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THE CANADIAN LUMBERMAN



PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION \$2.00 PER ANNUM.

VOL. 2.

PETERBOROUGH, ONT., APRIL 1, 1882.

NO. 7.

WHAT WE OWE TO THE TREES.

In the April number of *Harper's Monthly Magazine*, Mr. N. H. Egleston has a very interesting and instructive article, entitled "What We Owe to the Trees." As it affords valuable lessons to Canada as well as to the United States, we take from it the following extracts, and will give others in our next issue —

SCHOOLS OF FORESTRY

So important a place have the forests come to occupy in the estimation of European people, on account of their value as sources of fuel and lumber, as well as their relations to agriculture, to climate, and to health, that the care and management of them have become one of the most important employments of private landholders, and of the many corporate bodies, including states and kingdoms, which are the possessors of forest domains. The state forests of France, for instance, amount to 3,000,000 acres, it is said, and reach an annual revenue of \$5,000,000. Many of the provinces and departments also are large forest proprietors. Germany has about 35,000,000 acres in forest, nearly one-third of which belongs to the state, one-sixth to the communes, and somewhat less than one-half to private individuals. Other European countries have larger forest areas, with correspondingly large revenues. The recognized importance of the forest interest has led to the establishment in most European countries of what are known as schools of forestry institutions ranking in importance with our colleges and polytechnic schools. They furnish a course of instruction from two to two and a half years in length. During these terms the pupils are expected to spend five hours daily in study, and as many more in attendance upon lectures, or to do about twice the work required in our colleges. Taking for illustration the school near Berlin, the faculty embraces a director, who occupies the chair of forest science, with two assistants in the same department, a teacher of mathematics, physics, mechanics, and meteorology, one of chemistry, mineralogy, and geognosy, one of botany, one of zoology, and one of jurisprudence; and, in addition, a royal forest officer as assistant teacher of construction of roads, geodesy, and plan-drawing, and also a chemist as assistant teacher of geology.

It will be seen, even from such general statements, that the instruction in these schools includes not only the technical or botanical study of forests, but embraces also a complete course in natural science and mathematics, as well as, to a considerable extent, political economy, finance, and jurisprudence. Captain Campbell Walker, chief conservator of forests in New Zealand, giving an account of his visit to the school at Neustadt-Eberswalde, says: "Nothing struck me as more remarkable than the extent and varied nature of the studies required from forest candidates or probationers in Prussia, and the number of years they are contented

to spend, first in studying, and then in waiting for an appointment." The students at these schools or academies are expected to spend several years, either before or after their graduation, in practical work in the forest, under the watch and instruction of the forest officers, and it is only after five or six years of such employment that they can reasonably expect to receive a fixed and permanent appointment in connection with the forest service. Yet so respectable and desirable is this employment considered, that it is stated on good authority that a few years ago there were not less than thirty-three barons or baronets holding appointments in the crown forests of Prussia.

The important place which forestry holds abroad may be seen from the fact that there are nine of these schools in Germany, and one or more in every European country except Great Britain, which has hardly any forests to take care of, while the abundant moisture from her surrounding seas, and her exemption from severe summer heats on account of her high latitude, prevent her from suffering from the absence of trees, as she otherwise would.

THE WORK OF DESTRUCTION.

In our own country we have gone to the forests in a kind of freebooter style, cutting, and burning more than we could cut, acting for the most part as though all the while in a frolic or fight, until now at length, after a century or two of this sort of work, we are waking up to the fact that our once boundless woods are disappearing, and that we are likely to suffer no little loss thereby. But it is only the few who seem now to have any adequate sense of our condition as affected by the threatened loss of the trees. In a recent publication, issued by authority of one of our Western States for the express purpose of attracting settlers from European countries, the statistics of its great lumber production are elaborately set forth, accompanied by the assurance that the present enormous consumption of trees for this purpose may be continued ten or fifteen years longer before the forests will be destroyed. The cool unconcern in regard to the future shown in this is very noticeable. "After us, the deluge." A corresponding feeling, though working on a much smaller scale, is seen in an advertisement, and of a class often appearing in our older states. "Brace up, Young Man. You have lived on your parents long enough. Buy this farm, cut off the wood, haul it to market, get your money for it, and pay for the farm. The owner estimates that there will be 500 cords of market wood." And so, all over the country, on the large scale and on the small, the axe is laid at the roots of the trees, and our forests are fast disappearing. It is estimated that 8,000,000 acres of forest land are cleared every year, and that in the ten years previous to 1876, 12,000,000 acres were burned over simply to clear the land.

PLANTING ENCOURAGED.

The very necessities of their situation have aroused the people of some of our Western States to action. In Kansas, Nebraska, and other states liberal premiums have been offered for the encouragement of tree-planting, and already in many portions of the prairie region a perceptible change has taken place, and the eye no longer wanders over great spaces without sight of tree or shrub. Minnesota has her Forestry Association, and its secretary reports that between seven and ten millions of trees were planted in that state during the year 1877, of which more than half a million were planted in a single day, "Arbor Day," as it is called, or tree-planting day, the first Tuesday of May having been fixed upon as the day, and every owner of land invited to devote the day especially to the planting of trees. Similar efforts have been made in other states which are similarly situated in respect to the supply of forest. The great railway companies, whose roads stretch across the treeless prairies, have become in some instances planters of trees, feeling the need of them both as screens from the fierce storms that sweep down from the Rocky Mountains, and as a source of supply for the ties which are constantly needing renewal.

Tree-planters manuals are published and distributed freely, with a view to aid those who would plant by giving them the experience already obtained in regard to the most profitable trees to plant and the best methods of planting. Thus in some places there is already quite a movement in the right direction. In the reports of planting the figures make an imposing aggregate. But a liberal discount needs to be made for the probable failure of a large percentage of the trees planted. And even with the most generous estimate in regard to the work of planting, what is accomplished as yet is but a fraction of what needs to be done. It is but the feeble beginning of a vast work. The talk is of millions of trees planted. This sounds well. But a good many trees can stand upon an acre, and the latest estimates put the annual decrease of our forest area at seven million acres. So that Minnesota, with all her ardor in this work, has only planted one tree for every acre of trees destroyed. An area equal to that of the State of Maryland is every year swept clean of its trees. This is a large section to be taken yearly out of our forest resources. With all that we are yet doing in the way of tree-planting, the balance is largely against us. With all the interest and energy manifested by the young West on this subject, stimulated by her most pressing need, we are only planting one acre while thirty-five are laid bare by the axe and by fire. And we must consider also that the work of destruction goes on at an increasing rate from year to year as our population and our industries increase, and that the trees which are killed are the product, on the

average, of more than a century's growth, while those we plant must grow during a century before they can fill their place.

DESTROYING FORESTS.

In an able article on the subject of forest removal, the Cincinnati Commercial says that the conditions that affect the Ohio are still more strikingly apparent in the Cumberland. This great river nearly disappeared in the heats of last summer, and a few weeks ago was so high as to do frightful mischief. There was a time when the water supply was hardly sufficient for Nashville, and again a considerable portion of the city was overwhelmed. * * * It is not the grain, the rails, the bridges and houses that are swept away, the loss of which inflicts in the largest degree impoverishment upon the country, but the yellow floods waste the wealth of the land. There is talk that the Jews will return to Palestine. They can not do it. The country would not sustain a great people. The forests are gone, and with them the soil, washed off into the Mediterranean and Dead Sea. There are hundreds of creeks within 100 miles of Cincinnati that 50 years ago were ample and beautiful all the year around, and populous with sunfish and silver sides, and that were serviceable in turning mills, that now alternate between dusty gullies and turbid torrents, and the danger of water famine is constantly increasing. * * * The last vestiges of timber will be cleared from the Ohio valley in the course of a few years if the necessity for the abominable system of fences can not be obviated. The thing to do is to abolish it altogether. Then trees should be intelligently cultivated.

LAND GRABBING.

One of our exchanges says that for several years past it has been known that a large area of timber land in northern Minnesota, especially in the region drained by the St. Louis river and streams emptying into Lake Superior, has been unlawfully secured by lumber operators for the purpose of cutting off the pine, or speculating in the lands, or stumpage. This illicit business has been stimulated by the building of the Northern Pacific railroad from the Duluth district westward through Minnesota and Dakota, which has opened up a vast demand for lumber. The method by which the land grabbers proceed is by taking advantage of the pre-emption law. By a liberal application of its provisions a single speculator is able to locate himself repeatedly, and he becomes a permanent homesteader, as it were, on numerous quarter sections of land, and always where the pine stands the thickest and best, and is handy to streams. The way which a single individual, afflicted with the pine craze, will multiply himself for the purpose of covering as much pine land as possible, is a terror to the law. — *Lumberman's Gazette*.

IN THE NORTHWEST.

We take the following extracts from the Annual Report of the Department of the Interior:—

TIMBER, MINERAL, AND GRAZING LANDS BRANCH, OTTAWA, 31st Dec., 1881.

Sir,—I have the honor to submit the following report of the timber, mineral, and grazing lands branch of this Department.

Statements showing the revenue derived from Crown timber for the year ending 31st October last; the number of saw mills in the Province of Manitoba, District of Keewatin, and the North-West Territory, with other information respecting the milling interests, and the report of the Crown Timber Agent at Winnipeg, are appended.

An examination of the return from saw mills shows the following quantities of building material as having been manufactured during the year ending 31st October last:—

Table with 2 columns: Item (Sawn lumber, Shingles, Lath), Feet, B.M., and Quantity (16,034,323, 4,082,100, 688,300).

The following new mills commenced sawing during the season of 1881:—

McLaren & Co., Brandon. Jonasson, Frederickson & Co., Icelandic River.

Manning, McDonald & Co., Eagle Lake. W. J. Macaulay, Rat Portage.

During the year a new agency was established for the Saskatchewan District, under the charge of Mr. Thomas Anderson. Instructions were given to the agent on the 3rd of September, but owing to the distance to be travelled in reaching Edmonton, his headquarters, the office was not opened for the transaction of business until the middle of December.

Under your instructions of the 31st October last, I proceeded to Winnipeg for the purpose of allotting ground to the various applicants who had applied for permits to cut railroad timber.

As the ground covered by these applications was chiefly in unsurveyed territory, it was necessary, to prevent conflict, that the limits should be surveyed; for this reason Mr. J. McArthur and Mr. A. L. Poudrier, both Dominion Land Surveyors, were sent out with small parties to lay off the locations situate between the Brokenhead River and Darwin.

The work lasted a little over a month, and during that time over one hundred miles of line were run. While this work was in progress I went west for the purpose of examining into the cutting of timber in the Big Spruce Bush, Township 10, Ranges 15 and 16 west. These townships were surveyed some years ago, but after careful search no traces of the original lines were seen; it was, therefore, impossible to ascertain whether licenses were lumbering on the sections covered by their licenses, or to know if the contractors for the Canadian Pacific Railway were cutting on Dominion, Hudson Bay, or railroad lands; I therefore, on my return to Winnipeg, moved Mr. Poudrier and partly from Whitemouth to this locality, instructing him to make a re-survey of the townships in question.

During the time of my stay in Winnipeg, November and December, one hundred and twelve permits were issued, the dues on which amount to \$18,912.75, on which advance payments were made amounting to \$4,238.20. This not including the permit to the Canadian Pacific Railway Company, whose contractors at present occupy all the land, not covered by license or permit, along the line of the railway between the Brokenhead River and Rat Portage, and by whom corresponding dues will be payable.

I have the honor to be, Sir, Your obedient servant, L. A. HAMILTON.

CROWN TIMBER OFFICE, WINNIPEG, 31st Oct., 1881.

Sir,—I have the honor to submit the following report of the work of the Crown Timber Office for the year just closed

The completion of the Canadian Pacific Railway to Rat Portage, Lake of the Woods, has opened to the west a very fine tract of pine country. The mills cutting on this lake are the Keewatin Lumbering and Manufacturing Co., Limited, capacity 120,000; W. J. Macaulay & Co., capacity 60,000 (announced to cut 12th October, 1881), and S. H. Fowler, on Rainy

Lake, which is to be enlarged this winter to a capacity of 6,000,000 per annum.

There are now seven mills operating on the Little Saskatchewan River, which will supply the demand in this section of the country for some time to come.

The Bird Tail Creek has two mills in operation, and another will be built this winter about fifteen miles north of Birtle.

As yet there are no mills erected on Shell River, those having limits granted them should be compelled to erect them this winter, as this settlement is very much in need of lumber.

The correspondence for the year stand as follows:—

Table with 2 columns: Item (Letters received, sent), Quantity (1,416, 2,184).

During the year 366 permits have been issued.

Table with 2 columns: Item (Number of seizures made, Value of timber seized, etc.), Quantity (101, 48,630, etc.).

Quantity of lumber manufactured in October and in the 10g 0,000,000

Number of new mills commenced cutting in 1881, four (4).

The following mills have been removed and rebuilt:—

Removed—Scoble & Dennison (late Smart & Co.), from Hawk Lake to Cross Lake, Canadian Pacific Railway.

Rebuilt—Jarvis & Be-ridge, Winnipeg, new machinery; Bell & McKay, Morris, burnt 1879; Clink, D. S., Boyno River, (this mill has changed hands).

The following are prices of lumber at, viz.:

Table with 2 columns: Item (Rat Portage, Winnipeg, Portage la Prairie, etc.), Price (\$18 to 20 per M., B.M.).

I have the honor to be, Sir, Your obedient servant, JAMES ANDERSON, Crown Timber Agent.

THE AUSTRALIAN TRADE.

Messrs. Gemmel, Tuckett & Co.'s latest report, dated Melbourne, January 17th, states that business at auction has been light, in consequence of stock-taking by the principal members of the trade.

