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NO. 19.

LUMBERMEN'S ASSOCIATIONS.

Failure in business does not always prove a man lacking in business ability, neither does the untimely termination of an organization conclusively establish the want of organizing power and energy in those who have been concerned in the association. Many a business man of fine abilities fails from excess of enterprise. He pushes his business beyond the limit of its endurance before he knows it; he fails because he attempts to do too much. This, we believe, was the cause of the failure of several of the lumbermen's associations to which the *Northwestern Lumberman* alludes. They were too comprehensive. To use an expressive vulgarism, "They bit off more than they could chew." Take the National Association of Lumbermen. There may have been some relations of the members to each other which it did not attempt to regulate, but we do not remember any. It was devoted mainly to the interests of the retail dealers, and had a patent, back-action, double open-and-shut device for preventing a member doing business anywhere except in his own bailiwick. This was chiefly directed at wholesale dealers, who were subject to be mulcted in a sum equal to the profits on the trade, which was to go to the dealers against whose prerogative they had sinned—the fine being collectable by a process which closely resembles boycotting, since that practice has been invented in Ireland. It amounted to a practical restraint of trade. If a wholesaler sold a bill of lumber to anyone not a dealer within the territory occupied or supposed to be occupied by a dealer, he was directly notified to walk up the captain's office and settle, or he was posted among the association as a man not entitled to their confidence. Theoretically, at least, all the members of the association agreed not to purchase lumber of him until he had shown for the prerogative of the retailer. It is not surprising that an association which proposed thus to interfere with the freedom of trade should fail. It gathered in the ducts of a large number of the retailers by its bewitching promises of promoting their interests and enabling them to corner the home market and unload at their own prices. But the promises it made to the ear were broken to the hope. It had bitten off more than it could chew. The wholesalers, after standing the boycotting a while, concluded, the National Association was a menace to their rights and interests, and they formed a counter-association. The National Association movement culminated and went to pieces because its foundation was rotten; it was organized for an illegitimate purpose, on unsound principles. The maintenance of such an organization is an impossibility, because it proposed an unnatural and unwarranted interference with the rights of trade.

As we do not think much of associations organized to determine where a man may sell his

goods or to whom he may dispose of them, so we have not a high opinion of combinations to determine what price he shall charge for them. They operate as a restraint of trade and subordinate energy and enterprise to indolent conservatism. Combinations to maintain the prices of commodities are not more justifiable than combinations to maintain or advance the price of labor. It is unquestionably of advantage to the trade that there be uniform grades of lumber, that the names of grades shall signify as nearly the same kind and quality of stock as the variable judgment of inspectors will allow, and to secure such a uniformity is legitimate work for an association. It may also be advantageous and justifiable that a uniform basis of prices be established, but the enforcement of any price list established by a combination is beyond the recognition of morality in trade. If the railroads or vessel men, or the workmen enter into combinations to enforce higher prices for transportation or labor, the irregularity of the procedure is recognized at once.

There is no association or combination of lumbermen on the Saginaw river; prices are maintained at a uniform rate without any such extraordinary contrivance. And there is no place where trade may not be safely left to the operation of the legitimate laws governing all trade.

Nevertheless, there is work for associations, and they will organize success when they will attend to those matters which lie within their proper sphere. An association may establish grades; compose price lists without attempting to enforce them; reform as many of the abuses its members suffer at the hands of railroads and other interests, as possible, without invading the rights of others; compile statistics, and disseminate among its members information regarding the condition and prospects of trade, and the best methods of manufacturing and handling the products. Such associations may safely attempt the same line as agricultural societies, but when they undertake to accomplish what trades unions and railroad pools are formed for, they may expect to be classed in the same category and break in pieces as often.—*Lumberman's Gazette.*

MESSRS. RATHBUN & SON manufacture yearly 62,740,000 ft. of lumber and ties, besides shingles, lath, doors, mouldings, sash, blinds, and other goods. They employ in all 1,500 men. They have this season brought 300,000 saw logs and 125,000 pieces of cedar, timber and floats down the Moira, Trent and Napanee rivers.

For a city the size of Winnipeg, property seems to be excessively dear. A lot having a frontage of 160 feet on Main street, with a depth of 264 and some buildings valued at about \$10,000, has been sold for \$110,000.

NOTES BY THE WAY.

SUNDERLAND.

The flourishing village, on the Toronto and Nipissing Railway, 53 miles from Toronto, is supplied with two planing mills. Mr. Moore's planing factory is a very complete establishment, not large, but *multum in parvo*. The machinery is so arranged, that all the woodwork required to finish a house from cellar to garret—with doors, sash, blinds, baynisters, chairs, tables, and bureaus, complete—is manufactured by Mr. Moore and his staff of assistants. Wooden rakes are also made by Mr. Moore in large quantities. There is also a circular saw for cutting small logs, of second growth wood, which is found to be best for rake, hoe, and fork handles. The motive power is supplied, by one of Doty's, Toronto, oscillating steam engines.

There are three saw mills in the neighborhood of Sunderland. Mr. A. McMillan's is near the railway station. It is driven by two engines, a portable 12 H.P. and a stationary 25 H.P. The portable engine is taken out after the summer sowing is over, and utilized for threshing grain. Mr. McMillan will cut this season about a million feet of lumber, including lath and shingles.

Mr. Joseph Ruddy's steam saw mill is about two miles south of Sunderland, near the railway. His stock will amount to over 250,000 feet of pine, besides some basswood.

The third saw mill is owned by Mr. James St. John, jr. It is situated about two miles west of the village. The season's cut will be about half a million feet of pine, and five hundred thousand shingles. Mr. St. John, fortunately, has come across a rare and valuable stick of curly-black ash. It is 36 feet long, 3 feet at the butt, round as a ball, and curly to the core. It will be a choice catch for some wholesale cabinet-maker or railway car builder.

WOODBIDGE

Being the headquarters of the manufacture of Mr. Abell's celebrated safety engines and threshing machines, the village of Woodbridge, sixteen miles from Toronto, via the Toronto, Grey & Bruce Railway, has attained considerable importance. Mr. Abell employs one hundred and forty men, and uses a large quantity of lumber in the manufacture of his threshing machines, as well as in covering the outside of the portable boilers to prevent radiation of heat. The factory is complete in all its branches, and possesses an hydraulic engine for boiler making, being the second in Canada of the kind. It performs the work of six men. It is Mr. Abell's intention to remove his Woodbridge establishment to Toronto. He has purchased seven acres of land adjacent to the Lunatic Asylum grounds, south of Queen street. Men are at work preparing 800,000 bricks for the building. The foundation will be of white limestone, from Owen Sound quarries. They are expected to be ready for

occupation in two years. Mr. Abell calculates to save \$7,000 per annum in freight by the removal to Toronto.

THE ADVANCE IN THE PRICE OF BUILDING MATERIAL.

The railroads have had the advantage of cheap iron for the past three years, and all our industries have had no reason to complain of the cost of material. With a rampant stock market, there has been no speculation up to this time or until very recently, in any of the leading products of the country. Cotton, corn and wheat have ruled low, and when labor was first being employed, it did not demand high figures. But it was evident to all business men that the plethora of money would find its way at length into general merchandise, and there is every evidence now of a steady enhancement in values, especially in manufactured articles, due to the increased cost of labor.

On June 11th the *Real Estate Record* gave the following advice to builders: "It would, we judge, be wise to take large contracts ahead for building material at their present rates. There is every prospect of an enhancement in values during the coming fall, for while consumption is enormous, supplies are light, and as the price of labor is rising in every department of trade, there is a fear of a large enhancement of values."

Those who heeded that warning have reason to congratulate themselves. Take the article of brick. In our market reports we have shown over and over again the dangerous condition of the brick market for buyers. The heavy rains and other causes have prevented the usual work in brick yards, and this occurring in connection with an extraordinary demand for building, has put the buyers of brick entirely at the mercy of those who sell them. This hint ought to be sufficient for all who are under obligations to complete buildings. The increase in the price of labor alone is sure to enhance the value of all the materials which go into the construction of a building. So serious is the brick question, that more than one large concern has put a stop to its work for the time being. Then, the scarcity of labor has led to most extraordinary demands for skilled working people.

As a matter of fact, there is too much building going on. We are overdoing a legitimate and necessary business. There is danger of loss to those who entered into contracts based upon the prices of labor and material which obtained six months ago. Land is rising in value, and the price of labor usually goes up when realty is in better demand. This reacts on all prices, and hence the prudent builder will make contracts for some time ahead.—*New York Real Estate Record.*

The bulk of the World's writing is done with steel pens. Esterbrook's can be procured from any stationer, and at wholesale from Brown Bros., Toronto.

AMONG THE GEORGIAN BAY MILLS.

A party consisting of H. H. Cook, and Robt. Jaffray of Toronto, Mr. McFarlane of the *Edinburg Scotman*, and representatives of the *Mail and Globe*, have been doing our timber country, and from the correspondence in the latter journal we cull the following as likely to prove interesting to our readers:—

THE MIDLAND SAW-MILL.

Our visit to the elevator, the wharfs and the saw-mill were made on Monday evening, when all was lighted up by sixteen electric lights. The saw-mill, which is one of the most extensive in the Province, is owned by the Canadian Lumber Company. This Company was formed about two years since, under the presidency of Mr. H. H. Cook, who handed over to it the extensive lumbering business he had then been carrying on for several years. The capital, a part of which is held in the Old Country, is \$1,000,000, one-half being preference stock, on which an annual dividend of ten per cent. must be paid before the other half million of stock can claim any share of the profits.

