in which Canadian lumbermen are not without an interest.

—G. Bixbee, president of the Navarro Lumber Company, Cal., says the failure of the lumber concern is a natural consequence of the over-production that has been going on for a number of years. He suggests as a remedy there should be a combine to limit the output of lumber and regulate prices. Competition is now excessive. His views are also entertained by other lumber dealers.

—At its annual meeting the Mississippi River Logging Company decided to curtail its log input from 330,000,000 feet last year to 275,000,000 feet the approaching logging season. Last year over 300,000,000 feet were carried over, making the total amount on hand at the beginning of the sawing season 630,000,000 feet. This year 175,000,000 feet will be carried over, making the available stock next spring 450,000,000.

—September is said to have been the dullest month ever experienced in lumber in the California district. Receipts have been very small; only 45 lumber vessels have arrived. The Puget Sound district, including Portland and the Columbia river, has sent 5,359,491 feet, Humboldt bay 1,239,526 feet, and Mendocino county 1,524,069. But 4 mills out of 14 in Mendocino county are running, and these may shut down at any time.

FIRES AND CASUALTIES.

FIRES.

—The sawmill belonging to W. H. Whinster, Strathclair, Man., was destroyed by fire on 19th ult. It is said the loss is covered by insurance.

—A planing mill owned by W. B. Derbyshire, of West Port, Ont., was destroyed by fire a fortnight ago. Loss about \$2,500; insurance, \$1,500.

—Appleyard's sawmill at Keldon, Ont., was destroyed by fire 16th ult.

—Young's sawmill at Warton, Ont., was destroyed by fire the early part of September.

A. C. Gordon's planing mill, Dutton, Ont., was destroyed by fire the first week of September. Loss about \$5,000; insurance, \$1,000.

CASUALTIES.

—A boy named Haines had one of his fingers cut off by a buzz saw in Cane's factory, Newmarket, Ont.

—Peter Lalonde, of Mechanicsville, Ont., is likely to die from injuries received by the bursting of a butter saw.

Zephyr Lacasse, East Templeton, Que., was killed by a falling tree when at work chopping on the Du Moine.

—A young man named Lago had his leg broken in Sheppard & Mors's camp at Bois Franc, being struck with a log.

—A bad accident occurred at Conlon's Camp in the Parry Sound district, whereby Moses Puderil had his leg broken in two places.

—A young man named Collins had his leg badly crushed while rolling logs at Sutherland & Innes' mill, Wheatley, Ont. The limb had to be amputated.

—A serious accident happened to a German boy named Bucher, who was trying to put a belt on a pulley in Carruthers & Shaw's shingle mill, Penetangshene, Ont. The belt slipped and threw the boy on the saw, cutting his forehead, shoulder and arm.

PERSONAL.

John Watt, of the Brunette sawmill, New Westminster, B.C., was married last month to Miss Jessie A. Drummond, a young lady recently arrived from Scotland.

Mr. Allan C. Mackay, of Renfrew, Ont., son of Wm. McKay, lumberman, of Ottawa, has taken to himself a bride in the person of Miss Maggie Wilmot, of the Capital.

The marriage is announced of Miss Florence A. Shaver, daughter of J. A. Shaver, a well-known lumberman, of Ancaster, Ont., to Rev. W. E. Hassard, B.A., of Bruce Mines, Ont.

Miss Mina Hurdman, daughter of Ottawa's well-known lumberman, Mr. W. H. Hurdman, was married a fortnight since to Rev. W. H. Stevens, pastor of the Methodist Church, Grenville, Ont.

R. A. Stark, nominee for the Commons for North Grey, in the Prohibition interests, is a well-known sawmill owner, and is reeve of the township of Derby. He is an active supporter of the Patrons of Industry.

Dr. Mark, of Ottawa, has shipped to White River, a small station on the C.P.R., beyond Port Arthur, a house, 18 by 12 feet in dimensions, built in sections to be used as a vestry and study for a young Methodist minister who is to take charge of a church recently erected there. The nearest sawmill to White River is 300 miles away and the nearest place where lumber is sold is 169 miles distant. The doctor also sends a bell to ring the people to church.

On September 10, Zaida Diana Arnoldi, beloved wife of Mr. E. B. Edly, of Hull, died at the family residence, after an illness of some duration. Deceased was highly esteemed for her personal worth and many charitable acts in the community where she had been for so many years a resident. She was a native of Bristol, Vermont, where the remains were interred. The expressions of sympathy to the bereaved husband have been many and marked.

Captain W. O. McKay, well-known to every shantyman in the Ottawa Valley, died at Ottawa, on 18th ult. Deceased came of a historic Scotch family, which mingled with the French by inter-marriage. His grandfather was descended from a Highland clan, and was known as Captain Louis Eustache McKay, who fought among the Loyalists in the Rebellion of '37, and who was afterwards awarded a government pension up to the time of his death. The late Mr. McKay was the son of William Adolphus McKay, a widely-known general merchant, of St. Augustine, county of Two Mountains, and was born on March 4, 1845, leaving him in his forty-ninth year at the time of his death. In 1866 he removed to Ottawa, entering the lumber agency of Renaud Bros., as clerk. Afterwards he became a partner of Mr. Ed. Chevrier, subsequently purchasing ex-Ald. Lauzon's present hotel on Murray street. Some time afterwards he sold out to the present owner, and became proprietor of the Richelieu hotel, Sussex street. His hotel was the mecca of many shantyman, both when coming down from the woods and when looking for engagements to go up. The proprietor was known personally to them all.

TRADE REVIEW.

Office of CANADA LUMBERMAN, }
September 30, 1893.

THE GENERAL SURVEY.

THE lumber situation shows an encouraging improvement over the conditions of a month ago. Only the one story of a decided depression could be told then and lumbermen were feeling blue.

Where it was almost impossible, even with good security, to obtain funds to carry on current business a month ago, banks are now loaning money with much greater freedom. Discounts are scanned with a good deal of care, but yet there is not that general refusal to accept paper, that had been the practice of bankers.

It will not be uninteresting to watch events and study the likely effects of the summer's trade on that of another season. A question for immediate decision is the work in the woods for the approaching winter, and it seems probable that this will be considerably curtailed.

In Canada trade of the month has been fair. The year will not have been a bad one, taking it altogether, though less in volume than was counted on in the early spring owing to the depression in the States.

Ontario lumber trade is little altered. British Columbia is doing a fair trade only. In Quebec and the Maritime Provinces there is a feeling of quietude.

UNITED STATES.

The money stringency that was prevalent in every part of the States a month ago has, in a large measure, disappeared, and with it the complete stagnation that was the only feature of lumber markets at that time.

FOREIGN.

It is not an easy matter to make a diagnosis of the British lumber markets that will possess any lasting qualities. Seemingly a revival of trade will be at hand, but the announcement is barely off the press, before the old dullness has returned.

TORONTO, ONT.

Table listing lumber prices in Toronto, Ontario, for September 30, 1893. Includes categories like CAR OR CARGO LOTS, VARIETY QUOTATIONS, and various lumber types such as cut up and better, dressing and better, etc.

OTTAWA, ONT.

Table listing lumber prices in Ottawa, Ontario, for September 30, 1893. Includes categories like WHITE PINK-IN THE RAFT, and various lumber types such as pine, good sidings, per M feet, etc.

QUEBEC, QUE.

Table listing lumber prices in Quebec, Quebec, for September 30, 1893. Includes categories like WHITE PINK-IN THE RAFT, and various lumber types such as pine, good sidings, per M feet, etc.

OTTAWA, ONT.

Table listing lumber prices in Ottawa, Ontario, for September 30, 1893. Includes categories like WHITE PINK-IN THE RAFT, and various lumber types such as pine, good sidings, per M feet, etc.

QUEBEC, QUE.

Table listing lumber prices in Quebec, Quebec, for September 30, 1893. Includes categories like WHITE PINK-IN THE RAFT, and various lumber types such as pine, good sidings, per M feet, etc.

Table listing lumber prices in various locations including RED PINK-IN THE RAFT, DAK-MICHIGAN AND OHIO, and others. Includes categories like Measured off, according to average and quality, etc.

BOSTON, MASS.

BOSTON, Mass., Sept. 30.—It is thought that business shows a slight improvement. Prices, however, for pine have declined somewhat. Hemlock and spruce have improved a little. Shingles are in fair demand.

EASTERN PINK—CARGO OR CAR LOAD.

Table listing lumber prices for Eastern Pink—Cargo or Car Load. Includes categories like Ordinary planed boards, Course No. 5, etc.

WESTERN PINK—BY CAR LOAD.

Table listing lumber prices for Western Pink—By Car Load. Includes categories like Uppers, 1 in., 1 1/2 and 2 in., etc.

SPRUCE—BY CARGO.

Table listing lumber prices for Spruce—By Cargo. Includes categories like Scantling and plank, random cargoes, etc.

LATH.

Table listing lumber prices for Lath. Includes categories like Eastern sawed cedar, extra, etc.

SHINGLES.

Table listing lumber prices for Shingles. Includes categories like Eastern sawed cedar, extra, etc.