AMERICAN LUMBER.—No sales of any note to afford quotations.

SPRUCE DEALS.—Sales made ex Lorenzo, at 39-16d. to 3d. per foot 9x3. The market is heavily stocked. The Priscilla has arrived from St. John's with 11,927 pieces, which will further depress the market.

Messrs. C. S. Ross & Co.'s circular reports a similar limited amount of sales, and but little change in prices. The arrivals have been the Ispahon, Loch Tay, Rodney, Scapita, Sarah Grice, British Ambassador, Leamington, Melanope, Allanshaw, and Gulf of Carpentaria, from Great Britain, with red deals, flooring, etc.; Staranger, Solide, Svea, City of Amoy, Johannes Rod, and Levant, from Baltic ports, with red deals; Lorenzo, from Miramichi, with spruce deals; Glengarry, from Quebec, with red pine deals, spruce deals, flooring, t. and g. ceiling, clear pine, shelving, laths, &c.; Priscilla, from St. John's, with spruce deals and laths; Rose M., from Humboldt Bay, with redwood; Kate Davenport, from Astoria, California and Excelsior, from Burrard Inlet, and Xenia, from Puget Sound, with Oregon timber and laths.

LIVERPOOL.

The Timber Trades Journal, of March 11th, says:—There has been a slightly better business done during the past week, although prices are still low, and are likely to continue so as long as sales are proessed upon the market at auction in the persistent manner which has lately been practised. Notwithstanding the very short stock of spruce deals on hand now as compared with that of last year, prices do not improve, as will be seen from the results obtained at the auction sales of last week as detailed below.

The auction sales during the week have been Messrs. A. F. & D. Mackay's, of 3rd instant,

when St. John, N.B., spruce deals sold as follows:—

Table with 4 columns: Item (21 to 26 ft. 3x11, etc.), Quantity, Price (£ s. d.), and Total (£ s. d.).

Another cargo sold as follows:—

Table with 4 columns: Item (10 to 20 ft. 3x11, etc.), Quantity, Price (£ s. d.), and Total (£ s. d.).

Sawn spruce timber, 9 to 20 ft. 5x5 to 7x8 at 10jd. per foot.

Table with 4 columns: Item (Spruce deals 4x5 to 9, 10 to 20 ft., etc.), Quantity, Price (£ s. d.), and Total (£ s. d.).

Primo St. John, N.B., birch timber:—

Table with 4 columns: Item (10 to 26 ft. 20 to 22 in. deep, etc.), Quantity, Price (£ s. d.), and Total (£ s. d.).

GLASGOW.

The Timber Trades Journal, of March 11th, says the arrivals of timber at Clyde ports during the past week comprise one cargo of Moulmein teak, one of pitch pine from Doboy, U.S., and sundry parcels of maple, walnut and ash per steam liners from New York. At Grangemouth there have been two cargoes imported, one from Skien, consisting of spars, timber and props, and the other from Mensel of timber, deals, sleepers, &c.

The public sale held at Yorkhill Wharf, Glasgow, on the 2nd inst., as undernoted, was quiet, and the attendance not quite as large as usual, the demand apparently being chiefly for present requirements. Of the goods catalogued a considerable portion was withdrawn, prices offered not reaching broker's limits.

This auction sale following so close upon the last may account partly for the limited business done. Spruce deals, being very scarce, sold at good prices. The market stands greatly in need of spruce deals as they are now all or nearly so out of first hands.

AUCTION SALE.

On 2nd inst. at Glasgow, Messrs. Singleton, Dunn & Co., brokers:—

Table with 4 columns: Item (Quebec 3rd spruce deals, Miramichi, N.B., spruce deals, etc.), Quantity, Price (£ s. d.), and Total (£ s. d.).

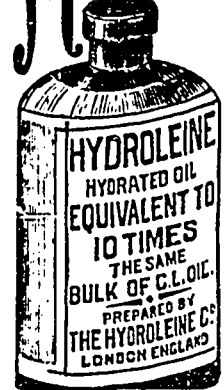
The accidents of life are unavoidable, but should a writer accidentally get hold of a bad pen, the remedy is easy: procure one of Esterbrook's Steel Pens. The Stationers have them. Brown Bros., Toronto, wholesale dealers. DESERVING OF PRAISE.—Too much cannot be expressed in favor of that unsurpassed remedy for coughs, colds, asthma, croup, sore throat, and all lung complaints. If you suffer from neglected cold, try Hagyard's Pectoral Balsam. The cost is trifling, only 25 cents.

Quebec Timber Company.

The Mail says that another proof of the fact that Canada is attracting more attention abroad than ever before in her history, is furnished in the fact that there is now before Parliament a Bill entitled the Quebec Timber Company Incorporation Bill, applied for by Scotch capitalists, who propose investing a very large sum of money in timber lands, mills, and shipping. Though there may not be many of those "tall chimneys" in connection with this enterprise, it involves an expenditure of money that must benefit all classes of the community.

JOHN PRESQUE, a government timber thief, was examined at Milwaukee, Wis., March 6, and held for trial in the United States Court, in the sum of \$500.

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50,000 Feet Tough White Oak, 50,000 Ft. White Ash, 50,000 Feet Rock Elm, all first quality; quote price at Ayr station; to be delivered by August, 1882. Specifications furnished on application.

Ayr Agricultural Works, AYR, ONTARIO. 317

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Table with 2 columns: Item (150 Mils. White Pine, etc.), Quantity (1 x 10 Stock, 1 x 12, etc.).

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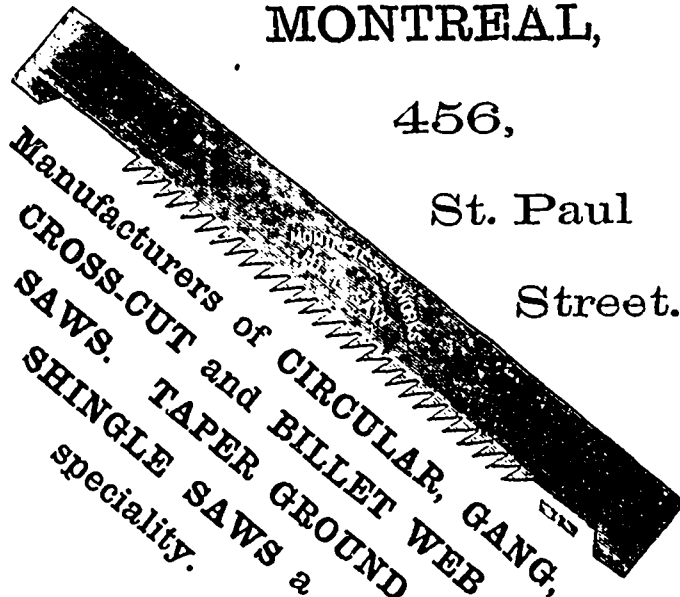
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P.O. BOX 556.

CLOG-MAKING AT BOOTLE.

On February 1st Lord Claud J. Hamilton, M.P., paid a visit to the works of the Morsey Wood-working Co., Bedford Place, Bootle, and inspected the whole of the processes, the visiting being probably suggested by the circumstance that from time to time extensive purchases of timber have been made by Mr. R. J. Jones, the manager, from the Duke of Abercorn's estate, of Baronscourt, in the North of Ireland. Besides this personal interest the unique character of the works was itself sufficient to make their inspection well worth a visit. From an interesting report in the *Bootle Times* we learn that the principal manufacture carried on at these works is that of wooden soles for what are called in Lancashire "clogs," and in France "sabots." Familiar as are the "wooden shoes," few persons would conceive how ingeniously the manufacture of the soles are conducted and how vast are the quantities which are issued daily, weekly, and hourly from these works. Lord Claud J. Hamilton first visited the yard, where there are usually stored from two to three thousand tons of timber. The native timber is first stripped of its bark, the foreign logs being already barked when imported. The logs are then raised from the yard by a crane and cut up by circular saws into segments averaging about a foot long. These segments are next cut into planks of convenient size, a dozen saws working at once, and the planing being effected with marvellous rapidity, about 60 tons of wood being cut up into clog soles every day. On the side of each plank a metal gauge is laid, and a girl with a pencil roughly outlines the size and number of soles which can be made from it. The planks pass on to a band saw, where they are cut up into blocks with the required curvature for a sole. Thence they pass to the roughing machine, which roughly shapes them. Another machine cuts the sides; another shapes the shanks; yet another rounds the heels; and yet another shapes the toes. They pass next to a revolving cutter, which roughly hollows the upper side of the sole, and subsequently this hollowed surface is smoothed in another machine. They pass next through the various finishing machines, where the bottoms, sides, shanks, heels, and toes are successively rendered perfectly smooth by friction with swiftly revolving bands covered with a mixture containing ground glass and other attritive materials, which scour them in the same way as if with sand or emery paper. They next go to the gripping machine, which bevells the edges, leaving a "grip" to which the leather boot uppers can be fastened. It will thus be seen that the sole of each wooden shoe, from the time when the log of wood is first cut into segments to the time when the edges are bevelled by the gripping machine, passes through fifteen different machines, and as the required sections are marked by hand, and the right and left sides of toes and heels are separately shaped, each sole passes through the hands of eighteen different work-people. Perhaps the advantages of the "division of labor" have never been exhibited in any manufacture with more remarkable results. The motive power for these various processes is supplied by a pair of 60-horse power compound high and low pressure condensing engines. The waste wood is also manufactured at these works into a valuable commercial product. It is chopped up by machinery, treated with chemicals, steeped to a condition of softness, and all knotty pieces having been removed, the softened woody fibre is drained and compressed between a series of rollers until it is transformed into sheets of pulp, or rather half made paper, which is supplied to paper manufacturers, and being mixed with other materials is transformed into the best qualities of paper. Lord Claud J. Hamilton was shown a sample of fine rose-tinted note paper, which was made chiefly from the waste cuttings of wooden clog soles. The works include a chemical laboratory and joiners', fitters', and grinders' shops. The extensive canteen are stored with clog soles, which are kept there for the time necessary to season the wood before being finished, and vast quantities of finished goods are passing daily from the warehouses to English, continental, and colonial markets. Lord Claud J. Hamilton inspected every process with considerable interest, and we imagine that to him and to others who may

read this description of what he saw "the clang o' the wooden shoon" will henceforth acquire a new significance.—*Timber Trades Journal.*

NORTHWESTERN TIMBER LIMITS.

A parliamentary return has been brought down giving particulars of all timber limits in Manitoba, Keewatin, and the North-West from the time of the acquisition of that country down to the 15th of February last. It is as follows:

| NAME. | LOCALITY. | NATURE OF GRANT. |
|---|---|--------------------|
| Turner & Co. | White Mouth River | Yearly License. |
| Gerrain & Co. | White Mouth River | " |
| J. Bergin & Co. | White Mouth River | " |
| C. P. Railway Company | Broken Head River | Permit. |
| M. H. Cochrane | Bow River | Yearly License. |
| J. A. Stephenson | Pogogy Creek | " |
| Department of Indian Affairs | Pindler Creek | " |
| Geo. D. Farmer | Red Deer River | 2 1/2 years lease. |
| Miller & Scott | Carroll River | Yearly License. |
| McLean & Sinclair | Carroll River District | " |
| Ed. Murphy | Sinking and Pelican Lakes Township 30, Range 30 | 2 1/2 years lease. |
| Arncliffe & McCullough | Township 30, Range 30 | Yearly License. |
| Cheverger & Chabot | Shell River | " |
| Messrs. Shields, Hagar, McLaren & Nicol | Shell River | " |

| NAME. | LOCALITY. | NATURE OF GRANT. |
|-------------------------|----------------------------------|------------------------------|
| P. Kelly | Lake Winnipegosis | 2 1/2 years lease cancelled. |
| Pratt & Smith | Lake Winnipegosis | " |
| Wm. Smith | Lake Winnipegosis | " |
| Joseph Whitehead | Lake Winnipegosis | " |
| Peter McArthur | Lake Winnipegosis | " |
| Joseph Whitehead | White Mouth River | " |
| Capt. H. S. Moore | North Saskatchewan | " |
| Cook & Sutherland | Saskatchewan | " |
| Dr. Bown | Big Island, Lake Winnipeg | " |
| W. J. McAulay | Lake of the Woods and Hairy Lake | " |
| Stephen H. Fowler | Rainy Lake and Seine River | " |
| R. Fuller & Co. | Lake of the Woods | " |
| McAulay, Ghly & Sprague | Roseau River | " |
| McAulay & Ghly | Winnipeg River | " |
| Dick & Banning | Lake Winnipeg | Yearly License |

EXTRAORDINARY ECONOMY.