THE INTERIOR OF THE MILL.

As this mill is a fair specimen of the largest lumber mills in the country, a brief notice of it may serve to give an idea of how those great mills are carried on. There are two storeys, the second one on a level with the extensive platforms which, supported by trestle-work, extend in every direction over the yard. In the lower flat are the engines and various separate machines, or machinery connected with the sawing frames up-stairs. The engines are two in number—one of 120 horse-power and the other of 60.

SAWING UP THE LOGS.

Up-stairs, however, the whole process of sawing is carried on. From the boom along the water front the logs are shoved one by one into an alley of water penetrating the mill. Then by a steam crank and chains they are hoisted up to the second storey and flung rolling upon a sort of platform. At the further end of this is a long car upon which the log rolls, and is placed in a firm position by a wooden arm which comes up through the floor, gives the log a poke and a squeeze in what looks like a clumsily intelligent manner. The log car then moves against a pair of saws, which strip off from two opposite sides of the log the bark and rough wood. When the log has passed the saw it rolls upon a frame work bearing a series of small iron wheels or rollers, which facilitate the movement of the log towards the great sawing machine. A hook now seizes the timber, gives it a shove into its proper position, rolls it upon a long car which is moved slowly up endwise against a wide sawing machine containing a large number of parallel saws adjusted to any required thickness of board. Your correspondent saw a log about four feet thick go through the saw singly, but generally the small size of the logs admits of two or four going through the machine at once. On the other side of the machine the rough boards, such as come off the unsquared parts of the log, are taken to one side and sawn into lengths. On the other side the good boards are thrown upon a small movable platform suspended from a curved iron-way above. They are then swung upon a broad car which moves them up to another sawing machine, over which they pass and are cut into the required lengths, and their rough ends trimmed off. The now finished boards are either shoved down a flume into the lower storey, or out upon cars on the elevated railways, and carried away to the piles which fill up most of the yard.

WHAT IS DONE WITH THE RUBBISH.

Long, shallow boxes reach round the building, and a system of endless chains, attached to which are transverse pieces of wood, scrape all the sawdust, bark and refuse wood out of the building, and either into the boiler room or away over an elevated way into a gigantic furnace nearly a hundred feet high and twenty-eight feet in diameter. The furnace is a round stone tower, narrowing in its upper part into a broad smokestack. A great damper on the ground outside admits the air to beneath the half open flooring of the furnace. At an elevation of forty or fifty feet is an opening through which the endless chain carries the refuse of the mill, and throws it upon an inclined sheet of iron, down which the stuff slides till it falls into the middle of the flames below. The constant falling of

heavy boards upon this sheet of iron causes an incessant rumbling noise like the sheet iron thunder of a theatre.

THE HEAT OF THE FURNACE.

Through the openings in the side of this great furnace there stream at night great beams of red light, which produce a weird effect as they fall upon the human figures moving around in the darkness. Inside a circular pit of from twenty-eight feet in diameter and ten or twelve deep is a glowing mass of coal, above which the flames roar and curl, and reach upward fiery tongues as if to lick down the pine fragments falling from the iron slide above.

The enormous destruction of refuse by this furnace at first sight may appear reckless, but in the lumber districts this refuse is worse than a drug, and is burned simply to get rid of it. Throwing it into the water would prove an intolerable nuisance and eyesore along these beautiful shores, and besides would poison the fish.

BRIGHT AS DAY.

We visited the mills at night, and found them lighted by eight Brush electric lights. The whole place seemed as bright as noonday. Even in the shadow the brightness was diffused as is a solar light in the shadows of daytime. Outside, away above the elevated platform, the lights now poured their radiance down upon the mills and trestle-works and acres of lumber piles and out on the tens of thousands of logs floating in the booms in the harbour. It was proposed to concentrate the outside lights in one or two high towers, so as to more effectively light up the village and harbour.

SOME FACTS ABOUT THE MILL.

The mill has a capacity of twenty-five million feet per season, and it is expected that eighteen million feet will be produced this year. There are also thirty thousand laths turned out per diem from small pieces of scantling which cannot be sold for lumber. Three hundred men are employed at the mill during the time of navigation. In winter most of these men betake themselves to the woods of the Muskoka and other rivers flowing into Georgian Bay. In these primeval forests the Canadian Lumber Company employs one thousand men all winter. The company has also built a mill at the mouth of the Wye, two miles south-east of Midland. This mill is smaller than the Midland one, having a capacity of only six million feet per annum. Midland has two mills besides that of the Lumber Company. They are owned by Messrs. Cheer Brothers and John Dollar. The two mills together are capable of producing eight million feet per annum.

WHERE THE LOGS COME FROM.

The logs for the mills come from far away in the interior. They are hauled in winter to the streams, and piled along the ice. Every log has upon it the mark of the lumbering firm to which it belongs. These marks are patented, and heavy liabilities are placed upon any one who interferes with them. In the spring the most of the logs are carried down the rivers to the bay, while a special company brings down all the others later, carefully distinguishing as to ownership. The grand collecting booms of the Canadian Company are at Muskwash, eighteen miles from Midland. Here booms of various sizes are made up and towed by a tug belonging to the company to the mills at Midland and at the Wye. Then the booms are floated in behind the long boom that stretches behind the shore with a width of from fifty to three hundred feet.

It may be necessary for the information of the uninitiated to explain that, although square timber is put up in rafts, round logs are not, but are floated in booms. These booms consist of logs connected by chains running through holes in their ends. A boom may thus be constructed for floating logs along the lake, or for confining them in a short strip against the shore.

AN HISTORICAL LOCALITY.

Near this locality are the ruins of an old French fort said to have been built over 250 years ago, but which was abandoned after the garrison had been massacred by the Indians. The masonry is overgrown with trees, and right upon the walls are standing stumps two or three feet in thickness. Three miles further inland an Indian pit containing the skeletons of

three thousand of the old aboriginals was discovered a couple of years ago. At the Wye in times long past the Hudson Bay Company maintained a post, of which scarcely a vestige is now remaining. At Victoria Harbor, a few miles further south-east, we found the extensive mills of Mr. Richard Powers. These mills produce 15,000,000 feet of lumber annually. At Sturgeon Bay, a little eastward, are two mills of a capacity of about four millions each.

A MODEL SAWMILL.

At Waubusheno we stopped for over half an hour to see the immense mill of the Georgian Bay Lumber Company. The village is a model of taste and neatness. The streets are tidy, and the houses, which are of board, are painted white, and surrounded by white picket fences. Gardens and croquet lawns abound and every evidence of comfort. The village is owned by the Company, which charges no rent to the occupants of the houses, all of whom are employees at the mill. These rent-free tenants are, however, expected to keep their places in good order, under penalty of ejection in case of negligence. No liquor is allowed to be sold or brought into the village, a regulation which the Company has enforced with excellent results. The appearance of the mill premises is in keeping with that of the village. The mill buildings have painted sides and roofs, and even the trestlework which supports the miles of elevated railway is painted white. The elevated tracks extend along the piles of timber to a distance in all of several miles. The manager, Mr. Penkham, a former resident of Toronto, and who proves himself a most efficient director of the mills, informs us that the railway siding measured between seven and eight miles. The mill's interior sufficiently resembles the Midland mill to make a description superfluous. The motive power is derived from an engine of 350 horse-power. The logs are hauled up from the water into the mill on inclined planes, and keep two endless processions all day long. An endless chain with teeth is used on one of the machines, while the other works with toothed wheels. Adjoining the mills are the warehouse, where supplies are stored, and a smaller building in which the tug boat lies when not in use. The mill has a capacity of about fifteen millions, and employs about one hundred men. The Company has another mill at the Severn, a few miles distant.

WANTED, A SOFT PLACE.

Inquiries come to us almost every week, "wanted a position," "would like to superintend a mill or get into a position where there is a good salary to be had, not very much work to do; am a graduate of— College, can refer to the Hon. so-and-so, the Rev. so-and-so, etc." There are about two hundred thousand men in the United States, if not a good many more, who are all looking for soft places, and have been looking for soft places ever since they were big enough to keep out of the reach of their mother's slipper, and the very fact of this continued hunt for soft places has cost the American people millions upon millions of dollars. Soft places are not to be had for the asking, and the general construction of this slang phrase is a place with a fat salary and not much work or responsibility. Just the sort of men are always looking for these places that are neither fitted by nature, by culture, qualification or disposition to properly fill them.

The majority of men are satisfied with a salary of from one to three thousand dollars. Sometimes men, with special qualifications, reach five, six or ten thousand in private life or in private business. There are a great many men to-day drawing salaries of from five to twenty-five or thirty thousand dollars who are no more fitted for the position they occupy than an uneducated boot-black is for professor of languages. They are put into these positions by the influence of their friends, so that their clique can control the railroad, manufacturing corporation, or whatever the position may be; and the fact of it is, in a position like this, there is no sort of competition, no chance of merited promotion, and, as a rule, the men who hold these positions would be very expensive at \$10 per year, so far as their personal qualifications and worth go. . . .

What we want to-day are men who are fitted by their experience and contact with business to

do business, and to manage business. A man who never saw a cotton mill, no matter how smart he is, is unfit to have the management of one. The man who has not had actual experience with a railroad, can not run it, successfully at least, and it does not make any difference whose son-in-law he is, or how much he has learned at some college. We prefer to risk our life on a road managed by a man who has been brought up in the business, and knows what he is doing; and the tendency among railroad managers, to-day, is to seek out this class of men and give them the control of roads, because the man who can run the train himself can teach others how to do it, and he knows also whether they are doing as they are instructed or not.