OSWEGO, N.Y.

OSWEGO, N.Y., SEPT. 30.—Business remains quiet, with shipments light.

WHITE PINK.

Table listing lumber prices for White Pink. Includes categories like Three uppers, 1 1/2, 1 1/2 and 2 inch, etc.

SHINGLES.

Table listing lumber prices for Shingles. Includes categories like 1 in siding, cutting up, etc.

1X12 INCH.

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

1X10 INCH.

Table listing lumber prices for 1x10 inch. Includes categories like 12 and 13 feet, mill run, etc.

SHINGLES.

Table listing lumber prices for Shingles. Includes categories like XXX, 18 in. pine, etc.

LATH.

Table listing lumber prices for Lath. Includes categories like No. 1, 1 1/2, etc.

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N.Y., Sept. 30.—Business is fairly active compared with that of a month ago. Greater

confidence prevails. Sales are of course smaller in volume compared with a corresponding period a year ago, but this is expected in view of the financial depression. There is a healthy demand for lath and shingles and thick, common and box.

WHITE PINE. Uppers, 1, 1 1/2, 1 3/4 and 2 in. 2 1/2 and 3 in. Selects, 1 in. 1 1/2 to 2 in. 2 1/2 and 3 in. 4 in. Fine common, 1 in. 1 1/2 and 1 3/4 in. 2 in. 3 in. 4 in. Cutting up, No. 1, 1 in. 1 1/2 to 2 in. No. 2, 1 in. No. 2, 1 1/2 to 2 in. No. 3, 1 1/2 to 2 in.

NOV. 1x10 and 12 in. (No. 3 out) 1x6 and 8 in. (No. 3 out) 1x13 and wider.

SHINGLES. 18 in. XXX, clear. 18 in. XX, 6 in. clear.

LATH. No. 1, 4 ft. No. 2, 4 ft.

ALBANY, N.Y.

ALBANY, N.Y., Sept. 30.—Trade has taken a decided upward tendency during the month. It is not such as would, no doubt, have existed at this season of the year had no set-back been given to general business three months ago; nevertheless, there is a very encouraging revival. A shipment of 800,000 feet to the West Indies is reported. Prices keep firm.

PINE. 2 1/2 in. and up, good. Fourths. Selects. Pickings. 1 1/2 to 2 in. good. Fourths. Selects. Pickings. 1 in. good. Fourths. Selects. Pickings. Cutting up. Bracket plank. Shelving boards, 12 in. up. Dressing boards, narrow.

LATH. Pine. Sawn Pine, ex. XXX. Clear laths. Smooth, 6 x 18.

SAGINAW, MICH.

SAGINAW, Mich., Sept. 30.—While there is an improved feeling in most lumber markets for the past few weeks, it cannot be said that Michigan shares in this impression, or fact, whichever it may be, to any large extent. Transactions are few and insignificant. Lumbermen are spending some time discussing the future of prices, and the continued inactivity is due in part to the fact that these people cannot just satisfy themselves what the future will be. Not a few hold to the view that prices will decline. At present prices show no apparent sign of weakening, but those who believe they know say that spot cash will help to make more favorable figures for the buyer.

FINISHING LUMBER—ROUGH. Uppers, 1, 1 1/2 and 1 3/4 in. Selects, 1 in. 1 1/2 and 1 3/4 in. 2 in.

SHING. Clear, 1/2 in. Select, 1/2 in. 3/8 in.

TIMBER, JOIST AND SCANTLING. 2x4 to 10x10, 12, 14 and 16 ft. 18 ft. 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. XXX Shingles. XX Climax. 18 in. 4 in. c. b.

LATH. Lath, No. 1, white pine. Lath, No. 2, W. pine, Norway 1/6

NEW YORK CITY.

NEW YORK, Sept. 30.—The actual business of the month in the metropolitan market has been exceedingly light. Various lines of work are coming to an end and sales at the yards are small. Prices are rather demoralized, especially when cash business is in view.

WHITE PINE WESTERN GRADES. Uppers, 1 in. 1 1/2 and 2 in. 3 and 4 in. Selects, 1 in. 1 1/2 and 2 in. 3 and 4 in. Fine common, 1 in. 1 1/2 and 2 in. 3 and 4 in. Cutting up, 1 in. No. 1. Thick, No. 1. Common, No. 1, 10 and 12 in. No. 2. No. 3.

NEWS AND NOTES.

Henry Pyper's new saw mill, at Osgoode, Ont., is now running. Alex. Prear lost two fingers off his right hand, on a jointer at the Cedar mill, at Deseronto, Ont.

Jos. Briel, 18 years of age, was accidentally killed a day or two ago in Messrs. Price Bros.' sawmill at Cape St. Ignace, Que., by a piece of plank striking him in the throat.

A sawmill owned by John McConachie, at Peninsular Portage, seven miles from Huntsville, was burned on 28th inst., also about 500,000 shingles. Loss, \$3,000; no insurance.

S. M. Elliott's sawmill, two and a half miles north of Port Elgin, Ont., was destroyed by fire on 27th ult., also several large piles of cut lumber. Loss, \$2,000; insurance, \$900.

Two men were badly scalded at Braman's sawmills, Three Rivers, Que., by the bursting of a steam pipe. One of them, F. Briere, will probably die. The other, Joseph Alsire, the engineer, will recover, although badly burned.

Charles Spence, who works in Nicols & Son's planing mill, Carleton Place, Ont., was gathering refuse from behind the pony planer, when the knot was thrown out with great force, striking him in the face, and breaking his nose in two places.

The G. J. Brown Manufacturing company, of Sandusky, Ohio, having worked out their limits at Romney, on Lake Erie, have disposed of their logging plant to Mr. John J. Gartshore, Toronto, who now offers it for sale. The plant is said to be in good shape.

E. D. Davison & Sons, of Bridgewater, N.S., in remitting their subscription for CANADA LUMBERMAN, write that lumber business in their district holds its own very well compared with other lines of trade, and prices remain stable and some better than last year.

Ernest Kirchner & Co.'s exhibit at the World's Fair, of sawmill and wood-working machinery, has received from the Jury of Awards two prize medals and seven honor diplomas. No other exhibit in the machinery hall has been awarded so high or many prizes as the manufactures of this firm, whose headquarters are at Leipsic, Germany.

It is reported from Duluth, Minn., that there are 100 cases of typhoid fever at Virginia on the Mesaba range, 50 at Biwaicke, and more or less danger of a typhoid epidemic in all the range villages. At Virginia the water is badly polluted and, moreover, there is no sewerage system in some of the camps, and when the typhoid starts it becomes almost a pestilence.

It was feared that the widespread destruction of standing timber throughout Ontario, caused by unusual windstorms last spring, would have the effect of reducing the price of hardwood for the coming winter. Many of the trees, however, uprooted, still retain sufficient nourishment to preserve their value as number 1 for cordwood or lumber, consequently the timber is allowed to remain unmarked for the present, except in a few isolated cases, till such time as it can be sold at its usual price.

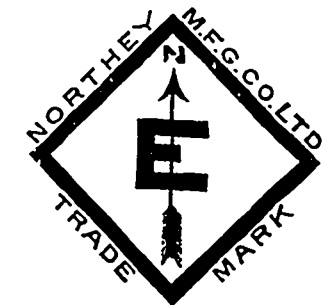
TRADE NOTES.

"LIST No. 17," from Petrie's machinery depot on Front St. west is a pamphlet of 96 pages that ought to have its place on the desk of everyone who has occasion to buy new or second-hand machinery. H. W. Petrie has scored a big success as a dealer in machinery and how broad he has made the field, is told by a glance through the pages of the present book.

A DESTRUCTIVE INSECT.

THE teredo navalis would be a valuable salt water insect if it would only confine its operations to the numerous directects floating in mid-ocean, instead of donating its energies to the destruction of pier and wharf piles. There are more than a score of lumber laden crafts floating around with the currents of the Atlantic reported by the Hydrographic office. One of these directects, loaded with Honduras mahogany, has been afloat for more than three years, and has been reported to the Hydrographic office twenty-six times, and is still a source of danger to shipping. If its timber had been used in a wharf or pier it would have been honey-combed by teredos by this time.

STEAM PUMPS



Duplex AND SINGLE Steam AND POWER Pumps

If you require a pump for any duty, of the latest and most improved pattern, and at close prices,

WRITE US



NORTHHEY M'FG CO. LIMITED TORONTO - ONT.

A TOOL WITH INTELLIGENCE.

IN an article describing the origin and work of the Hill steam nigger, which it terms "a tool with intelligence," the Timberman, Chicago, says: It must be seen to be appreciated. In the hands of men experienced in its use it performs all sorts of antics. Under a good head of steam its power and rapidity of action is something startling. It will cuff the log around with a blow that will send it through the carriage, or will stick its nose under it and throw it through the roof of the mill. It is the best sort of discipline for refractory or stubborn logs. It will take them off the carriage as well as put them on, turn them over into any desirable position and perform many other wonderful feats. One such "nigger" does just about all the work that two Ethiopians can do, including cant-hooks and rolling block. It is not satisfactorily demonstrated that the steam nigger increases the speed of the mill's operations beyond what is accomplished by two lively men standing on the deck prepared to turn the log when necessary, but the pay of the two men is done away with and there is nobody to swear back at the sawyer when he does not give time to do the work. To see the steam nigger in its best, or worst state, one should visit some of the mills, up north where they are cutting up logs which are coming in from land that is being thoroughly cleaned up: logs of all sizes and of all shapes. There the nigger is in its element and most gleefully and enthusiastically performs its work. A stranger in a sawmill is inclined to think that it is some captive from the infernal regions which has been trained thus to do this arduous work.

