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NO. 3.

BARKING UP THE WRONG TREE.

Although the revenue derived from woods and forests stands second in amount among Ontario's receipts, it is really surprising to note the manner in which so important a subject is treated, when referred to, by both parties in the Legislature. For instance, in the speech delivered from the throne the other day, on the opening of the present session of the Ontario Legislature, we are told that the recent sale of timber limits was effected "in the interest of settlement and revenue," which means, we suppose, that now that the right to cut the timber on the lands in question has been sold to private individuals, the Ontario Government proposes to minimize its value both to the purchaser and to the Province by throwing it open to indiscriminate settlement under the "Free Grant Act," and the only objection which the leader of the Opposition apparently has both to what has been done, and what is proposed to be done, is that the Legislature was not consulted as to the expediency of the sale before it took place.

Now, all this, to our mind, is very much like barking up the wrong tree. In the first place, all past experience proves that those lands, which are chiefly valuable for their timber, as the prices realized for these limits amply prove them to be, are not the best for *bona fide* settlement, while their attempted settlement unavoidably causes the destruction of their valuable timber by fire, and thereby a loss of revenue to the Province, and a loss of employment both directly and indirectly to the people, of infinitely more benefit than any settlers which will ever make a permanent home on these lands—especially at the present time, when the North-West offers so many inducements to the intending agriculturist.

We had hoped that in view of past experience, and in view of the necessity which exists for making the very most of our timber resources, the present Ontario Government would have been prepared to try the experiment of setting apart the district covered by the recent sale for timber production only, and adopted special measures for protecting the timber growing thereon from destruction by fire. The importance of the revenue yet to be derived therefrom by the Province, and the importance of making the very most of the forests which we are so fortunate as to inherit from the past, should forbid any carrying over any reasonable expenditure for such a purpose, or any highfalutin about the rights of the would-be-settler to settle where-soever he pleases. So far as settlement is concerned, the question simply is, Will the Province, as a whole, derive most benefit from protecting the timber, or from the settlers which will go on these lands? Whenever the lands are chiefly valuable for the timber upon them, it cannot be questioned that the timber is worth both directly and indirectly much more to the province than any settlement

which is likely to take place on such lands under existing circumstances, while we do not think it would be difficult to prove that the timber thus protected would add more to the population of the Province in the course of its manufacture than is likely to follow from opening the land itself to settlement under the Free Grant Act.

PROTECTION FROM FIRE.

The Ontario Legislature having now met, it should be its urgent duty to pass some measure whereby the provisions of the Hon. T. B. Pardo's Fire Act could be practically enforced. As it is now, the Act is a dead letter. Its 14th clause provides that it shall be the special duty of every Crown Land Agent and Bushranger to enforce this Act, and to prosecute every person guilty of a breach of its provisions and requirements; but as they have no instructions or authority from their Department to that effect, they can do nothing, and as for lumbermen taking up and prosecuting parties guilty of breaches of the fire act, it is simply absurd, as they would do it at the risk of having more of their limits purposely burned another year in retaliation.

It would appear that the greatest fires have occurred since the passing of the Act, and this may be due to the fact that no person is afraid of being prosecuted under its provisions.

Most people are under the impression that it is only the license holder who suffers from fires set out in the limits. They forget that every timber forest destroyed by fire represents so much revenue lost to the Province, let alone the actual loss to the license holder, in his limit and extensive river improvements.

There is another greater loss to be considered, and that is the loss to the country of the money which would be paid out in manufacturing and bringing this timber to market had it remained green.

During the past summer fires overran large parts of the Parry Sound and Muskoka districts, and the country lying between the Georgian Bay and the Ottawa River, and according to an estimate made in the *Globe*, of Nov. 10th, destroyed \$10,000,000 worth of pine in Ontario. This does not nearly cover all the loss, as there were many fires of licensed lands, of which the public knew nothing, the holders of the limits burned keeping the knowledge of it to themselves, not wishing the value of their properties to be depreciated.

If these annual fires continue, they will in a few years make a large hole in the revenue of Ontario.

There were three quarters of a million dollars in bonus alone obtained from the last sale of timber berths, and the duty on the timber growing on them will represent to Ontario, if not burnt, upwards of five millions of dollars, and perhaps more. The parties who have paid such large sums for timber berths have a right to

look to the Government for protection against fires, and that the existing Fire Act be properly enforced.

As these berths are all likely to be operated on within a few years, (buyers being anxious to get returns), and as they are now owned by so many different parties, the risk of fires is very much increased. Before the sale these berths were in their virgin state, and not much exposed to fire, being held by the Government, but as soon as operations commence on them they will stand a poor chance.

There should be a distinction made by the Crown Lands Department between pine lands and hardwood lands fit for settlement. It is well known that in the back districts of Ontario and the Ottawa Valley, the pine lands are generally not fit for settlement, and that where settlement has been made on them the settlers, instead of prospering, yearly grew poorer and poorer, till in many places they were actually driven from their holdings by starvation, as witness the Opeongo Road, the Bonnechere and Mississippi counties, which are now nearly deserts, nothing but dry pines to be seen as far the eye can reach, while on the other hand those who settled on the hardwood lands have done well, and made themselves comfortable.

Now that the country is mostly all surveyed and the quality of the lands known to the Government, through its surveyors and bushrangers, it surely would be easy to make a distinction between lands for settlement and those for lumbering. A large portion of the Opeongo and Bonnechere country was not surveyed until after its settlement, and the Government had not therefore the knowledge they now have about their unoccupied lands.

It surely would not be too much to expect that the source of such a large revenue to this Province as its timber forests should be better guarded against loss than it now is.

If the present staff of woodrangers were increased, and kept in the woods during the months of May, June, July and August, being good, practical bush and canoe men, and well posted in the back country, they could prevent many bush fires being set out, and generally enforce the provisions of the Fire Act; if authority were given them to do so. If one fifth of the revenue, which would have been derived from the timber destroyed by fires last year alone, had been expended in watching the Crown domain, it would have paid the salary of a large staff of men for several years, and it is more than probable that very little damage from fires would have occurred.

If persons holding and working limits, and their agents and foremen, were all held responsible for the damage done by fires set out by them or their men, and also the heads of surveying or hunting and faking parties, they would be more careful than they now are. It is not so hard to trace the makers of fires in the woods

as it to trace incendiaries in cities, as every practical bushman knows that almost all fires in the woods can be traced to their starting points, and to the parties who set them out. *Cont.*

WOODEN BREAD.

It has lately been discovered that whiskey can be made from saw dust, and while we were yet calculating on the good times when one can "set 'em up" without stint or limit, and as to what is likely to be the increase in the snake product, if science keeps on in this fashion, along comes another scientist, and informs us that we may also have bread made from wood. We clip the following from a recent edition of *Good Health*.—"It is well known to the botanist that many plants besides those commonly used for food, contain nutritive elements. Nearly all plants contain starch. The barks of several aspens and pine trees contain so much of this substance that it can be extracted from them as from potatoes by trituration with water. It exists also in the roots and other parts of perennial plants to such an extent as to have been employed in the preparation of bread in families. In illustration of this we quote the following directions, given by Prof. Autenrieth, for preparing a palatable and nutritious bread from the beech and other woods' taste of turpentine. 'Everything soluble in water is first removed by frequent maceration and boiling; the wood is then to be reduced to a minute state of division, not merely into fine fibres, but actual powder; and after being repeatedly subjected to heat in an oven, is ground in the usual manner of corn.' Wood thus prepared, according to the author, acquires the smell and taste of corn flour. It is, however, never quite white. It agrees with corn flour in not fermenting without the addition of leaven, and in this case some leaven of corn flour is found to answer best. With this it makes a perfectly uniform and spongy bread; and when it is thoroughly baked and has much crust, it has a much better taste of bread than what in time of scarcity is prepared from the bran and husks of corn. Wood flour, when boiled in water, forms a thick, tough jelly, which is very nutritious." *Northwestern Lumberman.*

Adirondack Preserves.

Mr. Wm. Pickhardt, of New York, has purchased a tract of 6,000 acres of land, on Saranac lake, called the Pharaoh property, which lies in the eastern portion of the Adirondack forest. This large area he proposes to preserve from the profanation of plow or woodman's axe, and devote it entirely to natural wildness, and to be the home of untamed beast and bird. The price paid for the tract was \$10,000. The woods will appear to be kept, but hunters will be watched, and, if possible, no poaching will be allowed, and violators of the game law will be prosecuted. A section of aristocratic old England has been in the woods of northern New York.

McLAREN vs. CANADA CENTRAL R. R.

In the case of McLaren vs. The Canada Central Railway, for damages for lumber burnt by sparks from a locomotive, after a long trial the jury returned a verdict for the plaintiff, assessing the damages at \$100,000. Mr. Justice Oser then directed judgment for the plaintiff for \$100,000, but the entry was not to be made until the fifth day after the next Hilary sitting. The following were the questions submitted to the jury by the judge, and the answers made:—

Q. How did the fire occur—from sparks or cinders cast out from the locomotive, or from some other cause?

A. We think the fire occurred from sparks cast by the locomotive.

Q. If you find that the fire was caused by fire cast out by the locomotive, did it come from the smoke-stack or the ash-pit?

A. From the smoke-stack.

Q. If you find that it came from the smoke-stack, was it from any imperfection in the construction of the stack, or from the way in which it was managed by those in charge of the train?

A. Imperfection in the stack.

Q. If you find that it was from any imperfection in the construction, state what the imperfection was. Was there anything too large, or was the opening or unfastened bonnet improper, or was the cone too close to the netting?

A. Cone too close to the netting.

Q. Would there be more substantial danger of fire from a bonnet provided with a mesh of the size used by the defendants than from that used by the Northern Railway, which appears to be the smallest in use?

A. Yes.

Q. Were the defendants, in your opinion, guilty of negligence in using such a mesh?

A. No.

Q. Was the plaintiff guilty of contributory negligence in piling his lumber so near the track, or by allowing sawdust to remain on it, or by not having sufficient appliances to extinguish fire? If the plaintiff was guilty of negligence, could the defendants, by the use of ordinary care and diligence, have prevented the injury?

A. Not as to piling the lumber, or as to the sawdust, but somewhat as to appliances. We think the defendants could have prevented the fire.

Q. What was the actual value of the lumber destroyed?

A. \$100,000, including ties and rails.

Q. Do you allow anything for interest?

A. No.

Another question was then raised by Mr. McCarthy, and at the request of His Lordship the jury once more retired, this time to consider whether the bonnet-rim of the smoke stack fitted to the bed. They occupied fifteen or twenty minutes in discussing this question, and at a quarter to eleven o'clock returned for the third and last time to say that the bonnet-rim did not fit so completely as it should have done.

FOREST CULTIVATION.

The necessity for forest culture is forcing itself on the attention of the people. Many of the leading journals have had articles on the subject. Over in the States the same anxiety on the subject prevails, and a convention will be held in Cincinnati to carefully consider the matter. The general Government, the States, scientific and agricultural societies, and other associations interested in saving the timber from wanton destruction, will send delegates to Cincinnati to discuss the whole subject of forestry. This is a subject that we in Canada should also be seriously considering, as it is one of great and vital importance. Our forests are now thinned out at a rapid rate, and in the most prodigal way. Many thousand acres of woodland are annually burned over, mostly by accidental fires, but often intentionally, to make clearings. Railroad ties consume every year a vast amount of growing timber. An enormous quantity, too, and some of it of the most valuable species, is needlessly used up for firewood. In all parts of the country the waste goes on. This waste must be stopped, or the world will witness a timber famine before the middle of the next century. It is true that many millions of trees are being planted on the

American prairies, but not nearly enough to replace the destructive consumption of timber which is now taking place. In this country the Government should take steps to preserve existing forests, and to plant trees wherever available. The rural municipalities might be compelled by law to plant their roads with trees, and thus three per cent of the whole land of the country could be made to bear timber. We repeat,—this subject must be carefully considered by the Government.—*Bobcaygeon Independent.*

LAKE OF THE WOODS TIMBER DISTRICT.

Until quite lately the vast timber resources of this portion of Canada were but little known. Parties passing through islands on the Lake of the Woods could form a very limited idea of pine actually within reach. The timber limits surveyed in 1873 for Fuller & Co. were, we may say, unexplored, and in fact the Government know very little about what they were leasing. This limit included all the islands north of the steamboat channel (islands, the number of which is not even yet definitely known), besides the several limits on the mainland. Since the Keewatin Lumbering and Manufacturing Co. have been running their mills at Keewatin, these islands have been more carefully prospected and explored, and the result is the discovery of a much larger district of timber than was thought to exist in the country. The limits belonging to Mr. W. J. Macaulay, recently transferred to Dick & Banning, are scattered over a large tract of country, and embrace a very considerable area of land. One pinery especially is worthy of notice. On the Rainy River, near the Sault rapids, the timber is all white pine, and will compare favorably with the product of Lower Canada. Proceeding to Fort Francis, we find Sutherland & Bros.' saw mill. This firm has almost inexhaustible limits on Rainy Lake, the Manitou River, and elsewhere, and employ this winter a large force in the woods. The development made in this industry during the past summer lead us to believe that no inconsiderable portion of our future wealth will be derived from the pine districts of the Lake of the Woods and Rainy River.—*Rat Portage Progress.*

THE AUSTRALIAN TRADE.

Messrs. Gimmell, Tuckett & Co.'s timber report, dated Melbourne, Nov. 22nd, states there has been a brisk demand for all kinds of timber for building purposes, and prices realized for some lines show an advance on late rates.

American lumber continues in short supply, and prices are firm at present rates. Sales ex Oneida and Claud Hamilton—Michigan clear, 2 and 3 in., brought £18; 4 and 5 in., £18 10s.; w. p. shelving, 12 in. and wider, £14 2s. 6d. to £14 5s.; w. p. t. and g. ceiling, £10 17s. 6d. to £10 12s. 6d. per M. super.

Messrs. C. S. Ross report that during the past month there has been an active demand for building materials, and prices have slightly advanced. Sales by auction have been well attended, and the bidding has been more spirited than usual for nearly all descriptions of timber.

There is evidence of a substantial character that the present activity in the building trade will continue as the exports from the colony this season of wool will be far heavier than usual. The arrivals for the month have been the *Ethiopian, Northern Monarch, Cambrian Prince, Loch Sloy, Houghton Tower, Chrysmene, Ganges, and Antiope*, from Great Britain, with flooring, red deals, &c.; *Cheriot, Zonooarra, and Dorrabool*, from Sydney, with cedar; *N-mesu*, from Sydney, with redwood and white pine; *Amoor* from Drammen, and *Mary*, from Fredrikstadt, with flooring and deals; *Drumlanrig*, from Gleso, with red deals; *Fleetsong*, from Burrard Inlet, with Oregon laths and pickets; *Grace Deering*, from Boston, with spruce deals, clear pine, shelving and laths.

PREJUDICE KILLS.—"Eleven years our daughter suffered on a bed of misery under the care of several of the best (and some of the worst) physicians, who gave her disease various names but no relief, and now she is restored to us in good health by as simple a remedy as Hop Bitters, that we had poohed at for two years, before using it. We earnestly hope and pray that no one else will let their sick suffer as we did, on account of prejudice against so good a medicine as Hop Bitters."—*The Patients.—Tetragyn.*

MICHIGAN TIMBER SUPPLY.

A Brighton, Mich., despatch says some interesting figures relating to the timber interests of Michigan are furnished by the *Forestry Bulletin* just issued from the National Census office at Washington. The timber supply of this State, that is the estimated amount of merchantable timber standing on May 31, 1881, was as follows:—Lower Peninsula—Of white pine the basins of streams flowing into the Saginaw Bay have 7,000,000,000 feet, board measure; the basins of streams flowing into Lake Huron have 8,000,000,000 feet; the basins of streams flowing into Lake Michigan have 14,000,000,000, making a total of 29,000,000,000 feet. The pine on the Lower Peninsula is distributed over about 6,500,000 acres. Of hardwood there is an estimated amount of 575,500,000 cords distributed over some 20,000,000 acres. Of this about 20 per cent. is suitable for lumber and cooerage stock. Some 7,000,000,000 feet of hemlock lumber and 7,000,000 cords of bark still remain, together with about 5,000,000 cords of white and yellow cedar. Upper Peninsula—Of white pine, Marquette and Menominee counties have some 1,600,000,000 feet; Ontonagon, Houghton, Keeweenaw and Bargo counties have about 2,400,000,000; Schoolcraft, Chippewa, Mackinaw and Delta counties have 2,000,000,000 feet, making a total of 6,000,000,000 feet. Of hardwood there is an estimated amount of 124,500,000 cords distributed over 10,000,000 acres; also about 62,500,000 cords of tamarac and white and yellow cedar.