The man who can erect the machinery in a cotton mill, who can figure his own drafts, twists, changes, etc., is the very man to know whether the people who are working under his direction are doing their work as they should do it or not.

We take the ground that it is no disgrace to a man to have a collegiate education. The majority of men form habits during their attendance upon the average college which are not any particular benefit to them all through life, and the simple fact that a man has been through college, and has graduated, is no sort of a warrant to a cotton spinner, a machine maker, a railroad or steamship manager, that that man is any more fit to take practical charge of either one of these matters than as though he had never seen college, except in so much as he may be able to write or figure better. The certainties are that he will not know as much or as well about doing the routine work required as some man who has been for several years employed in a line of business which gives him familiarity with what he is in daily contact with. And other things being taken as equal, we would prefer, if we were to choose editorial assistants, to take from the ranks men who were familiar with the manipulations of machinery, men who knew the difference between a wheel-barrow and a front roll, a monkey-wrench and a water-wheel, than to take the best educated collegian who knew only his Greek and Latin—and perhaps very indifferently at that—for the man who had been several years working with his hands and his brains, has formed habits that will stick to him through life; he is better able to cope with difficulties, he is less liable to err in judgment, and his judgment is apt to be keener and clearer than the man who has, up to the time of his leaving college, depended entirely upon somebody else for every thing.

Capitalists and business men are getting to take this view of matters, and within the last two years men who have been expecting soft places or desirable positions, have had to stand back and see men who have been in the work promoted. As a matter of fact, the last seven or eight years have taught capitalists and stockholders that we have been on the wrong track. They have switched off; they are running more upon common-sense principles than ever before, and the man who requires a soft place hereafter will have to work for it, and not only make himself fit to be promoted, but fit to hold the place after he has been put into it.

Men who have never been obliged to depend upon themselves, are not men to be trusted with the working out of important problems. Men who have been compelled to earn their own living and to get their education by such means as good books and papers, out of working hours, not only learn faster, but what they learn they are sure of. Seemingly soft places are not always so soft as they appear to be; and if a man is capable of holding a position, the surest way for him to get it is to attend strictly whatever he has in hand, and he may be assured that his time will come from some source or other, and it will most likely come when he least expects it.—*Boston Journal of Commerce.*

At the annual meeting of the stockholders of the Longford Lumber Co. the other day, Mr. Wm. Thompson was appointed President, in the place of his father lately deceased, and Mr. Maxwell Hall, formerly of Peterboro, Secretary.

MR. GEORGE STATHEN, of Peterborough, asks any mill-owner using leather belting to try Jewell's (Hartford, Conn.) oak tanned; from 4 to 12 inch in stock. No matter how small the order. Satisfaction guaranteed.

THE SCOTTISH PINE.

Erect he stands, 'mid scenes so wild,
On Nature's bulwarks grey;
His plume wave in the northern breeze,
The shadows round him play.

The blacken fern and blackberry
Spring up about his feet,
While heath-crowned rocks, or hoary crags,
O'er head oft nearly meet.

The storms that blow so fierce and strong,
Round many a summit bare,
Sweep down upon him. Yet he stands
Unvanquished monarch there.

O'er many a glen his sceptre sways;
Ls no Rannock, wild Braemar,
The banks of Spey, and crooked Glass,
Lochiel, Glenroy, Cromar.

Although he loves his Highland hills,
'Mong purple heath to stand,
Yet we oft meet his stalwart form
Far from his native land.

Give him the welcome he deserves,
He's always brave and true;
Where others fall, victorious he,
Shall save his bonnet blue.

A DURABLE WHITEWASH.

To the Editor of the Scientific American.

In regard to the query of C.B.C., in your last number, in relation to whitewashing, I believe I have tried every known wash. The so-called White House stucco wash is no better than any ordinary whitewash. No brick wall that ever is intended to be painted should be whitewashed. All washes absorb water, and in damp weather lose their color.

The best wash that I have ever heard of is made as follows: For one barrel of color wash—half a bushel white lime, 3 pecks hydraulic cement, 10 pounds of umber, 10 pounds ocher, 1 pound Venetian red, quarter pound lamp-black.

Slake the lime; cut the lampblack with vinegar; mix well together; add the cement, and fill the barrel with water. Let it stand twelve hours before using, and stir frequently while putting it on.

This is not white, but of a light stone color, without the unpleasant glare of white. The color may be changed by adding more or less of the colors named, or other colors. This wash covers well, needing only one coat, and is superior to anything known, excepting oil paint.

I have known a rough board barn washed with this to look well for five years, and even longer, without renewing.

The cement hardens, but on a rough surface will not scale.

Cincinnati, Ohio, July, 1881. T. G.

Population and Temperature.

A census bulletin shows the distribution of population in the United States in accordance with temperature. Arranging it in groups by 5 degrees of mean annual temperature, it is found that no less than 98 per cent. of the total population live between lines marked by 40 and 70 degrees Fah. The cotton region is above 55 degrees, sugar and rice above 70 degrees, and tobacco between 50 degrees and 60 degrees. The prairie region of the Mississippi valley almost entirely below 55 degrees, while the great wheat region of Minnesota and Dakota is mainly below 50 degrees of mean annual temperature. The highest maximum temperature is in southwestern Arizona and southeastern California. Of the entire population, 89 per cent. are found in the classes which have maximum temperature between 95 degrees and 105 degrees. In considering minimum temperature, it is seen that 95 per cent. of the inhabitants of the United States live between the lines of 35 degrees below zero and 10 degrees above, for extreme cold.

From this it is evident how population tends to increase in regions rather north of medium temperature; or, more correctly speaking, between isotherms of low degree.

THE MOST PLEASANT, rapid, reliable and effectual remedy yet discovered for diarrhoea, dysentery, cholera morbus, cholera infantum, and all summer complaints, is Dr. Fowler's Extract of Wild Strawberry. It is unsurpassed as a reliable specific in the above diseases, it is well known as a great remedial agent, and is more highly valued the longer it is known. Travellers and tourists should carry a supply in their haversack. For sale by all dealers in Medicines.

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Is noted for its superior home-like comforts—a well kept table, equalling the best hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground floor. Walton Street, Port Hope. b20 W.M. MACHUG, Proprietor.

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This hotel, which is unrivalled for size, style and locality in Quebec, is open throughout the year for pleasure and business travel. b13

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HENRY FRASER proprietor, (successor to Douglas Brown) Mr Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Douglas Brown, in the Village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties en route to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good stabling and attentive hostler. Free bus to and from trains and steamboats. b20

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That Steam Saw Mill, at the Village of Cumberland, formerly owned by BURTON & WATSON, with all the Machinery, and also Wharf, Store-house, and several Cottages on the property. Apply to the Union Bank of Lower Canada. b219 M. A. ANDERSON, Manager.

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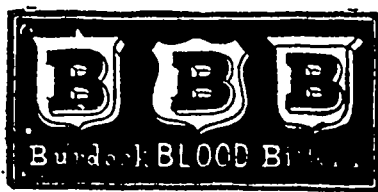
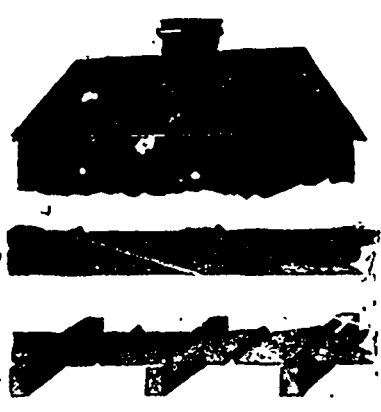
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The undersigned keeps Canoes suitable for LUMBERMEN, SPORTSMEN and others constantly on hand. Price List on application.

WILLIAM ENGLISH

1434 PETERBOROUGH, ONT.

DESERONTO.

A GREAT WOOD CENTRE—RATHBUN & SON'S EXTENSIVE OPERATIONS—WHAT ENTERPRIZERS AND ENERGY HAVE DONE.

About the year 1848 H. B. Rathbun, Esq., arrived in those parts, seeking a site to establish himself in the lumbering business. Picton, Napanee, Belleville and other points were all approached in turn, but none would offer a suitable site or hold out sufficient inducements to secure the location of his business, and he consequently settled at Culverton's. Facts have since proven that in giving Mr. R. the cold shoulder, is just when the other corporations missed their golden opportunity.

ITS GROWTH.

The original saw mill, which was of a primitive character, was soon found to be entirely inadequate for the requirements of their business, and was therefore replaced by one of a more approved pattern, and supplied with better machinery. In the year 1872 this mill with the other shops which had been added, together with the lumber surrounding them, was entirely consumed by fire, but the buildings and machinery were immediately replaced by a more substantial structure, fitted up with all the economical and labor-saving machinery known to the business.

THE BIG MILL.

as it at present stands, is built of stone, covered with an iron roof, and with the excellent facilities for avoiding and overcoming fire, is as safe from the destructive element as it is possible to make it. The size of the main building is 173x137 feet. The sawing floor is 145 feet long by 90 feet wide. The sawing machinery consists of 165 gang saws, and 38 small circulars, for edging, making lath, etc. The machinery for handling the logs is the most effective and economical in time and labor known to the business, while the arrangements for sorting and carrying off the manufactured lumber and the refuse is complete. An elevated railway was constructed a little over a year ago for conveying the edgings, etc., to the adjacent wharves for convenient shipment to the steamers which use them as fuel, and for shipment to other places where large quantities are consumed as firewood. The product of the mill for the year 1881 will be at least 28,000,000 feet of pine lumber, besides lath, barrel heads and short lumber, running by day only. Not a single inch of lumber which is adapted to any use is allowed to go to waste, and even the sawdust is henceforth to be utilized and turned into a valuable commodity which will give it a market value.