FORESTRY IN GERMANY.

THE forests of Germany cover 13,900,600 ha. of ground, that is, 25.7 per cent. of the total area of the Empire; this amounts to 0.28. for every inhabitant. According to the ownership, we may distinguish forestland belonging to the State and the Crown, 32.7 per cent.; to various communities, 15.2 per cent.; endowed institutions, 1.3 per cent.; societies, 2.5 per cent.; and private individuals, 48.3 per cent. The forests are stocked to the extent of 65.5 per cent. with evergreens, and 34.5 per cent. with deciduous trees. The individual varieties of timber are represented in percentage of area covered as follows: Firs, 42.6; pines, 22.6; larch, 0.3; beech, 14.7; birch, alder, and aspens, 3.3; tan-bark oak, 3.1; copse, 3.1; and young forest, 6.5. The most prevalent variety is, accordingly, the fir, which occupies more than half the forest-area of Prussia and nearly half of that of the German Empire. In German forestry two methods of procedure in propagation are used. In the one, the trees are raised from the seed; in the other, from shoots from the roots and trunks of full grown trees.

The rents of forest-lands are so adjusted that the income may represent an interest of 2 to 3 per cent. on the capital invested. The state forests of Saxony yield the largest products, the reason for which being essentially that the country is densely populated and possesses a highly-developed industry. It holds, as a general rule, in German forestry that half

of the gross income is required to cover operating expenses. Of late an attempt has been made to raise the net proceeds of the forests by more exhaustive operation. The State forests and most of the private ones are managed by a staff of scientifically and practically trained men.

There are special schools for forestry in Eberswald, Mluden, Tharandt, Aschaffenburg, etc.; at some of the universities also, instruction in forestry is given. The forests of various communities are placed under state control. This arrangement is generally recognized in Germany as a necessity proved to be such by a history of their forests. The authority of the Government extends to a general supervision of the property and methods of operation, and to a control of the disposal of the products. Private forestry is to-day almost free from any State supervision and subject to no legal control other than that which the general good requires. The supervision is stricter in the South and more liberal in the north, especially in Prussia. Timber is exported from Germany to France, Belgium, Holland, Great Britain, Switzerland and Denmark, and the export of wooden wares to Russia and America is considerable.

In proper appreciation of the importance of the forests from an economic and climatic standpoint, within the last few decades throughout Germany the conversion of barren belts of land not adapted to agriculture into forest-land has begun; and it is believed that the time when the area of these forests will have been greatly increased now no longer lies in an indefinitely distant future.

OVERSTOCKING OAK.

SOME few years ago the oak manufacturers of the United States were unwise enough to overstock the market for quarter-sawed stock. Wisdom prevailed last year and every mill-man who sawed oak, we are told, profited by it. Hardwood, of Chicago, is afraid that the folly of three years ago is going to be repeated again. If so, dealers are warned to expect trouble. An over-supply of quartered stock this season will surely demoralize the market clear through. It will not only affect quartered, but plain sawed as well in sympathy. With oak cheap, all other hardwood finish will fall off in a corresponding degree. If all the quarter-sawed oak now being rushed out was strictly first-class stock, the danger would not be so imminent, for the amount of such has a natural limit. But experience teaches that whenever there is a rush by the mill men to stock up with any particular kind, the grade is invariably lowered, and advices from mill points show that this is already the case, and that the new stock at many places is not up to last year's in quality. This is to be regretted, as the oak men closed last year with everything in their favor, demand being rather better than supply, and quartered stock selling itself at the mill at remunerative prices. The only demand thus far this spring has been for first-class dry stock, in white oak. Red quartered is not in any sense in extra or even good demand, and should be sawed only as there is an actual call for it.

THE OLDEST TREES.

THE Soma cypress of Lombardy is, we believe, the oldest tree of which there is any authentic record. It is known to have been in existence in 42 B. C. There are, however, many trees for which a vastly greater antiquity is claimed. The Senegal baobabs—some of them—are said to be 5,000 years old.

The bo tree of Anuradhapura, in Ceylon, is perhaps the oldest specimen of another very long-lived species; it is held sacred upon the ground that it sprang from a branch of the identical tree under which Buddha reclined for seven years while undergoing his apotheosis. The oak is well known to be a long liver, and there are specimens still standing in Palestine, of which the tradition goes that they grew out of Cain's staff. The hawthorn, again, sometimes lives to be very old; there is said to be one in Cawdor Castle of an "immemorial age."

The cedars of Lebanon may also be mentioned, and there are, according to Dean Stanley, still eight of the olives of Gethsemane standing, "whose gnarled trunks and scanty foliage will always be regarded as the most affecting of the sacred memorials in or about Jerusalem."

KEEP THINGS SHARP.

ONE of the most important admonitions to the apprentice in woodworking, is to keep the tools as sharp as possible. When things seem to be going all wrong in the work, when the pattern won't come to suit you and the wood seems extra hard, just grind your chisel up in good shape and whet it down to a fine edge, and see if the work don't go better than you expect. We know from experience that this little piece of advice will be worth considerable to some of the boys if they will only follow it, and some may say that the tools ought to last over five minutes without being ground. Perhaps they ought to do this but perhaps they don't, and it will be policy even then to try this simple remedy, only don't overdo the matter and expect them to work by themselves, if you only have them sharp enough, for I have never been able to get them sharp enough for this. Be cautious about using the oil stone, as the writer has seen many tools stoned to death by an injudicious use of the oil stone, when not necessary and then using it in the wrong manner.

TERRESTRIAL GRAVITY.

THE mean density of the earth has been studied by a French physicist, M. Berget, by means of a new instrument—the gravimeter of M. Mascart. This apparatus consists of a U-shaped glass tube, containing a column of mercury balanced against a small quantity of hydrogen gas in such a way that slightly varying effects of gravitation will cause the mercury to move in the tube, as in the thermometer or barometer. By this delicate device M. Mascart believes he has obtained some evidence of a variation in the gravity of the earth. M. Berget made his computations of the mean density from the difference in effect upon the apparatus of the earth's attraction with the attraction of a lake and when the lake had been emptied of its 320,000 tons of water. A number of trials have led the experimenter to

place the mean density of the earth at 5.4, the estimate of M. Cornu, by the method of Cavendish, being 5.5.

IN A HOLE.

ACCORDING to the Engineering News the Columbian Exposition had cost \$23,867,752 to August 7 for construction and administration. The gate receipts to the same date were \$3,447,937, and from concessions \$1,178,546. The daily receipts from all sources are about \$80,000, and the average daily expenses \$15,000, leaving a net daily revenue of \$65,000. The auditor, in his condensed balance-sheet of July 31, charges to construction account a total of \$18,819,198; to general and operating expenses \$4,957,870, and to preliminary organization \$90,674. This does not include the outlay of the States, cities, individuals and corporations of this country and those of foreign exhibitors. These added would swell the cost to about \$35,000,000. The fair will be a loser, considered as an investment, merely.

REAL EFFICIENCY OF THE BOILER.

MUCH importance is attached, and properly so, says a writer in Power, to low uptake temperature in steam boiler tests and steam boiler practice, but the fact must not be lost sight of that the real efficiency of the boiler is the difference between the furnace temperature divided by the former value. A low uptake temperature can be had with very poor efficiency by maintaining a low rate of combustion and a comparatively cool furnace, while a considerable increase in uptake temperature can be afforded if the rate of combustion and furnace temperature is correspondingly increased. It is to this fact that tests with comparatively high uptake temperature, when the reduction of temperature has been by absorption in the heating surface, will give the best results.

PUBLICATIONS.

As an illustration of the money paid to writers as soon as they acquire a reputation, the September Cosmopolitan contains less than eight thousand words for which the sum of sixteen hundred and sixty-six dollars was paid. Ex-President Harrison, Mark Twain and William Dean Howells are the three whose work commands such a price.

Frank R. Stockton has written the story of "How I Wrote 'The Lady, or the Tiger?'" for the next issue of The Ladies' Home Journal, and tells what came of the writing of the famous story and the condition of his own mind at the present time, of the correct solution of the problem whether the lady or the tiger came out of the opened door.

COMING SALES.

In our advertising pages will be found the announcement of Perley & Pattee, of an extensive auction sale, at Ottawa, on January 24 next. The lots to be offered comprise all told 1,338 square miles and are to be disposed of in ten parcels. The limits are located in good pine belts and the rivers and streams from them are in good condition for driving and are all tributary to the Ottawa river.

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REAMER LUMBER CO. LTD.