With the majority of people wood is wood. The possibility of making it into articles of commerce, distinct from wood, does not enter their minds. The *Lumberman* is indebted to Mr. J. A. Mathieu, a French chemist, who visited this office on Saturday last, and exhibited several of these articles. In a dozen bottles he had as many different liquid preparations. There was acetate of nickel, acetate of zinc, acetate of alumina, acetate of copper, acetate of lead, acetate of iron, acetate of soda, of man ganese and of lit. These preparations are used for painting, preserving wood, tanning,

dyeing, and in the manufacture of paper, ink, colors, varnish, and in a hundred and one other directions. The principal ingredient of them all is acetic acid, which is obtained in the process of carbonizing wood, retorts for which Mr. Mathieu has invented and patented. The first thing desired is charcoal, and the acid spoken of comes naturally. It is a fact that has been known for a good while that the demand for charcoal has equalled the supply. Since it has been known that charcoal iron is the best, the demand has largely increased. Heretofore a good result from a cord of wood was 45 bushels of charcoal. Mr. Mathieu was of the opinion that too much wood was wasted, and set about to devise a remedy, and with perfect success. From a cord of beech, maple or birch wood he obtains from 60 to 70 bushels of charcoal, and if we may believe Mr. W. H. H. Gore, of New York, of the Gore Iron & Mining Company, at Port Leyden, N.Y., it is of very superior quality. The use of it enabled him to put 41 pounds burden to the bushel of coal, whereas before there had been but 30 pounds to the bushel; and it bore an extra revolution of the blast cylinder. If this be so, the value that the invention will be to the iron industry will represent a vast sum of money. Mr. Mathieu had with him a piece of a beech limb, a foot and a half long, carbonized, that was so hard and resonant that when struck with a pencil it gave forth as much sound as though it were steel. Charcoal from peat bog can be made in the same retorts, and it is said that two tons of dried peat will make nearly a ton of hard charcoal. Mr. Mathieu also exhibited a preparation for fuel, composed of sawdust and charcoal dust. It weighs 30 pounds to the bushel, burns without disintegrating, and will last as long as coke. As a fuel for locomotives it will undoubtedly be valuable. Tanbark can be mixed with charcoal dust and serve the same purpose. We were much interested in Mr. Mathieu's invention, not only on account of its novelty, but because it promises to add to the worth of forests that have been considered of little value. Charcoal made of pine, while not so valuable generally as that made of hardwood, is better for some purposes. If the slabs and sawdust that accumulate to such an extent at the milling points can be turned into charcoal and fuel, and sold at a good, round profit, it will be a stroke of business that will make every extensive lumber manufacturer laugh.—*Northwestern Lumberman.*

PRESERVING FENCE POSTS.

A correspondent at Benton Harbor, Mich., sends us the following statement by Parker Earle (a widely known horticulturist), in the *Chicago Times*, and requests our opinion of his mode for preserving fence posts. In answer it may be stated that no single experiment, or no single series of experiments under like circumstances, can be adopted as a rule for unlike conditions. Our own observations and experiments have led uniformly to the opinion that coal tar applied warm to dry wood is a good preservative for timber underground, or exposed to wet and shade, but does more harm than good if exposed to the heat of the sun and weather. But varying circumstances may vary the rule. The character of the soil may have a controlling influence, and experiments should be repeated in different places and on different kinds of wood. The experiments of Mr. Earle are a valuable contribution to such a series of trials. For general application, we would recommend first impregnating the whole of the post with crude petroleum as a general preservative, and when dry apply hot tar to the portion going underground, but none above. The petroleum will penetrate the pores, and the tar coating will hold it there. The following is Mr. Earle's statement—
In building a fence around our young orchard, several years ago, we tried many plans for preserving the posts. Having occasion to remove the fence this winter, we noted the condition of the posts as follows. Those set with no preparation were decayed an inch or more in thickness, those coated with a thick wash of lime were better preserved, but were quite seriously attacked by worms; those posts coated with hot tar were perfectly sound as when first put in the ground; those painted with petroleum

and kerosene were equally sound and as good as now. In future we shall treat all posts in the following manner before setting. Let the posts get thoroughly dry, and then, with a pan of cheap kerosene and a whitewash brush, give the lower third of the post, the part to go into the ground, two or three good applications of the oil, letting it soak in well each time. Posts so treated will not be troubled with worms or insects of any kind, but will resist decay to a remarkable degree. This we find to be the simplest, easiest, cheapest, and best method of preservation.—*Country Gentleman.*

MAPLE LOGS.

A Wexford, Mich., county paper has the following regarding operations in hardwood on the Manistee river:—An almost unlimited source of wealth to the people of this country has just commenced development in the offer of certain parties to purchase hard maple logs delivered on the bank of the Manistee river. Hitherto it has been supposed that maple logs would not float, and consequently that all the vast hardwood forests in this and adjoining counties would have to be burned up before the land could be made available for farming purposes. But if this enterprise of running maple logs to Manistee should prove successful, not only will it prove a great financial benefit to the country by the increased amount of money which will be put in the hands of our farmers as the price of their maple logs, but it will produce a more rapid development of farming industry, by making it much more easy for men of limited means to clear up their farms. We shall await with considerable anxiety the result of this experiment of floating hardwood logs to market.

READY MADE HOUSES.

A gentleman living in Ottawa has conceived the novel idea of constructing wooden houses in sections, of a size admitting their transportation on ordinary flat cars. These sections, which are to be built in this city, are to be taken to Winnipeg or other places in Manitoba, and erected there, some of which are owned by the speculator and others which are to be rented. The project appears to be feasible enough, and as lumber and labor are both much cheaper here than in Manitoba, and the cost of transport reasonable, there is no reason why the speculation should not prove a paying one. The parts are to be substantially built, and on arriving at their destination, a few hours' work will put them together, and as the oak pins with which the sections are joined are easily driven, it is calculated that in one and a half days a dwelling 18 by 20 feet, with kitchen, 12 by 14, attached, can be put in readiness for occupation.

Timber Trespassers.

A New York paper is concerned about a system of reform which will prevent, throughout the northern states, what it terms a "reckless, criminal, and suicidal destruction of timber which will, in the remote future, entail disaster upon the wood-working industry and the country at large." Referring to the facts that there are 65,000 wood-working establishments in the United States, employing 400,000 persons, and using \$350,000,000 worth of material yearly in the manufacture of wooden-ware alone, as well as 8,000,000 more workmen employed on articles partially constructed of wood, the paper urges that congress shall interest itself as to preventive measures against the wholesale robberies of forests. Stringent restrictions against unnecessary waste are advocated to govern all sales of timber land.

"On the Hip."

This rather indelegant expression, used popularly to indicate that condition of things in which one person holds another securely by some circumstance, work or act, finds literal exemplification in the following narrative by Mr. John Rourke, of Ottawa, Canada. Mr. Rourke says: I have been subject to hip disease for 8 or 9 years, and have tried all kinds of remedies, but found nothing to give me any relief until a friend advised me to try St. Jacobs Oil. I tried it, and after using 1 1/2 bottles I am entirely relieved of pain, and have not been troubled since, now nearly six months. This is what people would call getting hip disease "on the hip."

THEIR BOUNDEN DUTY.

The Montreal Journal of Commerce says, in alluding to the lumber market, that there is no change to report, any estimate or opinion now formed of the quantity of lumber to be produced this season is largely guesswork—as there are so many contingencies in the way, bad roads, horse sickness, etc., etc., that would lead many to suppose that the stock will be very light. Should we yet have wintry weather and heavy falls of snow, however, there can still be a good deal of drawing done, besides there are the logs stuck last season to come forward. If there is a good drive there will be a good, fair quantity, and, with present high prices, the country will be far more benefitted than if an immense stock were manufactured and sold at low prices. On the whole, the hindrances and drawbacks to overproduction are regarded as a special benefit. The work of denudation of our forests is progressing at a tremendous rate, and anything that tends to prolong the production will be our gain in the future. The present proprietors of timber lands seem to feel it their bounden duty to strip the country of all timber for present gain.

Forests and Rainfall.

In alluding to the connection between forest and flood, the Providence Journal of a late date says that "violent floods alternating with extreme and long continued low water, each damaging to navigation and commerce, have been noticed in the Ohio valley now for some years, and with such regularity that they can no longer be ascribed to exceptional conditions. The river is more and more assuming the conditions of the Nile, or rather of those which flow through the treeless deserts of Arizona and New Mexico, which are raging torrents at one season and dry beds of sand at another. Nor is there any doubt that it is from the same cause. Whatever effect forests may have on the rainfall itself, and there is no doubt that it is very considerable, it is certain that its leaves and roots absorb and hold it in longer solution, and that instead of pouring down into the streams at once, it slowly percolates and its flow extends over days instead of hours."

Antagonistic Trees.

It is said that certain kinds of wood, although of great intrinsic durability, act upon other woods of equal durability, in such a way as to induce mutual destruction. Experiments with walnut and cypress, and cypress and cedar, prove that they will rot each other while joined together, but on separation the rot will cease, and the timbers remain perfectly sound for a long period. This interesting fact suggests an analogy to the philosopher that reaches beyond the province of the woodworker. If some enduring woods have an antagonism to each other, so that a mutual rot is induced when in contact, why may not certain individuals of a strong nature induce a mutual rot when they come in contact with each other. Carrying the analogy into the close relations of matrimony the possibilities that it suggests are simply awful!

The Chicago Lumbermen's Exchange.

At the recent annual meeting of the Lumbermen's Exchange, at Chicago, the Secretary reviewed the operations of the institution since its organization and during the last year past. The lumber receipts aggregated 1,904,689,000, 866,075,000 shingles, and 104,109,000 lath, while the coarser forest products by lake navigation amounted to 2,846,340 posts, 1,305,560 railroad ties, 33,055 cords of wood, 2,254 cords of slabs, 29,702 cords of bark, 86,922 telegraph poles, 25,118 pieces of piles. About one-sixth of the lumber is classified as hardwood. The Exchange commenced the year with a membership of 85, and closed with 126 names on the rolls, including eight firms from outside points.

SHREWDNESS AND ABILITY.—Hop Bitters so freely advertised in all the papers, secular and religious, are having a large sale, and are supplanting all other medicines. There is no denying the virtues of the Hop plant, and the proprietors of these Bitters have shown great shrewdness and ability in compounding a Bitters, whose virtues are so palpable to every one's observation. —Examiner and Chronicle.

TEAZEBRY whitens the teeth like chastened pearls. A five cent sample settles it.

The Wood-Working Industry.

The following figures compiled from the U. S. census returns of 1880 may prove interesting to those engaged in any branch of the wood working industry:—There are in the United States more than 65,000 establishments employing 40,000 persons, and using material of the value of over 350 millions of dollars yearly in the manufacture of articles from wood alone. Besides these there are over eight million workmen employed on articles constructed partially from wood, and using that material to the value of \$6,000,000 yearly.

MAINE NEWS.—Hop Bitters, which are advertised in our columns, are a sure cure for ague, biliousness and kidney complaints. Those who use them say they cannot be too highly recommended. Those afflicted should give them a fair trial, and will become thereby enthusiastic in the praise of their curative qualities. Portland Argus.

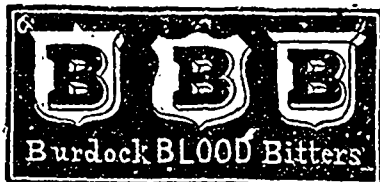
"AND fools who came to scoff remained to pray."—We receive many letters from those having tried while doubting, yet were entirely cured of dyspepsia and liver troubles with Zeposa. Clergymen write us earnestly to its wonderful effects.

CHILBLAINS.—These troublesome complaints may be speedily cured by Hagyard's Yellow Oil, the great Rheumatic remedy, which, as an external application and an internal remedy has a wider range of usefulness than any similar preparation in the world. All druggists sell it. Price 25c.

CHEAP AND GOOD.—For 50 cents you can purchase from any reliable druggist a box of Mack's Magnetic Medicine, which contains forty-five doses; this is cheaper than any other similar medicine sold, and while it is cheap our druggists say it is the best, and gives satisfaction in all cases. Read the advertisement in another column.

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 Zeposa, from Brazil, the new 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 Zeposa, the new remedy, of your druggist. A few doses will surprise you.

TAKE CARE OF THE LITTLE ONES.—Children are the mother's idol, the father's pride; they are entrusted to your care to guide and protect, to fill positions of honor and trust. If you truly feel the responsibility of your trust, and want to make the duties of your office as light and pleasant as possible, don't allow a slight cold to prey upon the little ones, for even a single day or night may reveal the dreaded destroyer, Croup, but a few doses of Down's Elixir, if taken in season, will banish it, as well as Whooping Cough, Bronchitis, and all throat and lung affections. For sale by all dealers in medicine. Price 25 cents and a \$1 per bottle.



Burdock Healing Ointment should be used in connection with Burdock Blood Bitters for curing Ulcers, Abscesses, Fevers, Sores, &c. Price 25 cents per box. T. MILBURN & CO., SOLE AGENTS, TORONTO.

Advertisement for Hop Bitters featuring an image of a bottle and text: "If you are a man of business, weakened by the strain of your duties, avoid stimulants and use Hop Bitters. If you are young and delicate, or of a nervous disposition, or if you are suffering from any of the following ailments, Hop Bitters is your best friend. Thousands die annually from some form of kidney disease that might have been prevented by a timely use of Hop Bitters. D. I. C. is an absolute and irrefragable cure for drunkenness, use of opium, tobacco, or narcotics. Sold by druggists. Send for Circular. Hop Bitters Co., Rochester, N. Y. & Toronto, Ont."

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 11 10

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. The Most Convenient House to all Trains. GREEN & SON, Proprietor.

The American Hotel, BARRIE, ONT.

Collier Street, Adjoining the Market. RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS.

Every accommodation for Commercial and LUMBERMEN. W. D. McDONALD, Proprietor.

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. W. HERLHEY, Lindsay.

17 YEARS' EXPERIENCE.

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OFFICES, 32 KING STREET EAST, TORONTO, ONT. All legitimate Detective business attended to for Banks, Fire and Life Insurance Co's, also for private parties. This agency does not operate for reward.

J. K. POST & CO.

LUMBER MERCHANTS And Shipping Agents. OSWEGO, N. Y.

Messrs. W. H. SAMUEL & Co., LIVERPOOL, ENGLAND.

Among the oldest established importers of American manufactures being open to place large orders for

BROOM HANDLES, CLOTHES PINS, VENETIAN LATHS, Etc., Etc.

Manufacturers of the same will please state stock on hand, and maximum quantities deliverable in three months, with cash prices. Freight paid to any seaport in the Kingdom. Address at once as above with full particulars.