DRY KILNS.

South of the mill are five large dry kilns for the quick seasoning of lumber. The bay, in the immediate vicinity of the mill, furnishes ample storage room for the large quantity of logs required to keep the mills in operation during the season.

BLACKSMITH SHOP AND BOILER ROOM.

Adjoining the "big mill" and to the east of it is the blacksmith shop and boiler rooms. These are filled with the best machinery, such as steam hammers, &c., for the building of the largest boilers and other machinery, and making necessary repairs. A large staff of skilled mechanics are employed.

MACHINE SHOP.

If there is one department in which Messrs. Rathbun endeavor to excel, it is in their machinery department. No trouble or expense is counted loss in securing the services of the most skilled artisans, to perfect not only the machinery of their own establishment, but of the steam vessels which are entrusted to their workmanship. Some of the very best marine engines employed on the bay and lake service are from this establishment, and the satisfaction which they are giving is the best proof of their excellence. They are at present engaged upon a large double engine to be placed in a freight and passenger propeller now on the ways, and to be employed by the Deseronto Navigation Company, between Oswego and the bay ports. Repairs are promptly executed in this department, and already the firm has established a wide reputation among marine men.

PLANING MILL AND SASH AND DOOR FACTORY.

To the north of the machine shop is the planing mill and sash and door factory. This is an industry which has been in operation only a

short time, but it promises soon to rival even the big mill in the range of its products, and its importance to the future of this place. A trade in this line has been opened up with Great Britain, Australia, New Zealand, and other countries, and as the foreign demand is practically unlimited and is constantly increasing, the possibilities of this trade cannot be estimated. Shipments are made weekly to all parts of the globe, and the facilities for production have to be constantly increased to meet the demand. The following is the product of this mill during 1880:—

Doors	25,000
Turned Maple Rods	60,000 pieces
Chair Stretchers	100,000 "
Mouldings	600,000 feet
Broom Handles	75,000
Window Sash	7,000
Blinds	4,500
Matched Flooring	3,000,000 feet

This year they will turn out lath, 10,000,000; doors, 40,000; besides sash, mouldings, &c. A large part of the above was exported to European countries and the antipodes.

To the east of the collection of mills is located the

SHIP YARD

where on an average about forty men are constantly employed, and a large number of steam and sailing vessels have been constructed during the past few years. Perhaps half of the bay fleet now employed in the bay and lake trade is from this yard, and the industry is increasing year by year. A large freight and passenger propeller is now on the way, and it is expected she will be completed for business some time in August, to be ready for the fall trade. An immense repairing business is done at this yard.

THE CEDAR MILL

is located just east of the ship yard. Unlike the "big mill" this is kept in operation throughout the year, and the amount of manufactured material turned out is enormous. For the season of 1881, they expect to turn out 12,000,000 feet of ties and lumber.

Besides the above the Messrs. Rathbun & Son have contracts for the delivery of cedar ties and lumber from outside mills amounting to 10,000,000 feet.

During the year 1881 they will manufacture 20,000,000 shingles.

OTHER MILLS.

Besides the above mills Messrs. Rathbun & Son own the Eagle Mills at Ferry Point, and the Walbridge at Shannonville is operated for them. At the former they will saw 12,000,000 feet of lumber this year, and at the latter 75,000 feet. The magnitude of all the figures—the product of Messrs. Rathbun's Mills, can be scarcely comprehended even by those who are accustomed to lumbering operations on a large scale, for instance we have the

Big Mill	28,000,000
Cedar Mill, ties and lumber	12,000,000
Eagle Mill	12,000,000
Walbridge's Mill	750,000
Contract for ties and lumber	10,000,000

Making a grand total of 62,750,000 feet of lumber and ties, besides the lath, shingles, doors, sash, blinds, moulding and other goods which are in constant course of manufacture. In their mills at Deseronto they now employ about 500 men, and in all their operations about 1,500 hands on the average are kept constantly employed. The operations of the firm are amazing to the novice, and an inspection of the mills and factories is always interesting. We have several times had the pleasure of visiting the mills, and have always found both proprietors and employees willing, courteous and obliging to visitors, and those who can make it convenient to visit the village and make a tour of inspection will be well repaid for their trouble.

We almost forgot to mention that the logs that will be brought down the Napanee, Moira and Trent waters this year by the firm will aggregate 300,000 pieces, besides 125,000 pieces of cedar, timber and floats.

THE STABLES.

An important adjunct to the other interests of the place is the stables of the firm. These are located just east of the road and are the most extensive and complete in their equipment of any to be found in the province. The stable is 40x140 feet—two stories high, with horse fork and other apparatus for hoisting feed, and is

provided with granary, root collar, harness room, straw cutter, etc. About eighty horses and mules are kept stabled here, and from an inspection of the stock we know that the firm has some of the finest draft horses in the district. They also keep some good road stock. The animals are kept in excellent condition.

THE GRIST MILL.

This is Messrs. Rathbun and Son's latest enterprise, and it is one of greatest importance. The mill is situated in the eastern portion of the village Deseronto, and is a substantial stone structure, 45x70 feet, four stories in height the stories ranging from twelve to sixteen feet high. At the north end of the building is the engine-room, also of stone, 40x40 feet. To the south or rear of the mill, on the water front is the elevator, entirely sheeted with iron, 60x60 feet, forty-five feet high, and surrounded by a cupola twenty feet high. This elevator has a storage capacity of 45,000 bushels, and the mill is supplied with wheat from it by means of an iron screw conveyor, which passes into the mill in the third storey. About sixty-five feet west of the mill is a bran and flour warehouse, 40x60 feet, forty-five feet high. The upper portion is used for the storage of bran, and has a capacity of 400 tons, while the lower portion is intended for a flour warehouse, having the capacity for from 1800 to 2,000 barrels. This mill operates on a system which is entirely new in the Dominion at least, and very few such mills are in operation on this continent. Instead of employing stones in grinding, the kernel is crushed, by means of a series of iron rollers revolving at great speed, and which gradually reduce the grain to flour of the finest and purest grade. This mill has twelve sets of these rolls, and is regarded by milling experts as one of the most complete on the continent. The sample of flour turned out in every day work equals the finest brands manufactured, and is, in every way, of superior quality. The mill is now turning out daily an average of 125 barrels. In an article upon this mill the *Milling World* says:—

"The mill, in the fullest sense of the word, is a model, and reflects credit upon its proprietors for the liberal spirit evinced in its fitting up, and upon its designer for the perfect manner in which every portion of the machinery performs its allotted functions. The Deseronto mills are unquestionably far in advance of home competition. The Messrs. Rathbun are to be congratulated upon the ownership of the finest mills in Canada."

The location of these mills in our midst is an advantage which should be appreciated by both producers and consumers. The quality of flour produced is unquestionably the finest and best in the market. Another advantage is that farmers taking their grists to the mill will immediately have the proper amount of flour weighed out to them, and may return to their homes without delay.

THE GRAIN ELEVATOR

adjoining the grist mill is also a public accommodation which the people of this district are not slow to appreciate, as it increases competition for their staples, and enables them to get full value for their productions.

THE COAL TRADE.

Messrs. Rathbun & Son engage largely in the coal trade and have coal sheds at Deseronto, Belleville, Napanee, Kingston, Gananoque and other points. Last year they handled about 20,000 tons of coal, and the prospects are they will handle a much larger amount this year.

THE DOCKS.

Nowhere are the improvements which Messrs. Rathbun & Son have effected in Deseronto more noticeable than in the magnificent docks and wharves which they have constructed. These now reach over a mile and a half in length, and are of the most substantial character, having been built for permanency and not for temporary accommodation. These are constantly filled with huge piles of lumber, and it is a rare thing indeed for a visitor to call at the village and fail to find vessels loading lumber therefrom for foreign parts. The steamboat landing and storeroom is the principal point of attraction, but our space will not admit of a detailed description of this. Suffice it to say that it is one of the most convenient and com-

modious on the Bay. They have also extensive docks at Belleville, Napanee, Kingston, Gananoque and other places. Directly opposite the steamboat wharf is an immense coal shed, of very substantial construction,

THE BIG STORE.

Messrs. Rathbun & Son also the proprietors of a large store in the village, through which they supply their employees and the public with everything from a needle to an anchor.

BANKING.

The firm has also within the past few months added banking to their other business, which is found to be a great accommodation to the people of the village.

THE OFFICE.

Their offices are at present located in a two storey building between the big mill and the steamboat wharf, but we are informed that the firm contemplate erecting, at no distant date, a large and commodious suite of offices possessed of more conveniences than the present business quarters.

Every department in their mills is connected with Mr. Rathbun's private office by means of a Bell telephone, so that orders and directions may be given promptly by word of mouth.

DESERONTO NAVIGATION COMPANY.