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AND

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DONOGH & OLIVER



WHOLESALE DEALERS IN

LUMBER

OFFICE

Nos. 213, 214 and 215

Board of Trade Building

Toronto, Ont.

Representative Lumber Manufacturers and Dealers

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 Hand Mill
Ottawa, Ont.	Ottawa	Bronson & Weston Lumber Co.	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Band, 4500
Ottawa, Ont.	Ottawa	OTTAWA LUMBER CO.	Lumber, Pine, Spruce, Hemlock, Wholesale	
Parry Sound, Ont.	Parry Sound	Conger Lumber Co.	Lumber, Wholesale and Retail	
Parry Sound, Ont.	Parry Sound	Parry Sound Lumber Co.	Saw, Shingle and Lath Mills, Pine, Wholesale	Water, Gang, Circular, Saw 9000, Shingles 7000, Lath 3000
Muskoka Mills, Ont.	Penetanguishene	Muskoka Mill and Lumber Co., Head Office, Arcade, 24 King st. w., Toronto	W. Pine Lumber, Lath and Bill Stuff, all lengths	2 Mills, Water, 1 Band, 2 Gangs and 3 Circulars
Alexandria, Ont.	Alexandria	McPherson, Schell & Co.	Cheese Box Factory, Pine, Spruce, Cedar	Circular, 300
Almonte, Ont.	Almonte	Callwell, A. & Son	Sawmill, Pine, Lumber, Hemlock, Hardwoods	Steam, Circular, 400
Barrie, Ont.	Barrie	Dymont & Kiddle	Sawmill, Pine, Spruce, Cedar, Hardwoods	Steam, Circular, 400
Barrow Bay, Ont.	Warton	Barrow Bay Lumber Co., Limited	Saw, Shingle and Heading Mill, Pine, Cedar, Oak, Oak Railway Ties, Paving Blocks	Steam, Circular, 1500
Blind River, Ont.	Blind River	Blind River Lumber Co.	2 Saw, Sh. and Lath Mills, Pine, Hem., Bl. Birch	Stm., Band, Cir., S. 7500, Sh. 6000
Bolton, Ont.	Fenelon Falls	Boyd, Mossom & Co.	Lumber, Wholesale and Retail	
Barrie, Ont.	Barrie	Barton Bros.	Lumber, Wholesale and Retail	
Waukegan, Ont.	Waukegan	Gargian Bay Consolid. Lumber Co. Hd. office areola, 27 King st. w., Toronto	Pine only	Waukegan mill, stm., 2000; Pt. Severn mill, water, 1500
Callabogie, Ont.	Callabogie	Carswell, Thistle & McKay	Lumber, Wholesale and Retail	
Callander, Ont.	Callander, G.T.R.	John E. Smith & Sons	White and Red Pine Lumber, Bill Stuff, Lath and Shingles	Steam, 2 Circular, 800
Collins Inlet, Ont.	Collins Inlet	Head Office, Strachan Ave., Toronto	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	Steam, Circular, 600
Comber, Ont.	Comber	Collins Inlet Lumber Co.	Saw and Stave Mill, Pine, Hardwoods	Steam, Circular, 600
Glanville, Ont.	Pinkerton	Ainslie, J. S. & Bro.	Saw, Shingle and Lath Mill, Timber Lands, Hemlock, Pine, Lumber, Hardwoods	Steam, Cir., Saw 1400, Sh. 2000
Glanville, Ont.	Pinkerton	McIntyre, N. & A.	Lumber, Wholesale and Retail	
Hamilton, Ont.	Hamilton	BRADLEY, MORRIS & REID CO.	Lum., Tim., Pine, Hem., Hwd., Whol. and Ret.	Steam, Circular, 2500
Huntsville, Ont.	Huntsville	Heath, Tait and Turnbull	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 400
Hamilton, Ont.	Huntsville and Kaituma	Thomson, Robert & Co.	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular, 400
Keewatin, Ont.	Keewatin	Dick, Banning & Co.	Sawmill, Pine, Hardwoods, Wholesale	Steam, Circular, 1000
Keewatin, Ont.	Keewatin	Keewatin Lumber & Mfg. Co.	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Water, Band and Circular, 1000
Lakefield, Ont.	Lakefield	Lakefield Lumber Mfg. Co.	Lumber, Wholesale and Retail	
Little Current, Ont.	Sudbury	Howry, J. W. & Sons	Lumber, Wholesale and Retail	
London, Ont.	London	Gordon, James	Exp. and dr. in Ann. Hwd., made to specification	
Longford Mills, Ont.	Longford	Longford Lumber Co.	Saw and Plan. Mill, Hemlock, Hardwds., Whol.	Steam, Band and Circular, 1000
Norman, Ont.	Norman	Cameron & Kennedy	Saw and Plan. Mill, Tim. Lands and Logs, Pine	Steam, Circular, 400
Norman, Ont.	Norman	Minnesota & Ontario Lumber Co.	Lumber, Wholesale and Retail	
Louise, Ont.	Elmwood, G.T.R.	S. B. Wilson & Son	Hardwoods, Shingles, Lath, Handles	Steam, Circular, 2000
Toronto, Ont.	Toronto	Campbell, A. H. & Co.	Lumber, Wholesale	
Toronto, Ont.	Toronto	F. N. Tennant	Lumber, Wholesale	
Toronto, Ont.	Toronto	Donogh & Oliver	Lumber, Wholesale	
Toronto, Ont.	Toronto	Victoria Harbor Lumber Co.	3 Saw, Shingle and Lath Mills, White Pine, Whol.	Stm., Cir., Gang and Band, 1400
Toronto, Ont.	Toronto	W. N. McEachren & Co.	Lumber, Wholesale	
Toronto, Ont.	Toronto	James Tennant & Co.	Lumber, Lath, Shingles, etc., Wholesale	
Warton, Ont.	Warton	Killer, B. B.	3 Sawmills, Lumber, Barrel Heads	Steam and Water, Circular, Portable and Stationery, 1000
Buckingham, Que.	Buckingham	Ross Bros.	2 Sawmills, Pine, Spruce, Hardwoods	Circular, Gang and Band, 1500
Toronto	Toronto	DeLaplante & Bowden	Pine and Hardwood Lumber, Whol. and Retail	
Montreal, Que.	Montreal	Dufresse, O. Jr. & Fere	Sawmill, Pine, Spruce, Hemlock, Hdwds., Whol.	Steam, Circular and Band, 5000
Montreal, Que.	Montreal	SHARER & BROWN	4 Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	2 Stm., 2 Wat., Band, Cir., 4000
Moodyville, B.C.	New Westminster	MOODYVILLE SAWMILL CO.	Sawmills, P. Fir, Spruce, Cedar, Hardwoods	Steam, Circular, 2000
New Westminster, B.C.	New Westminster	Brucette Sawmill Co.	Saw and Planing Mills, Sash, Doors and Blinds	Steam, Gang and Circular
Canterbury, N.B.	Canterbury Stn.	James Morrison & Son	Fir, Cedar, Spruce, Hardwoods	Steam, Circular, 1500
Hidgewater, N.S.	Hidgewater	DAVIDSON, E. D. & SONS	Sawmill, Pine, Hardwoods	Water, Circular and Gang, 2000

Lumbermen desirous of being represented in this Directory can obtain information in regard to rates by communicating with the Publisher.

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The Montreal Car Wheel Co.

... MANUFACTURERS OF ...

Charcoal Iron Chilled

RAILROAD WHEELS

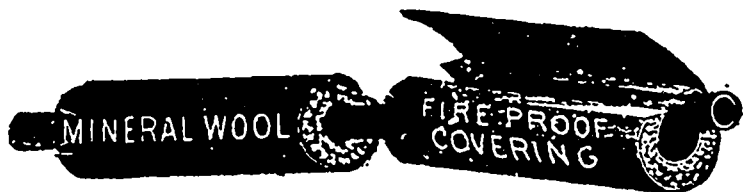
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NEW YORK LIFE INSURANCE BUILDING, MONTREAL

WORKS: LACHINE, QUEBEC

We make a specialty of Wheels suitable for the requirements of Lumbermen and Street Car Service, and can supply them Forest, Finished and Balanced.

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Mineral Wool Pipe and Boiler Covering

If you want to save fuel
 " " " dry steam at long distance
 " " " to prevent condensation
 " " " cold water pipes from dripping
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 MINERAL WOOL
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THE best non-conductor is the cheapest covering. Mineral Wool heads the list as a fire-proof non-conductor. Hand pressed coverings are poor non-conductors, and are therefore the most expensive in the end. A good pipe covering is one of your best investments. It is false economy to have uncovered pipes, as you are just paying the coal man what the covering man should have, and only ashes to show for it. Give the matter your consideration, it means money to you. We also carry full lines of Asbestos Goods, and Mineral Wool for fire-proofing, deadening of sound, insulation, etc., etc. Send for Pamphlet.