On 30 DAYS' TRIAL

We will send on 30 Days' Trial Dr. Dye's Celebrated Electro-Voltaic Belts AND SUSPENSORIES,

And other ELECTRIC APPLIANCES TO MEN

Suffering from Nervous Debility, Lost Vitality, Vigor and Manhood, resulting from Abuse and other causes, or to any person afflicted with Rheumatism, Neuralgia, Paralysis, Spinal Difficulties, Lame Back, Liver and Kidney Troubles, Eruptions, and other Diseases of the Vital Organs. Speedy relief and complete restoration to health guaranteed. These are the only Electric appliances that have ever been constructed upon scientific principles. Their thorough efficacy has been practically proven with the most wonderful success. We have the testimony of thousands who have been quickly and radically cured by their use. All we ask of any person is to give them a trial for 30 days and be convinced.

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J. DAVIES & Co.

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E. S. VINDIN,

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FRANCOIS MARCHAND,

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

J. & F. N. TENNANT

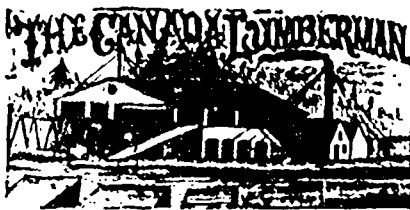
Dealers in all kinds of Lumber, Lath & Shingles, Office, Union Loan Building, Toronto Street, Toronto.

J. G. EDWARDS

HARDWARE MERCHANT, LINDSAY. BELTING, FILES, BABBIT METAL, CHAINS, ROPE, and LUMBERING SUPPLIES.

Advertisement for Gray's Specific Medicine featuring portraits of two men and text: "GRAY'S SPECIFIC MEDICINE. TRADE MARK THE GREAT ENGLISH TRADE MARK. REMEDY, an unfailing cure for Seminal Weakness, Spermatorrhoea, Impotency, and all Diseases that follow a sequence of Self Abuse, as Loss of Memory, Unlivered Lassitude, Pain in the back, Dimness of Vision, Premature Old Age, and many other diseases that lead to Insanity or Consumption and a Premature Grave. Full particulars in our pamphlet, which we desire to send free by mail to every one. The Specific Medicine is sold by all druggists at \$1 per package, or six packages for \$5, or will be sent free by mail on receipt of the money by addressing THE GRAY MEDICINE CO., Toronto, Ont."

Advertisement for N. H. Downs' Vegetable Balsamic Elixir featuring a large image of a bottle and text: "N. H. DOWNS' Vegetable Balsamic ELIXIR! This valuable medicine is purely vegetable, the discovery of which has been the result of many years' close study, in order to discover the cause, the symptoms and the cure of Consumption, Coughs, Colds, Catarrh, Croup, Asthma, Inflammation, 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 lines the lungs, and is not observable, but as it progresses it becomes more and more frequent, the cheeks flushed and the pulse more common. This Elixir during 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, IT HEALS THE ULCERATED SURFACES and relieves the cough and makes the breathing easy. It supports the strength and at the same time reduces the fever. It is free from strong opiate and astringent articles, which are so drying a nature as to be in great danger of destroying the patient, whereas this medicine never dries or stops a cough, but by removing the cause, generally destroys the seed before the cough is entirely gone. Consequently, when the cough is cured the patient is 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."



DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY
TOKER & Co. PETERBOROUGH.

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Per line, for three months..... 30
Per line, for first insertion..... 10
Per line, for each subsequent insertion to 3 mo's..... 05
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Cards not occupying more than 6 lines per annum..... 5 00
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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. APRIL 1, 1882.

The water mill of the Parry Sound Lumber Company commenced running on March 23rd, having been shut down for only two months.

The Parry Sound Lumber Company have added another vessel to their fleet, having purchased the schooner *Sir C. T. Van Straubane* recently.

We learn that Mr. C. H. Edwards, lumber dealer, Yonge street, has been shipping several carloads of dressed lumber from Toronto for Winnipeg.

DURING the year 1881 one prominent match firm paid the United States Government \$4,500,000. This amounts to a total manufacture of 45,500,000,000 matches, or 277,500,000 five-cent boxes.

A notice has been issued to have the timber boom placed in position in the Northern slips at Toronto. Men were engaged on Saturday, March 18, having this done. This looks as if timber was to be brought down directly.

CAPT. WM. JOHNSON'S fine fleet of lumber vessels—the schooners *Alicet*, *Olga*, *Clara*, and *Ida*—are being fitted out at Chicago for the season's business. A third mast has been put into the *Clara*, adding greatly to her beauty, and makes her one of the handsomest and neatest three masters sailing the great lakes.

In another column will be found the advertisement of C. Norworthy & Co., of St. Thomas, offering for sale the iron work of cars for pole roads. A diagram will also be sent, from which the woodwork of the car can be constructed. These pole roads are largely used in the States for drawing logs, &c. They are cheaply and speedily laid down, and make hauling easy.

The *Winnipeg Times* says that the following circular issued by the C. P. R. authorities will show the prices to be paid for all kinds of timber cut upon their limits:—Fence posts, 3 feet 6 in., 1 cent each; telegraph poles, each lineal foot over 22 feet, 1 cent; railroad ties, 8 feet long, 3 cents each; rails, 12 feet, \$2 per thousand; stakes, eight feet long, \$2 per thousand; shingles, 60 cents per thousand; square timber and saw logs, of oak, elm, ash and maple \$3 per thousand feet; all other woods except poplar, \$2 50; poplar, \$2; all other products of the forest not enumerated, 10 per cent. *ad. valorem*.

THERE are 100,000 cedar ties, and 100,000 posts banked at Tawas, Mich., as well as large quantities of telegraph poles. Large operating is also done in cedar paving block timber, which is hauled to the several shipping points along the shore.

The following paragraph from the *Chignecto Post*, of Sackville, N.B., dated March 16, will be read with surprise in Ontario:—Lumbermen work on, chopping the trees off somewhere about the middle, owing to the depth of snow. If the snow be thin next winter they may go over the ground again and cut another log from every stump. Large piles of timber have been got out, however, and mills are expected soon to boom.

The *Timber Trades Journal* says that in consequence of the late storms on the Clyde coming so close after the heavy storms of January last, and before the timber ponds had been properly secured, there has again been much inconvenience experienced by timber merchants, and there will be no sales of timber during March. It is hoped that with fair weather the ponds will be put all right again, and the scattered timber properly arranged for sale coming on early in April.

FORESTRY CONGRESS.

We learn from Dr J. A. Warder, President of the American Forestry Association, that the Society over which he presides will meet in Cincinnati, Ohio, on April 25-29, when papers will be read, followed by practical discussions.

The National Forestry Congress and the Presidential Arbor-day will also be held during the same week. The Congress will be international, rather than national, for a number of Canadian gentlemen have promised to attend, and any other visitors who are interested in the subject of forestry will be welcomed.

OTTAWA TIMBER CUTTING.

A gigantic stick of square timber measuring 50 feet in length and 30x30 inches square, containing 312 feet, was cut by the Rielly gang on C. & H. Mohr's limit, one mile back of the famous Oiseaux Rock, so well known to excursionists.

The same gang—John Rielly, Maurice Rielly, Robert Rielly, and John Bradloy, respectively, made ninety eight pieces in one week, including this large piece.

This country has not been culled by other lumbermen, owing to the great difficulty experienced in getting timber on the ice, as it is mountainous and rocky.

The Messrs. Mohr are getting out some splendid logs and timber. The logs will average 16 inches, while the timber will go 80 feet, clean and free from bad knots, stakes, or anything that has a tendency to injure merchantable timber.

Mr. Mohr's agent having great practical experience in lumbering operations, enables him to overcome those difficulties that former lumbermen experienced here in getting timber to market. No snow here of any consequence, but at present indicates a thaw.—*Free Press*.

MASTERS AND SERVANTS.

To the Editor of the *Canada Lumberman*:

DEAR SIR,—I see by the last issue of the CANADA LUMBERMAN that the lumbermen of Canada are circulating a Petition to the Minister of Justice, asking for an amendment to the Act, 40 Vic. Chap. 35, respecting Masters and Servants. This Act was passed for the purpose of remedying the evil that it was alleged existed, whereby persons under contracts of service were liable to a quasi criminal prosecution for non-performance of the contract, and it was deemed advisable that such contracts should be placed on the same basis as other civil contracts, the remedy for breach of which, except in the cases named in the Act, should only be such as applied to the ordinary civil contract, on a failure to perform the same. This Act has been found to be very injurious to persons engaged in the manufacture of saw logs and square timber throughout the Dominion in that there is no remedy in such cases as the following, which are occurring every day with the lumbermen. It is well known

that the great bulk of the logs and timber annually taken out is manufactured by gangs of men who for years have been in the habit of hiring themselves to the lumbermen at their own homes in the Province of Quebec, in the autumn of each year, and agreeing to go to the point at which the work is to be done, and remain for the full season. In almost all cases these men have to get an advance of wages to leave with their families or boarding-house keepers, and have to be conveyed at expenses of railway fare, food, and in some cases clothing, to enable them to go into the woods to do the work for which they are engaged. These men are generally of an improvident class, and are totally without means. The employer at great expense brings these men to the point at which they are to perform the contract, and after a time, but before the period for which they have hired expires, some offer is made, by a rival lumberman, of a higher rate of wages, if the parties will quit the employment of the men who brought them from Quebec, and go into the employ of the person making them the offer. It will be apparent that such a person, having paid nothing to bring the men from Quebec, can afford to pay a higher rate of wages for the remaining portion of the season. In case the men, or any considerable number of them, leave the person who hired them in Quebec and brought them to the point at which the work is to be performed, such person must suffer serious loss. He loses what he has advanced to, or paid for, the men, and also loses, by not being able to get out the logs and timber necessary to perform contracts he may have entered into. If he refuses to pay the men any arrears of wages, they go before some country Justice of the Peace and lay a complaint for arrears of wages, and most of these justices side with the men, particularly as unless they give judgment against the employer, the chance of the justice and constable getting their fees are remote. The lumbermen of the Province of Quebec felt the grievance some time ago, and petitioned the Minister of Justice on the subject, and he replied that the matter was one within the jurisdiction of the Provincial Legislature, and that the proper place to apply was to the Premier of the Province within which the contract was to be performed. The lumbermen throughout the Dominion feel that they should have some protection, and it appears to me the proper place to seek the remedy is from the Dominion Parliament. At any rate the law in the Provinces should be uniform. The Legislature of Quebec, Chap. 15 of 45 Vic., passed an Act to remedy the evil complained of, and for the relief of which the lumbermen by their petition pray. If the Legislature of Quebec had power to pass such an Act, as it has done, I cannot see how the Dominion Parliament had power to pass the Act 40 Vic. Chap. 35. It seems an absurdity that the Dominion Parliament should pass a law repealing a statute in force in two Provinces of the Dominion, and that the Legislature of one of the Provinces should be able and competent immediately thereafter to pass a law re-enacting in that Province the law repealed by the higher Parliament. I send you a copy of the petition and of a clause suggested to be added to the Act now in force, and would further refer to the "Seaman's Act," by which penalties are enforced against seamen who break their contracts of service. There is no reason, to my mind, why lumbermen, who refuse and neglect to perform such contracts, should not be under similar penalties imposed on seamen who quit service before the expiration of the period for which they were hired.

I am your obt. servt.

Peterborough, March 21, 1882. H.

POLE ROADS.

The following letter appears in the *Toronto Mail*:—

SIR,—In the *Globe* of the 11th is an article claiming that pole roads are the best suited to use in carrying logs from the woods to rivers and mills. After a thorough trial I have found the three foot tract, with stringers hewed on two sides to six inches thick, with either wooden rail two by four or light iron rail, the cheapest and best. Pole roads cost more to grade, and are always horse-killers. In heavy down grades with iron rail, I will guarantee to run cars with from

fifteen hundred to three thousand feet of logs securely, and that around curves, and for branch roads, corners can be turned shorter with tramroads than with pole roads. In building tramroads hardly any grading is necessary, the stumps only being cut low or dug out, and dirt and wood, with dirt on top to cover the wood, in holes. In Michigan, where trams and pole roads have both been tried, the tramroad is retained and the pole road discarded. I have used both horses and an engine costing three thousand dollars, on tramroads. If any lumberman in Canada wants to write me you are at liberty to give him my address.

Yours, etc.,

SENEX.

Chicago, Ill., March 18, 1882.

Its Work in Strathroy.

It often happens that the opinion of an experienced man, an expert, if we so call him, conveys greater force than an aggregation of outside, uneducated testimony. And then, too, personal experience or observation is so much more convincing than mere assertion. Trained to habits of analysis and keenest accuracy, and and from the very nature of their daily occupation, given to the most incisive criticism of anything of a proprietary nature, chemists, as a class, hesitate very long before endorsing anything of a remedial nature whose virtues have been announced through the public press. St. Jacobs Oil, however, is so universally successful and so unvaryingly accomplishes all that it promises, that the able chemist, W. J. Dynas, Esq., of Medical Hall, Strathroy, Ont., sends, with his friendly recommendation, the following from David Harrison, Esq., 9th Con., Township of Caradoc:—Having suffered with inflammatory rheumatism since last July, and hearing of St. Jacobs Oil, I sent for a bottle of the article on the 15th of October. At that time I was confined to the house, and could not possibly get out of bed without assistance. After four applications of the Oil the pain ceased entirely, and I was able to go about Strathroy in less than a week. I cannot give too much praise to St. Jacobs Oil for what it has done for me, and I believe it to be the most reliable remedy in rheumatism. Its wonderful efficacy should be brought to the knowledge of everybody.

No article ever attained such unbounded popularity in so short a time as Burdock Blood Bitters, and that too during the existence of countless numbers of widely advertised bitters and blood purifiers. It is evident that this medicine begins its work at once, and leaves no desirable effect unattained.