The business of the firm of Messrs. Rathbun & Son is of itself sufficient to keep a whole fleet of steam and sailing vessels employed. Until very recently, nearly the whole of their immense transportation business was done by steamers owned by the firm. Last year, however, a new company styled the "Deseronto Navigation Company," was organized, composed principally of Messrs. Rathbun & Sons and their employees, and the principal steamers are now under control of the company. The principal of these are the steamers *Armenia*, between Deseronto and Ogdensburg, tri-weekly; the *Deseronto*, between Picton and Trenton, daily; the *Pilgrim*, between Deseronto and Napanee, and the steam barge *Norman*. The Company has another large propeller on the way which, it is expected, will be completed in August. She is intended for passengers and freight, and will be run between Oswego and Bay ports. The engines have been constructed in Messrs. Rathbun & Son's machine shops, and are nearly ready to be set up. R. C. Carter, Esq., is manager of the Company, and the steamers being swift and commodious, and so placed that they make sure and convenient connections, they are fast becoming popular with the travelling public. The route of the *Armenia*, passing through the Thousand Islands by daylight, both going and returning, is particularly pleasant. F. S. Rathbun, Esq., is Secretary-Treasurer of the Company.

THE FARM

Messrs. Rathbun & Son have, within the past two or three years, added a magnificent farm to the other industries. The farm is located immediately north of the village, and contains two hundred and thirty acres of the very best arable land to be found in this favored agricultural district. An experienced manager has been engaged, and already the transformation that has taken place is amazing to those who have been content to spend their lives plodding along on the old system. Messrs. Rathbun & Son have undertaken to test the value of scientific farming in Canada. They have some excellent thoroughbred stock, and in every respect the farming operations are carried on in the most approved principle. It will not take many years for Messrs. Rathbun & Son to make their farm the model of the Bay district, if not the Province. Like every other department of their business, the aim is to make the farm self-sustaining, and we are assured this object will not be lost sight of in its management, as is too often the case in farming on scientific principles.

RAILWAY CONNECTION.

Until now Deseronto has depended entirely upon water communication for their intercourse with the outside world, but it has been a fact patent to all that this state of affairs would not be long tolerated. Last year the village granted a handsome bonus to secure connection with the Grand Trunk Railway, and with the promptness which marks all their enterprises, the contract for grading has already been given out, the ties are upon the route, and in a few weeks—two or

three months at farthest—the citizens will hear the snort of the iron horse entering their village. The railway is to be furnished with steel rails, and will be in every respect a first-class road.—Napanee Beaver.

THE TREATMENT OF SEA SICKNESS.

The Tribune has been making inquiries among prominent physicians touching the cause and cure of sea sickness:

"What advice in regard to sea sickness would you give a patient going to sea?" was asked of Dr. Alonzo Clark.

"I should tell him to take a wash basin into his stateroom," responded Dr. Clark, cheerfully. "Then there is no remedy?"

"One remedy, yes—to stay ashore." Dr. Clark continued: "I think people will be sea sick until the millennium comes. The disorder is in a way a puzzle to doctors. It is caused by a disordered action in the brain and nervous system, and the stomach feels it as a part supplied with nerves. There is no perceptible change in the nerve tissue, but a nerve disturbance, and probably all the brain is affected. It is unaccountable that the practice of going to sea cures the disorder, although this may be owing to a circulatory accommodation. I have never made use of the various remedies suggested. Sea-sickness is modified by a low diet, and if health is much depressed the patient should keep his bed. Food should be taken as constantly as possible, and the best form is soup with toasted crackers. Any alcoholic drink will soothe some stomachs. The supposed benefit to be derived from sea-sickness amounts to very little, except, perhaps, in the case of large feeders. Of course, land sickness, caused by riding backward and in railway cars, is practically the same as sea-sickness. An instance has been related of a woman cured by wearing a sheet of paper over her chest, which illustrates the power of faith."

Dr. Geo. M. Beard said: "A year ago there was no disease of which so little was known and which was so incurable as sea-sickness; now there is no disease of which so much is known and which is so perfectly curable. It is a functional disease of the central nervous system, mainly of the brain, but sometimes also of the spinal cord, and comes from purely mechanical and physical causes, being a result of a series of mild concussions. No more benefit can be derived from it than from an attack of typhoid fever. Infancy and old age are least affected by it, and it is most frequent and severe with the nervous and sensitive. In some cases there is simply congestion of the brain. The chief symptoms are headache, backache, nausea, vomiting, pain in the eyes, mental depression, neuralgic pains, sleeplessness, and nervous exhaustion. Dr. F. D. Lento, of Florida, first suggested the use of bromide of potassium as a preventive of sea-sickness in voyages between the North and South, and it was used with good results. This had also been recommended by Dr. Parker, who carefully studied the subject. My experience had led to my developing this treatment for long voyages and suggesting bromide of sodium in large doses instead of bromide of potassium. The former is less irritating to the stomach and contains more bromine than the latter, but when not procurable bromide of potassium may be used. The patient should take thirty, sixty, or ninety grain doses of bromide of sodium three times a day a few days before embarking and keep it up at sea until the danger seems to be past. The result aimed at is a mild bromination of the central nervous system, rendering it less susceptible to the disturbances caused by the movements of the ship. There is a great difference in people about the effect, and the great point is to know when to stop taking it, avoiding an excess, and not to take too little. A few people have an idiosyncrasy against bromide, but there is little or no danger from its use if patients will carefully watch for the sleepiness and indisposition for exercise which are the symptoms of mild bromination. I have known of but one failure from the proper use of bromides, and I have here several letters from persons who have crossed safely by their use, although always sick before. Of course the drug should be taken intelligently and under competent directions, as there is a great difference in different people, and every

case ought to be studied separately so far as possible."

"What is sea-sickness?" was asked of Dr. Wm. A. Hammond.

"Well, I should call it a disorder of the nervous system."

"Is there any remedy?"

"I can't lay down rules for other people, but I can tell what I have found beneficial in my own case, and that is ten or fifteen drops of chloroform on lump sugar, and the use of bromide of potassium."

Overworking the Undeveloped Brain.

"Overwork," properly so-called, can only occur when the organ upon which the stress of the labor falls is as yet immature, and, therefore, in process of development. When an organ has reached the maturity of its growth in can only work up to the level of its capacity or faculty for work. Fatigue may produce exhaustion, but that exhaustion will come soon enough to save the organ. Repeated "efforts" may, under abnormal conditions, follow each other too rapidly to allow of recuperation in the intervals of actual exertion, and as the starting point will, in each successive instance, be lower than the previous state, there may be a gradual abatement; but even this process should not seriously injure a healthy and well developed organ. In short, a great deal of nonsense has been said and written about the "overwork" of mature brains, and there are grounds for believing that an excuse has been sought for idleness, or indulgence in a dissipated habit, in the popular outcry on this subject, which awhile ago attracted much attention. Nevertheless there can be no room to question the extreme peril of "overwork" to growing children and youths with undeveloped brains.

The excessive use of an immature organ arrests its development by diverting the energy which should be appropriated to its growth, and consuming it in work. What happens to horses which are allowed to run races too early, happens to boys and girls who are overworked at school. The competitive system as applied to youths has produced a most ruinous effect on the mental constitution which this generation has to hand down to the next, and particularly the next but one ensuing. School work should be purely and exclusively directed to development. "Cramming" the young for examination purposes [could] ledge students at this time of year take heed.—Ed.] is like compelling an infant in arms to sit up before the muscles of its back are strong enough to support it in the upright position, or to sustain the weight of its body on its legs by standing while as yet the limbs are unable to bear the burden imposed upon them. A crooked spine or weak or contorted legs is the inevitable penalty of such folly. Another blunder is committed when one of the organs of the body—to wit, the brain—is worked at the expense of the other parts of the organism, in face of the fact that the measure of general health is proportioned to the integrity of development, and the functional activity of the body as a whole in the harmony of its component systems. No one organ can be developed at the expense of the rest without a corresponding weakening of the whole.—Lancet.

A Wood-Splitting Machine.

A novelty in mechanics is a wood-splitting machine, which E. W. Peck has used near Cambridgeburgh, Vt. It acts exactly upon the guilotine principle. An enormous axe, weighing with its fixtures 200 pounds, runs up and down between two uprights, and is controlled by a pair of levers. As the section of a log drops from the buzz saw, it rolls down an incline to the splitter. Here a workman places it under the axe, which, descending, splits it with incredible ease and despatch. The toughest and knottiest "old settlers," which it would take a man half a week to split with an ordinary axe, are disposed of in a second. The rapidity with which it works may be imagined from the fact that it can split wood as fast as it can be sawed in a mill. It does as much work in a given time as twenty men can accomplish.

According to the Louisville Courier-Journal, a good deal of the black walnut in Kentucky is utilized in fence rails.



Department of the Interior,

OTTAWA, 25th May, 1881.