CANADIAN MINERAL WOOL CO. LTD., - 126 BAY ST., TORONTO

3 1/2 Cents a day—

That isn't much money, is it?
 About twenty-five cents a week or so.
 And a man must be pretty hard up if he hasn't that much to spend every week.
 Times are hard, they say; but if they are hard now to your family and yourself, what will they be to your family without you?
 That's worth thinking about.
 We think that no man should be without life insurance when it can be had at such a low rate as 3 1/2 cents a day from the Manufacturers' Life, Yonge Street, corner Colborne, Toronto.
 Write to us and we will give you all particulars.

Every Lumberman wants it 35 cents buys it

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SAVES TIME SAVES MISTAKES SAVES MONEY

BRIMFUL OF EVERY-DAY, PRACTICAL INFORMATION

Address: THE CANADA LUMBERMAN, Toronto

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion.

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.

WANTED

BASSWOOD LUMBER, BY CAR OR CARGO. Offers invited. Address "Basswood," care of CANADA LUMBERMAN.

LUMBER AND SHINGLE MILL. FOR sale in the Village of Dundalk; this is good new 50-horse power mill; will run lumber and shingles at same time; plenty of stock can be bought in the locality for four or five years at a reasonable rate.

COMMISSIONS

THE ADVERTISER CAN SECURE HIGH prices for black ash, basswood, elm and maple in New York and surrounding markets, best of references given. Send lists of stock on hand. No shipment on consignment. Bona fide orders sent you before shipment.

Address "Commissions," care of CANADA LUMBERMAN.

LOGGING TRAMWAY FOR SALE

About three miles of 25 lb. T-Rail; 12 Logging Cars complete, and a Shay Locomotive

IN GOOD CONDITION, FOR SALE ON ADVANTAGEOUS TERMS.

For further particulars apply to JOHN J. GARTSHORE, 49 Front Street West, Toronto.

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NEW AND SECOND-HAND STEEL AND iron rails for tramways and logging lines, from 12 lbs. per yard and upwards; estimates given for complete outfit.

JOHN J. GARTSHORE, 49 Front St. West, Toronto.

SAW AND SHINGLE MILL FOR SALE

At Proton Station on the G.P.R.

Containing 3 1/2 Acres of Land

Mill capacity from 10,000 to 15,000 feet per day

THE PROPERTY IS SITUATED IN ONE of the best hardwood districts in the country.

Two small houses, stable, etc., on the property. Mill can be seen at any time.

Terms easy. For full particulars apply

235 QUEEN STREET EAST, Toronto

VALUABLE PINE TIMBER LIMITS

1338 MILES OF PINE TIMBER LIMITS to be disposed of by a Public Auction Sale at Ottawa, Canada, on the

24th of January, 1894

Full particulars furnished on application to PERLEY & PATTEE, Ottawa, Canada.

WANTED FOR CASH.

ASH AND SOFT ELM DIMENSION STOCK cut to exact sizes. Apply for specification, price, etc., to

P.O. Box 2144, NEW YORK.

WANTED FOR CASH

Ash and Soft Elm

MOSTLY ONE-INCH, SOME ONE-AND-A-quarter and one-and-a-half inch, strictly firsts and seconds; also common. Furthermore, Ash and Oak squares from one-and-a-half to four inches thick. Red Birch Lumber, 1 and 1 1/2, all thickness; also Red Birch Squares 5 x 5 and 6 x 6, ten feet and over long. Address all particulars as to dryness, quality, quantity on hand and price, to P.O. Box 2144, New York, N.Y.

... THE ...

FLINT & PERE MARQUETTE RAILROAD

FROM

Port Huron and Detroit

By the Short Line to

SAGINAW AND BAY CITY

(Centres of the vast lumber interests of Michigan)

MT. PLEASANT, CLARE, REED CITY

BALDWIN, LUDINGTON, MANISTEE

AND

MILWAUKEE AND MANITOWOC, WIS.

The last two named are reached by the Company line of Steamships across Lake Michigan.

The line thus formed is a short and direct route from NEW YORK BUFFALO MONTREAL TORONTO

to ST. PAUL, DULUTH and Pacific Coast points.

Write either of the undersigned for Folders, which contain Maps, Train Schedules and much information of value to those contemplating a trip to any of the above-mentioned points.

W. H. BALDWIN, JR., General Manager. W. F. POTTER, Genl. Supt.

A. PATRIARCHE, Traffic Manager.

GENERAL OFFICES: - SAGINAW, MICH.

Are you Interested

IN FLOUR, MEALS, MILL PRODUCTS OF ANY KIND, OR GRAIN?

Then you cannot

Do without the CANADIAN MILLER. A sample copy sent on application. Address

CANADIAN MILLER, TORONTO

Actual Results

NET PREMIUMS PAID TO THE

ONTARIO MUTUAL LIFE

on an ordinary Life Policy of \$1,000, No. 1230 during its first 20 years, issued for age 37:

Table with 4 columns: Year, Paid, Year, Paid. Rows show annual payments from 1872 to 1891, with a total paid of \$321.09 after 20 years.

Total Paid in 20 years...\$321.09

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Revised, Enlarged, Improved and Illustrated

The most complete book of the kind ever published

IT IS DESIGNED EXPRESSLY FOR

SHIP AND BOAT BUILDERS, LUMBER MERCHANTS, SAWMILL MEN AND MECHANICS

Containing Tables for measurement of Scantling, Boards, Plank, Cubical contents of Square and Round Timber, Saw Logs, reduced to Board Measure, by Doyle's Rule, Specific Gravity and Weight of different Woods, Measurement of Wood and Price Per Cord, Stave and Heading Bolt Table, Hints to Lumber Dealers and Mechanics, Selection of Standing Trees, Defects of Timber, Felling Trees, Cubic Measurement, Speed of Circular Saws and Power of same, Growth of Trees, Cutting Fuel, Splitting Rails, Price Table for Lumber, Standard Log Table, Care of Saws, Filing Saws, Land Measure, Strength of Timber, Stone Wall Table, Weight of Flat and Round Bar Iron, Tables of Wages by the Month, Board or Rent by the Week or Day, Interest Tables, etc., etc.

BY J. M. SCRIBNER

Author of "Engineers' and Mechanics' Companion," "Engineers' Pocket Table Book," etc.

In preparing the book we have had the advice and assistance of large lumber dealers throughout the country, and have endeavored to make the book in every way convenient and accurate.

In all lumber countries, it will be found very convenient, as it comprises much that is needed by the Lumber Dealer, Mechanic and Business Man, and as a book of reference is invaluable to all persons dealing in lumber of any kind, buying wood or casting up wages or interest, who are liable to make mistakes by hasty calculations.

Over One Million Copies have been sold

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35 CENTS BUYS FISHER'S GRAIN TABLES

192 PAGES

The book contains more valuable information and useful tables for Farmers, Millers, Traders and others than any similar book of its kind ever published, besides being a complete Ready Reckoner showing the value of articles or lbs. from one to 100; from a quarter of a cent to \$2.00. Also tables for Grain, Hay, Rent, Board, Wages, Interest, etc.

Write for sample copy.

THE CANADIAN MILLER, Toronto, Ont.

Advertisement for FIRE PROOF ROOFING, ILLUSTRATED CATALOGUE FREE, METALLIC ROOFING CO. MANUFACTURERS TORONTO.

Advertisement for NEW & 2ND HAND MACHINERY, ILLUSTRATED CATALOGUE FREE, H.W. PETRIE, TORONTO CANADA.

WHY

not investi-
gate the cost
to you of
putting a Band
in your mill
in place of
the wasteful
circular saw.
Also the ex-
tra cost to
run the Band?
Quantity and
quality of cut
is not di-
minished.

WHY

should you
hesitate to
go to this
expense? You
secure with
the Band at
least six
boards where
the circular
gives five.
This would
have given
you 20 per
ct. more lum-
ber this year

WHY

when having decided to
change, go to the States
for your machinery. None
surpass the Bands built
by Waterous, Brantford,
Canada--either in qual-
ity, capacity or popu-
larity. The Ten Bands
they sold this season
equals in output any
American firm, when ex-
tent of territory is
considered. They have
given the best possible
satisfaction. Several
purchasers assert that
their daily saving more
than paid the daily cost
of running the entire
mill. You cannot longer
defer the change, nor can
you give a valid reason

WHY

YOU SHOULD NOT

Think-Carefully.

Decide-Wisely.

Act-Promptly.

BETTER WRITE WATEROUS TO-DAY

AND ORDER NOW, SAVING 50%

MACHINERY

FOLLOWING LIST OF NEW AND SECOND-HAND Boilers, Engines and General Machinery for sale by The Canada Machinery and Supply Co., Brantford, Ont., dealers in new and second-hand machinery and supplies:

- ONE BOILER, TO BRICK IN, 44 IN. DIA., x 11 ft. 7 in. long, 41 3/4 in. tubes, in first-class order.
ONE BOILER, TO BRICK IN, 44 IN. DIA., x 11 ft. 8 in. long, 38 3/4 in. tubes, in first-class shape.
THREE 25 H.P. PORTABLE LOCO. FIRE BOX boilers, in good order.
ONE 20 H.P. RETURN TUBULAR BOILER to brick in.
TWO 6 H.P. FIRE BOX BOILERS FOR cheese factories.
ONE 12 x 16 SLIDE-VALVE ENGINE, BECKETT'S MAKE.
TWO 9 x 12 SLIDE-VALVE ENGINES, Goldie & McCulloch and Morrison makes.
ONE 6 1/2 x 9 SLIDE-VALVE ENGINE, COPP BROS. & BARRY MAKE.
TWO 5 1/2 x 9 SLIDE-VALVE ENGINES, BECKETT'S MAKE.
ONE 6 H.P. ENGINE, UPRIGHT, with 8 H.P. boiler combined on one cast iron base.
ONE 15 H.P. ENGINE, English make.
ONE 14 H.P. LEONARD MAKE ENGINE, nearly new.
ONE 12 H.P. HORIZONTAL PORTABLE ENGINE and boiler on skids; Ames & Co., makers, Oswego, N.Y.