THE CAUSES OF COLDS are getting overheated in hot rooms or crowded assemblies, sitting in a draught, or cooling too rapidly after exercise, muffling up warm and changing to lighter wrappings, cold and damp feet. No matter what is the cause Hagar's Pectoral Balsam is the cure for all throat and lung disease that induce consumption.

HAGYARD'S YELLOW OIL will be found invaluable for all purposes of a family liniment. Immediate relief will follow its use in all cases of pain in the stomach, bowels or side; rheumatism, colic, colds, sprains and bruises. For internal and external use. It has no equal in the world for what it is recommended. For sale by all dealers at 25c. per bottle.

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Poleroad Tramway Cars

Will Carry 2,000 Feet of Hard-wood Lumber per Load

Drawn with one span of horses, either summer or winter, on Round Pole Roads, which are cheap and speedily built.

The woodwork of the Car can be built by any handy man in a couple of days. The undersigned supply the ironwork complete, including bolts and washers and a diagram of car.

The wheels are adjustable on its axles to accommodate itself to any bend in the pole. The weight of ironwork is 2,250 lbs. Price on application to

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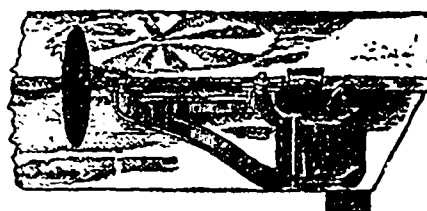


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Is a new, efficient, and exceedingly cheap machine and
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 saws of every description. Wheel is moved along the length, and in the depth of the tooth, and can be placed
 just where wanted as easily as 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 Walsport, Pennsylvania, and in Amherst, Nova Scotia.

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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.
 Traverser of carriage to suit large or small stock, is under control of operator when running. Will run for days
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HEMLOCK TO THE FORE.

Hemlock is fast attaining prominence as one of the most valuable among the soft woods. Its adaptation to nurseries is being more fully recognized, and this once despised wood is coming prominently to the fore as one of the most useful in the catalogue. The memory of the writer carries him back to the time, not very many years, either, in the vista of the past, when in the purchase of lands for lumbering purposes in the Saginaw valley, hemlock was left entirely out of the calculation, and thousands of acres containing vast quantities of hemlock have been allowed to revert to the state after the same had been denuded of the pine, because the hemlock was considered practically worthless except for the bark, and that could not be utilized because of the lack of transportation. These hemlock lands looked slightly into prominence a few years since at the time of the hemlock extract boom, when several extract factories were established in the state, but the "great expectations" of the stockholders in hemlock extract bonanzas appear to have vanished into thin air or in a fruitless search for profits which their projectors had promised. Up to within a few years hemlock was considered worthless, except for fencing, joists, or for some of the purposes for which rough, coarse lumber was demanded. But as pine has advanced in price and is growing scarcer, necessity has demonstrated that hemlock is especially adapted, not only for coarser work, but also for inside finishing, and is being utilized in its natural state—being found capable of extraordinarily fine polish for such purposes, in some very expensive structures. As an illustration we might cite a church in a neighbouring city, finished principally in hemlock in oil, in which is displayed some of the most beautiful specimens of natural graining, in the panel work, which can possibly be produced. It has been ascertained that hemlock is adapted for almost any of the uses to which the soft class of woods has heretofore been applied. The popular favor with which it is being received has resulted in rapidly enhancing the price of the lumber, as well as the lands on which the timber is located, and hemlock stumpage has appreciated in value to such an extent that in some sections it is ruling higher than that received for pine land stumpage a few years ago. This may have been partially induced by the speculative mania which has lately set in for the possession of timbered lands, but not wholly so; and because of the utility of the lumber for almost every conceivable purpose, it is safe to predict that hemlock will maintain a much higher figure in the future, and be received with much greater favor than in the past, and those who through foresight, or inability to dispose of them, have retained possession of these lands, will find they have struck a bonanza.—*Lumberman's Gazette*.

CONSTITUENCY OF WOOD.

All woods heated away from the air yield watery vapor chiefly, leaving nearly pure charcoal, which, when burned, leaves more or less mineral matter as ashes. Of green wood from one-third to one-half or more of its weight is water, the conditions partly depending upon the time of cutting. A gentleman made experiments on a basis of 100 pounds, and found they contained water as follows:

| | Cut in Jan. | Cut in April. |
|-------------------|-------------|---------------|
| Ash, pounds water | 29 | 33 |
| Sycamore | 33 | 40 |
| White Pine | 62 | 61 |

All kinds of wood cut in January contain from 15 to 25 per cent. less water than after the sap is in motion in April, and considerably earlier in the Southern States. As wood seasons naturally in the air, it loses from one-sixth to one-third its weight of water, but still contains from one-seventh to one-fourth its weight of moisture. A considerable part of the latter may be expelled by kiln-drying, and most of it if the kiln heat be raised to 212°. Some careful tests made showed that five cords of beech and maple just cut weighed as much as eight cords of the same wood when thoroughly air seasoned. This teaches us a practical lesson; that is to haul and handle green wood requires a very large waste of strength. In handling five cords of green beech wood, for example, we have loaded, hauled, and unloaded three or more tons of useless water, which a few months' seasoning would

have removed. A cord of wood contains 128 cubic feet as it lies piled up. But allowing for the interstices in fairly piled wood, we may reckon a cord to actually contain about seventy-two cubic feet of solid wood. Thoroughly dry wood weighs about as follows, per cubic foot and cord:—

| | One c. foot. | One Cord. |
|-----------------|--------------|-----------|
| Hickory, pounds | 63 | 4,454 |
| White oak | 53 | 3,810 |
| White ash | 49 | 3,523 |
| Red oak | 45 | 3,276 |
| White beech | 45 | 3,240 |
| Apple tree | 43 | 3,096 |
| Black birch | 43 | 3,096 |
| Black walnut | 42 | 3,000 |
| Hard maple | 40 | 2,880 |
| Soft maple | 37 | 2,664 |
| Wild cherry | 37 | 2,664 |
| White elm | 30 | 2,160 |
| Butternut | 25 | 1,800 |
| Red cedar | 25 | 1,800 |
| Yellow pine | 24 | 1,728 |
| White birch | 23 | 1,672 |
| Chestnut | 21 | 1,512 |
| White Pine | 20 | 1,440 |

If the wood is to be used for steam-generating purposes, the relative values per cord, of various seasoned woods, taking into account weights, heating power, etc., and valuing hickory, as a basis, at \$5 per cord, we reach the following results:—

| | |
|--------------|--------|
| Hickory | \$5 00 |
| White oak | 4 05 |
| White ash | 3 85 |
| Apple | 3 50 |
| Red oak | 3 25 |
| White beech | 3 25 |
| Black walnut | 3 25 |
| Black birch | 3 15 |
| Hard maple | 3 00 |
| White elm | 2 90 |
| Red cedar | 2 85 |
| Wild cherry | 2 75 |
| Soft maple | 2 70 |
| Yellow pine | 2 70 |
| Chestnut | 2 60 |
| Butternut | 2 55 |
| White birch | 2 40 |
| White pine | 2 10 |

We find no record of careful experiments to test the relative value of cottonwood and rose-wood or linden. The hickory named above is what is known as the shellbark hickory (*Carya alba*). The pignut hickory (*Carya porcina*) is of nearly equal value. The western hickory (*Carya sulcata*) weighs about 25 per cent. less than the shellbark, and its relative value per cord is estimated at \$4.05, or the same as white oak.—*Northwestern Lumberman*.

SOUTHERN PINE FORESTS.

The St. Paul *Pioneer Press* learns through the parties chiefly interested, of quite an important transaction in Florida pine, which will be of interest to people in the northern lumbering regions. In 1872, A. J. Floyd, a Kentuckian, once wealthy but impoverished by the war, came into this country on a prospecting tour among the pine lands, of which there were many thousand acres that had reverted to the state through default in the payment of taxes. He was without means of his own, but had interested in his prospects Mr. W. H. Polleys, of Wisconsin, an old Black river lumberman of considerable wealth, who had agreed to back him to a reasonable extent if satisfactory opportunities for investments offered. Mr. Floyd was well posted on pine, and after examining the country thoroughly, located 64,000 acres in a nearly or quite solid mass, lying on waters flowing into the gulf and splendidly situated for operations and marketing. Mr. Floyd with his family took up his residence upon the tract, and has lived there in hermit-like seclusion for ten years, selling each year a few logs which found their way to the navy yard at Pensacola, and furnished sufficient means for the payment of taxes and support of his family. His confidence in the value of his investment never weakened, and his partner, Mr. Polleys, was equally hopeful, although the financial panic of 1873, following right upon the heels of a venture which tied up for some years considerable of his available cash capital, seriously crippled him, and probably caused him some regrets that he had hampered a profitable business with uncertain speculations of this character. However that may be, his judgment has been vindicated. The land was well selected and its value has been recognized during the past year by capitalists from the north, who have been seeking investments in the gulf states. Offers have been made and refused. Recently an English firm, Sanders & Rankins, made an offer of \$5 per acre for the entire tract. This was refused. They then offered \$5 per acre for an undivided one-half of the 64,000 acres, and this was accept-

ed. I understand the transfer has been made, and the purchase money, \$160,000 in cash, placed to the credit of Messrs. Polleys & Floyd. They expect to hold the remaining 32,000 acres, considering it the most profitable investment they can make. Mr. Floyd, who was here last week, left to-day for Alabama, where he will reinvest in pine lands. This trade has opened the eyes of northerners wintering here, and although to-day there are tracts of pine in the gulf states that can be had by clearing up taxes, for a nominal sum, it seems likely that within a year the best located portions will have passed into the hands of the numerous capitalists now looking for investments.—*Lumberman's Gazette*.

EXPORT OF HEMLOCK BARK.

The St. John, N.B., *Daily News*, of March 6th, says:—The discussion or conversation that took place last week in the Legislative Council in connection with Mr. Jones' motion for papers relative to the hemlock land sale, showed that the weight of opinion in that body, was opposed to the course pursued by the Local Government on that matter. In the course of that discussion, two points were brought out very clearly, of which one was that the policy of stimulating the destruction of our hemlock forests for the maintenance of a great export trade in hemlock bark extract, was a most wasteful and shortsighted one, and the other of which was, that whether that policy was wise or no the land disposed of had been sold at a price far below its value.

There seems to be no doubt as to the soundness of these conclusions. It is plain to every intelligent observer that the tanning industry is one which the world can never dispense with. Its importance can never be lessened, but rather increased ago after ago. But the materials needed for use in the tanning process naturally become scarcer and scarcer. The trees whose bark furnishes the best tanning material grow slowly, and are destroyed quickly. The hemlock is one of the best of the tanning-bark bearing trees. It has been plentiful in this Province. But it is being rapidly destroyed, and as it grows scarcer it becomes more and more valuable. It would pay the Province well to guard it carefully. The rapid destruction of tanning-bark bearing trees elsewhere will surely enhance the value of such trees in New Brunswick. There is not the slightest probability that the use of tanning bark will be superseded by any discovery or device whatever. Where it cannot be obtained in sufficient quantity, inferior tanning will have to be depended upon. Where it can be got it will always command a good price. But anyone can understand that as the supply of such bark is limited, the country would profit far more in the long run from its use in tanning factories at home, than by its exportation in any shape for use in tanning factories abroad.

The exportation, however, may be found difficult to stop altogether; but henceforward the Government should be careful to part with no hemlock lands in large quantities, and with none in any quantity below their real value. The Government should be made to understand that the hemlock forests of the Province are sources of wealth to be jealously guarded and husbanded for the general good.

POLEROADS IN WASHINGTON.

The lumbermen of the Puget Sound district have adopted the poleroad system, for years so successfully operated in Michigan. The Blackman Brothers, of Snohomis City, have invented an improvement on car trucks for these railways, and the invention seems to promise good results. The renouncing of primitive methods for advanced ones adequate for the demands of the lumber business is a question of the times. A wooden track with these improved cars can be used by the lumbermen in places and upon grades where an iron track could not be used, for the reason that an iron track can only be used on comparatively light grades, whereas the wooden track has been successfully used with these trucks where the grade was one foot to every nine. All such improvements are hence important, and when the idea is perfected it will work a revolution in the methods of hauling logs from the woods to the booms or navigable water.—*Northwestern Lumberman*.

BURNING UNDERBRUSH.

Mr. Thos. Meehan, of Philadelphia, who is an authority on matters relating to forestry, endorses the proposition of Joaquin Miller to burn the brushwood and rubbish in the forests every year, to prevent extensive conflagrations. In the *Gardeners' Monthly* he says:—

"If the undergrowth is kept down and dead matter not allowed to accumulate, there will be no fire to hurt the living trees. We know of a piece of wood that is burned under every year by sparks from the Reading Railroad Company's locomotives, but the standing timber has never been injured. It will not cost a thousandth part as much to clear out all the brushwood in the United States forests as we lose in one year by forest fires, and the true way to preserve our forests must start from just here. At any rate this idea removes the great objection to forest planting, that it may get burned. If rank vegetation is kept down for a few years during the growth of the forest, it will by its own shade keep down the growth thereafter."

The Literature of Forestry.

The large place which forestry holds in European countries is strikingly shown to the American mind by the number of publications on the subject issued by the European press. Spain, from which we should not expect a voluminous literature of the sort, furnishes us a *catalogue raisonne* of 1,120 books, MISS., etc., in Spanish, on subjects connected with forest science. In Schmidt's Catalogue, published in Prague in 1876, are given the titles of German works on this subject published from 1870 to 1875 inclusive, which amount to 650. A gentleman to whom application was made from the Cape, South Africa, for information in regard to suitable works on forestry in the German language, reported that they might be reckoned by cart loads. Publications on this subject are also abundant in the French and other languages of Europe.—*N. H. Egleston*.