WHEREAS circumstances has rendered it expedient to effect certain changes in the policy of the Government respecting the administration of Dominion lands, public notice is hereby given:—

- 1. The Regulations of the 14th October, 1879, were rescinded by order of His Excellency the Governor General in Council, on the 20th day of May instant, and the following Regulations for the disposal of agricultural lands substituted therefor:
2. The even-numbered sections within the Canadian Pacific Railway Belt—that is to say, lying within 24 miles on each side of the line of the said Railway, excepting those which may be required for wood lots in connection with settlers on prairie lands within the said belt, or which may be otherwise specially dealt with by the Governor in Council, shall be held exclusively for homesteads and pre-emptions. The odd-numbered sections within the said belt are Canadian Pacific Railway Lands, and can only be acquired from the Company.
3. The pre-emptions entered within the said belt of 24 miles on each side of the Canadian Pacific Railway, up to and including the 31st day of December next, shall be disposed of at the rate of \$2.50 per acre; four-tenths of the purchase money, with interest on the latter at the rate of six per cent. per annum, to be paid at the end of three years from the date of entry, the remainder to be paid in six equal instalments annually from and after the said date, with interest at the rate above mentioned on such portions of the purchase money as may from time to time remain unpaid, to be paid with each instalment.
4. From and after the 31st day of December next, the price shall remain the same—that is to say, \$2.50 per acre—for pre-emptions within the said belt, or within the corresponding belt of any branch line of the said Railway, but shall be paid in one sum at the end of three years, or at such earlier period as the claimant may have acquired a title to his homestead quarter-section.
5. Dominion Lands, the property of the Government, within 24 miles of any projected line of railway recognized by the Minister of Railways, and of which he has given notice in the Official Gazette as being a projected line of railway, shall be sold, with as to price and terms, as follows:—The pre-emptions shall be sold at the same price and on the same terms as fixed in the next preceding paragraph, and the odd-numbered sections shall be sold at \$2.50 per acre, payable in cash.
6. In all townships open for sale and settlement within Manitoba or the North-West Territories, outside of the Canadian Pacific Railway Belt, the even-numbered sections, except in the cases provided for in clause two of these regulations, shall be held exclusively for homestead and pre-emption, and the odd-numbered sections for sale as public lands.
7. The lands described as public lands shall be sold at the uniform price of \$2 per acre, excepting in special cases where the Minister of the Interior, under the provisions of section 4 of the Amendment to the Dominion Lands Act passed at the last Session of Parliament, may deem it expedient to withdraw certain farming lands from ordinary sale and settlement, and put them up for sale at public auction to the highest bidder, in which event such lands shall be put up at a special price of \$2 per acre.
8. Pre-emption outside of the Canadian Pacific Railway Belt shall be sold at the uniform price of \$2 per acre, to be paid in one sum at the end of three years from the date of entry, or at such earlier period as the claimant may acquire a title to his homestead quarter-section.
9. Exceptions shall be made to the provisions of clause 7, in so far as relates to lands in the Province of Manitoba or the North-West Territories, lying to the north of the belt containing the Pacific Railway lands, wherein a person being an actual settler on an odd-numbered section shall have the privilege of purchasing to the extent of 320 acres of such section, but no more, at the price of \$1.25 per acre, cash; but no Patent shall be issued for such land until after three years of actual residence upon the same.
10. The price and terms of payment of odd-numbered sections and pre-emptions, above set forth, shall not apply to persons who have settled in any one of the several belts described in the said Regulations of the 14th October, 1879, hereby rescinded, but who have obtained entries for their lands, and who may establish a right to purchase such odd-numbered sections or pre-emptions, as the case may be, at the price and on the terms respectively fixed for the same by the said Regulations.
Timber for Settlers.
11. The system of wood lots in prairie townships shall be continued—that is to say, homestead settlers having no timber on their own lands, shall be permitted to purchase wood lots in areas not exceeding 20 acres each, at a uniform rate of \$5 per acre, to be paid in cash.
12. The provision in the next preceding paragraph shall apply also to settlers on prairie sections bought from the Canadian Pacific Railway Company, in cases where the only wood lands available have been laid out on even-numbered sections, provided the Railway Company agrees to reciprocate where the only timber in the locality may be found on their lands.
13. With a view to encouraging settlement by cheapening the cost of building material, the Government reserves the right to grant licenses from time to time, under and in accordance with the provisions of the "Dominion Lands Act" to cut merchantable timber on any lands owned by it within surveyed townships, and settlement upon, or sale of any lands covered by such license, shall, for the time being, be subject to the operation of the same.
Sales of lands to Individuals or Corporations for Colonization.
14. In any case where a company or individual applies for lands to colonize, and is willing to expend capital to contribute towards the construction of facilities for communication between such lands and existing settlements, and the Government is satisfied of the good faith and ability of such company or individual to carry out such undertaking, the odd-numbered sections in the case of lands outside of the Canadian Pacific Railway Belt, or of the Belt of any branch line or lines of the same, may be sold to such company or individual at half price, or \$1 per acre, in cash. In case the lands applied for be situated within the Canadian Pacific Railway Belt, the same principle shall apply so far as one half of each even-numbered section is concerned—that is to say, the one-half of each even-numbered section may be sold to the

company or individual at the price of \$1.25 per acre to be paid in cash. The company or individual will further be protected up to the extent of \$500, with six per cent. interest thereon till paid, in the case of advances made to place families on homesteads, under the provisions of section 10 of the amendments to the Dominion Lands Acts heretofore mentioned.
15. In every such transaction, it shall be absolutely conditional:—

- (a.) That the company or individual, as the case may be, shall, in case of lands outside of the said Canadian Pacific Railway Belt, within three years of the date of the agreement with the Government, place two settlers on each of the odd-numbered sections, and also two on homesteads on each of the even-numbered sections embraced in the scheme of colonization.
(b.) That should the land applied for be situated within the Canadian Pacific Railway Belt, the company or individual shall, within three years of the date of the agreement with the Government, place two settlers on the half of each even numbered section purchased under the provision contained in paragraph 14, above, and also one settler upon each of the two quarter sections remaining available for homesteads in such section.
(c.) That on the promoters failing within the period fixed, to place the prescribed number of settlers, the Governor in Council may cancel the sale and the privilege of colonization, and resume possession of the lands not settled, or charge the full price of \$2 per acre, or \$2.50 per acre, as the case may be, for such lands, as may be deemed expedient.
(d.) That it be distinctly understood that this policy shall not only apply to schemes for colonization of the public lands by Emigrants from Great Britain or the European Continent.

Pasturage Lands.

- 16. The policy set forth as follows shall govern applications for lands for grazing purposes, and previous to entertaining any application, the Minister of the Interior shall satisfy himself of the good faith and ability of the applicant to carry out the undertaking involved in such application.
17. From time to time, as may be deemed expedient, leases of such Townships, or portions of Townships, as may be available for grazing purposes, shall be put up at auction at an upset price to be fixed by the Minister of the Interior, and sold to the highest bidder—the premium for such leases to be paid in cash at the time of the sale.
18. Such leases shall be for a period of twenty-one years, and in accordance otherwise with the provisions of section eight of the Amendment to the Dominion Lands Act passed at the last Session of Parliament, heretofore mentioned.
19. In all cases the area included in a lease shall be in proportion to the quantity of the live stock kept thereon, at the rate of ten acres of land to one head of stock, and the failure in any case of the lessee to place the requisite stock upon the land within three years from the granting of the lease, or in subsequently maintaining the proper ratio of stock to the area of the leasehold, shall justify the Governor in Council in cancelling such lease, or in diminishing proportionately the area contained therein.
20. On placing the required proportion of stock within the limits of the leasehold, the lessee shall have the privilege of purchasing, and receiving a patent for, a quantity of land covered by such lease, on which to construct the buildings necessary in connection therewith, not to exceed five per cent. of the area of the leasehold, which latter shall in no single case exceed 100,000 acres.
21. The rental for a leasehold shall in all cases be at the rate of \$10 per annum for each thousand acres included therein, and the price of the land which may be purchased for the cattle station referred to in the next preceding paragraph, shall be \$1.25 per acre, payable in cash.
Payments for Lands.
22. Payments for public lands and also for pre-emptions made in cash, or in scrip, or in police or military bounty warrants, at the option of the purchaser.
23. The above provisions shall not apply to lands valuable for town plots, or to coal or other mineral lands, or to stone or marble quarries, or to lands having water power thereon; and further shall not, of course, affect Sections 11 and 29 in each Township, which are public school lands, or sections 8 and 26, which are Hudson's Bay Company's lands.

J. S. DENNIS, Deputy Minister of the Interior. LINDSAY RUSSELL, Surveyor-General. 3117



We have added to our plant all the latest improved machinery for Electro and Stereotyping, and the manufacture of Printers Furniture, facilities for executing work which no other establishment in the Dominion possesses, and not excelled by any on the continent. A large assortment of various cuts constantly on hand. FLEMING & SON, 20 Colborne St., Toronto.

TRUSSES. CLUTHES PATENT SPIRAL TRUSS all attachments improved. No more buckles, all on solid brass casting. Book on rupture and human frame free. Send address in full post card. Best true information about rupture and deformities. CHAS. CLUTHES, Surgical Machinist, 1184 King Street west, Toronto. 12113

Travelling Agent.

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

The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY
TOKER & Co. PETERBOROUGH.

Terms of Subscription:

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Per line, for six months 50
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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. AUGUST 1, 1881.

NOT ALL PROFIT.

THOSE not engaged directly in getting out and manufacturing lumber are inclined to think the lumbermen of Canada are having a big time just now. But on the present occasion, as on so many others, "all is not gold that glistens." Were the enhanced prices now being obtained, as compared with a few years ago, all profit, they would indeed be having a good time. But such is very far from being the case. If the selling price of lumber had advanced, the cost of getting it out and manufacturing it has also sensibly advanced, and, as a consequence, the "margin" between the two is much less than many would suppose. Of course the lucky men who carried over considerable stocks from last year are doing well, but, upon the logs taken out last winter, and now being got to the mills and manufactured, every item of expenditure has increased in quite as great, if not greater ratio than the price of lumber. This being the case, it will be obvious that any set back in prices within the next twelve months might prove disastrous to those who seem to be on the high road to fortune. While we do not think there is any immediate danger of such a set back, a word of caution certainly can do no harm—either to employer or employed. With regard to those employed in the trade it may not be out of place for us to remind those of them, who see the *Lumberman*, that while they are entitled to share in the existing "boom," their employers have to encounter many slips twixt the cup and the lip between the time the tree is felled and got to market, and unless he keeps a decent margin ahead of him, he is very apt to come out at the small end of the horn by the time the seasons operations are wound up. During a period of high prices, like the present, such a margin is particularly necessary. Granting that the expenses in getting out the stock now on hand is moderate as compared with ruling prices, these prices cannot be realized for months to come, and in a great many cases until next year, so that the employer has to consider, not so much the present value of lumber, as what it may be twelve months hence, and the higher the price now, the greater the room for a fall before he can get his present stock off his hands. Caution and moderation should therefore be the motto of the employer and employed.