MACHINERY:-

- ONE 24-INCH MCGREGOR, GOURLAY & CO. make heavy surface planer, almost new.
TWO 24-INCH CANT, GOURLAY & CO. MAKE light surface planers, in good order.
ONE GOLDIE & McCULLOCH THREE-SIDE moulder.
ONE ONE-SIDE MOULDER.
TWO 14-INCH WHEELS BAND SAWING machines.
ONE ALMOST NEW VERTICAL SPINDLE boring machine, McGregor, Gourlay and Co.'s make.
ONE ALMOST NEW IRON TOP JIG SAW, Cowan and Co., makers.
ONE GOOD SHAPER.
SIX GOOD SAW TABLES.
ONE NEARLY NEW GOLDIE & McCULLOCH tenoner, with double copes.
ONE WOOD FRAME TENONER IN GOOD shape.
TWO UPRIGHT SWING SHINGLE OR of heading machines, with jointers.
ONE ALMOST NEW GENUINE "BAILEY" gauge or handle lathe, with countershaft.
ONE ALMOST NEW SPINNING LATHE FOR making span metal work, with countershaft.
FOUR DOWELL MACHINES.
ONE 20-INCH WATEROUS CHOPPER COMPLETE with double elevators, equal to new.
FULL PARTICULARS CHEERFULLY GIVEN upon enquiry at the Canada Machinery and Supply Co., Brantford, Ont.

J. D. SHIER

MANUFACTURER OF

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THOS. MCGRAKEN

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Rochester Bros. : : COMMISSION AGENTS

Limits bought and sold on commission. Limits travelled and carefully prepared. Estimates given. Some first-class beetle on the North Shore of Lake Huron and on the Upper Ottawa now in our hands for sale. Communications confidential. References given.

36 Rochester St. Ottawa

THE

NORTH SHORE NAVIGATION CO.

Royal Mail Line of Steamers

CITY OF MIDLAND CITY OF LONDON

... FAVORITE MANITOU ...

Running in connection with the G.T.R. and C.P.R., will sail during the season of 1893 as follows:

THE CITY OF MIDLAND AND THE CITY OF LONDON will leave Collingwood at 1.30 p.m. every Tuesday and Friday on arrival of G.T.R. morning trains from Toronto and Hamilton, calling at Meaford. Leave Owen Sound same day at 10.30 a.m., after arrival of C.P.R. train from Toronto, connecting at Wharton with night train from the south, and stopping at all intermediate ports to Sault Ste. Marie. Returning leave the Soo at daylight, making railway connections at Wharton, Owen Sound and Collingwood.

The FAVORITE will leave Collingwood Monday and Thursday, at 1.30 p.m. for Parry Sound, Byng Inlet, French River and Killarney, connecting there with line steamers for Sault Ste. Marie. Returning stop at French River, Byng Inlet and Midland, making connection there with steamer MANITOU for Parry Sound and G.T.R. for south and east, and at Collingwood with G.T.R. for Toronto and Hamilton.

Commencing Thursday, May 4th

The MANITOU will make regular trips from Penetanguishene, connecting with trains from the south only at Midland, every Monday, Wednesday, Thursday and Saturday on arrival of G.T.R. from all points south and east for Parry Sound, making connection there with the steamer FAVORITE for Byng Inlet, French River and Killarney, where the latter connects with the line steamers for the Soo.

For tickets and further information see folders, or apply to all agents of the G.T.R. and C.P.R., or to

C. E. STEPHENS, M. BURTON, Sec.-Treas., Collingwood, Mgr. Collingwood.

MILLERS' & MANUFACTURERS' INS. CO.

ESTABLISHED - 1885

32 Church Street, Toronto

The President, James Goldie, Esq., in moving the adoption of the report on the business of 1892, said: I have much pleasure in drawing your attention to the fact that this company has verified, in a marked degree, every expectation set forth in the original prospectus when organized in 1885.

Up to the present time the insurers with this company have made a saving, when compared with the current exacted rates, of \$91,004.20. And in addition thereto bonus dividends have been declared to continuing members amounting to \$21,512.72.

Besides achieving such result, we now also have, over all liabilities - including a re-insurance reserved (based on the Government standard of 50 per cent. - (50 -), a cash surplus of 1.93 per cent. to the amount of risk in force.

Such results emphasize more strongly than any words I could add the very gratifying position this company has attained. I therefore, with this concise statement of facts, have much pleasure in moving the adoption of the report.

The report was adopted, and the retiring Directors unanimously re-elected. The Board of Directors is now constituted as follows: James Goldie, Guelph, president; W. H. Howland, Toronto, vice-president; H. N. Baird, Toronto; Wm. Bell, Guelph; Hugh McCulloch, Galt; S. Neelon, St. Catharines; George Pattinson, Preston; W. H. Story, Acton; J. L. Spink, Toronto; A. Watts, Brantford; W. Wilson, Toronto.

HUGH SCOTT, THOS. WALMSLEY, Mgr. and Sec'y. Treasurer.

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:

Card of Enquiry to Lumbermen.

Manufacturers of lumber, shingles, lath, staves, headings, etc., will please fill in this blank:

Power, style and capacity of mill:
Class of manufacture:
Post Office: Shipping Point:

Dealers in lumber, shingles, lath, etc., will please fill in following blank:

Wholesale or Retail: Class of stock handled:
Post Office: Shipping Point:

Owners of planing mills, sash, door and blind factories, will please fill in following blank:

Power and style:
Class of manufacture:
Post Office: Shipping Point:

(Signed)
P.O.
Province.

Address all communications to

DIRECTORY DEPARTMENT, CANADA LUMBERMAN, TORONTO, ONT.

REGISTERED STAR BRAND PORTLAND CEMENT

Our own manufacture and unexcelled.

Its use is authorized by Province of Ontario and Toronto City Engineers.

Quality GUARANTEED, and always the same.

WORKS AT NAPANEE MILLS The Rathbun Co'y MANUFACTURERS, Deseronto, Ont.

GALT MACHINE KNIFE WORKS



MACHINE KNIVES

OF EVERY DESCRIPTION FOR

Planing, Moulding and Stave Cutting

Send for Price List

PETER HAY, GALT, ONT.

J. W. MAITLAND—H. RIXON J. G. AINSIE—W. STODARI

MAITLAND, RIXON & CO.

OWEN SOUND, ONT.

Saw Millers and Lumber Dealers

All kinds of Building Material kept in stock

WE MAKE A ... SPECIALTY OF LONG BILL STUFF IN ROCK ELM, PINE, CEDAR AND HEMLOCK Quotations furnished on application

The Rathbun Company

DESERONTO, ONT.

MANUFACTURERS OF

Doors, Sash, Blinds, Stairs

And all kinds of House-Finishing Materials

VENEERED DOORS a specialty

CORRESPONDENCE SOLICITED

J. J. TURNER

.. Sail, Tent and Awning Maker ..

251 George St. and 154 King St.

PETERBOROUGH

Canoe, Yacht and Boat Sails made to order. Perfect Fits Guaranteed.

Every description of Lumbermen's Supplies and Waterproof Clothing.

WILLIAM FOSTER

Lumber and Commission Merchant

RECEIVER AND FORWARDER OF

LUMBER, LATH AND SHINGLES

... CORRESPONDENCE SOLICITED ...

OWEN SOUND, ONT.

PATENTS CAVEATS and TRADE MARKS

Obtained in Canada.

UNITED STATES AND FOREIGN PATENTS A SPECIALTY.

Engineering Drawings Furnished.

W. J. GRAHAM, 71 Yonge St.

Toronto

Lumbermen

YOUR BUSINESS IS HELPED BY ...

.. ADVERTISING ..

... IN ...