After Pine, Paper.

In a paper on the white pine of Michigan, Mr. W. H. Ballou shows that the quantity of pine in that state has decreased from 135,000,000,000 feet on 20,000,000 acres of land to 33,000,000,000 feet on 10,571,000 acres. Some 5,000,000,000 feet are now annually taken away, so that in seven years the supply will be exhausted. It almost seems a despairing task to hope over to raise forests for another such enormous production, and science will have to devise other materials as a substitute for wood. Lumber is already made in boards an inch thick from wheat straw, and can be colored so as to resemble any real lumber. The inventor manufactures two thousand square feet of a more durable and cheaper material than lumber from a ton of straw.—*Popular Science Monthly.*

Albany, N. Y., Stocks.

The following comparative statement of lumber on hand at Albany, N. Y., on the 1st of January in each year for the past ten years, is taken from a statement just issued by Sumner & Hasey, lumber dealers, at that city:—

	Pine.	Hardwood.	Hemlock.
1873.....	79,242,000	4,972,000	26,395,000
1874.....	90,990,000	5,504,000	16,092,000
1875.....	67,704,000	5,355,000	16,875,000
1876.....	67,800,000	6,652,000	8,338,000
1877.....	75,589,000	5,495,000	12,321,000
1878.....	69,547,000	3,645,000	22,432,000
1879.....	68,766,000	2,231,000	30,614,000
1880.....	76,463,000	2,097,000	5,415,000
1881.....	114,977,000	2,659,000	2,317,000
1882.....	101,587,000	3,265,000	6,258,000

LIVERPOOL.

The *Timber Trades Journal*, of Jan 7th, says:—The business of the past week has naturally been upon a very limited scale, and the usual course of trade has yet hardly had time to settle down into its normal condition; this position is, however, a question of only a few days, and everyone appears to look forward to a resumption of business as good, if not considerably better, than has been the case during the past three or four months.

The circulars issued from nearly every branch of business show that the trade of the country has been fair, and positively good during the latter portion of the year, and in all probability the timber trade, always the slowest to feel the influence of the ups and downs of trade, will enter the year with good prospects of obtaining higher prices than have recently been obtained, although these are higher than we have been accustomed to.

The imports continue moderate here, and as the import season for North American and Baltic goods is now practically closed, shippers are not willing to part with their goods excepting at a price which will see them recouped for their outlay, and therefore several auction sales are announced to take place during the next ten days, which will include most of the goods now on the way from New Brunswick and other deal ports.

Messrs. Farnworth & Jardine state that the arrivals from British North America during the past month (December) have been 17 vessels, against 17 vessels in the corresponding month last year, and the business of the month has been of a satisfactory character, prices having advanced, especially in Canadian woods. The imports for the season is now about closed, and stocks are generally very light. Canadian Woods—Of square yellow pine the stock is very small, and the late sales show a considerable advance in prices; for waney board also there has been a fair demand, and prices are improving. For red pine there has been more enquiry and the stock now is light. Of oak the consumption has been large, and prices are firmer; there is an increasing demand for planks cut to waggon sizes, the prices of these being so much lower than oak in the log, but they can no longer be had at the extremely low prices lately ruling. For elm and ash the demand has been limited, but prices are fairly maintained. Pine deals—There has been a good demand, and the late sales have been at improving prices, but they are still disproportionately low as compared with pine timber. Staves—Pipe fully maintain their value; but puncheon are rather easier. New Brunswick and Nova Scotia Pine and Spruce Deals—There has been a moderate import and a good consumption, and the stock is only about half as much as it was at the end of last year. The late sales of spruce deals show a slight advance in prices, and now that the season's import is practically over we may soon expect to see a further improvement in value. For pine deals there has not been much enquiry, but stock are now getting very low and the next sales will probably be at higher prices.

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LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Dec. 31st, 1880 and 1881, and also the Consumption for the month of December, 1880 and 1881:—

	Stock, Dec. 31st, 1881.	Stock, Dec. 31st, 1880.	Consumption for the month of Dec. 1881.	Consumption for the month of Dec. 1880.
Quebec Square Pine.....	345,000 ft.	360,000 ft.	190,000 ft.	223,000 ft.
Waney Board.....	353,000 "	303,000 "	"	"
St. John Pine.....	25,000 "	21,000 "	12,000 "	2,000 "
Other Ports Pine.....	37,000 "	43,000 "	8,000 "	8,000 "
Pitch Pine, heavy.....	510,000 "	394,000 "	120,000 "	141,000 "
" sawn.....	412,000 "	200,000 "	72,000 "	43,000 "
" planks.....	59,000 "	37,000 "	27,000 "	8,000 "
Red Pine.....	26,000 "	63,000 "	19,000 "	14,000 "
Danzig, &c., Fir.....	50,000 "	219,000 "	6,000 "	32,000 "
Sweden and Norway Fir.....	16,000 "	4,000 "	3,000 "	"
Oak, Canadian.....	347,000 "	624,000 "	119,000 "	78,000 "
" Planks.....	92,000 "	57,000 "	"	"
" Baltic.....	64,000 "	37,000 "	4,000 "	3,000 "
Elm.....	50,000 "	43,000 "	12,000 "	34,000 "
Ash.....	18,000 "	18,000 "	1,000 "	7,000 "
Birch.....	127,000 "	275,000 "	27,000 "	62,000 "
Greenheart.....	30,000 "	38,000 "	"	25,000 "
East India Teak.....	14,000 "	77,000 "	6,000 "	22,000 "
Quebec Pine Deals.....	7,832 stds.	11,095 stds.	2,773 stds.	1,755 stds.
" Spruce.....	"	"	"	"
N. B. & N. S. Spruce Deals.....	15,935 "	30,641 "	30,641 "	"
" Pine.....	718 "	1,856 "	0,370 "	7,730 "
Baltic Deals.....	3,113 "	0,943 "	473 "	615 "
" Board.....	198 "	790 "	48 "	37 "
" Flooring Boards.....	1,603 "	2,330 "	489 "	482 "

OUR QUEBEC LETTER

From Our Own Correspondent.

DULLNESS OF THE TRADE—MOVEMENTS OF FRESH-NEST LUMBERMEN—THE SUPERVISORSHIP OF CULLERS—MINING NEWS.

QUEBEC, JAN. 11th.—The extreme inactivity which prevails in the lumber business renders it a difficult matter at this season to compile a very readable or interesting letter on subjects entirely connected with the trade. In face of the very useful and interesting annual statement prepared by Messrs. J. Bell Forsyth & Co., of this city, concerning the season's business in lumber at this port, and the stocks wintering here, which statement has been analyzed in the columns of the CANADA LUMBERMAN, it would be decidedly presumptuous to attempt anything further in this direction.

Quotations it is at present impossible to give, since no transactions have occurred for some weeks back.

Mr. R. R. Dobell, of this city, left town a couple of days ago for Penascola, and will be absent about three weeks.

The firm of Hamilton Bros. & Co., doing business here and at Hawkesbury, Ont., has been dissolved by mutual consent, and the business is now being carried on under the old name and style by the Hon. John Hamilton, of Hawkesbury.

Mr. J. B. Charleson, of this city, has purchased all the standing spruce and pine on Brooks & Tool's lands, at Windsor Mills, in this Province. This, with other lots bought on the same river, makes his purchase of standing spruce and pine foot up to 27,000,000 feet. Both of these lands are quite close to Mr. Charleson's Mills, and in proximity also to a station of the Grand Trunk Railway.

The Arthabaska Timber Co.'s property, consisting of extensive steam and water mills at Arthabaska, with limits, and hitherto the property of the Russel Hotel Co., of this city, has been sold to American operators. The price has not transpired.

The vessels engaged in the lumber trade of Quebec this fall have been, as a rule, singularly unfortunate. Besides those already reported lost, the following over due vessels, of which small hopes are now entertained, are published in the newspapers of this date:—

Bark *Pearl of India*, Captain Kelly, from Quebec, Sept. 21, from Greenock, 1,256 tons register, loaded by Messrs. R. R. Dobell & Co.

Bark *Thomas Lee*, Captain Wilson, from Quebec, Oct. 21, for Whitehaven, 390 tons register, loaded by Messrs. R. R. Dobell & Co.

Bark *Caprea*, Capt. Whitake, from Quebec, Oct. 24, for Newcastle, 735 tons register, loaded by Messrs. R. R. Dobell & Co.

Bark *Ella*, Capt. Sjoström, from Quebec, Oct. 27, for Dublin, 641 tons register, loaded by Messrs. R. R. Dobell & Co.

Bark *Eastern Empire*, Capt. Love, from Quebec, Oct. 28, for Greenock, 1,751 tons register, loaded by Messrs. R. R. Dobell & Co.

Bark *Matador*, Capt. Ewart, from Quebec, Nov. 1, from Limerick, 420 tons register, loaded by Messrs. Wilson & Co.

Bark *Roomar*, Capt. Morris, from Quebec, Nov. 8, for Plymouth, 1,187 tons register, loaded by Messrs. J. Sharples, Sons & Co.

The appointment of a Supervisor of Cullers for Quebec has not yet been made. There are those who anticipate still that the appointment will be a political one, as it is known that party hacks, possessed of not the slightest business knowledge, are actively canvassing for the position. The trade, generally speaking, however, have reason to hope that the Government will pay some attention to their oft repeated representations and to the law which requires the appointment of a duly licensed culler.

Minor matters have looked up somewhat of late. New French capital is expected to pour into the Province next year, to be utilized in developing our mines, and in fact a Mr. Fatin, of this city, has recently received from a French company the sum of \$100,000 for a one half interest in a gold mine owned by him in Beauce. It is the intention of a number of speculators, who hold upwards of 100,000 acres of mining lands in the Eastern Townships, to open an office for the exhibition of specimens and sale of lands, in this city.

A UTILITARIAN PROTEST.

Some opposition is being expressed concerning the proposed reservation of a tract of land in Tulare county, California, as a national park. A bill is now pending in congress with this end in view. This reservation will be for the especial purpose of saving the giant trees that grow on the tract from being destroyed. The opponents of the reservation scheme allege that in it there are only two trees of notable size in that locality—the General Grant and Hugh Miller. These stand in a large body of timber, and are seven or eight miles apart. The operators who want to cut this timber, talk as follows:—

"Very few stop to consider that by reserving this large tract considerable money is kept out of circulation. It contains upwards of 15,000 acres of land, with perhaps 300,000,000 feet of timber, of which probably 50,000,000 feet are redwood. Sequoia. It is hard to tell where one kind of tree leaves off and the other begins. The tract lies on the south side of King's River, and has so far been untouched, because it was impossible to haul out or get at in any ordinary way. It will require some \$200,000 to utilize the tract, so that cutting and marketing would be of benefit to some persons, of course. Some capitalists had just made arrangements to utilize this tract, and were prepared to spend the above amount of money. The land, as it stands, is represented to be utterly worthless for any small operation, and can never be touched unless done cheaply on a large scale. Of course, as soon as the bill was introduced, the capitalists stopped work. The damage around Lake Tahoe has been exaggerated. Some of the logs have been cut off, but a very large proportion was still left around the shores. One acre out of every 5,000 has been cut off the shores of the lake, and no more. It would be more sensible to create a reservation around that lake than in Tulare county."

There are two sides to this question. If the general government has a right to the land, and can legally reserve the Tulare tract for the purpose of preserving the great trees, no private interests have much to offer against it. If the district is well timbered, so much the better; there will be one forest on the continent that will be saved to future generations, in all its primeval grandeur and beauty, untouched by the destroying lumberman. If forest preservation, by government interference, is to make headway at all, it might as well begin in Tulare county, California, as anywhere else.—*North-western Lumberman.*

THAT MERCER TIMBER MUDDLE.

I have republished criticisms on Mr. Wm. Mercer's account of the Spanish River country, we think it only fair to give the other side of the story, from the *Lumberman's Gazette*:—

By courtesy to Wm. Mercer, we publish the following communication, addressed to this paper. Still we are at a loss to understand by what manner of reasoning he is brought to the conclusion that we have used his name in any sense which savors of an untruthful connection, and Mr. Mercer fails to explain the method by which he reached such a conclusion. We distinctly set forth in our former article that we had very serious doubts that Mr. Mercer had ever made the statements attributed to him by the Chicago papers. Further than this, Mr. Mercer fully corroborates nearly every statement in our former article, not only as regards himself, but also sustains the views expressed by us in relation to Mr. Little, the Canadian, who scourged him so mercilessly. In regard to Mr. Mercer's strictures on the Chicago reporter, we have nothing to say further than that we are now fully satisfied that the representative of that paper misrepresented him.

With regard to the secrecy enjoined by the parties who employed Mr. Mercer, and the pledge thereto, Mr. Mercer's memory must be somewhat short, as by his own statement he divulged the business inside of forty-eight hours after returning from his trip; he has no right, therefore, to find fault with those parties if they do accuse him of a breach of confidence:

DEAR SIR,—As some one has sent me a copy of the *Lumberman's Gazette*, in which I see you are using my name in a very free way, and in

by no means a truthful connection, I may say that the *Press* and a Chicago paper seem to have it all their own way, and contain statements that are quite new to me and in fact were never heard of before by me. But not having had an opportunity to see or hear what has been said in the matter, I will state the facts and you can judge how far they agree with the statements made.

When leaving Bay City for Canada on the expedition named, the caution was given to say nothing about the object of the journey. This is the usual custom in all such cases, but they only extend to the time in which the would be purchaser has the refusal of the land, and are never meant to extend over a whole province, nor to a period of a man's natural life. If I had imagined that the gentleman had the least idea of purchasing the whole of Canada lying between the Georgian Bay and the North Pole, I might have been more cautious, but I considered that after the land was bought it was of little consequence making a secret of it, if indeed any secret were necessary at any time, the land having been advertised for sale in the Canadian paper for several years back, and had been inspected by several Michigan lumber firms before we ever saw it. On my arrival in Bay City I found telegrams awaiting me that I had to leave for Chicago immediately; and being in Chicago next day, and while waiting for a train, I called at a friend's office, and the subject of the Canada Pacific came up, in which the Chicago people are interested as a diverting line for "northwest" freight. A gentleman came in and was introduced, but I did not catch the name (he turning out, however, to be a reporter of one of the Chicago dailies). I made the remark in the course of conversation that the Canada Pacific never could compete with our lines of railroads on this side of the lakes, simply because the road ran through several hundred miles of country that had no local traffic or freight to support it, and consequently had to charge all expenses to "through freight" from the great "northwest," while ours had every few miles along the lakes immense quantities of freight to carry that would share the general expense and make these roads able to compete successfully with any road that can be built. Whether I am right or wrong in this has nothing to do with the question. The question was asked if there was nothing to carry in that section through which the C. P. R. runs. I said I had just come from the country north of the Georgian Bay, and with the exception of a tract of pine on Sable river, and as the Indians reported, also on the Spanish river some distance up, I saw nothing for a railroad to carry, and as these rivers were good streams to drive, I thought all the timber would come out that way. That was the substance of the whole conversation, which I claim was utterly private and not meant for publication in any way, and could not be distorted into an absurd claim of discovering a country that has been settled by whites over 100 years ago; and the Hudson Bay Company have a station near the mouth of the Spanish river that may have been there longer than that for all I know. Now if you read the article in question, you will find that the industrious scribe of the Chicago paper does not state that I made these enormous figures about the pine. That is all his own work from whole cloth, and must have been done on the principle of the natural philosopher, on being given the tooth of a mastodon, will construct the whole animal for you, even to giving you the length of its tail and the kinks thereof. I disclaim any such ability, and as you, Mr. Editor (I refer to Mr. Bennett), have known me ever since you were a boy, you can answer as well as anybody for my veracity.