FORESTRY.

THE Council of the Agricultural and Arts Association offer special prizes this year for essays on "Forestry, including best methods of preserving our present forests, and the varieties of trees best suited for forest planting." These essays are not to exceed twenty pages of foolscap in length, and are to be sent into the Secretary of the Council, (Henry Wade, Toronto,) not later than the 15th August, so as to be examined by a committee, the prizes awarded and the prize essays read at a public meeting to be held during the Provincial Exhibition, on Wednesday evening the 21st of September. The prize for the best essay is \$30, for the second best, \$20.

TORONTO.

From Our Own Correspondent.

TORONTO, July 25.—From the contents of my last letter you will doubtless expect to hear that lumber shipments at this port are now fairly booming; but, alas! for human hopes, this world of ours is full of disappointment, and in this instance the fond expectations of the lumbermen has not been realized; in fact, matters are worse to-day than at any period of the season's work. True, the gauge of the road has been changed, and it seems difficult to find out what is the exact trouble at present. Some assert that the company have not engine power sufficient to do the work required, but this the company deny positively; others affirm that it is the want of rolling stock, a large quantity of flats being still unchanged from the broad gauge to the narrow. My impression is that the latter is the main cause of the present delay, and much difficulty is said to have been experienced through the heating of the boxes on cars that have been lately changed to the present gauge. So much trouble has this caused the company that trains have frequently had to be divided, and a portion left at some station a considerable distance north of this city, and shippers are now declaring that patience with them has ceased to be a virtue. Inspectors working at different points of the road have in many cases had to return home, one of whom I heard soberly declare that he had travelled the entire length of the road in search of empty flats, and failed to find one on any part of the line. One thing is certain, unless the present state of things is soon changed, this season's business will be a losing game. The retailers are grumbling furiously because shippers get a preference in their application for cars, and there is no doubt but that the railroad companies favor shippers at the expense of those doing a local trade. So much so has this been the case that many of the yards are entirely out of desirable portions of their usual stock, and this just at the time when building is unusually brisk is certainly vexatious. Let us hope, however, that another week or two will so improve prospects, as to at least partially remove the state of ill-feeling existing in the minds of those having business relations with the company. There is no doubt, as remarked in my last letter, that the railroad company made a serious blunder in changing the gauge of the road just at the commencement of the busy season, but they are now striving to remedy their mistake as far as possible by using strong efforts to get all the rolling stock changed as quickly as circumstances will allow, so as to meet the demands made upon them for cars as far as lies in their power. Local dealers now shipping over the Midland and G. T. R. to this place find no difficulty in disposing of all the lumber they bring in, and this will continue to be the case while the dearth for empty flats continues on the other road. There are several firms doing a good carload trade on the local market, noticeable among whom is the firm of J. & F. N. Tennant, formerly of Barrie. They have the reputation of being liberal buyers and close sellers, and their success in consequence is doubtless assured, and being men who look sharply after their business, they will deserve all the success they may obtain. I will in future letters mention the names of other enterprising firms doing wholesale local and shipping trade. In my last letter I promised to give you the total quantity of walnut sold and worked up in this city, and after considerable trouble in collecting figures, I find that there is sold and con-

sumed in this market, in round numbers, something over 2,000,000 feet of walnut, which may be put down at an average price of \$80 per M., thus making a total investment in this class of wood alone of \$160,000.00, and the trade in this and other fancy woods is rapidly increasing. How long the forests of this continent will stand the yearly drain now being made in the above and other woods is hard to predict, but unless an extensive system of replanting is soon entered upon, the end may be much nearer than many people imagine.

Freights to Oswego remain about the same, with some tendency on the part of vessel owners to accept slightly lower rates on lumber, as there are always a large number of vessels seeking lumber freights that are unfit for the grain carrying trade. Shingles have at last taken a leap upwards, and are now selling from the yards at \$2.75 per M. for XXX, and if the present scarcity continues a still higher price will have to be demanded. Dealers have at last been convinced of the folly of selling by retail at wholesale purchasing prices, and it would have been money in their pockets had they consented to have raised their prices earlier in the season. The same quantity, or nearly so, would have been disposed of, and some remuneration for their labor; and I would again remind retailers that just so long as they consent to remain in an isolated position, without any recognized organization amongst themselves, just so long will this haphazard mode of doing business continue, and I venture to say, without fear of contradiction, that there is no other class of dealers on the face of the earth to-day who would so long allow this state of affairs to continue.

LATEST QUEBEC NEWS.

SHIPMENTS OF LUMBER—RECENT TRANSACTIONS. PRICES CURRENT.—MINING NOTES.

From Our Own Correspondent.

QUEBEC, July 25.—So far as the shipment of lumber goes, this is about the dullest period of the summer. The early arrivals, generally spoken of as the spring fleet, are mostly on their return voyage, and the vessels now in port are not, generally speaking, taking in very large quantities of timber or deals. It is too early yet to speak of the prospects for the fall fleet, but no matter how large may be the sailing of timber vessels for Quebec this fall, cargoes will be found for all, providing present expectations are realized, and that the heavy transactions of the past few weeks are repeated a few times from now to the close of navigation.

The very large yield of deals from the mills of Messrs. Baptist & Co., of Three Rivers, have been lately purchased by Messrs. R. R. Dobell & Co. of this city. The prices paid have not yet transpired.

The most accurate idea that can be given of the prices current of deals may be formed from the figures paid in the latest transactions, the principal of which are given elsewhere.

OAK.

Only two sales of oak worth reporting have been recently made in this market. One dram of Ohio oak, 76 feet average, has changed hands at 49 cents, and it is understood to-day that another sale has been made of 100,000 feet, though the prices are not made public.

In the absence of sales to report, the following market prices may be of interest:—American pipe staves, fair specification, \$320 per standard mill; West India white oak, \$72 per standard mill; West India red oak, \$64.

MINING NOTES.

Scarcely a week passes but the discovery of new signs of mineral wealth in this Province attracts the attention of scientific men and mining experts. Only a few days since there was found quite close to the line of the Lake St. John R.R., about 15 miles from this city, beautiful specimens of white plaster (sulphate of lime.)

Mining operations in the gold district of Beauce have been materially interrupted of late by want of water, occasioned by the late drought. The streams are now well replenished, however, by late rains.

MESSRS. R. & G. STRICKLAND are now shipping over the Midland and Grand Junction Railways, from Lakesfield to Belleville, a raft of 150,000 feet of timber, which is said to be the finest ever sent from these parts.

A NEW LUMBER COMPANY.

THE MIDLAND AND NORTH SHORE LUMBERING AND GENERAL MANUFACTURING CO., (LIMITED).

The *Lindsay Post* says:—A meeting of a number of gentlemen interested in the new lumbering and manufacturing company, to be formed with headquarters at Lindsay, was held at the Benson House on Monday, and satisfactory progress made in the project. Among those present were Hon. T. N. Gibbs, Ottawa; R. C. Smith, Port Hope; A. P. Pousette, D. Ulyott, Peterboro; J. D. Smith, Fenelon Falls, and J. A. Barron and Needler & Sadler, Lindsay. The capital stock is to be \$750,000, in shares of \$100 each, and nearly one-half of this amount has been taken and paid already. From the notice in the *Ontario Gazette* we gather that the company is to be called "The Midland and North Shore Lumbering and General Manufacturing Co., Limited," and that the objects for which incorporation is sought are the acquisition of pine timber limits and lands in the Province of Ontario by purchase or otherwise; the conducting of the business of lumberers and timber merchants, including the purchase, preparation, manufacture, transport and sale of timber, lumber, shingles, lath and pickets, broom handles, matches, pulp, doors, sashes and blinds, pails, tubs and wooden ware, furniture, agriculture, implements, mouldings, boxes, railroad and other cars, ties, cordwood, fence rails and posts, telegraph poles, staves and barrels, axo handles, wagons, carts and lumber dryers; the building of vessels, ships and boats, docks and piers; the planing and dressing of lumber, and the erection and purchase of mill privileges, water powers, mills, saw mills, buildings, machinery, coves, booms, booming grounds, utensils, horses, cattle, boats, vessels, and many other things. The operations of the company are to be carried on within the Province of Ontario, and the town of Lindsay is to be the chief place of business. The applicants and directors are Messrs. Dalton Ulyott, G. A. Cox, A. P. Pousette, Hon. T. N. Gibbs, Jas. H. Beatty of Thorold, R. C. Smith, Malcolm McTavish of Parry Harbor, and J. A. Barron of Lindsay.

It will be seen that car-building is one of the lines of industry to which the company proposes to have power to give its attention, and that being the case, it may be well that the superior advantages of Lindsay for such industry should be brought before them. The committee on manufactures might take some action in the premises.

LONGFORD MILLS.

From Our Own Correspondent.