The Question Settled.

There's no use in arguing the question of the potency of some substances for especial service in emergencies. They will do all they promise, and more, if judiciously used. The following from Mr. P. Murphy, of No. 1 Fire Station, Ottawa, bears upon the point stated above. Mr. Murphy says:—I had occasion to use St. Jacobs Oil recently, and must say that it is the best Liniment I ever saw used. I caught cold from getting wet at a fire, and it settled in my shoulder and down my back to my hip. I suffered a great deal from the pain. I was advised to try St. Jacobs Oil. I did so, and after the fourth application I was entirely free from pain. I cannot speak too highly of it, and advise others to use it.

Planting Trees.

Dr. J. M. Anders, in the *American Naturalist*, says:—"The experiment has been tried extensively in France of planting trees in belts 100 metres apart, and with marked benefit to the climate, and there are some good reasons for believing that a similar experiment in various places in our own country would prove equally advantageous. It has been observed many times that fruit grown in the city surpasses in quality and size that grown in the country, and this is ascribable to the more effectual shelter in the former place."

At Shell Lake, Minn., a boom will be put in that will hold 40,000,000 feet of logs. One of the mills at this point will put in a track and employ a locomotive to bring logs to the lake to offset the shortage in the winter's cut. The distance is from four to six miles.

Saved from the Poorhouse.

For years David Allingsworth suffered with rheumatism, and notwithstanding the best medical attendance, could not find relief. He came to the Sciota County Poorhouse, and had to be carried into and out of bed on account of his helpless condition. After the failure of all the remedies which had been applied, the directors of the Poorhouse resolved to use the celebrated German Remedy, St. Jacobs Oil, and this was a fortunate resolution; for, with the trial of one bottle, the patient was already better, and when four bottles had been used upon him he could again walk about without the use of a cane. The facts, as above stated, will be verified by the editor of the *Portsmouth (Ohio) Correspondent*.

Chips.

A FINE tree was recently cut on Beaver creek, Peshtigo, Wis., district, that made four 10 foot logs, 8, 46, 44, and 42 inches in diameter, and altogether scaling 5,744 feet

THE Lachute Watchman says that Messrs A & G. Holland, of Ottawa, are constructing a pulp factory at Buckingham, and intend having it completed early in the spring

WHILE engaged in digging a well recently at Two Rivers, Wis., some men found a piece of hemlock wood 86 feet below the surface of the earth, and in a good state of preservation.

ON the Elk river, in Wisconsin, Ed. Butler banked what was regarded the biggest log of the season a few days since. It measured 20 feet long and 44 inches through at the small end.

THE cordage to be used by the St. Croix, Wis., Boom Company for the ensuing season has been contracted for, and amounts to 100 tons, costing in the aggregate from \$24,000 to \$26,000.

THE ancient temples of Egypt are believed to contain the oldest timber in the world, in the shape of dowel pins which are incorporated with stone work, known to be not less than 4,000 years old. These dowel pins, according to the appearance they present, are thought to have been made from the tamarisk, or shittim wood, in ancient times a sacred tree in Egypt.

THE Chatham, N. B., World says that at Barnaby River there are about 125 men engaged at the lumber business, as follows:—Mr. O'Brien has 30 men in two camps; Mr. M. Grattan has 45 men in two camps; Mr. T. Gill has 25 men in one camp; Mr. McSweeney has 15 men in one camp, and Mr. Murphy has ten men in one. The total number of camps is six, and the lumber expected to be cut is about 5,000,000 feet.

THIS winter there are 16 camps, containing 150 men, lumbering at Bay du Vin. Mr. D. Buckley has six camps and employs 60 men; Mr. M. Savoy has five camps and employs 40 men; Mr. Charles Rainsburrow has two camps and employs 15 men; Mr. John McDonald has one camp, containing 15 men; Mr. J. Hanley has a camp containing ten men; and Mr. Lynch has a camp containing ten men. The estimated lumber expected to be cut is seven or eight million feet.—Chatham, N. B., World.

THE Quebec Chronicle says that a large quantity of square birch timber is now being brought to town over the Lake St. John Railway. On Saturday, March 4, two trains of thirteen cars of this timber arrived at the Palais Depot for different shippers, and has been unloaded at Flood's, Clint's, Commissioners' Wharf, and other coves. The bulk of the timber comes from St. Raymond, where there is keen competition for it, as many as six or seven Quebec buyers having been operating there this winter. A considerable quantity also comes from Lake St. Joseph and St. Gabriel Stations.

A NUMBER of lumbermen of Alpena have been or are at present, making visits to the southern pines. A. W. Comstock, of the firm of Bewick, Comstock & Co., returned to the city on the 3rd from a southern trip, and appears so well pleased with what he saw of the southern pine woods that it is the intention of the firm to purchase some 40,000 acres of pine woods in that part of the country. There seems to be an immense sale of southern pine lands, as will readily be seen by the fact that the officials whose duty it is to record deeds are about one month behind hand with their work.—Cor. Free Press.

THE Minneapolis Lumberman says the logging season may now be considered closed in the northwest. The cut on the upper Mississippi, Rum, Snake, St. Croix, Menominee, Chippewa, Wisconsin and Black rivers, as well as the railway mills taken as a whole will reach about 66 per cent. of the intended cut. The extreme upper Mississippi loggers have done the best. The Black river has done the poorest. It is also to be kept in mind that there is a very much larger supply of old logs on hand than ever was known before. We think it a safe estimate to put down the logs in booms from St. Louis north at 500,000,000 feet, which will go far toward making up the shortage.

ST. JACOBS OIL



THE GREAT GERMAN REMEDY

FOR RHEUMATISM,

Neuralgia, Sciatica, Lumbago, Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,

Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

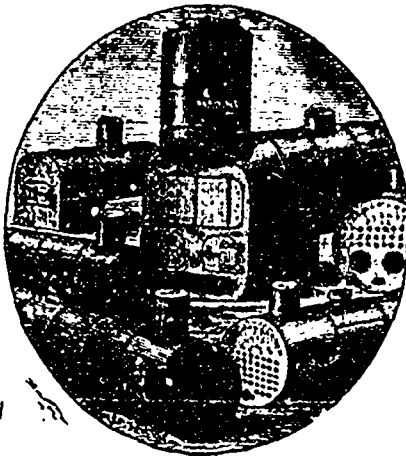
No Preparation on earth equals St. Jacobs Oil as a safe, sure, simple and cheap External Remedy. A trial entails but the comparatively trifling outlay of 50 Cents, and every one suffering with pain can have cheap and positive proof of its claims.

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MANUFACTURERS OF ALL KINDS OF STATIONARY, MARINE, and LOCOMOTIVE BOILERS, And SHEET IRON WORK.



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Sample Bottles 10c; Regular size \$1.

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Power Capstans, Patent Ship Pumps With Copper Chambers. 1116

Lead Sappers & Water Closets & all goods in my line for Ships' use.

Work done to Order with Quick Despatch.

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Shop, Office and Parlor Stoves, and Franklins.

Agricultural Implements.

BRASS CASTINGS.

Tin, Sheet Iron and Copper Ware for SHIP and HOUSE use.

Market Reports.

MONTREAL.

From Our Own Correspondent.

MARCH 24th.—The action of the authorities in charging over weight of from \$2 to \$5 on lumber brought by the Q. M. & O. Railway, has for the time being put a stop to importations by that line, and no more will likely be brought this spring...

Table listing lumber prices for various grades like Pine 1st quality, Pine 2nd, Pine shipping culls, etc., with prices in dollars and cents.

London mail advices say that there is special dullness in the lumber market, buyers and sellers being wide apart in their views. Stocks are not much behind that of last year, and during the week ending first inst., 7 timber laden vessels were reported either lost or disabled.

COMBWOOD.—There has been quite an excitement among cordwood dealers during the last week owing to the new regulation which came into force in the rates of freight charged on wood by the Q. M. O. & O. Railway, which used to be paid for at the rate of \$1.70 a cord from the Ottawa District, but is now charged by weight...

Table listing prices for Long Maple, Short, Long Birch, Short, Long Beech, Short, Long Tamarack, Short.

TORONTO.

From our own Correspondent.

MARCH 22nd.—Active preparations are now being made for the opening of navigation, and several vessels are now loading ready for a start as soon as the month closes. The Marquis, John Bently and Annie Mulvey, three vessels owned by Capt. Hall, of this city, will all take cedar ties the first trip, and are now on the way loading; the total capacity of the three above named crafts is 1,250,000 ft. Rates to Oswego will open at \$1.25 per M., and strong efforts will be made to ship all dry lumber away as fast as vessels can be procured to carry it...

hewn timber for the English market got in port before the opening of navigation, and although the company have placed their booms in position, not a stick of timber has yet arrived, so that when the limited water front owned by the R. R. Co. is partly taken up by the timbermen, it makes shipping by vessels slow and vexatious.

The mild and rainy weather of the past few weeks has operated somewhat against the brisk sales from the yards, as the new streets, on which most of the building operations are in progress, have become nearly impassable for laden teams, yet so far as my observation goes, most of the retail yards have had all they could do to furnish orders, and you will observe that bill stuff has advanced \$1 per M., and will, I think, remain at that figure during the season. Good cut up 1 1/2 in. and 2 in. dry plank is in demand, but hard to obtain.

In continuing my observations ament our woodworking establishments here, I would next call your attention to the factory owned by J. B. Smith, on the Esplanade west of Yonge street. All the appliances for the cheapening of labour are to be found in this building, and as a large retail lumber business is run in connection with the factory, quite an extensive business is done, prepared lumber being sent as far east as Montreal.

A little farther west and situated on the corner of Lorne street and the Esplanade, stands the extensive sawing and planing mills, owned by Messrs. McCracken & Oliver. This firm keeps logs of all lengths on hand, so that any desired piece of timber can be turned from their saw carriage at short notice, and all fancy woods from their own extensive covered yard, adjoining the mill, can be immediately manipulated into any desired shape required by their customers.

The next in order are the large shops and machinery owned by Bryce Bros., situated at the foot of Frederick street. This factory was formerly operated by Joseph Gearing, who skipped out between the two lights to the land of the stars and stripes, leaving a host of creditors to mourn over their losses, but the old stand has now passed into energetic hands, and will be doubtless run for all it is worth, and as the firm has a large stock of lumber at all times on hand at their retail premises near by, their facilities for turning out good work, and plenty of it, are unsurpassed.

In my last letter where it reads "As it is well understood that the N. R. Co. receives no benefit for the charge levied for excess weight," it should read the "M. R. Co." as all Midland Railway cars pass over the G. T. R. route to this city.

QUOTATIONS, FROM YARDS.

Table listing various lumber products and their prices, including Mill cull boards and scantling, Shipping cull boards, Scantling and joist, up to 16 ft., etc.

LONDON, ONT.

From Our Own Correspondent.

MARCH 24th.—The substance of my last letter is fully borne out by the feeling which prevails to-day throughout the lumbering interest of this

city. The inevitable result of an unseasonable winter must be higher prices, and there is a greater firmness displayed to-day than perhaps at any time during the last three months. Prices, however, cannot be said to be higher, but in no cases do we hear of any of the merchants making even the slightest concessions in consideration of that tempting "feeler" cash. Prospects for this spring are looking bright, and nearly all the lumber merchants have placed their contracts for supplies. One of our largest firms have placed their orders for about six million feet of lumber alone.

It is feared that the great Northwest boom will take away many of our carpenters and builders as soon as strong evidences of spring assert themselves, and that labor will be scarce and consequently will cost more; this, together with the anticipated advance in lumber, will add a considerable percentage to the cost of building. An item in the London Free Press, of Thursday, says:—"A deputation from Chatham, Ont., will wait on the Minister of Finance tomorrow to urge the imposition of an export duty on elm logs shipped to the United States. The deputation consists of manufacturers of elm staves, who used to do a large business to the United States, but a duty of 25 per cent. having been imposed on the staves by the United States Government, and the logs being admitted free, the manufacture of the staves have been thrown into the hands of American manufacturers. The Canadian manufacturers think that by imposing an export duty on the logs they can recover most of their trade." I do not know how this will result, inasmuch as logs can only be classified as "raw material," and the imposition of an export duty might recoil on the heads of the projectors.

After the many promises I have made to furnish you with a data of the business done here for the past year, I cannot with consistency "hang fire" any longer, and I now herein give you an authentic statement of what has been done; and allow me here to thank the merchants of this city who received your correspondent so courteously, and so willingly furnished the information desired.

STATEMENT OF BUSINESS DONE FOR YEAR 1881. Lumber (all grades) ft. 13,740,300. Pieces Lath 6,199,190. Shingles 8,763,000.

The quotations are at the present time about the same as last and you will be safe in giving them at this date. They are as follows:—

QUOTATIONS. Mill cull boards and scantling \$11 00. Shipping cull boards, promiscuous widths 12 00. Common boards, promiscuous widths 14 00. Scantling and joist, up to 16 ft. 15 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 pick 28 00. Three uppers, Am. inspection 35 00. 1 inch dressed and matched flooring 21 00. XXX sawn shingles, 2 M. 3 00. Lath per 1000 feet 4 50@5 00.

OTTAWA.