The above facts are all there is to the matter. Only I must say that, had the member of the firm purchasing the land, who is well known as a professing Christian gentleman, remembered that there was such a thing as "Christian charity," he might have waited before he imputed such motives to me as he has, and if any blame attaches to me, it is in having alluded inadvertently to the subject at all in the company of strangers.

I can't conclude without thanking the Chicago gentleman for my "brevet rank," but as I find every second man here owns the title, I beg to

hand it back to him again, unneeded, as I have never used it.

As for Mr. Little, of Montreal, I have known him for 30 years, and during that time he has written poetry and lumber statistics in large quantities. And if his knowledge of Canada is equal to that of Michigan, as shown by his published statements regarding the supply of Michigan pine playing out every four or five years, I don't think he is in a position to contradict any figures made by anyone.

This is a long article, Mr. Editor, but as you have printed longer ones in regard to me, I think I am entitled to the insertion of this.

WILLIAM MERCER,
Jerseyville, Ill., Dec. 31st, 1881.

QUEEN vs MCFARLANE & MCFARLANE.

OTTAWA, Jan. 14.—The Supreme Court met at 11 a.m. In the Case of the Merchants' Bank of Canada, appellants, and The Queen, respondent, Mr. Bethune, Q.C., was heard in reply on behalf of the appellants. Judgment was reserved.

The case of The Queen (defendant), appellant, and Joan McFarlane and Duncan McFarlane, (suppliants), respondents, was then proceeded with. Mr. Lamb, Q.C., appeared for appellant, and Mr. Botham, Q.C., and Mr. McIntyre for respondents. The suppliants' petition of right claims payment of certain losses sustained by them, arising from the breaking of a boom at the mouth of the Madawaska River, owned by the Dominion Government as a public work, and constructed for the purpose of facilitating the transmission of saw logs down the Ottawa River. The suppliants were carrying on lumber operations on the Madawaska River, and certain timber and logs owned by them passed into the Government boom at the mouth of the Madawaska. The suppliants charge that the boom-master, by reason of the unskillful and negligent manner in which he performed his duty, allowed a larger quantity of timber and logs than the boom was capable of holding to pass into it, in consequence of which the boom broke, and the timber and logs of the suppliants floated out. That some of the logs were lost, and the suppliants were put to expense in recovering the others. The petition also alleges that the boom was negligently and unskillfully constructed. The petition prays that Her Majesty may be held liable for the losses sustained by them by reason of the unskillful and improper conduct of the boom-master.

To this petition the Attorney-General for Canada demurred for several reasons, among which are:—That no liability on the part of Her Majesty exists towards the suppliants in the premises, the Crown not being liable for the negligence of its servants. That no contract with the suppliants on the part of Her Majesty is shown, and a petition of right does not lie to recover damages not arising under contract with the Crown. That no liability on the part of Her Majesty exists by reason of the insufficiency of the boom or the want of care in the selection or employment of the slide-master, and that Her Majesty is not liable for the negligence of the persons having charge of such works.

The demurrer was argued before Mr. Justice Henry, and judgment given thereon in favour of the suppliants. From this judgment Her Majesty appealed to the Supreme Court. The case was argued, and judgment reserved. This being the last appeal on the list, the Court rose.

Here in Our Own Territory.

It can almost be asserted that St. Jacobs Oil works wonders. Shortly before the New Year, when I visited my family in Mitchell I found my son Edward, a lad little more than ten years old, very sick. He suffered with rheumatism, and so terribly, that he was perfectly stiff in his limbs, could not possibly walk and had to be carried from place to place. At once I sent for some St. Jacobs Oil, used it according to directions, and in a few days could see evidence of considerable improvement. On the tenth of this month I again visited my family and was astonished to find him well and hearty. He once more has fresh color in his face and can go to school again. Whenever the old trouble threatens to return relief is immediately secured by the use of the celebrated St. Jacobs Oil. From sheer joy over this result I cannot withhold recommending St. Jacobs Oil to suffering humanity as a true benefactor. Charles Metzendorf, office of the *Volksfreund*, German paper of Stratford, Ont.

BAY CITY STATISTICS.

The *Lumberman's Gazette*, of Bay City, Mich., in its annual review gives the following statistics of the business of the Bay County mills—

Lumber manufactured.....	972,820,317
On dock at close.....	252,120,029
On dock sold.....	118,008,117
On dock unsold.....	134,111,912
Lath manufactured.....	65,943,750
Shingles manufactured.....	354,925,600
Staves manufactured.....	47,480,060
Headings manufactured.....	5,440,917
Logs in mill boom.....	46,495,890

LIVERPOOL.

Messrs. James Smith & Co.'s wood circular, of January 2nd, says:—

The wood market is enjoying a more extensive rest than has occurred for some years. The import has been small and may be considered now closed. The consumption has been good and has exceeded the import, and the present stock is the smallest held for some years past, so that holders are firm, as there is no possibility of replacing any article they have on hand on the same terms. The open winter is general, extending over all the wood-producing countries. The Canadian mail, just in, reports the weather there more like April, and that this is seriously affecting the logging, while here building is still going on, thereby increasing the consumption, and reducing stocks largely. Freights are without change, as is also the money market.

COLONIAL WOODS.—Yellow pine—The import is closed, and the stock is about one-half that of last year. Second-class waney pine, 18 inch average, has been sold at 2s. 3d. per foot, primo at 2s. 6d. per foot, and short wood, 16 inch square, at 2s. per foot. Red pine—The stock is light; small average has been sold at 15d. per foot. Ash is inquired for, and may be quoted at 2s. Elm—The stock is sufficient. Black walnut continues in good demand, especially for good quality and large sizes; sales have been made at 5s. 9d. per foot for 20 inch, and larger sizes at 6s. to 6s. 6d. per foot. Chestnut and square maple have been tried this year, and have come forward in good sizes and quality, but prices have not been equal to cost of production. Birch—The demand has been large, and prices have considerably improved; sales by private have been made for Pictou at 13d. per foot, and St. John's, 604 logs, realized 13d. and 19d. per foot. Oak is more inquired for and the consumption is increasing; good wood is wanted, and the present quotations are from 2s. 11d. to 3s. per foot, and wagon scuttlings, 2s. 8d. to 2s. 9d. per foot. N. B. and N. S. spruce deals—The consumption continues large, and, with the reduced supply, prices are firmer. The present stock is the smallest held for some years past, and is only one-half of last year's; the stocks wintering at the shipping ports are lighter than for many years, and the advices today report spring and summer weather in Canada, seriously affecting the work in the woods, which cannot progress without snow, so that this state of things must be considered, along with high wages, corrections and scarcity of labour. The estimate of short supply next season is therefore put down at fully 25 per cent. less. The late sales have been of Shediac at 27 13s. 9d.; St. John, inferior specification, at 27 12s. 6d., and by auction, St. John, at an average of 27 15s.; Musquash at 27 9s.; Dalhousie at 27 10s.; Bathurst at 27 10s. per standard. Pine deals—The stock is only 718 standards, and prices have improved; the last sales were at 27 5s. 6d. per standard for Dalhousie, and 27 10s. for Miramichi. Scantling and boards are wanted; the former have been sold at 27 2s. 6d. per standard and the latter at 26 10s. 6d. to 12s. 6d. per standard. Quebec pine deals—There has been more enquiry and the stock is now 3,263 standards, less than last year; sales have been made at advanced rates, and 3rd quality bright realized from 23 5s. 6d. to 23 10s. per standard; 2nd at 21 10s.; 1st at 20 per standard. Red pine deals—On account of the advance in Baltic redwood they are improving in value; sales have been made at 23 15s. per standard. The consumption of these will improve if shippers can give a greater variety of sizes and are more careful in the seasoning before shipment. Quebec staves are in good demand and the stock is nearly exhausted. Palings have been sold at from 6s. to 8s. 6d. per mille, according to dimensions. Laths, 16s. per 1,200 pieces.

The arrivals since our last have been 30 vessels, 19,940 tons, against 31 vessels, 19,850 tons in corresponding period last year, and 27 vessels, 8,268 tons, in 1879.

From the 26th January to the 31st December,

1881:—

Vessels.	Tons.
Quebec.....	124
St. John, N.B., &c.....	201
United States.....	95
Baltic.....	139
Total.....	559

From the 26th January to the 31st December,

1880:—

Vessels.	Tons.
Quebec.....	125
St. John, N.B., &c.....	293
United States.....	90
Baltic.....	230
Total.....	738

From the 25th January to the 31st December,

1879:—

Vessels.	Tons.
Quebec.....	73
St. John, N.B., &c.....	213
United States.....	42
Baltic.....	140
Total.....	468

Saw Dust.

There are 500 vendors of sawdust in New York, with a capital of \$200,000 invested, and an annual business of over \$2,000,000. Four decades ago the mills were glad to have the saw dust carted away; 25 years ago it was worth only 10 cents a load at the mills. It is used principally at hotels, eating houses, groceries and other business places. When wet and spread over floors, it makes the sweeping cleaner work and prevents the raising of dust. Packers of glass, soda water, and many other small articles use it. It is used by plumbers about pipes and buildings, to deaden walls, floors and ceilings. Dolls and some living bipeds are more or less stuffed with it. Yellow pine makes the least dust and the best saw dust, and has a pungent, agreeable odor. Any white wood will answer for the above purposes. Black walnut sawdust, which has generally been burned because it would not sell on the market, has lately proved to be very valuable for the tumbling process of pin manufacture. — *Lumberman's Gazette.*

Effects of Lightning.

In a grove of 500 popular trees, with telegraph wire passing near them, eighty-one, or about one-sixth of the whole number, have been struck by lightning, and this upon the south side of the trunk nearest the wires. Those farthest from the wires are very rarely affected by the electric fluid. The wounds made by this element are said to be of three kinds; first the bark is shivered and rent upon the side toward the wire, over a narrow portion of the trunk. Second, the thunderbolt traces upon the tree a furrow, more or less broad, according to the severity of the stroke, beginning at a parallel with the wire and descending to the ground, sometimes spirally, but most frequently in a straight line. Third, the wounds are peculiarly formed, being oval, and the edges of the bark are colored a clear brown. These observations were made by M. Montigny, at Didant, France.

TIMELY WARNING.—Now is the season for sudden colds and distressing coughs, treat them with Hagg's Pectoral Balsam, it cures influenza, asthma, croup, whooping cough, bronchitis, and all pulmonary complaints leading to consumption.

A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of *Zojosa*, from Brazil, the now and remarkable compound for cleansing and toning the system, for assisting the digestive apparatus and the liver to properly perform their duties in assimilating the food. Get a ten cent sample of *Zojosa*, the new remedy, of your druggist. A few doses will surprise you.

BISHOP BEVERAGE.—A gentleman writing the celebrated and excellent Bishop Beverage, asked him how he was. Beverage replied, "If I answer in Latin, I am sic, etc. if in English, so, so." There are many, who, if they spoke truly would give the same answer as the excellent Bishop. They have contracted lung disease, or it may be are suffering from asthma, and in great danger of that fatal malady consumption. Take warning in time, use N. H. Downs' Vegetable Balsamic Elixir, it is really what many have called it, the "king" of remedies. Sold by all druggists throughout the Dominion.

Caledonian Hotel, GRAVENHURST.

JOHN SHARPE, Proprietor. This Hotel has been newly opened out, pleasantly situated on Main Street, within five minutes walk of Northern Railway station. Bar kept with best assorted Wines, Liquors and Cigars. Every attention paid to guests. Good Stabling 1110

Simcoe House, CORNER FRONT and SIMCOE STS. TORONTO, ONT.

Best accommodation in the City. TERMS \$1 50 and \$1.00 per day, according to Location of Rooms. 1121 WILLIAM HANCOCK, Proprietor.

The American Hotel, BARRIE, ONT.

Collier Street, Adjoining the Market. RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS. Best accommodation for Commercial and ALLIEN. W. D. McDONALD, Proprietor. 1117

J. DAVIES & Co. 46 Church Street, Toronto.

Sells all sort of Lumber on Commission. Advances on Consignments. Prices given on application. Whole Stocks disposed on very low Commission. 1111

E. S. VINDIN, Commission, Shipping, Forwarding and General Agent. LUMBER MERCHANT Office, Tempest's Block, Port Hope. 1113

FRANCOIS MARCHAND, Manufacturer of all Descriptions of STEAM BOILERS, SHIPS WATER TANKS, Etc. St. Roch Street, 117 QUEBEC, P. Q.

CANADA TRUSS FACTORY (ESTABLISHED 1860) F. GROSS, Manufacturer of SURGICAL and ORTHOPAEDIC INSTRUMENTS, ARTIFICIAL LIMBS, &c. &c. INDIA RUBBER GOODS of every description. 688 and 690 Craig Street, Montreal.

P. PAYETT'S NEW IMPROVED Adjustable Saw Guide! Can be adjusted without danger. You can cut your saw off without taking the guide off.

All kinds of Brass & Iron Turning, PLANING and TURNING done with Despatch. For particulars apply to CRAIG & CAMERON, PENETANGUISHEN 1112

GRATEFUL-COMFORTING. EPPS'S COCOA BREAKFAST.

"By a thorough knowledge of the nature of those which govern the operations of digestion and assimilation, and by a careful application of the fine properties of well selected Cocoa, Mr. Epps has provided for our breakfast tables with a delicately flavored beverage, which may save us many heavy doctors' bills. It is a judicious use of such articles of diet that a weak man may be gradually built up until strong enough to resist every tendency to disease. Hundreds of delicate invalids are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame." — *THE LANCET, 1876.*

Made simply with boiling water or milk. Packets and tins only (4-lb. and 1-lb.) labels. JAMES EPPS & CO., Homoeopathic Chemists, London England. 1113

Burdock Balm
Burdock Healing Ointment should be used in connection with Burdock Balm for curing Ulcers, Abscesses, Fever, Swellings, &c. Price 25 cents a tin. T. MILBURN & CO., Sole Agents, Toronto.

THOS. GRAHAM

(Established 1874), MANUFACTURER OF New Files Old Files
HAND CUT and made from the BEST refined English CAST STEEL. All goods neatly put up in labelled boxes for the trade, (at home) lowest prices will be given. Price List on application and Sample Order collected.
Factory and Offices: 114 35, SHERBOURNE STREET, TORONTO.

WISDOM & FISH

IMPORTERS AND DEALERS IN Rubber and Leather Belting RUBBER HOSE, STEAM PACKING, LUBRICATING OILS, COTTON WASTE Wrought Iron Pipe and Fittings, And all Articles used in the Application of Steam to Machinery. No. 41 Dock Street, St. John, N. B. (SMALL'S BLOCK.) N.B.—Estimates for Steam and Hot Water Heating Apparatus furnished on application. All work Warranted. 1115

"NIL DESPERANDUM."
TRADE MARK Important to Nervous Sufferers. THE GREAT ENGLISH REMEDY for Nervous Debility and all Nervous Affections, including Spermatorrhoea, Seminal Weakness, etc., result of Self-abuse, Indiscretion, &c. is GRAY'S SPECIFIC MEDICINE. This is the only remedy which has been found to permanently cure all the various other affections of the system, in its earlier stages, and to restore the blood to the head. TRADE MARK
BEFORE TAKING... (Images of men's faces)
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BEFORE TAKING... (Images of men's faces)

N. H. DOWNS' Vegetable Balsamic ELIXIR!
This valuable medicine is purely vegetable, the discovery of which was the result of many years' close study, in order to discover the cause, the symptoms and the cure—viz.: Consumption, Coughs, Colds, Catarrh, Croup, Asthma, Influenza, Pleurisy, Hoarseness, Spitting Blood, Bronchitis, and every species of oppression of the Chest and Lungs. In all cases where this Elixir has been duly administered its efficacy has been invariably manifested, convincing the most incredulous that
CONSUMPTION
is not incurable, if properly attended to.—Consumption at its commencement, is but a slight irritation of the membrane which covers the lungs, then an inflammation, when the cough is more or less, but rather dry, then becomes more feverish and the pulse more frequent, the cheeks flushed and the face more prominent. This Elixir counteracts the above complaints, operates so as to remove all morbid irritations and inflammation from the lungs to the surface, and finally expels them from the system. It facilitates expectoration, and relieves the cough and makes the breathing easy. It supports the strength and at the same time reduces the fever. Its food from strong opiate and narcotic articles, which are of so drying a nature as to be in great danger of destroying the patient; whereas this medicine never dries or stops the cough, but, by removing the cause, generally destroys the hectic before the cough is entirely gone. Consequently, when the cough is cured the patient's well. Send address for pamphlet giving full directions for cure of pulmonary diseases. Price 25cts. and \$1 per bottle. Sold every where.
HENRY, JOHNSONS & LORD, Props. MONTREAL, P. Q.

Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.



DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY
TOKER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance..... \$2 00
One copy, six months, in advance..... 1 00

Advertising Rates:

Per line, for one year..... \$0 90
Per line, for six months..... 50
Per line, for three months..... 30
Per line, for first insertion..... 10
Per line, for each subsequent insertion to 3 mo's..... 05
Cards not occupying more than 12 lines (1 inch) per annum..... 8 00
Cards not occupying more than 12 lines (1 inch) for six months..... 5 00
Cards not occupying more than 6 lines per annum..... 5 00
Cards not occupying more than 6 lines, for 6 mo's..... 3 00

Special rates will be made for page, half page and column advertisements.

Advertisements intended for insertion in any particular issue should reach the office of publication at least three clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. FEB. 1, 1882.

MR. WM. TAIT, of Gravenhurst, has sold his saw mill and timber limits to Mr. Chas. Mickle, for something over \$20,000.

A MUSKOGON paper asserts that in making an inventory of its property, the Muskogon Boom Co. found that its boom chain was 31 miles long, and a value was placed on it amounting to \$32,000.

Two lumber camps at Hubbard Lake claimed the same landing. The result was a kind of guerrilla warfare, until the men at one of the camps cleaned out the other—the foreman of the vanquished camp taking to town in his shirt sleeves.

THE season thus far has been open in Norway as well as in this country. Cutting timber does not begin in that country till the frost makes the bogs passable, and the snow permits of hauling logs. Both these conditions were wanting at a late date.

PROBABLY more saw mills are being operated this winter than ever before in the history of lumbering. This is owing partly to the open weather so far experienced, but more to the great demand for special sizes which have to be cut to order.

FOR the season of 1881 Cheboygan shipped board timber, 410,000 cubic feet; cedar posts, mixed, 40,500; cedar posts, paving, 80,750; cedar railroad ties, 117,500; hemlock ties, 2,000; tamarac ties, 2,000; telegraph poles, 5,000; tan bark, 673 cords. It is estimated that during the coming season she will ship 150,000 posts, 100,000 ties, and 500,000 cubic feet of board timber.

THE last quarterly report of the state board of agriculture of Kansas contains a statement of the number of acres of timber planted and growing in that state, other than the native forests. The statement is made by counties, and the totals appear as follows:—Walnut, 5,895 acres; maple, 6,453; honey locust, 1,215; cottonwood, 39,108; osage orange, 617; catalpa, 788; other varieties, 38,788.

THE shipbuilding trade on the Clyde has now assumed gigantic proportions. From the statements of the launches at five districts on the river—say from Glasgow to Greenock, or within a distance of 22 miles—it is shown that there have been built, during 1881, 217 steamers and 52 sailing vessels, representing a total of 331,868 tons, and an estimated value of about £7,000,000. The largest steamer launched was 7,392 tons register.

THE failure of McGauvran, Tucker & McDonnell, of Montreal, is reported. This firm were engaged in the lumber trade, and effected a compromise with their creditors in 1879, at 50 cents on the dollar. Their present liabilities are placed at \$200,000, the heaviest creditor being the Bank of Commerce, which has a secured claim of \$30,000, and an unsecured one of \$10,000. The assets are nominally placed at over \$200,000, of which \$160,000 is in real estate.

THE Montreal Witness says that a contemporary makes a good suggestion in proposing to make the approaching Forest Preservation Convention in Cincinnati an international affair, so that Canada might take part in it. Of course a Canadian convention could be arranged for, but the combined experience and thought of the whole continent upon the subject, which would find expression in an international convention, would return greater benefits to all concerned than would separate conventions.

THE Globe in its annual report of the trade of the city of Toronto, estimates the consumption of lumber during 1881 at 80,000,000 feet, (as against 65,000,000 in 1880), made up as follows:—Lumber, 45,000,000 feet; shingles, 15,000,000, and lath, 2,000,000. The same report also notes a considerable development during the past year in our native hardwood trade, and predicts a good demand next season for black ash, maple, elm, and birch timber, all of which are now being largely used in the manufacture of furniture.

AN Ottawa correspondent says that the unprecedented scarcity of snow at the beginning of the season has had the effect of considerably shortening the lumbering season, yet reports from these districts are not such as would lead to an anticipation of any shortage in the supply for the season. The recent fall of snow has greatly facilitated the hauling of timber from the more remote districts, and it is being prosecuted with great vigour. The fears entertained by some of the lumbering firms at the commencement of the season that there would be a scarcity of teams occasioned the unusual high rates that prevailed at that time, since when, however, rates of hire have considerably fallen, and no scarcity of horses is reported. In many of the higher and rougher districts the absence of a sufficient quantity of snow renders the hauling still somewhat difficult.

WOODS AND FORESTS.

AN attentive reader of the debates in the Ontario Legislature, now in session, cannot have failed to notice the fact that unusual attention has been given to the subject of our forests and the lumbering industry. Of course the disallowance of the Rivers and Streams Bill has raised much discussion, and several members have devoted much of their attention to it. But this is not all. Member after member has spoken, at more or less length, as to the necessity for protection from fire, the preservation of timber, and the perpetuation of our forests. But though this is very satisfactory, as showing the increasing interest that is felt in this important subject, it is unfortunate that no practical step has been taken in the matter.

THE establishment of a separate Department of Woods and Forests would be of great public benefit. We hope that the Government will take this matter into immediate consideration, for there is now no more important subject to which they could turn their attention. If the administration does not act in this matter, some private member, and there are several who are fully competent, would render a public service, and secure for himself the gratitude of the whole community, by taking up the subject and

pressing it upon the attention of the House and the country.

With the formation of such a department we feel confident that a better system in regard to our forests would be inaugurated, and therefore we abstain for the present from pointing out the details of the legislature that is desirable.

Who will move in this matter and earn the thanks of the whole country?

TIMBER STATISTICS.

THE United States Government have already issued several valuable documents giving the statistics of their forest areas, as compiled from the recent census returns. There is thus made public, on the best authority, the extent of the forest wealth of the country.

We trust that our own Government will follow this good example. It is of the utmost importance that we should know the extent of our standing timber, and the probable duration of the supply.

It is true that rather unfortunately the crown lands and forests were voted at Confederation in the several Provinces, who enjoy the revenue to be derived from them. But in reality this is no Provincial question. The whole Dominion is deeply interested in the prosperity of the lumbering industry, and has even a greater, if deferred, interest in the preservation of our forests, in view of the probability, that if the present system continues, we may in time become a timber importing, instead of exporting, country. These considerations make trustworthy statistics very desirable.

APPRECIATED.

We publish the following as a specimen of many gratifying communications that we are receiving, and which prove that the CANADA LUMBERMAN is appreciated:—

BISMARCK, West Lorne P.O., Jan. 17.

To the Editor of the Canada Lumberman:

DEAR SIR,—Herewith find two dollars for another year's subscription for the CANADA LUMBERMAN. It is really a valuable paper for lumbermen, and I was glad to see you start it. Hoping you will have the success your enterprise deserves, I subscribe myself as one of your patrons and wellwishers,

J. C. SCHLEIHAUF.

LOSS BY FIRES.

From a Special Correspondent.

The loss sustained by mill owners through fire in 1881, as far as ascertained, is as follows:—

Henry Allen, Stayner, Ont.....	\$10,000
Anderson & Tennant, Hendrie, Ont.....	15,000
Ball, Calodonia, Ont.....	partially insured
Thos. Bryson, Coulouge, Que.....	10,000
Robt. Bligham, Borden, Ont.....	unknown
John Boyd, Whitevale, Ont.....	2,000
M. Cryderman, Northampton, Ont.....	1,600
S. Currie, Bardsville, Ont.....	2,000
O. Collins & Co., Gorrie, Ont.....	4,000
Coleraine Mining Co., Black Lake, Que.....	15,000
S. M. Elliott, Elgin, Ont.....	2,000
A. Eyer, Richmond Hill, Ont.....	10,000
E. B. Eddy, Hull, Que.....	16,000
H. R. Fleming, Weydale, Ont.....	500
W. A. Fraser, Wallaceburg, Ont.....	4,500
Jos. Gaudette, St. Anne's, Que.....	16,000
Georgian Bay L. Co., Waukegan, Ill.....	75,000
H. Gawloy, Belle River, Ont.....	6,000
J. W. Harrison, Brantford, Ont.....	4,000
Howard, Etchemin, Que.....	1,500
R. Irwin, Spence, Ont.....	2,000
Geo. Kent, Delta, Ont.....	6,000
Kingsford & Co., Lindsay, Ont.....	6,000
J. Lawson, Orangeville, Ont.....	3,000
Papineau, Montreal, Que.....	30,000
Snyder & Goff, Holton, Ont.....	3,000
Scott & Wagram, Napanee, Ont.....	2,000
W. Tait, Gravenhurst, Ont.....	14,000
A. Thompson, London, Ont.....	4,000
Woodstock Lumber Co., Gravenhurst, unknown	
Lindsay Mills, Lindsay, Ont.....	20,000

THE SWEDISH SUPPLY.

THE Timber Trades Journal says that although the returns of the exports from Sweden for 1881 have not fully been made up, we can, by adding about 5,000 standards for December—and the amount seldom exceeds these figures—come pretty near to a correct return. Making this addition, we arrive at the following comparative rough totals of the exports of sawn and planed wood from Sweden for the last ten years, and likewise for the year 1868, all expressed in St. Petersburg standard hundreds, viz.:—

1868.....	430,000	1877.....	640,000
1869.....	550,000	1878.....	565,000
1870.....	535,000	1879.....	620,000
1871.....	500,000	1880.....	635,000
1872.....	500,000	1881.....	600,000
1873.....	585,000		

These are remarkable figures, and show that if the increase for the next fourteen years is in anything like the same proportion as in the fourteen last years, we shall be up to a million standards before the century is out. The possibility of such a thing will doubtless be tabooed by many members of the trade here, but I do not consider it at all unlikely. The population of the United States and Canada is increasing at the rate of about one and a half million yearly, and, if we are to lay any stress at all on the outcry in those countries, the dark spot on the horizon of the Swedish timber trade, referred to in the late report of the Society of Saw Mill Owners, &c., viz., America, may be expected to diminish in size yearly, and, if so, the forests in Europe will be called on for an increased supply. The question whether they are capable of supplying this increased demand in perpetuity is another thing, that cannot be entered into here with advantage.

Lumber Districts in the South.

A Southern States paper gives some facts which show that those who prate continually about the imminent exhaustion of forests leave a most important forest country out of account. The States of Tennessee, Alabama, Arkansas, Florida, Georgia, South Carolina and West Virginia, contain in the order named from 58 to 66 per cent. of forest land, whereas, Maine and Michigan, which now produce one-half of the lumber used, contain only 47 and 40 per cent. of forest land. North Carolina, Louisiana and Mississippi have an even greater extent of forest land still untouched than the states just named. Neither is the world generally aware of the good quality of the timber in the south. All the trouble is that, owing to the absence of snow the wood is not won so cheaply as in the north.

Glasgow.

THE Timber Trades Journal, of Jan. 7th, says that there has been little business done during the past week, being the New Year holiday season. Imports of wood to Glasgow and Greenock amount to 500 loads, consisting of sundry parcels of wainscot oak and staves, &c., and a small cargo of Riga redwood at Greenock. In view of prospective requirements for shipbuilding and other operations the aggregate stock (all descriptions of wood) now in the Clyde ports appears moderate, being decidedly under the average of the three preceding years, though equal on the whole to the quantity held a year ago.

Wood for Paper Making.

Wood is going in to the Yarker paper mills with a rush in this good sleighing. The thermometer is 22° below zero. The Napaneo Paper Mill Company are buying up all the standing wood in the vicinity. They bought 600 acres from E. W. Benjamin, in the drowned lands, for \$6,000, for the wood, and also purchased all of H. McConnell's in Portland. They are drawing the wood to the river bank in order to float it in the spring to the mill. The Napaneo Paper Company want to get a start of the new Company.—Kingston Whig.

It has been decided by the Menominee, Michigan, Manufacturing Company to cut a sluiceway around Little Quinnesec falls, on the Michigan side of the Menominee, to facilitate the driving of logs, and to prevent their becoming injured by battering on the rocks as they pass the falls.

THE Timber Trades Journal says:—"We notice the prospectus of a new company, which may possibly affect the supply of pine deals to this country. The "Dominion of Canada Freehold Estate and Timber Co., Limited," is formed to acquire possession of an estate of 80,000 acres, situate on the banks of the St. Lawrence, about 150 miles from Quebec, and nearly opposite Rimouski. An engineer's report, accompanying the prospectus, sets down the value of the timber at £800,000, said to consist of pine, red and white spruce, silver birch, and aspen. With a working capital of £15,000, the annual profit, to be derived from the sale of timber alone, is estimated at £24,000.

The *Timber Trades Journal* says that serious havoc was committed in the policies and woods of Dunse Castle by the gale of the 14th October, thousands of trees having been uprooted. In the avenues and parks around the castle, sixty fine old trees, many of them of large dimensions, have been replanted; the remainder of the fallen timber, estimated at over 50,000 trees, has been sold to Messrs. Brownlie, Earleton, who engage to remove it within four years. The purchasers are to be allowed to erect saw-mills on the estate to cut up the wood.

LAME BACK.—Lumbago, Kidney complaint, Neuralgia, Rheumatism, and all pain and inflammation are speedily cured with Hagar's Yellow Oil. Croup, sore throat, colds, burns, scalds, bruises, frost bites, chilblains and all wounds of the flesh are quickly healed by Yellow Oil.

"DON'T GIVE UP THE SHIP" were the memorable words of Commodore Perry. We repeat, "Don't Give up the Ship," poor, despairing invalid, but try Burdock Blood Bitters. It cures others, why not you? It renovates, regulates and tones all the organs of secretion, and restores lost Vitality.

HOW TO CURE A COLIC.—Upon the first feeling of chill or shivering remain indoors if possible, bathe the feet in tepid water, gradually increasing the heat as long as it can be comfortably borne, drink freely of warm ginger tea or sage tea, to induce perspiration, and take Hagar's Pectoral Balsam according to directions on the bottle. Hagar's Balsam cures coughs, catarrhs, and bronchitis.

HAD SUFFERED MANY PHYSICIANS and grew no better but rather worse. Mr. D. H. Howard, of Geneva, N. Y., after dismissing his physicians, tried nearly half a gross of the various blood and liver remedies advertised, no benefit; when one bottle of Burdock Blood Bitters cured him of Paralysis and General Debility. At the advanced age of 60, he says he feels young again, and is overjoyed at his wonderful recovery.

CHOPPING AXES

(Made to Order and on hand.)

MILL PICKS DRESSED in a first-class style. Those shipped by rail will be returned promptly. Lance Tooth Saws Gummed. AXES WARRANTED.

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CASTINGS of every description in Brass and Iron.

All sorts of MACHINERY for Saw and Grist Mills.

STEAM FEED for Circular Saws.

Also Saw Gummers, Cutters, Double Upset Swages, and all Saw Tools.

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The Canadian Pacific Railway Company offer lands in the FERTILE BELT of Manitoba and the Northwest Territory for sale at

\$2.50 PER ACRE,

Payment to be made one-sixth at time of purchase, and the balance in five annual instalments, with interest at SIX PER CENT.

A Rebate of \$1.25 per ACRE

being allowed, on certain conditions, for cultivation and other improvements.