CANADA LUMBERMAN

.. .. WRITE FOR PARTICULARS

Dauntless Shingle and Heading Machine

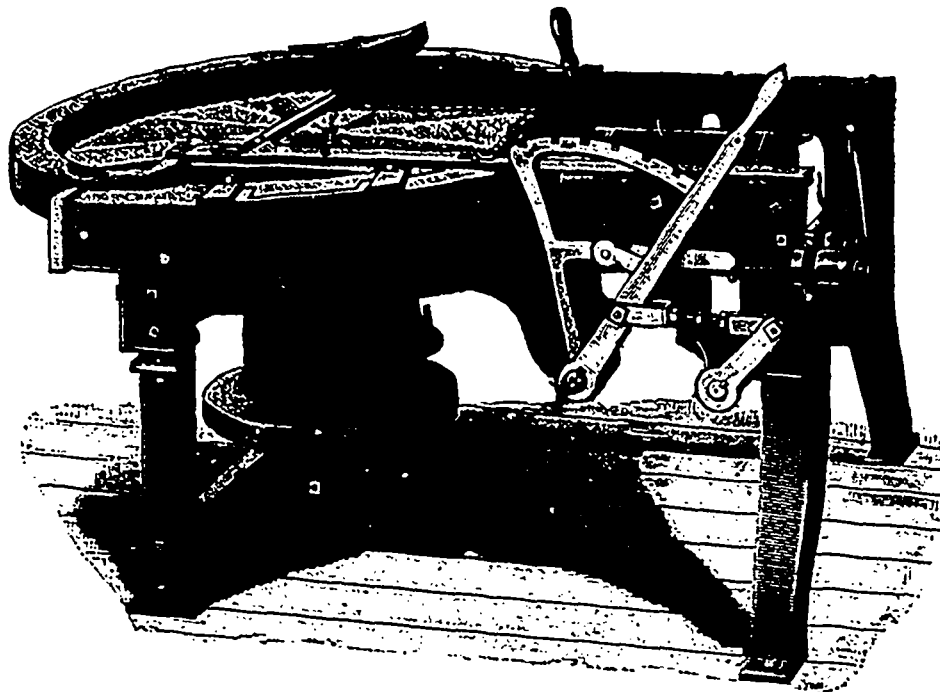
.. WILL make more Shingles per day than any self-acting machine with vertical saw in existence, and more Shingles from the same quantity of timber.

THE FRAME

... Is of Iron throughout, very heavy and rigid, strongly bolted and braced.

THE CARRIAGE

... Is very light and strong, made of forged Cast Steel Plate, running on steel ways or tracks. Will take in a block 18 inches wide and 19 inches long, adjustable for 16-inch or 18-inch shingles.



CAPACITY FROM 25,000 TO 50,000 PER DAY

[cont.]

LANSAY, May 18th, 1893.

Mr. F. J. DRAKE, Belleville. Dear Sir, The shingle machine we bought of you over a year ago is doing well. Last year we averaged over 12,000 shingles per day all through the season. We did not lose 15 minutes' time from all stoppages, and all repairs so far have not cost 50c. We expect to make a still higher average out this year.

All our other machinery purchased from you is as good as the shingle machine. Your drag saw, with friction drive, cannot be beaten. We run ours 120 strokes per minute; with 6 1/2 ft. saw it would easily make blocks for two shingle machines. The splitter, with balance wheel 4 feet diameter, weighing 1,000 lbs., is perfect and runs without the least jar. The iron frame shingle jointer with 40-inch saw is the only good jointer we ever saw. In fact, all your machinery, line shaft, pulleys, etc., give us the best satisfaction.

We expect to require another mill in a few days, and, if we do, will send you the order for complete outfit.

Truly yours, M. DAVIS.

P.S.—If any one wants to see a good working shingle mill send them to me. M. D.

F. J. DRAKE

PATENTEE AND ... MANUFACTURER OF SAW, SHINGLE AND LATH MACHINERY BELLEVILLE, ONT.

POROUS TERRA COTTA

Proved by actual and thorough tests to be the best fire-proofing material in use.
 Unequalled for making buildings, vermin, heat, cold and noise proof.
 For partitions, costs no more than brick; weight, one-third that of brick.

SEND FOR CATALOGUE AND PARTICULARS

THE RATHBUN COMPANY :::
 ::: MANUFACTURERS, DESERONTO, ONT.

WHY BAND SAWS BREAK

SIXTEEN
 REASONS,
 AND HOW TO
 AVOID THEM



Being instructive to filers on the care of large band saw blades used in the manufacture of lumber

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner of properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

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.

Address - CANADA LUMBERMAN,
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F. REDDWAY & CO.
 MANUFACTURERS OF

BREAKING STRAIN 6 IN. "CAMEL" HAIR BELT 14,181 lbs.
 " " 6 IN. ENGLISH OAK DOUBLE LEATHER 7,522 "

ALSO MANUFACTURERS OF
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H. G. ROSS & CO.
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CORRESPONDENCE SOLICITED BOX 273

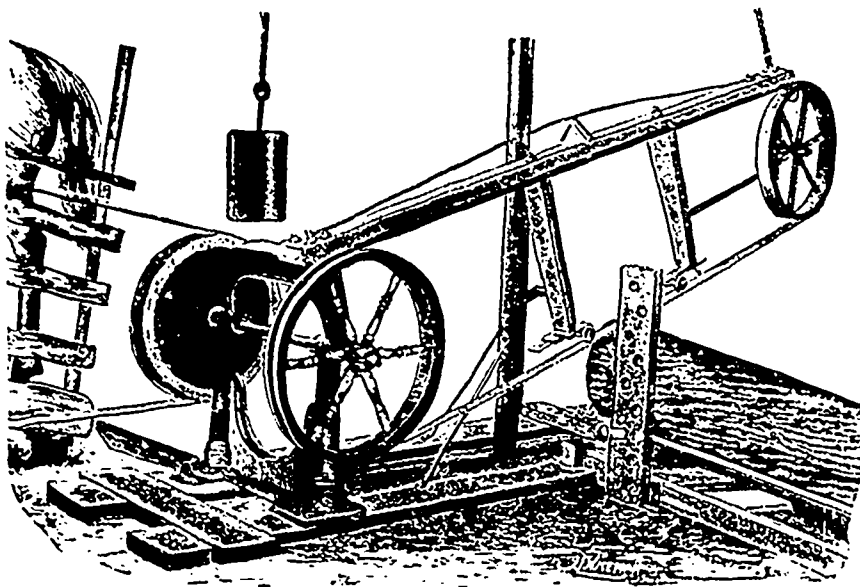
ROBIN & SADLER
 MANUFACTURERS OF

Leather Belting

SPECIALTIES
 DYNAMO BELTS
 WATERPROOF BELTING

MONTREAL TORONTO
 2518 & 2520 NOTRE DAME ST. 129 BAY ST.

Send for sample of our new SAWMILL BELT



GROSS-GUT BAND SAW

For cutting Pulp Wood, Shingle Bolts, Last Blocks, Firewood, etc.

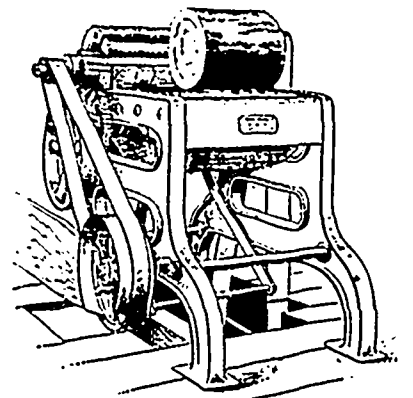
This new invention is worth the notice of any one who has cross-cutting sawing to do. It far exceeds any drag cross sawing machine ever made; and it takes the place of both drag and cutting off circular, as it is adapted to cutting both large and small stock, and far excels both in many ways, but especially in leaving the stock square and smooth.

Patent Rossing Machine

For removing the bark from all kinds of stock; especially Pulp Wood, Shingle Bolts, Butter Tub stock

WHAT WE CLAIM FOR THE MACHINE

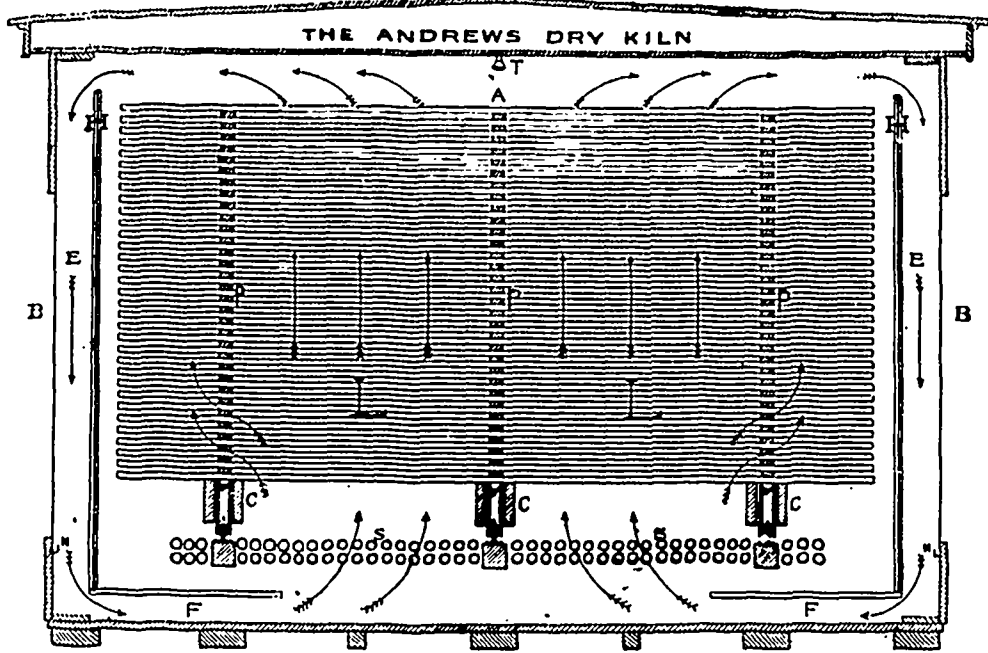
It will do double the work of any other. It leaves the block in better shape. In shoving off timber it is unexcelled. It is a safe feeder and will soon pay for itself.