MARCH 23.—Extensive preparations are now being made by the lumbering firms here for the spring drive. All the men that can be engaged are being sent up the river. Agents complain of a scarcity of men, and wages are consequently high. From \$25 to \$30 per month are paid. As soon as operations in the shanties, which are, however, being pushed on vigorously, come to a stop, there will be, it is thought, lots of hands for the drive. Timber and logs will continue to be manufactured until the first week in May in the most of the shanties on the Upper Ottawa, and on the Kippewa in particular. There are a number of concerns already closed, however, for want of snow, among them Capt. Young's shanties on Bissett's Creek, and Campbell McDougall's. Quite a number of this season's logs will be left in the woods, as generally happens, owing to innumerable difficulties in having them conveyed to the main streams. Demand for logs at present is fair, and lumber quotations also remain steady, with an upward tendency. Mill culls bring \$5 per thousand, and shipping culls from \$12 to \$13. In regard to the approaching season's trade, very fair quotations

are confidently expected to prevail, and a good summer is anticipated. Stocks on hand are not very large, orders having been continually filled during the past winter by rail shipment. The mills here will begin as early as possible, about the 1st of May.

MIDLAND.

From our own Correspondent.

The prospects here are that a large cut of lumber will be made this present season. The several mill owners have made every effort to have their mills well stocked. The only question now will be the water supply for the drives. Dollar's mill is running to its full capacity; Chew Bros. have cut 4,000,000 feet of logs for their mill, the British Canadian Lumber and Timber Co. expect about from 33,000,000 to 36,000,000 feet of logs, and their new mill on Hugel Point here will be ready for cutting early in the season. J. A. Smith, of Port Hope, is engaged in taking out oak for car stuff, and is also dealing quite largely in ties, basswood and maple. He has shipped from this point to Niagara Falls sixteen carloads of poplar to be manufactured into paper. Tait's mill is now running daily, cutting oak for car stuff.

Property here is advancing rapidly; quite a boom in the market. A hotel stand sold for \$2,500 nine months since and now \$7,000 are refused, and a lot sold one year since for \$100, while now \$1,400 are refused. Lots are selling rapidly, and our village is making rapid progress.

QUEBEC.

It is reported that Messrs. Sharpley & Co. and Messrs. Burstall & Co. have purchased this season's cut of Montmorenci pine deals at about \$110 for firsts, \$73.33 for seconds, and \$36.66 for thirds. Messrs. R. R. Dobell & Co. are the largest holders of waney and square pine timber in this market. They have purchased very largely this season, and are said to have the control of 4,000,000 feet.

ST. JOHN, N. B.

From Our Own Correspondent.

MARCH 22nd.—There is very little to notice in connection with our wood trade since last report. The weather continues cold, and the roads are in a better condition for hauling than usual at this season of the year, enabling the lumbermen to continue their operations in some sections, compensating in a small measure for the disadvantages of the mild weather in the earlier part of the season.

Some of our city mills have commenced sawing, but as the available supply of logs is very light, sawing operations will be on a limited scale till after the opening of the river, which generally takes place between the 20th and the last of April.

FREIGHTS.

The demand for tonnage continues very light. In last report 60s. was quoted as the market rate; since that time two vessels have been placed at that figure, viz., Herbert Beech, 1,061, for Liverpool, and Kato Sancton, 677, for a direct port East Coast of Ireland. Quotations nominal, unchanged.

SHIPMENTS.

The shipments of deals and other sawn lumber are as follows:— For Europe 2,420,000 Sup. feet. United States 2,260,000 West Indies 594,000

The number of sugar box shoeks shipped for Cuba is as follows:— Sept. 1 to March 6 63,045 Since 6,595

Total 69,640

SHIPPING.

The following is a list of the vessels in port, with their tonnage and destinations:— Richard Hutchinson, 733, Penarth Roads, or E. C. Ireland. Maria Astrup, 332, Bristol Channel, or E. C. I. Oliver Emery, 623, Bristol Channel, or E. C. I. John Black, 645, W. C. England, E. C. I., or Glasgow. Kato Sancton, 677, East Coast Ireland. Herbert Beech, 1,061, Liverpool. Our Annie, 364, discharging. Milo, 654, W. C. England or E. C. I. Bachelors, 655, Brothers, 537, —

CHICAGO.

MARCH 23.—The Northwestern Lumberman says that the moderate views as to values, held

this spring by Chicago dealers, is having a good effect on trade at this point. While other markets are bowling prices up the incline, values here are held with a steady hand at figures prevailing on January 1, with nobody favoring advanced rates. This is bringing a large amount of trade to this city that would otherwise go to other sources of supply.

As an indication of the state of trade, it is mentioned that one concern the past week received orders in one day to the amount of 1,200,000 feet. This day's work was, of course, exceptional, but it shows that lumber is moving on a large scale. The average sales of the same company have reached 1,000,000 feet a month since January 1, and it is not reported to be the heaviest concern in the district either.

Receipts and shipments of lumber and shingles for the week ending March 23, 1882—

| RECEIPTS. | | SHIPMENTS. | |
|-----------|-----------|------------|------------|
| Lumber. | Shingles. | Lumber. | Shingles. |
| 1882.... | 5,652,000 | 1,048,000 | 39,162,000 |
| 1881..... | 3,242,000 | 1,001,000 | 10,333,000 |
| | | | 4,020,000 |

Receipts and shipments of lumber and shing' from January 1, to March 23, inclusive:—

| RECEIPTS. | | SHIPMENTS. | |
|-----------|------------|------------|-------------|
| Lumber. | Shingles. | Lumber. | Shingles. |
| 1882.... | 65,350,000 | 13,660,000 | 302,704,000 |
| 1881.... | 41,781,000 | 13,407,000 | 151,812,000 |
| | | | 70,272,000 |

Inc... 13,569,000 253,000 150,892,000 20,345,000

STOCK ON HAND MARCH 1.

| | 1882. | 1881. | 1880. |
|------------------|-------------|-------------|-------------|
| Lumber..... | 378,658,184 | 398,800,030 | 338,096,421 |
| Shingles..... | 162,302,900 | 166,010,000 | 162,072,000 |
| Lath..... | 83,426,283 | 91,784,270 | 37,132,210 |
| Pickets..... | 2,354,511 | 2,251,438 | 1,407,074 |
| Cedar posts..... | 112,083 | 177,304 | 207,362 |

ALBANY.

MARCH 23rd.—Quotations at the yards are as follows:—

| | | | | |
|---------------------------------------|-----|----|----|------|
| Pine, clear, 2 M..... | 553 | 00 | 03 | 00 |
| Pine, fourths..... | 60 | 00 | 00 | 00 |
| Pine, selects..... | 45 | 00 | 55 | 00 |
| Pine, good box..... | 22 | 00 | 35 | 00 |
| Pine, 10-in. plank, each..... | 00 | 33 | 00 | 44 |
| Pine, 10-in. plank, culls, ea..... | 00 | 19 | 00 | 22 |
| Pine boards, 10-in..... | 00 | 20 | 00 | 28 |
| Pine, 10-in. boards, culls..... | 00 | 18 | 00 | 19 |
| Pine, 10-in. boards, 10 ft., 2 M..... | 25 | 00 | 30 | 00 |
| Pine, 12-in. boards, 10 ft..... | 25 | 00 | 30 | 00 |
| Pine, 12-in. boards, 12 ft..... | 20 | 00 | 28 | 00 |
| Pine, 1 1/2 in. siding, select..... | 38 | 00 | 40 | 00 |
| Pine, 1 1/2 in. siding, common..... | 15 | 00 | 18 | 00 |
| Pine, 1 in. siding, select..... | 40 | 00 | 42 | 00 |
| Pine, inch siding, common..... | 10 | 00 | 10 | 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, 2 1/2 x 4, each..... | 00 | 00 | 00 | 13 |
| Hemlock, wall strips, 2x4, each..... | 00 | 00 | 00 | 10 |
| Ash, good, 2 M..... | 35 | 00 | 40 | 00 |
| Ash, second quality, 2 M..... | 25 | 00 | 30 | 00 |
| Cherry, good, 2 M..... | 60 | 00 | 70 | 00 |
| Cherry, common, 2 M..... | 25 | 00 | 35 | 00 |
| Oak, good, 2 M..... | 38 | 00 | 43 | 00 |
| Oak, second quality, 2 M..... | 20 | 00 | 25 | 00 |
| Hardwood, 2 M..... | 22 | 00 | 25 | 00 |
| Hickory, 2 M..... | 36 | 00 | 40 | 00 |
| Maple, Canada, 2 M..... | 26 | 00 | 30 | 00 |
| Maple, American, per M..... | 25 | 00 | 28 | 00 |
| Cherriut, 2 M..... | 35 | 00 | 40 | 00 |
| Shingles, shaved, pine, 2 M..... | 0 | 00 | 0 | 00 |
| " 2nd quality..... | 0 | 00 | 0 | 45 |
| " 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, 2 M..... | 0 | 00 | 0 | 1 62 |
| Lath, spruce..... | 0 | 00 | 0 | 1 60 |
| Lath, pine..... | 0 | 00 | 0 | 2 70 |

OSWEGO, N.Y.

MARCH 23.—The following are the quotations:—

| | | | | |
|------------------------------------|-----|----|----|----|
| Three uppers..... | 642 | 00 | 45 | 00 |
| Pickings..... | 52 | 00 | 35 | 00 |
| Pine, common..... | 20 | 00 | 25 | 00 |
| Common..... | 14 | 00 | 15 | 00 |
| Culls..... | 13 | 00 | 15 | 00 |
| Mill run lots..... | 17 | 00 | 22 | 00 |
| Sidings, selected, 1 inch..... | 34 | 00 | 35 | 00 |
| " 1 1/2 inch..... | 34 | 00 | 35 | 00 |
| Mill run, 1x10, 15 to 16 feet..... | 17 | 00 | 21 | 00 |
| selected..... | 23 | 00 | 25 | 00 |
| slippers..... | 15 | 00 | 16 | 00 |
| Culls, selected..... | 22 | 00 | 30 | 00 |
| Culls..... | 10 | 00 | 13 | 00 |
| 1x6 selected for clapboards..... | 25 | 00 | 40 | 00 |
| Shingles, XXX, 18 inch, pine..... | 3 | 75 | 4 | 00 |
| " XXX, 18 inch, cedar..... | 3 | 00 | 3 | 25 |
| Lath..... | 1 | 40 | 1 | 60 |

BUFFALO.

We quote cargo lots:—

| | | | | |
|-------------|-----|----|----|----|
| Uppers..... | 640 | 00 | 48 | 00 |
| Common..... | 18 | 00 | 19 | 00 |
| Culls..... | 13 | 00 | 14 | 00 |

TONAWANDA.

CARGO LOTS—BAGINAW INSPECTION.

| | | | | |
|-------------------|-----|----|----|----|
| Three uppers..... | 640 | 00 | 45 | 00 |
| Common..... | 17 | 00 | 20 | 00 |
| Culls..... | 11 | 00 | 12 | 00 |

D. S. BRIGGS,
9 TORONTO STREET, TORONTO.

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Clear, Pickings, Common and Hardwood
Lumber, Lath, Shingles, &c.
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WHITEWOOD, ASH, CHESTNUT, CHERRY, BUT
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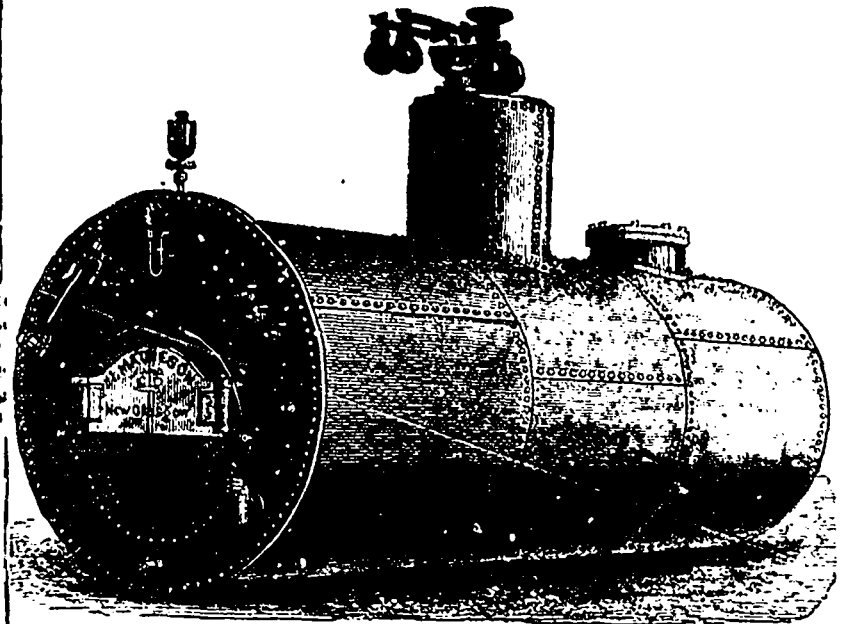
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MONTREAL



ACADIA FOUNDRY
I. MATHESON & Co.
ENGINEERS & BOILER MAKERS.
NEW GLASGOW, N.S.



ALL KINDS OF
Machinery, Marine, Portable
and Stationary Boilers.

Pump Boilers for Stationary Mills

153 & 155 Front Street, TORONTO.

J. PERKINS, PROPRIETOR

JONES & SON,
Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.
Oak Ship Plank and Timber. Pine Deck Plank and
Ship Stock Generally.

MACHINE OILS, ETC.

McCOLL BROS. & Co.
TORONTO,

MANUFACTURERS and WHOLESALE DEALERS IN

Machine and Illuminating Oils

Four (4) Medals and Three (3) Diplomas awarded to them
in 1881, by the Leading Exhibitions of the Dominion.

SEND FOR PRICES, ETC.

ROBERT W. LOWE,
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 Hazelhurst & Co's WINTHROP COOKING RANGES, WATERLOO WOOD STOVES, FRANKLIN, &c., &c., &c.

1117

SAINT JOHN, NEW BRUNSWICK.

ROBIN & SADLER

594, 596, 598, St. Joseph St.