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of the Company, which can be procured at all the Agencies of the Bank of Montreal, and other Banking Institutions throughout the country, will be

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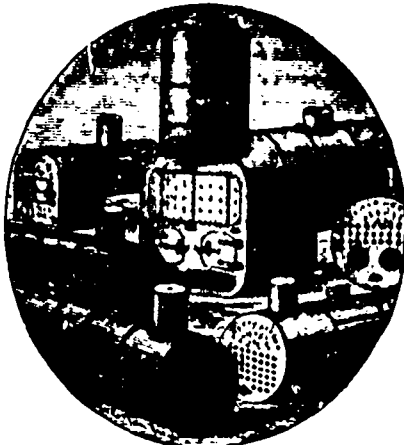
For full particulars, apply to the Company's Land Commissioner, JOHN McTAVISH, Winnipeg; or to the undersigned. By order of the Board.

Sec. CHARLES DRINKWATER, Montreal, December 1st, 1881.

John McGregor & Sons,

MANUFACTURERS OF ALL KINDS OF

STATIONARY, MARINE, and LOCOMOTIVE BOILERS, And SHEET IRON WORK.



Portable Boilers for Threshing Machines, Shingle Mills, etc., furnished on short notice. All Boilers tested by cold water pressure to 150 lbs. to the square inch before leaving the shop.

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- 150 Mills. White Pine, 1 x 10 Stock.
- 175 " do 1 x 12 "
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- 20 " do 2 x 12 "
- 140 " do 1 inch Skirting
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- 16 " Cedar, 3 x 6 "
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MACHINERY for SAW and GRIST MILLS.

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CHARLOTTETOWN,

PRINCE EDWARD ISLAND.

FORESTRY, ITS CLIMATIC AND HYGIENIC INFLUENCE.

The following essay, by M. McQuade, Egmondville, was taken from the report of the Agricultural and Arts Association of Ontario, for 1891.

"Remarks. - If the following rough sketch shall be the means of adding one acre to our forest area, shall add fertility to one acre of land, shall be the means of adding to the beauty of our landscape, the comfort of one family, the grateful feelings of one true Canadian, the efforts of the writer will be amply rewarded.

How rapidly our world moves, and circumstances with it! Scarcely yesterday since he who would think of saving timber in Ontario would be considered a madman. It is only forty years since this part of our peninsula was almost an unbroken dense and magnificent forest, when the sole aim of the pioneer was how most readily to get the timber burned, destroyed, or put out of the way in any fashion most readily. Such a desire was common and under the circumstances, but the practice has been carried too far by all and to a ruinous extent by some partly through ignorance, and partly through a mistaken desire for gain, by which they bartered the few remaining trees for a few cents. The plea set up by this class of people is that an acre of grass or grain is worth more than the timber. This would be very good thirty years ago, when clearings were small, but when the timber belts are getting so thin that they are scarcely sufficient to break the breeze or arrest the snow drift, when the owner of these wantonly sacrifices his few remaining trees because cordwood is three dollars a cord, and a one is not only inflicting an irreparable loss on himself, but on the whole community. A custom prevailed, at least in this vicinity, of cutting down every tree and twig along roadsides and boundaries, leaving the country treeless and marked only by dead line fences. Such conduct is wrong, and can be corrected by planting rapid growing trees on roadsides and boundaries, and the sooner the better for all concerned. Want of knowledge of nature's laws is the cause of such a state of things. Our ordinary farmers never imagine that a few trees scattered through their fields can have any effect on their grain crops other than as so many obstacles in the way of the plough, the reaper, and the horse rake, and the boy who drives these declares that they should be cut down. We all know that it is very convenient to have a piece of timber to furnish our winter fuel, to make a few fence rails and the like; but how few ever think that those trees are not only nature's ornaments, but the farmer's best friend in tempering either a hot or cold climate, in producing copious dews, frequent showers, increasing snow falls, not to speak of their grateful shade, friendly shelter, and mercantile value. How many of our people think of these? How many can believe the natural fact that when our timber belts shall have been cut or blown down, the farmers of Ontario can no more grow fall wheat than they can in Minnesota and Dakota, that showers in summer will be rare and uncertain, that those terrific storms which cause such destruction in prairie districts will sweep our Province with merciless fury, that our overflowing springs will diminish and dry up; that where water can now be got at from fifteen to twenty feet, none will then exist; that our rivers will dwindle down to a few stagnant shallow pools; and that the crystal brook in which the speckled trout was wont to leap and gambol, in days gone by, now presents only a crooked line of dry gravel from June till January? In those days of universal tillage, the grass will burn off the earth, the cattle perish for want of water—and why? Because we have not the everlasting snow-capped mountains hanging over us to feed our creeks and springs, because we have destroyed our forest trees which nature's Great Architect planted for that purpose. Do our people know all this? Will they believe it when told? O! that some mighty genius with the tongue of Demosthenes, eloquence of Cicero, and pen of Homer, would proclaim it in every hamlet throughout the length and breadth of our fine young Province before it is too late! Will not the press of our country announce in thunder tones the dire fate that awaits this garden spot

of America, if the remnant of our once magnificent forests is not spared and saved from utter destruction?

Someone may say that we have been trying to manufacture an agricultural fright, that we are courting an imaginary evil. Would that we were wrong, or that nature's laws could be reversed. Such is not the case, however; they are all stubborn facts, and in painting them we have not used the darkest colours, nor even the deepest shade which our brush would give in the hand of a master. We shall try, in a simple and familiar way, to prove what we have advanced from a farmer's view of the case, with a few facts from science as corroborative evidence, and we must remember that when nature speaks she means it, and science applied is nature's voice modified.

Everyone will admit that a fertile soil is the most desirable feature in a farming country, but a soil to be fertile and retain its fertility must be irrigated from the clouds, either by snow or rain. It is also a melancholy fact, too patent to many on some of the prairie sections of Western Kansas, that a soil, however fertile, is useless without rain, and what is true there is true here. Take our richest land and sow it with any crop and let not a shower fall on it from January till November, what will be the result? Failure. Rain must be had to grow a crop on any land away from the sea shore, frequent showers mean good returns in a warm climate. To insure these, there must be a source of supply and means of distribution. There must be a wet surface from which the rain cloud can be formed; there must be a medium to attract and condense that cloud, else it will constantly float in mid air and never descend. We must remember that rain and low clouds are produced by evaporation from the wet surfaces on the earth, just as steam rises from a boiling kettle. Now, it is easy to understand that if the kettle is dry there will be no steam. In the same way, when our water supply runs short, our dew and rain clouds will be deficient. What is the experience of the old settlers on this point? Will they say that our water supply is now what it was forty, thirty, twenty, or ten years ago? Let the facts speak. Thirty years ago the brook which runs through Egmondville furnished water to turn a great undershot wooden bucket wheel, about eight feet wide and ten feet in diameter, to drive two run of stone, also sufficient to drive a saw mill. The saw mill ran during about six months, and the grist mill had water to run the whole year through, except perhaps a week or so in September, when a full head could not be got. Imagine the volume of a stream eight feet wide and two feet deep at a rapid current for twelve months. A few years later water began to shrink, when the old bucket wheel was displaced by a centre discharge, and the saw mill was put on short time. Ten years later the grist mill had to rest in September by reason of low water. It after this passed into other hands and an improved turbine took the place of the centre discharge, but even with this great economizer of water power, steam had to be introduced, and this magnificent stream has to-day, and since the middle of June, not sufficient water to wet its bed, except in a few places, where some lush land is on both sides, a few small pools of green, stagnant water may be found. Twenty years ago the love of sport could catch trout, bass, chub and suckers, at any time in summer, from Bayfield to Dublin, or about the great wood duck; to-day there is not sufficient water in its whole length to keep a decent family of frogs in drink. This instance is the history of all similar streams in this country. Twenty years ago there were swamps and patches of low land, where water could be got for cattle, if not on the surface, at most at the depth of a foot or so during the driest part of the summer; now, twenty to forty feet is the level, and, at the time of writing (the 16th August), complaints are numerous that wells of twenty feet and over, sources which did not fail in the past thirty years, are dry. What a change—gradual, sure and great; leaving cattle and owners without a drop to wet their tongues. Since every effect has a cause, we must have one for this great change. Will anyone say that the days are getting longer, the sun hotter, the earth getting nearer the source of heat? Certain-

ly not. Then what great physical cause has brought about this physical result, for the cause is here and is local? What local change has taken place over the face of our country in forty years, and has continued up to the present time? What is the comparative area of tillage and timber land now and thirty years ago? He who will answer this question exactly will show the cause why wells and streams are dry at present. He who, on this data, with the present rate of destruction of our woods, would institute an exact mathematical calculation, could determine how long it would be till farming and stock raising must cease in this part of Ontario, how many years it would take to cut off our water supply entirely during the summer months, except what might accidentally be got from some stray tornado or violent snow storm in winter. We may venture a rough estimate at present. We now know the cause, and, since it is local, shall not take in the whole country, but use the two adjoining townships for comparison. Forty years ago the proportion of woods to cleared land was about as 98 to 2; thirty years ago, as 80 to 20; twenty years, as 70 to 30; ten years since, as 60 to 40, and to-day, as 15 to 85. Our water supply has dwindled down from 60 to 15 inches, or 400 per cent. in ten years. We hope to be able to prove that it must always, in an inland country like ours, keep in exact proportion with the area of timber growing in the country immediately around.

HOW GROWING TIMBER ATTRACTS MOISTURE FROM AIR AND PRODUCES WATER.

To understand how timber land acts in condensing moisture from air, we must have some idea of the agencies at work in the structure of it and the effects of these agents on external air; in other words, we must have some idea of how trees grow. This we shall try to sketch in a few simple words. The tree, like every other vegetable, is made up of two kinds of substances, one called mineral elements and the other vegetable, or organic elements. The first set of elements is composed of the alkali, potassium, soda, with flint and rust, or what chemists call oxide of the metals, iron, magnesia, manganese, calcium, together with sulphur, phosphorus, and traces of other minerals sometimes. These substances it gets from the subsoil, and when we burn a piece of timber in the open air, they will be found in the ashes. Now, if we examine the little mouths of the roots, or the sap vessels of the new wood, we will easily conclude that pieces of iron rust, little grains of manganese, pieces of limestone, little bits of bone dust, or granules of flint, could never get through them alone, although all these are formed in the ashes, and therefore formed part of the wood. They entered the extremities of the radicals in a decomposed form and in perfectly thin solution. The air enters the soil, seizes the mineral compounds, decomposes them, reduces them to their simple elements; the water of the soil and the subsoil takes up the newly-born substances, some as gases, others fine atoms; the little spongy roots suck up the water, which is now the sap that courses through the newer wood; it reaches the leaf, where the air again acts upon these mineral elements and prepares them to form part of the vegetable structure by being deposited in the rind, or where the next coating of new wood is to be formed. The water which carried them to the leaf, having performed its mission, is poured out on the air as vapour. Herein lies the benefit. Who has had on a garment thoroughly wet through to the skin and allowed it to dry on his back and felt warm all the time? Even in the warmest day in summer will not a wet shirt produce cold? Everyone knows how much heat is required to boil water in the open air. It is just so at the surface of the leaves; every drop of that water which was thrown off is changed into steam and the operation sends a volume of cold, or, philosophically speaking, destroys or absorbs a volume of heat in the air, and the result is the condensation of the vapour of the air into rain clouds which, when of sufficient density, come down in showers. Where vegetation flourishes, the air is always humid, and only needs cold to bring it down in dew, rain or snow. To illustrate this, let anyone fill a jug or glass pitcher with cold water, wipe the outside perfectly dry, and set in a close, warm room, when, in a few minutes, it will be covered

with dew; and if the room has been quite warm and the water below 40 degrees, the drops will assume quite a considerable size and run down to the table. This is a miniature example of what is going on above the tops of our forest trees. But we saw that the trees drew a large supply of water from low down in the subsoil, they also condense much of what is constantly flowing around them in the air and suck it in through the lower layer of veins in the leaf, strain the carbon, ammonia, and other vegetable foods from it; then send it out again through the upper layer as vapour, still adding to the cooling process. This accounts for the refreshing coolness experienced under the shade of growing trees, and the greater the heat of the weather, the more rapidly will evaporation go on and the more cooling the shade. Hence, no shade artificially constructed can equal nature's living canopy, so beautifully designed and wisely constructed that they not only neutralize the fierce rays of the sun, drink up poisonous and noxious vapours, but pour out a plentiful flood of oxygen to vivify man and beast under the debilitating and lethargic influence of continuous hot seasons. This is called ozone, and is composed of two measures of oxygen gas in chemical union. So wonderful is its effects supposed to be, that it was made a specific by quacks and itinerant medicine men; yet, beneath the steady ardour, or in the open forest nature showers this precious medicine around our heads. Although not strictly relating to forest growth, yet a product of it, a hint of its source may not be uninteresting here. All the mineral elements which are carried from the subsoil are united to oxygen in their natural state, but since the tree does not need this oxygen, it is set free in the leaf; the carbon of the soil, as well as the carbon of the air, which the tree must have, are both got through union with this same oxygen gas. Here, then, is a double supply of oxygen to spare, and a chemical union takes place, forming the double oxygen compound, ozone. Not having an authority by me, I cannot give its specific gravity, but conclude that it must be heavier than air, and, therefore, falls rapidly towards the earth. From these facts it is clear that no shade for man or beast is equal to green spreading foliage. Cattle especially should have plenty of such shade, and milking should be done under the shade of trees with green grass under foot if we would secure pure, sweet milk, free from unhealthy odors.

HOW MUCH WATER IS YIELDED BY AN ACRE OF WOODS?

Since we know with certainty that on growing timber we must depend for our supply of water, a very natural question is, How much water will an acre of our forest supply during the season of growth? This question can only be answered with approximate certainty, as it will depend on the leaf surface, the age, vigour and kind of trees, as well as the length of day in summer, the duration of the growing season, and the heat and light to which it is exposed, together with its situation in a moist or dry atmosphere, as well as the general rate of motion of the air during the season. In order to solve this question, Professor Rutland, Vermont, instituted an experiment in 1789. The tree selected was the hard maple. Two leaves and a bud of a branch were sealed in a bottle while yet attached to the tree. The expired water collected and weighed was found to amount to 16 grains in 6 hours. The tree was 8½ inches in diameter, and thirty feet high. It was cut down, and the leaves carefully counted were in number 21,192. Supposing all these to have evaporated like those in the bottle, they would have expired, in twelve hours, 339,072 grains of water. A very moderate estimate, and below the usual quantity of wood per acre of similar land, gave four such trees to a rod, or 640 per acre. At 7,000 grains to a pint, 3,875 gallons, or 31,000 pounds, of water were evaporated from an acre of woodland in twelve hours. On the 26th of May the maple leaves were one-sixth of their full size, and on the 15th of September following these leaves began to turn white. By throwing the fifteen days in September and the four days in May out of the calculation, the leaves may be considered fully developed for the three months. During these ninety-two days the evaporation would have amounted, at twelve hours a day, to 2,852,000 pounds. The rain at that place

during that period was 43 4-10th pounds to every square foot of surface, equal per acre of 43,660 feet, 1,890,504 pounds. From this it is clear that the amount of water by evaporation from an acre of woodland exceeded the quantity of rainfall during the same period by nearly 1,000,000 pounds of water to the same area, and, if the calculation had taken in fifteen hours to the day in July and August, as expiration goes on rapidly when the sun shines, the quantity would have been much larger.

Such experiments are of vast importance in determining the proportionate quantity of timber to cleared land, in order to secure a sufficiency of rainfall during the summer. But this one, though valuable in proving one of nature's laws, is not of any definite practical importance as a means of guiding us in Ontario, since our location is different with regard to many important essentials, such as soil, proximity to ocean, elevation above sea level, and relative timber and cultivated surface; but such an experiment, carefully conducted, in any particular locality, and careful estimates based upon it, should be able to estimate pretty correctly what area of leaf surface would be required to insure a full crop under ordinary circumstances.

[To be continued.]

Preserving Woods.