EASTMAN LUMBER CO. - - - **EASTMAN, QUE.**
 Sole Manufacturers for the Dominion

THE ANDREWS DRYER

For Lumber, Shingles, Staves, Heading, etc.



This system and apparatus covered by letters patent.
 A—Drying-Room. BB—Brass Condensing-Walls. CCC—Lumber Cars. EE—Down Air-Flues. FF—Bottom Air-Flue. HH—Inside Walls, protecting metal from heat. LL—Lumber on cars. NN—Brass Cutters for receiving condensed moisture. PPP—Sinks between lumber. SS—Double Steam-Coils. T—Automatic Steam Fire-Extinguishers. Arrows show direction of currents of air.

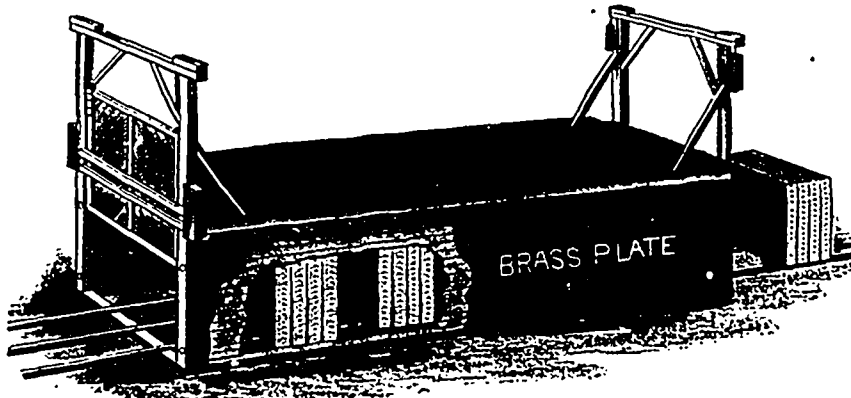
THIS DRYER

HAS PROVED TO PURCHASERS TO DO WHAT IS GUARANTEED IN SAVING THEM MONEY IN

Freight, Insurance, Time, Interest, Expense, Capital, Yard Room, Labor

There may be persons who do not appreciate the advantages of the artificial drying of lumber. But the shrewd men, in the manufacture of furniture and other woodwork where reputation would be sacrificed by a lack of proper material for good gluing and finishing, recognize a good system of drying as an important element of their success. High scientific authorities and thoroughly practical men are now agreed that the hot-blast and rapid-current systems ARE WASTEFUL, and that steam heat is the only safe means for artificial drying. The mode of applying steam heat most efficiently and economically is therefore now the essential point. The Andrews Dryer accomplishes this result more surely than any other known system.

- NO FAN
- NO ENGINE
- NO SMOKE
- NO CHIMNEY
- NO SPECIAL FIREMAN OR FUEL
- NO EXPENSIVE BRICKWORK
- NO RISK OF FIRE
- NO CHECKING OR WARPING
- NO CASE-HARDENING
- ... NO EQUAL ...



Outside View of the Andrews Progressive Kiln, showing Lumber placed crosswise the building, on cars.

"WE PUT GREEN SPRUCE IN DRIPPING WITH WATER, AND IN EIGHTEEN HOURS IT WAS DRYER THAN LUMBER THAT HAD BEEN STUCK UP IN THE YARD ALL SUMMER."

This is the verdict of a Quebec lumber firm, and we can give equal results every time.

What a leading Stave and Heading Manufacturer says:

CHATHAM, ONT., August 25th, 1893.

A. G. MORTIMER, Esq.,
 M'g'r Dom. 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.

What we have done for others we can do for you

WRITE FOR CIRCULARS AND FULL INFORMATION TO

The Dominion Dry Kiln Co., Toronto, Ont.

R. H. SMITH CO., LIMITED

ST. CATHARINES, ONT.

Sole Manufacturers

... OF ...

The "SIMONDS"
CIRCULAR SAWS

plus

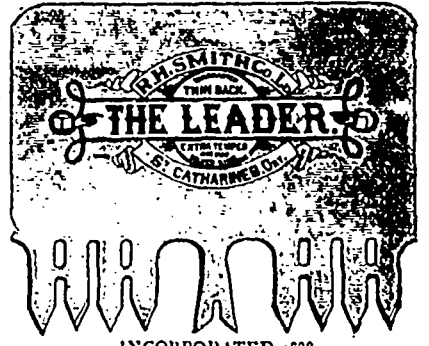
The "LEADER"
CROSS-CUT SAWS.

THE BEST SAWS IN THE WORLD

None Genuine without our Trade Mark



ESTABLISHED 1855



INCORPORATED 1888

OUR HAND SAWS cannot be excelled for variety, quality, style or finish REPAIRING PROMPTLY ATTENDED TO . . . Price List and Discounts on application . . .

We Manufacture SAWS of every description. Also GUTTING-BOX KNIVES

THE DOMINION LEATHER BOARD CO., MONTREAL

MANUFACTURERS OF

ASBESTOS MILL BOARD

FOR STEAM PACKING

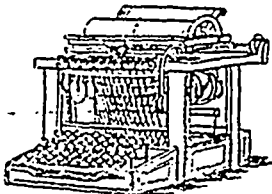
FRICTION PULLEY BOARD

THE BEST FRICTION KNOWN

Proprietors Sault au Regollet Paper Mills, making ROOFING, SHEATHING, FLOORING AND LINING FELT

1892 MODEL

Remington Typewriter



Unapproached for Excellence of Design and Construction, Quality of Work, Simplicity and Durability.

227 MACHINES FOR RENTAL OPERATORS SUPPLIED SEND FOR CIRCULAR

GEORGE BENGOUGH

- 45 -

Adelaide St. East

Tel. 1207. TORONTO

SPACKMAN & CO.

164 St. James Street

Tel. 1189 MONTREAL

DOTY

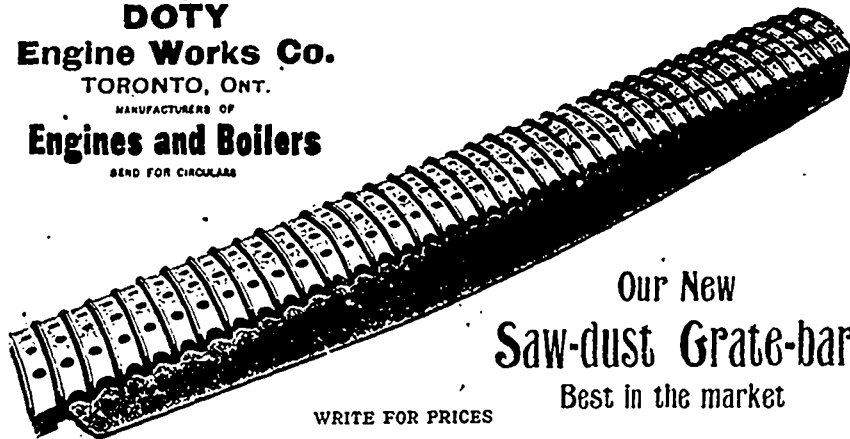
Engine Works Co.

TORONTO, ONT.

MANUFACTURERS OF

Engines and Boilers

SEND FOR CIRCULARS



Our New Saw-dust Grate-bar Best in the market

WRITE FOR PRICES

Marine Engines, High Pressure, Compound and Triple Expansion

Armington & Sims High Speed Engines for Electrical Work

Marine, Stationary and Portable Boilers Hoisting and Vertical Engines, all sizes

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The Rathbun Co.

Are open to Purchase

Oak, Ash, Birch Basswood and Good Pine Lumber Cedar and Pine Shingles

Manufacturers having such for sale are invited to communicate with

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Office Cor. Spadina Ave. and Front Street

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DUNDAS, ONTARIO

MANUFACTURERS OF

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LEATHER BELTING AND LACE LEATHER

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GEO. GORMACK

Wholesale and Retail Dealer in

ALL KINDS OF LUMBER

LUMBER SHIPPED TO ALL PARTS BY RAIL OR VESSEL

WHITBY, ONTARIO

Patented Solid Web Wood Split Pulley

Alexander Thomson, Bamboo and Art Furniture Manufacturer, Hamilton, writes:

"I find your Wood Split Pulleys give entire satisfaction. They do not slip, and are very handy to put on. I have had from twenty to twenty-five years' experience in pulleys, and I find none so satisfactory as yours, and am sure they will meet with success.

The CANT BROS. CO., Ltd.

Wood-working Machinery of all kinds

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F. E. DIXON & CO.

MANUFACTURERS OF

Star Rivet LEATHER BELTING

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