MONTREAL

Manufacturers

of

LEATHER BELTING

Fire-Engine

HOSE,

Lace Leather,

Mill Supplies, &c.

1112

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 24 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.

Yours 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,

Gives 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 them 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.

ADAM HALL, Peterborough.

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.

1112

ESTABLISHED 1820.

EAGLE FOUNDRY!

GEORGE BRUSH

14 to 34 King and Queen Streets, MONTREAL,

MAKER OF

Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,

CIRCULAR SAW MILLS, BARK MILLS, SHINGLE MILLS,

Ore Crushers, Mill Gearing, Shafting, Hangers and Pullies, Hand and Power Hoists for Warehouses, &c., &c.,

AND AGENT FOR

1120

'Water's' Perfect Steam Engine Governor, and 'Herald & Sisco's' Centrifugal Pumps

ABRAMS & KERR

MANUFACTURERS OF

Steam Engines, Mill Gearing, Rotary Mills, Shafting, Planers, Hangers, Pulleys, Variety Moulders.

SPECIAL MACHINERY MADE TO ORDER

Latest Improved Spool and Bobbin Machinery.
Every Variety of Heavy and Light Casting.

1119

Foundry and Machine Shop on City Road,
ST. JOHN, NEW BRUNSWICK.

OAK HALL

Nos. 115, 117, 119, 121, King St. East, Toronto.

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

LUMBERMEN!

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.

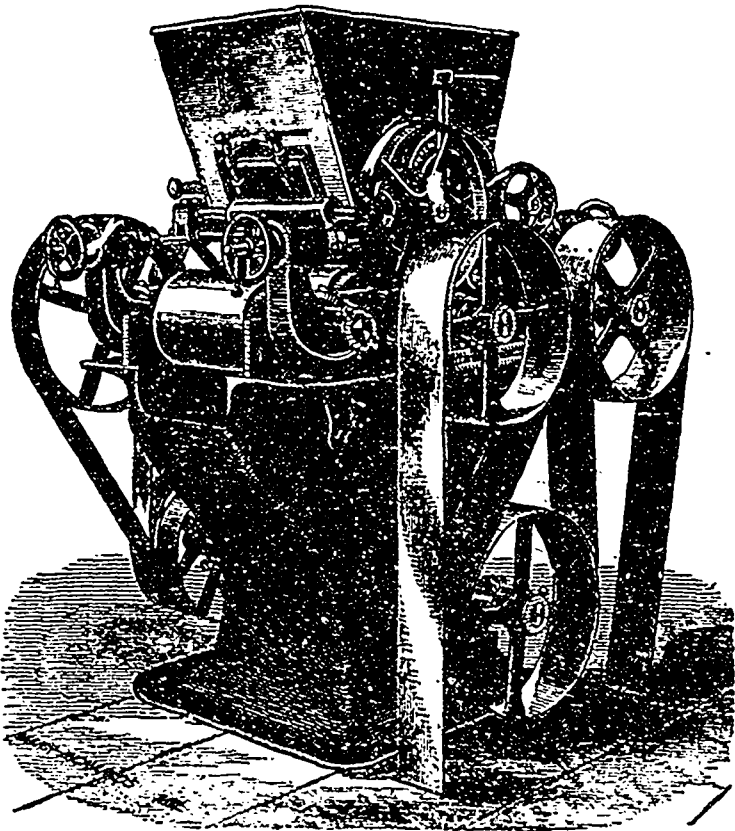
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Flour Making by the New Process

GRAY'S PATENT NOISELESS ROLLER MILL

*A Model of Perfection!
Every Mill a Success!*

CORRUGATIONS of all Descriptions.
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.

WEYMAN'S NEW IMPROVED PATENT Porcelain Rolls

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

MILLER BROS. & MITCHELL,

Nos. 110, 112, 114 and 116 KING STREET

MONTREAL.

SOLE LICENSEES FOR DOMINION.

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

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MILL SUPPLIES.

Extra Stretched and Patent Smooth Surface

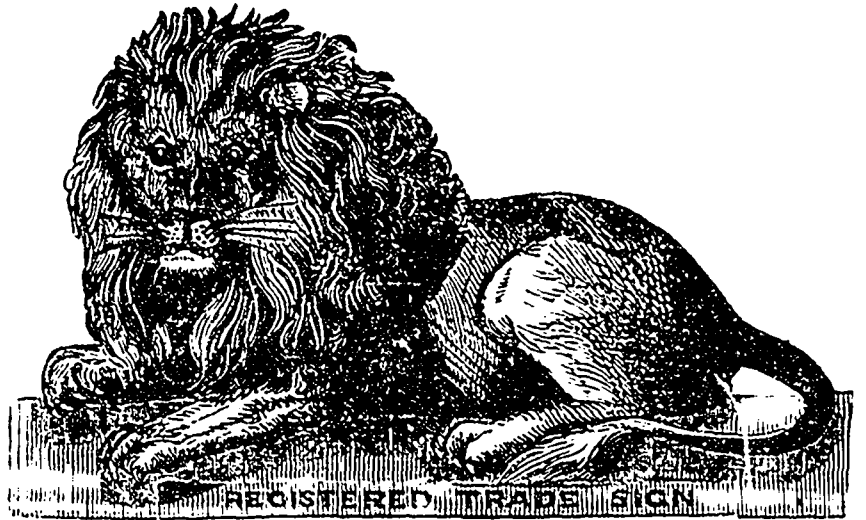
RUBBER BELTING—in Stock, 2, 3, 4, 5, and 6 Plies.
HOYT'S CELEBRATED LEATHER BELTING.
COTTON BELTING, for Flour Mills. &c., Superior Quality.

DISSTON'S CELEBRATED MILL SAWS.

Steam Packing of all kinds, Rubber and Linen Hose, Silk Dolling 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. 1121

ESTEY, ALLWOOD & CO., SAINT JOHN, NEW BRUNSWICK.

THE GOLDEN LION



IS THE RIGHT HOUSE FOR

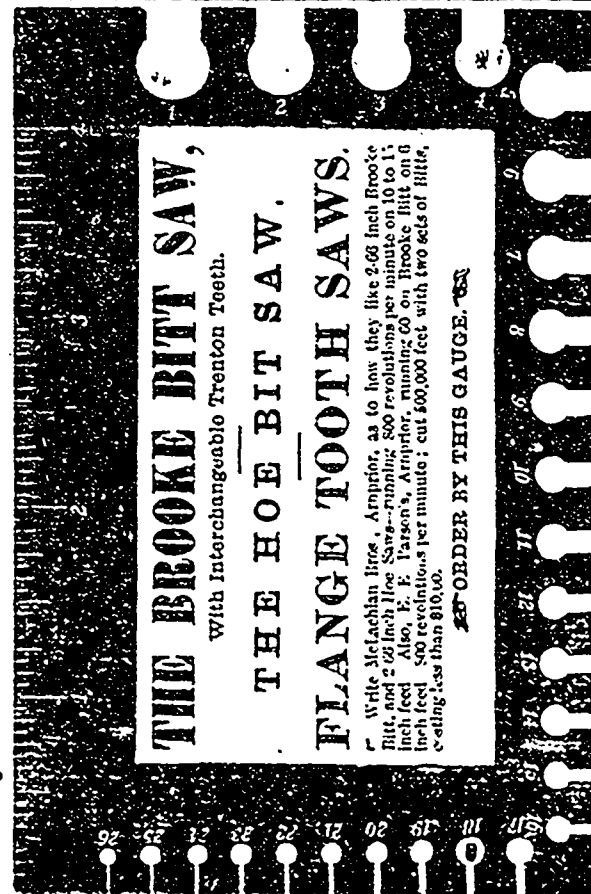
CLOTHING

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

HEADQUARTERS FOR INSERTED TOOTH SAWS!



THE BROOKE BIT SAW,

With interchangeable Trenton Teeth.

THE HOE BIT SAW.

FLANGE TOOTH SAWS.

Write McLachlan Bros., Arrprior, as to how they like 2-66 inch Brooche Bit, and 2-66 inch Hoe Saws—running 800 revolutions per minute on 10 to 15 inch feed. Also, E. F. Varson's, Arrprior, running 60 on Brooche bit on 6 inch feed. 500 revolutions per minute; cut 500,000 feet with two sets of files, cutting less than \$10.00.

ORDER BY THIS GAUGE.

FOR SAWDUST CARRIERS, LIVE ROLLS, TRIMMERS and REFUSE CARRIERS.

BROWN'S PATENT SEALT MACHINE

Sets three perfect shingles out of inch board. Cuts shingles out of slabs and all manner of ref. ac. Will soon pay for itself around any large Mill.

AUTOMATIC GANG TRIMMERS, SIX SAW EDGERS, and the most improved Saw

and Machinery. PORTABLE SAW MILLS OUR SPECIALTY.
Address, WATERLOO ENGINE WORKS CO., Brantford, Canada.

Toronto November 17th 1887

Mess^{rs} The Joseph Hall Manufg Co
Oshawa
Ont.

Gentlemen

When you were manufacturing
Engines and Mill machinery in 1872 you
supplied me with all the machinery for my
Saw-Mill at Midland.

Every part of the work was
strictly first class and gave me the greatest
possible satisfaction. I never saw as good a lot
of Machinery. The material was the very best quality
and the workmanship unsurpassed. Until
my Mill was burned and rebuilt I did not
fully realize how entirely you carried out
your agreement to do me a first class job.

The Engines, Boilers, Circles, Gauges, and
connections worked splendidly. In the erection
of the Machinery we had no trouble everything
was according to the plans and specifications
furnished and was put together without alteration
of any kind.

I am pleased to learn
that you have repurchased the patterns and plant
you sold to the McGill Manufg Coy and intend
to manufacture all kinds of Mill Machinery. You
shall have all the work I can send you.

Yours very truly

N. H. Cook

President of the British Canadian Lumbering and Timber Co.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

GILBERT HART, Detroit,
President.

JAMES T. BARNARD, Hamilton,
Secretary-Treasurer.

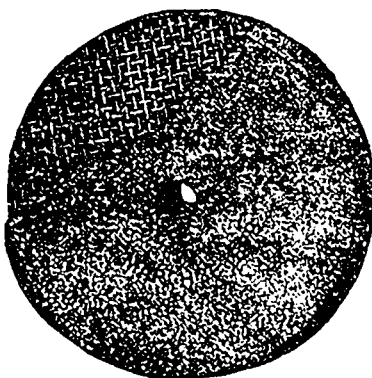
SAMUEL BRIGGS, Hamilton,
Superintendent.

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 ROBERSTON & CO.,
TORONTO.

WE ALSO REFER TO

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

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

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 18 boards 13 ft. long in one minute. It can do much smoother and better work than the piston 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,

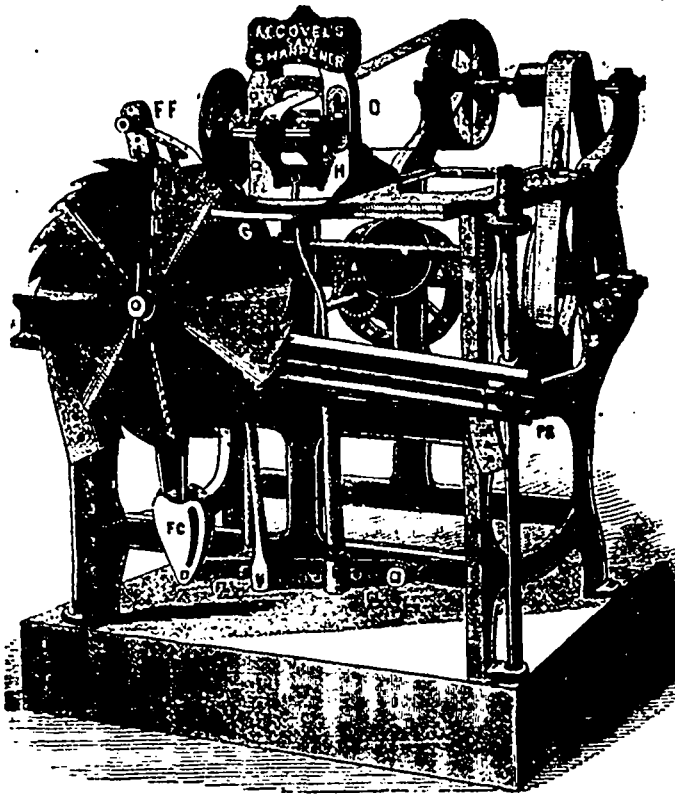
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly.
Yours, &c.,

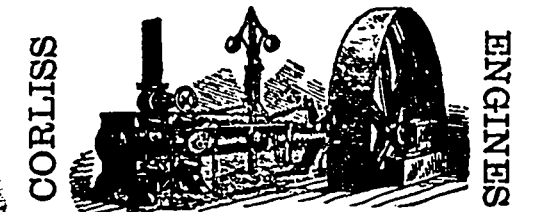
THOMPSON, SMITH & SON.



MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double 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.**

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 25,000 to 30,000 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 \$4 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 fierce, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an 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:

| | | | | | |
|--------|---------------|---------|---------------|---------|--------------------------|
| 8x 1/2 | } 7 in. hole. | 10x 1/2 | } 7 in. hole. | 12x 1/2 | } Holes, 7/8 and 1 inch. |
| 9x 1/2 | | 10x 3/4 | | 12x 3/4 | |
| 8x 3/4 | | 10x 1/2 | | 12x 1/2 | |
| | 10x 3/4 | 12x 3/4 | | | |
| | 10x 1/2 | 12x 1/2 | | | |
| | 10x 3/4 | 12x 3/4 | | | |

Probably more wheels 12x 1/2, 12x 3/4 and 12x 1/2 are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x 1/2. 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.