That mortar is a preservative of wood is a fact well known, and many instances are noted of its value for this use. It has recently been stated that a schooner of unseasoned Maine timber, laden with lime, which went ashore and bilged forty years ago, was raised some time after and is still in service. Another instance is that of a platform, consisting of nine planks, which had been used successively by father, son and grandson for mixing mortar, was thrown aside, allowed to be overgrown with grass, and after sixty years was resurrected, and found to be in a perfect state of preservation. It is somewhat remarkable that no systematic attempt has hitherto been made to utilize this knowledge; but recently a method has been brought forth in Franco, based on these facts, which is simple, cheap, effective, and requires no special apparatus. It is described by a contemporary as follows.—Pile the planks in a tank, and put over all a layer of quicklime, which should be gradually slackened with water. The time required depends on the thickness of the wood. Timber for mines will be thoroughly impregnated in about a week. The material is said to acquire remarkable consistency and hardness after this process.

The Big Trees.

The Secretary of the Interior in his annual report asks Congress to enact a law for the protection and preservation of the famous "big trees" of California. These trees, the giant redwood and the overgreen redwood, are found chiefly in two townships in the northern coast range, and a similar area in the southern part of the State, and they are not found of equal size anywhere else in the world. They are giants of growth, being 350 to 400 feet in height—and with a circumference in proportion; and they are as venerable as they are large, being at least a thousand years old. And yet they grow on public land subject to entry at \$1.25 per acre, and may be bought up and destroyed by anyone who wishes to make such a use of them. They have excited the wonder of scientific men in this country and Europe, and our government has been asked repeatedly to take measures for preserving them. It is to be hoped that Congress will comply with Secretary Kirkwood's recommendations.

HAUNTED MR.—A Workingman says: Debt, poverty and suffering haunted me for years, caused by a sick family and large bills for doctoring, which did no good. I was completely discouraged until one year ago, by the advice of my pastor, I procured Hop Bitters and commenced their use, and in one month we were all well, and none of us have been sick a day since; and I want to say to all poor men, you can keep your families well a year with Hop Bitters for less than one doctor's visit will cost.—*Christian Advocate.*

"AND fools who came to scoff remained to pray."—We receive many letters from those having tried while doubting, yet were entirely cured of dyspepsia and liver troubles with Zepos, Clergymen write us earnestly to its wonderful effects.

Chips.

OPERATORS in northwestern Wisconsin are building sun-shades over sections of their logging roads to save the little "slipping" there is on them. Sometimes these road sheds are half a mile long. There is no end to the lumberman's devices for banking logs in all weather, and under all conditions.

THE Buffalo Lumber World says it is stated that there are about 3,000,000 acres of excellent pine lands in Louisiana, which are beginning to attract northern attention, and Michigan parties have recently purchased 11,000 acres in Calcasieu parish, with a view to the manufacture of lumber. These lands are offered at \$1.25 per acre, and a lumberman who smells pine land at that figure usually may be counted on to take up the trail. These southern pine lands will come into active demand much sooner than is generally expected, should the enormous requirements of lumber continue, and there is not much doubt on that score.

THE Chicago, Portage & Superior Railroad Company received a grant of 407,000 acres of pine land in northern Wisconsin for building its road. Sixty-four miles are already graded from Superior southward, and track laying will be soon begun. When this section of the road is completed the land grant will be fully acquired. Sixty miles of grade have been accomplished on the southern end of the line between Geneva lake and Jefferson. It is the intention to have the road completed and cars running between Chicago and Superior City, before the end of the present year. The opening of this route will develop a chain of lumber manufacturing along its northern section, and induce speculation in the pine lands that the company will acquire by its completion.

THE Lafayette tree which stood in front of the city hall, Portland, was cut down recently by order of the Mayor. For many years the tree has been patched and painted, but the rot has now conquered it. The history of this old elm tree is interesting. The Marquis de Lafayette came to Portland on the 25th of June, 1825. A public reception was tendered to him, and was held under the branches of this tree. An awning was spread from the cornice of the old state house to this tree and another one above, which fell in the fire of 1866. Lafayette stood under this tree and shook hands with whoever saw fit to present himself. This was the only tree within the burned district of 1866 which survived the fire. It marks the eastern limit where any green thing can live.

THE Kingston Whig says that the advancement northward of the K. & P. R. is leading to the rapid development of the resources of the back country. Mr. W. C. Case, M.P.P., of Lanark, arrived in the city lately and conferred with the President and Superintendent of the railway, arranging freight rates for which the lumber from a new mill which he has in course of erection at the Clyde River can be shipped to the States via Kingston. The new mill will be located alongside the railway, so that every advantage can be given the shipper. The mill will have a cutting capacity of 6,000,000 feet per year, and is to be ready for operation by the 15th of April. The logs from the timber limits will be floated down the Clyde river. The amount of freight that the railway will have to carry is daily increasing.

JOHN NEWTON is about to erect a saw mill at Lachute, Que., where he has secured an eligible site. This section of country contains an immense unbroken forest, which only requires an outlet to make it a source of wealth to its owners, a difficulty which Messrs. Newton, Charles Vary, and others, intend to overcome by the erection of a timber slide from the mouth of Lake Louisa to Lachute. A survey, with this end in view, has been carried on for some time, and, after tracing several available lines, one has been decided on which is almost a direct line between the points mentioned, and gives a splendid descent the whole way, with the exception of a short distance before reaching Lachute, which is rather level, but this difficulty will be overcome by staging, etc. When completed this slide will be a valuable accession to the province, and will open up a new source of supply for its lumber market.



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Market Reports.

TORONTO.

From our own Correspondent.

JAN. 10th.—In consequence of this being the holiday season, there is not much doing in the way of lumber sales, but the open weather has had the effect of causing large numbers of new buildings to be started, and there being so little frost in the ground, foundations can be laid and cellars taken out with small labor, compared with that of last season, and builders seem determined to take advantage of our present mild spell. Bill stuff by car load still tends upward, and the retailers begin to realize the fact that they will have to advance prices from their yards. It is strange that they could not have been satisfied upon this point long before this, and doubtless most of them will wonder now, as they begin to replenish their stocks at the advance demanded by mill men, that they could have been so blind as to deplete their stocks and hug the old figures, while the wholesale men were advancing rates from week to week, but it is the old story over again,—want of unity, and therefore common consent to advance prices on the part of the entire trade.

The question is now being mooted by the retailers as to the advisability of calling a meeting of the middlemen (to comprise all those who sell by car load on this market), and try to induce them to demand yard prices for car load lots. This is intended, of course, to throw the entire trade of consumers into the hands of the yard men; but now comes the question, What is the sop to be given the car load men in return. In the first place it is manifest that the retailers must bind themselves to purchase only from those who sell by carload here, and that would only be a small part of the compensation needed to recoup the wholesale dealer, as it is questionable if retailers could do any better by going up to the mills to purchase, especially if they count their time and travelling expenses. Then how will the retail men like to compensate the wholesaler for the difference in price obtained from the consumer, over that charged to the retailer, which would be from fifty cents on the lower grades, to two dollars per M. on the better class of lumber. I fear that the difficulties in the way of any such arrangements being come to are insuperable, and much the better plan would be for the retailers to combine with a will and determination to improve many matters in connection with their trade, which are immediately under their own control.

Since the new year came in I have been endeavoring to ascertain the amount of lumber consumed in this city during the year 1881, and I find it extremely difficult to determine the quantity with any degree of certainty. It is comparatively an easy matter to give you the quantity brought here and intended for local consumption, but not so accurately can I determine the quantity transhipped to points east and west; however, after due consideration, I am led to the conclusion that upwards of 55,000,000 feet has been consumed in this city and the adjoining municipalities of Parkdale and Yorkville. In coming to this conclusion I estimate that the various yards throughout the city closed up the year with about the same stocks on hand as held by them at the beginning of the year, and in this surmise I think I am not far wrong, although the stock of joisting and scantling now on hand is much lighter than has been held here for some years past; but the deficiency in that respect is doubtless made up by other kinds of lumber.

Prices for car load lots of joisting and scantling up to 16 ft. lengths are fully \$1 per M. better than obtained during the months of September and October, and the fact is, dimension stuff can scarcely be obtained at all, and I question if there is a single car load on track here to dispose of.

Cherry and other hardwoods have arrived more freely of late, but not sufficient to glut the market in any sense. Black ash obtains ready sale if the quality is good. This wood has been rapidly coming into favor as a finishing wood, whereas a few years ago, it was only esteemed of value for barrel hoops and fence rails. It will now sell readily for \$14 to \$16 per M., and

good white ash for \$20 to \$25, the latter figure if suitable for carriage work. In fact all kinds of lumber, hard or soft, if quality and manufacture are right, will command ready sale at fair figures.

QUOTATIONS, FROM YARDS.

Mill cull boards and scantling	110 00
Shipping cull boards, promiscuous widths	12 00
Stocks	13 00
Scantling and joist, up to 18 ft.	13 00
" " " 22 ft.	13 50
" " " 24 ft.	14 00
" " " 26 ft.	13 50
" " " 28 ft.	14 00
" " " 30 ft.	15 50
Scantling and joist, up to 28 ft.	18 00
" " " 30 ft.	18 00
" " " 32 ft.	20 00
" " " 34 ft.	22 50
" " " 36 ft.	25 00
" " " 38 ft.	30 00
" " " 40 to 44 ft.	35 00
Cutting up planks to dry	20 00
boards	18 00
Sound dressing stocks	10 00
Picks Am. inspection	26 00
Three uppers, Am. inspection	35 00

LATER.

JAN. 24.—The present frosty spell has had the effect of slackening the demand for lumber on our local market, and the planing mills are also quiet, and in this connection I would remark that the excellent buildings and perfect machinery in use for saw and door factories in this city are far ahead of any other city in the Dominion, and in a future letter I will endeavor to give you a full description of the wood working machinery, and the different firms engaged in that branch of industry here. Referring to my last letter, and to the amount of lumber said to have been sold in this city during the season of 1881, I would say that probably 100,000 feet of that amount has been sold to farmers. There is now considerable trade done with farmers living from 5 to 20 miles from the city, as nearly all the small mills that once existed in the rural sections within that distance are now silent for want of the material once so plentiful.

Prices for all short bill stuff from the yards are now firm at \$13 per M., but as the prospect for a fair supply of logs is now good, it is doubtful if prices now demanded for common lumber will hold longer than the spring.

The resolution formed by some of the retail men to force the middlemen into a position more favourable to the retailer, and to which I alluded in my last letter, seems to have fallen through, if indeed it was ever seriously entertained; and as the middlemen hold nearly all the dry stuff there is for sale here, they hold the key to the position, and it would be useless to attempt to force them into any position at all distasteful to them, so that we have likely heard about the last of the matter. All the yards hold light stocks, with no surplus of any kind so far as I have been able to judge, and there is no prospect of any large quantity of any particular kind of lumber being forced upon the market this winter, and wholesale men are firm in their prices for all kinds of stock held by them.

OTTAWA.

From Our Own Correspondent.

JAN. 10th.—Lumbermen in the Ottawa Valley, as well as the general community, has great reason to complain of the unbroken weather which has almost continually prevailed during what should have been winter months, but a recent arctic wave has somewhat revived their drooping spirits. Since sleighing has set in the past few days hundreds of men and teams are flocking to the woods. Agents have been eagerly at work looking in all directions for hands, and the supply is said to be far from equal to the demand. This week may virtually be called the opening of the season's operations, for, up to the present, work in the woods has been carried on upon a rather small scale only. However, the actual number of men now engaged in taking out timber on the Upper Ottawa limits is said to be larger than at any time last year. This is accounted for by the increased number of log jobbers operating this year, and also the good

prospects entertained for next season's demand, which promises to be unprecedented in the timber history of this locality.

ON THE UPPER OTTAWA.

Snow has fallen in sufficient quantities to facilitate the taking out of logs, but not on a scale desirable. The principal firms here operating are Allan Grant (Scotch Canadian Lumbering Co.), Gilmour & Co., Oliver Latour, David Moore, Sherman, Lord & Hurdman, Bryson, Edwards & Co., Booth & Gordon, and J. & M. Grier. On the Temiscamingue Lake those actively operating are R. Ryan, Bell & Hickey, W. B. Latour, Allan Grant, and Fraser & Screoney. The foregoing firms will only engage in taking out logs.

ESTIMATE OF THE OUT OF 1881-2.

The following is a pretty correct estimate of the quantity of timber that will be manufactured this season on the limits of the firms mentioned:—

	White Pine, ft.	Board Timber, ft.
J. & G. Bryson	90,000	20,000
J. R. Booth	300,000	100,000
R. & W. Conroy	175,000	40,000
Oliver Latour	275,000	60,000
Wm. Mackey	200,000	—
David Moore	380,000	40,000
Richard Nagle	85,000	65,000

If no serious obstacles are encountered, such as the low water of last summer, in bringing the logs to the mills, everything indicates a busy time next season at the Chaudiere, and at other mills in the surrounding vicinity.

ON THE GATINEAU.

Operations are here carried on as usual in other seasons. Logs taken out on this river generally reach their destination in the spring, the drive not being as long as on the Ottawa. The following firms have limits on the Gatineau, and the estimate of what they will manufacture this season is subjoined:—

	Logs	Timber	Spars
McLaren & Co	23,467	1,671	750
Gilmour & Co	39,913	1,253	35
Edwards & Co	52,053	4,125	9
Hamilton Bros	54,514	7,731	—
Hall & Co	245,433	1,319	—
	415,435	16,069	794

CHIPS.

A boat is being built at present by a company, that will be used for towing and moving freight in Kippewa Lake.

A new mill is being built on the C. P. R., west of Pembroke, by Mr. James Findlay.

A. & P. White are also building a saw mill on their limit at Deux Rivieres, on the C. P. R.

In a log shanty on the Kippewa three men recently cut in one day 230 logs, one-half of that number being 16½ feet long, and averaging 16½ inches. In the same shanty three square timber makers made in one day seventeen pieces. This is hard to beat.

Messrs. Walker & Mills, who purchased White's mill at Pembroke, will make things boom next summer. The gangs at the shanties of the firm on Indian and Chalk rivers have so far this winter put 30,000 logs on the roll-ways.

LATER.

JAN. 23rd.—All commercial industries generally have a quiet spell at a certain time of the year, and as regards the headquarters of the lumber trade of the Ottawa Valley, that lull prevails at present. The many concerns centered here have their shanties on the Upper Ottawa in full blast, operations being carried on to the fullest extent. All the hands required, or, at least, as many as could be engaged, have been despatched to the woods, and nothing now remains but to anxiously await the breaking up of the shanties in the spring, and the sending up of men for to engage in

THE DRIVES.

Fears previously entertained of an insufficiency of snow for the successful carrying on of operations have now been dispelled, there being an ample supply of "the beautiful" to facilitate operations. Although there was an unusually late beginning this winter of shanty work, a prominent lumberman informs your correspondent that the cut which will be taken out from the present till the end of the season will be as large, if not larger on the whole, than for a number of years back. More sanguine hopes are entertained that the logs and square timber that will be taken out, and also that which was stuck last season in the streams, owing to the extreme low water, will all be safely brought to their destination, as a result of the great and

VALUABLE IMPROVEMENTS

that are being made this winter by the Upper Ottawa Improvement Co., and also by private individuals. As an evidence of the prosperous condition of the trade, but more especially of the hopes entertained, may be mentioned the boat building operations that are at present being carried on. Seales & Murphy, of Pembroke, owners of the steamers O'Kelly, Baldwin, Pembroke and Sir John Young, are building four new team tugs for towing purposes next summer between Portage du Fort and the Chate Lake. The Square Timber Co. are also constructing a new steam tug on the Temiscamingue. New tugs are also being built for the Upper Ottawa Boom Co. and Mr. O. Latour. The latter will ply on the Kippewa.

QUOTATIONS

remain firm, and few sales are reported. Stocks are getting low, consequent upon the steady railway shipment to the States, for the fulfillment of orders already contracted for. A number of the largest lumbermen here, and in fact all, are taking considerable interest in the proposed Canada Atlantic R. R., which will, when constructed, be of great value to the trade of the Ottawa Valley, affording better facilities for shipment to the States. Mr. G. W. Perley, of the firm of Perley & Pattee, is one of the principal stockholders, and being an active and enterprising gentleman, his interesting himself in the scheme carries with it a guarantee of the early completion of the road.

SAW MILL IMPROVEMENTS

this winter are being carried on upon a much larger scale than in former seasons, in some instances extensive and costly improvements are being made. It is the intention of a number of establishments to adopt the electric light next season, as it was such a signal success with those who tried it the past summer.

SAWDUST.

Four men in one of J. R. Booth's shanties on the Opeongo river made in one day recently 306 saw logs, averaging 16 inches. This is big work.

Lumbermen fear a scarcity of men next season.

MONTREAL.

From Our Own Correspondent.

JAN. 24th.—Since the date of our last report the only subject of interest to the trade which has taken place is the suspension of the well known firm in the lumber trade here, Messrs. McGauvran & Tucker. The cause of the stoppage is said to be the want of floating capital, so much of the money belonging to the firm being locked up in real estate, said to be worth about \$160,000. Liabilities about \$217,000, but very little of this is said to be due for lumber. This firm failed and made a compromise with their creditors about two years ago. We have not yet been able to learn whether they will resume operations again or not.

The violent storms with snow which we have had lately have caused the demand for lumber to be very slack. It is rather early yet for Americans to come round to see what can be picked up, but there has been a few, and now that sleighing is good, a large number is looked for in the course of 10 days or so. Lumber operations in this region are progressing favorably, with plenty of snow to get it drawn out. It is fully expected that prices of all kinds of lumber will shortly be advanced, and to-day we note an advance in the price of lath, but in the meantime our other figures are unchanged. We quote:—

Pine, 1st quality, @ M.	\$32 00
Pine, 2nd " " "	18 00
Pine, shipping culls, @ M.	12 00
Pine, cull deals, @ M.	8 00
Pine, mill culls, @ M.	5 00
Spruce, @ M.	8 00
Hemlock, @ M.	8 00
Red, run of long culls out, @ M.	16 00
Base, @ M.	14 00
Oak, @ M.	35 00
Black, @ M.	17 00
Hard Maple, @ M.	18 00
Lath, @ M.	1 50
Shingles, 1st, @ M.	3 00
Shingles, 2nd, @ M.	2 00

CORDWOOD.—Trade has been very slack until the last few days, when a good demand has sprung up, which the present very severe cold weather will help to develop. There is not much green wood coming in to the depot, dry wood, however, is arriving in fair quantities. We have no change to make in our quotations.

but the probabilities are that lower prices will soon prevail. We quote prices at the railway depot, ex cartage:—

Long Maple.....	\$3 50
Short ".....	6 00
Long Birch.....	0 00
Short ".....	5 50
Long Beech.....	5 50
Short ".....	6 00
Long Tamarack.....	4 50
Short ".....	4 00

LONDON, ONT.

From Our Own Correspondent.

JAN. 25. Your last issue of Jan. 16th did not contain a letter from me in consequence of my absence in Montreal. Since mine dated Dec. 22nd, a marked change has taken place in the lumber market here. Some time ago the merchants held a meeting to consider the advisability of advancing prices as a necessary result of scarcity and diminishing stocks, with little prospects of replenishing, and the result of this meeting was that prices were advanced about one dollar all round. Business cannot by any means be called brisk, in fact a quiet feeling prevails, but notwithstanding all this, prices are maintained firm. All stocks from the base of supplies are getting very low. Sarnia market has been higher for a considerable time, and Goderich has also advanced; both of these places are supply markets for much of the lumber coming here.

The lumber contract for the new wholesale block has been let to Messrs. Green, and building is proceeding.

Unless we have a good, long spell of cold weather, and an abundance of snow, such as we now have, prices are not likely to show any decline.

I intended giving you a data of our lumber market for the past year in this letter, but will have to defer it, and if possible give it in my next.

The prices ruling at present are:—

Mill cull boards and scantling.....	\$11 00
Shipping cull boards, promiscuous widths.....	12 00
Shipping cull boards, 10 and 12 in. stocks.....	12 50
Common boards, promiscuous widths.....	14 00
Scantling and joist, up to 16 ft.....	15 00
" " " 18 ft.....	15 50
" " " 20 ft.....	16 50
" " " 22 ft.....	17 50
" " " 24 ft.....	19 00
Common stocks.....	15 00
Common 2 in. plank.....	14 00
Cutting up plank and boards.....	19 00
Sound dressing stocks.....	18 00
Clear and picks.....	28 00
Three uppers, Am. inspection.....	35 00
1 inch dressed and matched flooring.....	21 00
" " " ".....	21 00
" " " ".....	21 00
XXX sawn shingles, 7/8 M.....	2 00
Lath per 1000 feet.....	4 50@5 00

BRACEBRIDGE.

From our own Correspondent.

BRACEBRIDGE, Jan. 19th, 1882.—Since my last things have changed some; we have now about six inches of snow with plenty of frost, and the hauling could not be much better. Every one is rushing in teams, and no doubt there will be a large quantity of logs and timber hauled this month. Teams have been very scarce and wages high, \$1.75 to \$2.00 per day, and the demand is not more than half satisfied yet; but they are coming in now. David Moore, from Walkerton, went in this week to commence operations in the township of McKonkey, on French River, on one of the berths sold at the recent sale. He will build a mill at the mouth of the French River in the spring. I believe that he is the only operator so far in that portion of the recent sale. I noticed an article in your last by Mr. Little. He is evidently writing about what he knows nothing. There is no fear of the lumber supply being exhausted in twenty years, nor in forty. He says that the Government three years ago sold 34 townships, the last they possessed. How does it come that last December they again sold 18 townships, and they have plenty to sell yet? The north shores of lakes Huron and Superior have been very little worked yet, and it is principally a pine country, except where the fires have destroyed it. There is no use trying to mislead; we have plenty of timber.

ST. JOHN, N. B.

From Our Own Correspondent.

JAN. 21.—From the very nature of things we cannot expect to have much to record in making up a lumber report at a shipping port

in the latter part of January. The most noticeable circumstance we have to report at the present time is that we have had several snow falls recently, which were greatly needed. The snow being now of moderate depth, and having fallen very evenly, the facilities for teaming in all directions are all that can be desired, causing a very agreeable change in the movements of all winter occupations.

OUR HARBOR.

Doubtless some of the readers of the LUMBERMAN are not aware that the harbor of St. John is never obstructed by ice in the least degree, which is more than can be said of any other harbor on the Atlantic coast, from Baltimore to the North Pole,—we do not say "both inclusive," as our knowledge of the latter place is rather too limited to enable us to speak authoritatively so far as it is concerned,—the open water extending some two miles up the river. This circumstance is a very important one as bearing upon the question of a winter port, now being agitated throughout the Dominion.

Another very important peculiarity of our harbor is the great rise and fall of tide (between twenty and thirty feet), which could be extensively utilized in the shipment of grain cargoes, dispensing with elevators, if not altogether, at least with any such structures at all approaching the magnitude of those required in other places.

We would earnestly press these features of our harbor upon the consideration of the Government, the C. P. R. Company,—of all people in Canada, indeed,—in discussing the subject of a Canadian winter port, in connection with the trade of our great North West, which is now a burning question. Any manifestation on the part of the "powers that be" in favor of a foreign port in this connection would cause a commotion in these Maritime Provinces not easily allayed.

FREIGHTS.

The freight market is easier, the latest transaction being at 60s. for Dublin, or a port on the west coast of England. Very few transactions in deal charters may be looked for during the next two months.

SHIPMENTS.

The shipments of deals and other sawn lumber are as follows:—

For Europe.....	2,295,000 Sup. feet.
" Africa.....	1,188,000 "
" Australia.....	637,000 "
" United States.....	1,353,000 "
" West Indies.....	579,000 "

The number of sugar box shoeks shipped for Cuba is as follows:—

Sept. 1 to Jan. 6.....	46,745
Since.....	7,000
Total.....	53,745

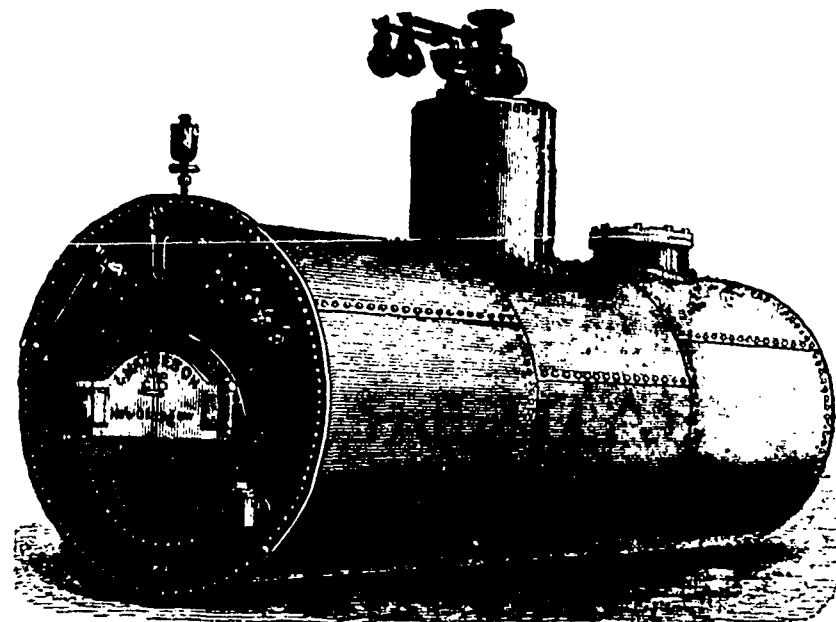
SHIPPING.

The following is a list of the vessels in port, with their tonnage and destinations:—

Etta Stewart, 787, Liverpool.
Scourin, 828, Liverpool.
Gettysburg, 1,015, Adelaide, for onlers.
Templar, 778, Liverpool, Barrow or Bristol Channel.
Torryburn, 447, Jamaica.
Memory, 409, Spain.
Athlow, 539, Bristol Channel.
Themis, 973, Liverpool, Barrow, Bristol Channel or Dublin.

BOSTON.

JAN. 21.—The Journal of Commerce says the market is still a very good one, and remarkably so for this time of year. Holders of stock are masters of the situation and name their own prices in every case. Arrivals are now beginning to be less frequent, and stocks (especially of the finer grades) are getting pretty low in most of the yards. Dealers at productive points are refusing future contracts, except at advanced rates. At the west there is quite a scarcity of dimension stock in flooring strips. In Chicago it is not an uncommon occurrence for sales of 100,000 feet in one lot to be made at regular list prices. The general opinion seems to be that the price of lumber will materially advance by the coming of spring, if not before. It is a well known fact that the supply to draw from has never been lower than at present, and that the amount of stock on hand in most of the yards is small. When these facts are considered it is plain that they point pretty strongly to higher prices, and dealers are making money if they hold on to their lumber. Hardwoods are as firm as ever, with indications of an improved demand in the spring.



ACADIA FOUNDRY
ATHLSON & CO. ENGINEERS & BOILER MAKERS.
NEW GLASGOW, N.S.

CANADA PINE.

Selects, Dressed.....	\$48 00@50 00
Shelving, Dressed, 1sts.....	40 00@42 00
" " 2nds.....	33 00@35 00
Dressed Shippers.....	27 00@29 00
Dressed Box.....	18 00@20 00
Shoathing, 1st quality.....	42 00@45 00
" " 2nd.....	34 00@35 00

ALBANY.

JAN. 20.—Quotations at the yards are as follows:—

Pine, clear, 7/8 M.....	\$53 00@53 00
Pine, fourths.....	48 00@58 00
Pine, selects.....	43 00@53 00
Pine, good box.....	10 00@31 00
Pine, 10-in. plank, each.....	00 33@00 44
Pine, 10-in. plank, culls, each.....	00 19@00 22
Pine boards, 10-in.....	00 23@00 23
Pine, 10-in. boards, culls.....	00 18@00 19
Pine, 12-in. boards, 16 ft., 7/8 M.....	25 00@30 00
Pine, 12-in. boards, 16 ft.....	25 00@30 00
Pine, 12-in. boards, 13 ft.....	20 00@28 00
Pine, 11-in. siding, select.....	33 00@40 00
Pine, 11-in. siding, common.....	15 00@18 00
Pine, 1-in. siding, select.....	40 00@42 00
Pine, 1-in. siding, common.....	10 00@19 00
Spruce, boards, each.....	00 00@00 16
Spruce, plank, 1 1/2-in., each.....	00 00@00 20
Spruce, plank, 2-in., each.....	00 00@00 30
Spruce, wall strips, each.....	00 11@00 12
Hemlock, boards, each.....	00 00@00 13
Hemlock, joist, 4x6, each.....	00 00@00 31
Hemlock, joist, 2x4, each.....	00 00@00 10
Hemlock, wall strips, 2x4, each.....	00 00@00 10
Ash, good, 7/8 M.....	35 00@40 00
Ash, second quality, 7/8 M.....	25 00@30 00
Cherry, good, 7/8 M.....	60 00@70 00
Cherry, common, 7/8 M.....	25 00@35 00
Oak, good, 7/8 M.....	35 00@43 00
Oak, second quality, 7/8 M.....	20 00@25 00
Hardwood, 7/8 M.....	22 00@25 00
Hickory, 7/8 M.....	36 00@40 00
Maple, Canada, 7/8 M.....	26 00@30 00
Maple, American, per M.....	25 00@25 00
Chestnut, 7/8 M.....	35 00@40 00
Shingles, shaved, pine, 7/8 M.....	0 00@0 00
" " 2nd quality.....	0 00@0 40
" " extra, sawed, pine.....	0 00@0 40
" " clear.....	0 00@0 30
" " cedar, mixed.....	0 00@0 25
" " cedar, XXX.....	0 00@0 40
" " hemlock.....	0 00@0 25
Lath, hemlock, 7/8 M.....	0 00@0 12
Lath, spruce.....	0 00@0 18
Lath, pine.....	0 00@0 20

CHICAGO.

JAN. 18.—The stiffening of the weather, and the resulting improvement of the roads in the country, has had an effect on trade, and a considerable increase in orders and movement of lumber is noticeable, the shipments for the last week exceeding those of the preceding one by about 1,000,000. This may be taken as an indication of a coming improvement of considerable proportions, if the weather continues favorable. The facts that generally stocks in country yards are low, and that country dealers report a very satisfactory trade for the time of year, go to encourage wholesale holders of lumber to hope that February will be a good month for business. The feeling in regard to prices was never stronger. Holders of lumber are not forcing sales, but are content to let trade take its course. The prevailing opinion is that lumber is making

a profit as it lies in the pile, and it is sufficient to sell it when it is called for, without using any urgency.

Receipts and shipments of lumber and shingles for the week ending January 19, 1882:

RECEIPTS.		SHIPMENTS.	
Lumber.....	3,958,000	Lumber.....	18,844,000
Shingles.....	1,630,000	Shingles.....	7,010,000
1881.....	4,962,000	1881.....	13,371,000
			7,512,000

Receipts and shipments of lumber and shingles from January 1 to January 19, 1882, inclusive:—

RECEIPTS.		SHIPMENTS.	
Lumber.....	10,440,000	Lumber.....	40,378,000
Shingles.....	3,615,000	Shingles.....	20,815,000
1882.....	10,353,000	1881.....	36,274,000
			20,392,000

The receipts for the season also embraced 104,499,000 lath, 2,846,340 cedar posts, 3,203,560 railroad ties, 33,055 cords of wood, 22,549 cords of slabs, 29,702 cords of tan bark, 86,993 telegraph poles, and 25,118 piles.

STOCK ON HAND JANUARY 1.

1882.		1881.		1880.	
Lumber.....	500,410,342	497,340,073	451,252,059		
Shingles.....	260,306,494	159,722,000	190,057,000		
Lath.....	48,820,433	50,321,135	48,030,300		
Pickets.....	3,744,173	2,497,853	2,129,700		
Cedar posts.....	229,012	63,659	404,730		

BUFFALO.

We quote cargo lots:—

Uppers.....	\$40 00@43 00
Common.....	18 00@19 00
Culls.....	13 00@14 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers.....	\$40 00@45 00
Common.....	17 50@20 00
Culls.....	11 50@12 50

LEATHER BELTING.
Chipman, Renaud & Co.
 MANUFACTURERS OF
LEATHER BELTING,
FIRE ENGINE HOSE
LACE LEATHER, &c.
 124 & 126 Queen St.
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AUCTIONEER AND COMMISSION MERCHANT
 81 SANDS BUILDING, PRINCE WILLIAM STREET.

Cash advanced on Goods put in for sale. No Storage charged. All kinds of Merchandise Bought and Sold. New and Second-hand Furniture always on hand. Agent for Hazellhurst & Co's WINTHROP COOKING RANGES, WATERLOO WOOD STOVES, FRANKLIN, &c., &c., &c.

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Manufacturers

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Fire-Engine

HOSE,

Lace Leather,

Mill Supplies, &c.

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Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE**, for Shanty, Hotel and Boarding House use. These Stoves are made of Heavy Sheet Iron, the top and lining of the fire-box being of Heavy Cast Metal and all the connecting parts of substantial Wrought Iron Work. The dimensions of these Stoves are as follows:—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 21 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 21 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I commenced manufacturing them. They are the names of gentlemen who are well known and reliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Your truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD.

Given the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend it highly to any one who is in the lumber business.

Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary **TINWARE** and **CUTLERY** for Shanties supplied at the Lowest Prices.

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ADAM HALL, Peterborough.

MILL SUPPLIES.

Extra Stretched and Patent Smooth Surface

RUBBER BELTING—in Stock, 2, 3, 4, 5, and 6 Plies.

HOYT'S CELEBRATED LEATHER BELTING.

COTTON BELTING, for Flour Mills, &c., Superior Quality.

DISSTON'S CELEBRATED MILL SAWS.

Steam Packing of all kinds, Rubber and Linen Hose, Silk Bolting Cloth, Emery Wheels, Lacing Leather (Pago's Genuine), Lard, Seal, Cylinder, Spindle, West Virginia and Wool Oils. Our Stock includes Mill Supplies and Rubber Goods of all kinds. Quotations furnished for any part of Canada.

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Northey's Steam Pump Works

BOILER FEED PUMPS,

MINING PUMPS,

AIR AND CIRCULATING PUMPS,

PUMPS SPECIALLY ADAPTED FOR

STEAM FIRE PUMPS, and

OIL PIPE LINES,

WRECKING PUMPS.

And CITY WATER WORKS.

No. 47 King William Street.

HAMILTON, ONTARIO.

SEND FOR CIRCULAR.

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 With interchangeable Trenton Teeth.

THE HOE BIT SAW.

FLANGE TOOTH SAWS.

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ORDER BY THIS GAUGE.

EWART'S PATENT DRIVE CHAIN
 FOR SAWDUST CARRIERS, LIVE ROLLS, TRIMMERS and REFUSE CARRIERS.
BROWN'S PATENT SPALT MACHINE
 Cuts three perfect Shingles out of inch Logard. Cuts Shingles out of alba and all manner of refuse. Will soon pay for itself around any large Mill.

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Neuralgia, Bronchitis, Incipient Paralysis, Asthma, Sciatica, Sprains,
Consumption, Sleeplessness, Colds, Indigestion.

Ask for Norman's Electric Belts and you will be safe against imposition, for they will do their work well and are cheap at any price.

A. NORMAN, Esq.,
Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,
C. L. TILLEY.
Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

A. NORMAN, 4, Queen Street East, Toronto.

N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices.

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We are the most Extensive CLOTHIERS in Canada.
We carry a STOCK of FIFTY THOUSAND DOLLARS to choose from.
We watch the Interest of our Customers. Our stock is FULL of the very best goods in Scotch, English and Canadian Tweeds.
We BUY and SELL for Cash, therefore it enables us to do business on very SMALL PROFITS.

NOTE THE PRICES.

We give a Good Tweed Suit for.....\$6 00
We give a Good Tweed Pants for..... 1 50
We give a Good Overalls for 0 35

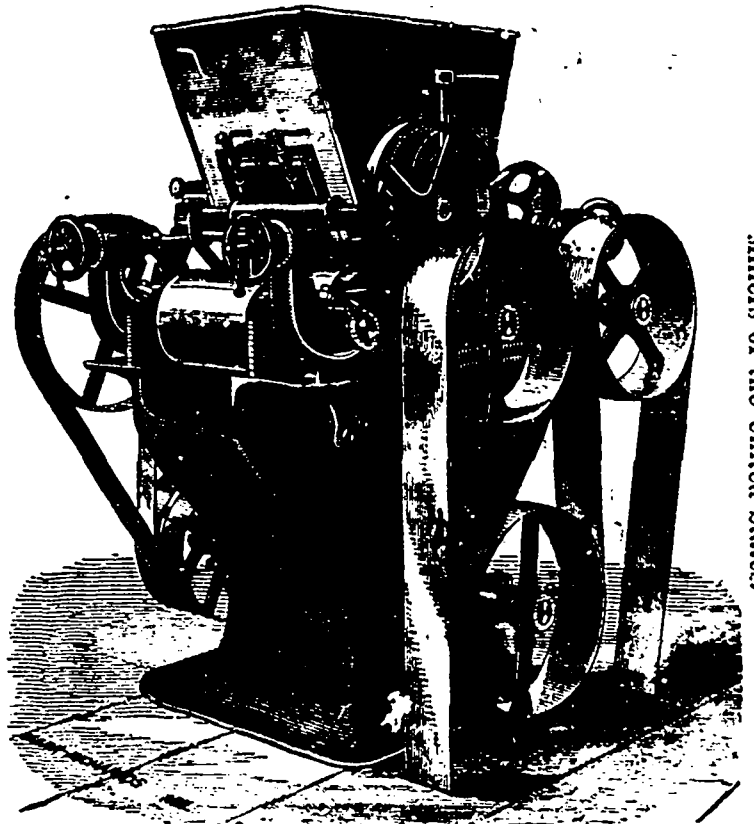
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When you visit Toronto, come direct to OAK HALL, and fit yourselves out with a Good Suit. Remember the address—OAK HALL, the Great One Price Clothing House, Toronto, opposite St. James's Cathedral.

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Every Mill a Success!*



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Smooth Iron or Porcelain ROLLS.

These Roller Mills are used by all the Representative Millers of the United States.

The Machine is Perfect in all its adjustments, and RUNS WITHOUT NOISE.

It is doing Better Work than any other Machine in use.
Automatic Lubrication of Principal Bearings.
Driven entirely by BELTS.
Differential Speed always insured.

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The BEST ROLL, FOR MIDLINGS in the world. Over 6000 in use in this country and Europe. Send for particulars.

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Manufacturers of Improved Hoisting Machinery, MINING and CONTRACTORS' PLANT. Importers of BEST STEEL WIRE ROPE. Mention this Paper.

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Locomotives, Stationery and Marine Engines and Boilers, Girders, Heaters, Radiators, and all kinds of Steam and Brass Fittings and Sheet Iron Work; and dealer in all classes of Railway, Steamboat and MILL SUPPLIES.

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BOILER FLUID COMPOUND.

Patented 5th March, 1877.

This Compound will save its Cost many times in one year by saving fuel. It eradicates scale, and when the Boiler is once Clean a very small quantity keeps it Clean and Free from all Incrustation. It is perfectly harmless to Iron, and emits a clear pure Steam. In ordering, mention the CANADA LUMBERMAN.

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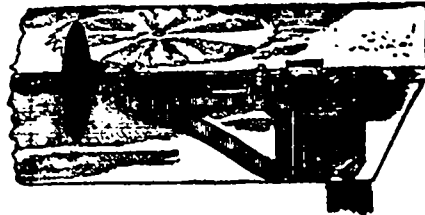
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TO MILLMEN!

HODGSON'S Patent Saw Grinder

Is a new, efficient, and exceedingly cheap machine and is equally well adapted to grinding long and round saws of every description. Wheel is moved along the length, and in the depth of the tooth, and can be placed just where wanted as easily as a file. It is just THE THING for mills, cutting from one to five million feet of lumber, and costs no more than one-fourth to one-tenth the price of little better machines. It is patented in United States and Canada, and is made in Wolsport, Pennsylvania, and in Amherst, Nova Scotia.

Hodgson's Patent Monitor Shingle Machine

combines, at a moderate price, more points of excellence than any other. Jointer is built in machine, a few inches from the saw. The cast steel feed rolls are opened by a foot lever, and grip the block like a vice. Traverse of carriage to suit large or small stock, is under control of operator when running. Will run for days without cutting a shim. Warranted to cut, with one attendant, three thousand in an hour, under forfeiture of \$100. Send for circulars to

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Alexandria Saw Works

SAINT JOHN, N.B.

Saws, of all kinds manufactured from the BEST CAST STEEL that can be procured in any Market.

EVERY SAW WARRANTED.

SAWS REPAIRED in the best manner and on Short Notice.

Send Address for Price List, Terms, &c.

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J. F. LAWTON.

THE GOLDEN LION



IS THE RIGHT HOUSE FOR

CLOTHING

No Shoddy Cloths used. All Goods Manufactured on the Premises.

EVERY GARMENT WARRANTED.

Men's Flannel Shirts and Durable Underclothing.

ORDERS SENT WITH MONEY PROMPTLY ATTENDED TO.

R. WALKER & SONS, 33-37, King & Colborne Sts., Toronto

The Rainer Piano Always Triumphant!

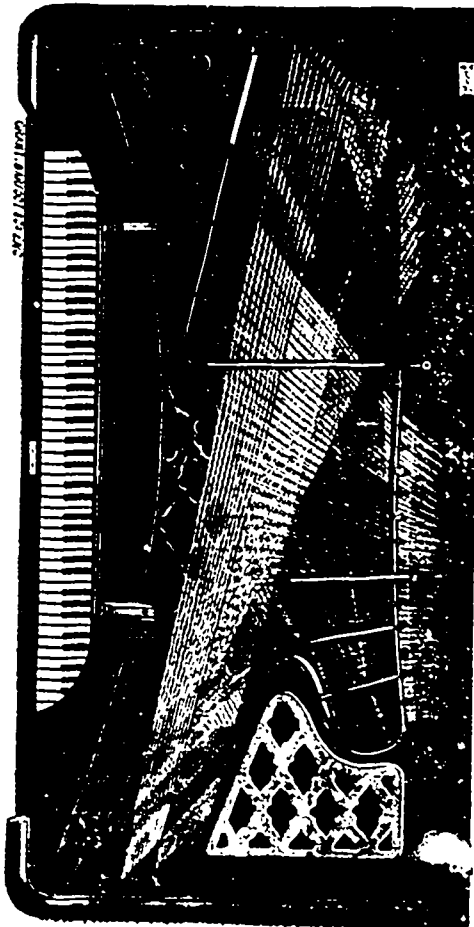
CARRIES OFF THE HONORS OF 1880 AS FOLLOWS:

At Toronto Industrial Exhibition, 1st Prize, Diploma & Medal for Best Square Piano
At Hamilton Provincial Exhibition, 1st Prize and Diploma
At Bradford Southern Fair, 1st Prize and Diploma
At Guelph Central Exhibition, 1st Prize and Diploma

SEND FOR CATALOGUE.

MANUFACTURERS,

RAINER, SWEETNAM & HAZELTON,
GUELPH, ONTARIO.



HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

GILBERT HART, Detroit,
President.

JAMES T. BARNARD, Hamilton,
Secretary-Treasurer.

SAMUEL BRIGGS, Hamilton,
Superintendent.

MANUFACTURERS OF THE CELEBRATED

DETROIT

EMERY and CORUNDUM WHEELS

These Wheels are
Wire Strengthened



And Specially Adapted
For Saw Gumming

Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

They Surpass All Other Wheels for Free Cutting and Durability.

We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

Messrs. SHURLEY & DIETRICH,
GALT.

Messrs. R. H. SMITH & CO.,
ST. CATHERINES.

JAMES ROBERTSON, ESQ.,
MONTREAL.

Messrs. JAMES ROBERTSON & CO.,
TORONTO.

WE ALSO REFER TO

WILLIAM HAMILTON, ESQ.,
PETERBOROUGH,
Manufacturer of the Covell Saw Sharpeners.

Messrs. H. B. RATHBUN & SON,
DESERONTO,
Lumber Merchants.

EMERY WHEELS FOR SAW GUMMING!



Solid Emery Wheels are now almost in universal use for the purpose of gulletting and gumming saws. Statistics show from 2,000 to 3,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing \$3 to \$1 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fleet, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become a staple article as files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of \$500 to \$750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round or beveled. Probably seven-eighths of all in use are beveled.

The principal sizes are:

8x4	} 1 in. hole.	10x4	} 1 1/2 in. hole.	12x4	} Holes, 7/8 and 1 inch.
8x3		10x3		12x3	
8x2		10x2		12x2	
		10x1		12x1	
		10x1/2		12x1/2	
		10x3/4		12x3/4	
		10x1/4		12x1/4	

Probably more wheels 12x4 and 12x3 are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x12. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33 per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities to match any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you a Tanite Wheel of similar quality. Our regular classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM-HARD.—This Wheel is the STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2." It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM-SOFT.—The same as to coarseness and fineness as "Class 2," but a softer, and therefore freer cutting wheel.

CLASS "POCONO" EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and *softer* than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

Illustrated Circulars and Catalogue, showing Cuts of Saw Gumming Machines, and Shapes, Sizes and Prices of Wheels, sent free on application.

The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

**CIRCULAR SAW
STEAM FEED!**

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials. —

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, Esq., Peterborough.

DEAR SIR:—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 15 boards 13 ft. long in one minute. It can do much smoother and better work than the plain feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,

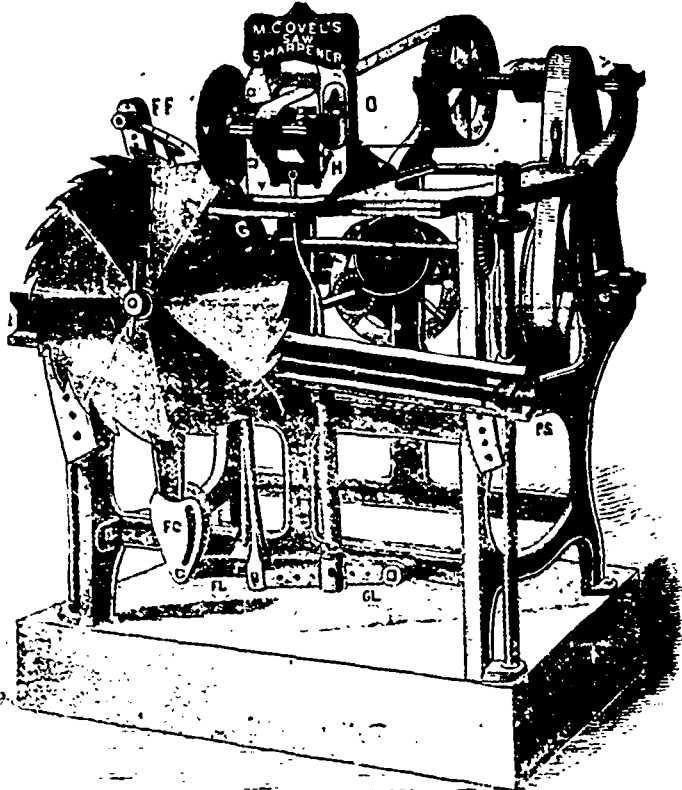
WILLIAM FAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR:—The Steam Feed you put in is working splendidly.

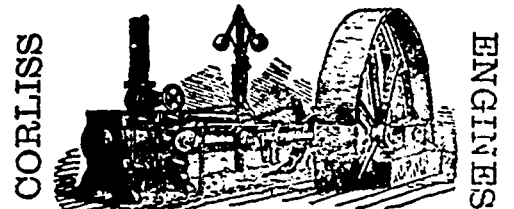
Yours, &c.,
THOMPSON, SMITH & SON.



MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Doub'to Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws, Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

Horizontal Engines and Boilers



Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woolen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2 1/2 pounds of coal per horse-power per hour.

WILLIAM HAMILTON, PETERBOROUGH, ONT.