Business at this point is at present booming. The logs of the Longford Lumber Company have all arrived safely in Lake St. John at the mills. The Dominion Bank logs reported stuck will be very near all got out of Black River. The two mills are running to their full capacity cutting up to the average of other years. Some difficulty was experienced for some time past in getting lumber forward to Toronto, owing to the scarcity of rolling stock on the Northern Railway during the time of the change of gauge. At present a full train a day leaves the yards loaded with lumber for Albany and other points. One hundred and twenty men are employed at the mills and yards, and up to the present no difficulty has been experienced in getting what men were necessary to keep this large staff replenished, owing largely to the cordial good feeling existing always there between employers and employes.

The burners erected here by Mr. Wm. Hamilton, of Peterboro, are an immense success, devouring the entire refuse of both mills like chaff and with perfect safety from fire. Sales of lumber are going on satisfactorily. Prices have advanced steadily. The large quantity of cull lumber held here was disposed of recently to an American firm at fair prices.

At the annual meeting of the Longford Lumber Company held recently a resolution of condolence with the families of the late Mr. John Thomson and Mr. T. W. Buck were unanimously passed, owing to the death of these two prominent gentlemen of the Board of Directors.

The circulation of the CANADA LUMBERMAN is over 2,000 copies. Advertisers should note this

OTTAWA.

From Our Own Correspondent.

OTTAWA, July 25.—The lumber market is firm, sales being steady. Business this year has been somewhat better than last. During the quarter ending June 30th the value of lumber and shingles exported to the States from this section was \$587,514.75, as against \$509,803.05 for the same three months of 1880. The shipments for the March quarter amounted to \$31,430.47, making a total value of \$618,945.22 for the half-year. Shipments of this season's cut of lumber have begun to be made.

QUOTATIONS.

There is virtually no change in prices during the past two weeks. Ten-inch stocks are quoted at from \$12 to \$14 per thousand; 12-inch stocks at from \$16 to \$19; sidings at from \$20 to \$30 per M.; shipping culls at \$10 and \$11 a thousand. Last sell at from 85 to 90 cents a thousand by the barge load, and 90 cents to \$1 in smaller quantities.

SQUARE TIMBER.

So far this season 50 rafts, averaging 90 cribs each, have passed through the Chaudiere slides at this point. There are about twenty or twenty-five rafts yet to come down. It is expected that not more than half of these will be got through, owing to the lowness of the water in the Ottawa, which is now slightly more than three feet lower than it was at this time last year. A jam of saw-logs at Roche Captains kept back several rafts a few days. McLachlin Bros., Octave Lalour, David Moore, and Allan Grant are among those having rafts in difficult places. The timber got out by the Scotch-Canadian Co. is being brought down by rail—twelve hundred cribs, through from Mackey's station to Quebec, over the the Canada Central and Occidental Railways, 475 miles, at a cost, it is said, of five cents per foot. The quantity of square timber taken out last winter was about ten million feet.

THE DRIVES.

The drive on the Upper Ottawa is progressing favorably, but it will be late in the season before the logs will all be got down.

The final sweep on the Gatineau River is being made, under the superintendence of ex-Ald. Bingham, who has the contract. The following quantities of logs have already been brought down this season:—

Gilnour & Co., Ottawa Mills.....	108,000
" " Chelsea Mills.....	112,000
O. B. Hall & Co.....	185,000
W. C. Edwards.....	41,000
Hamilton Bros.....	33,500
James MacLaren & Co.....	14,000
John Roach.....	8,300

In addition to the above 5,000 pieces of square and flatted timber were brought down for MacLaren & Co., and 48,000 railroad ties for Hebron Harris. The quantity of logs yet to come down the Gatineau is about 150,000, so that the total number of logs taken out on the river named this season will reach nearly 632,000.

ADINGS.

Messrs. Perley & Pattee have arranged for the lighting of their mill by electricity.

Capt. Young has been unfortunate this year, having to shut down on an average a couple of days a week for want of logs, which have been delayed in coming down.

Considerable quantities of lumber is being shipped by rail—St. L. & O. Railway—to Ogdensburg.

A number of Canadian barges are laid up for the present, for lack of freight, shipping being a little dull just now.

McLachlin Bros.' new steam mill at Agnirior will be 156x60, with a 32x40 wing, and a 4x60 boiler house. The engine will be of 500 horse-power.

Rates of lumber freights are as follows:—To Montreal, \$1.10@1.25; to Quebec, Burlington and Whitehall, \$2 per M.; to Albany, \$3, and to New York, \$3.25. The rate to Whitehall was \$2.25 a week ago, but it dropped a quarter.

ZOPESA.—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 Zopesa, 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 food. Get a 10 cent sample of Zopesa, the new remedy, of your druggist. A few doses will surprise you.

ST. JOHN, N. B.

From Our Own Correspondent.

DEALS AND SHIPS.—Our port continues to be well supplied with tonnage, and the shippers have been large, in consequence of which our stock of deals, not in the hands of shippers, is very small indeed. Country sawn deals, though coming in rather freely, are absorbed as fast as they arrive; they are selling at about \$8.50 per thousand, Sup. feet. The small stock of deals of city manufacture are held for considerable higher prices, which are likely to be realized before the end of the season.

FREIGHTS.—As a natural consequence of what is stated above, the freight market continues greatly depressed. The Hildyard, 1,200 tons, was chartered for Liverpool last week at 51/3, which, considering the lateness of the season, may be reasonably considered as about the lowest point. It is not very probable that rates will be lower this season.

VESSELS IN PORT.—The following is a list of the square-rigged vessels in port, with their tonnage and destination:—

- William, 198, Marcellus.
- Nyghan, 1254, Liverpool.
- L. H. D'Veber, 615, Londonderry.
- John Murphy, 1479, Liverpool.
- Lolning, 847, St. Nazaire.
- Moss Glenn, 893, Dublin.
- Varbler, 401, United Kingdom.
- Astracana, 1103, Liverpool.
- Arklow, 743, —
- Waclass, 809, Liverpool.
- Fidella, 450, W. C. England.
- Nelle Moody, 740, —
- Navigator, 530, Marcellus.
- Chas. B. Kenny, 1128, Adelaide, orders.
- Jennie Parker, 998, Gibraltar, orders.
- Paramatta, 925, Dublin.
- Solid, 493, Plymouth.
- Gem, 231, Cork Quay.
- Emily Raymond, 290, Wexford
- Regina, 1212, —
- China, 420, United Kingdom.
- St. Olaves, 571, —
- Eos, 390, Bonleax.
- Still Water, 1090, Newport.
- Priscilla, 700, Melbourne.
- Matilda, 676, Marcellus.
- Colorado, 692, Dublin.
- Finn, 425, France.
- John Rutherford, 653, Dublin.
- Stilla, 445, —
- Emily Lowther, 762, —
- Henry, 1096, Liverpool.
- Hildyard, 1200, Liverpool.
- Edna M. Gregory, 386, —
- Golden Sea, 1413, London.
- Susan L. Campbell, 727, —
- Hattie M., 597, Dublin.
- Alfred, 349, —
- Rolf, 922, —
- Torryburn, 448, discharging.
- B. F. Nash, 412, —

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

For Europe.....	25,587,000 Sup. feet.
" United States.....	4,693,000 " "
" West Indies.....	155,000 " "
" Canary Islands.....	209,000 " "

St. John, N.B., July 19, 1881.

Those who write for fame, for honor or emolument, cannot do better than use pens made by the Esterbrook Steel Pen Company. Samples furnished on application by addressing their office, 20 John Street, New York.

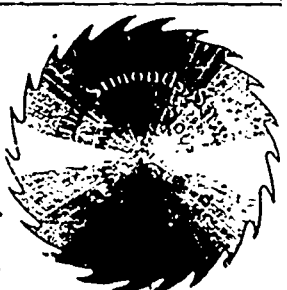
THOUSANDS OF CHILDREN are lost annually from cholera infantum, diarrhoea, and the summer complaints, whose lives might be preserved by using Extract of Wild Strawberry. Physicians recommend and use it constantly. It is a remedy well known, and more highly valued the longer known. It is for sale at all drug stores, and is within the reach of every one. See advertisement in another column.

THE SIMONDS SAWS

Are Superior to all others.
More Work.
Better Work.
Less Power.
Uniformity in Temper.

R. H. SMITH & Co., St. Catharines, Ont., Sole Manufacturers for the Dominion of Canada.

Send for Price List.
Our Hand Saws are like our Diamond and Hanlan Cross-Cut Saws.
UNEXCELLED.



CANADA TRUSS FACTORY

(ESTABLISHED 1856.)

F. GROSS,

Manufacturer of SURGICAL and ORTHOPEDICAL INSTRUMENTS. ARTIFICIAL LIMBS made to order. INDIA RUBBER GOODS of every description. 119 1/2 688 and 690 Craig Street, Montreal.

WANTED.

CHERRY, WHITE ASH, AND WALNUT LUMBER.

Quote Price delivered, and Carefully

Describe:—Quality, Widths, Length, Thickness, and how long Sawed.

ROBERT C. LOWRY,

Wholesale Lumber, 12110 55 Pine Street, New York.

Daily Line to Rochester.



THE STEAMER "NORSEMAN."

(R. CRAWFORD, MASTER.)

Will make her regular trips on this route commencing on Wednesday, the 20th of April, 1881, leaving Cobourg every morning at 7.30 and Port Hope at 9 o'clock, on arrival of Grand Trunk Railway trains from the East and West, connecting at Rochester with the New York Central, Northern Central, and Erie Railways, and the Lake Ontario Division of the Rome, Watertown and Ogdensburg Railway for all points east, west and south.

RETURNING,—Will leave Charlotte (Port of Rochester) daily at 9 o'clock p.m., except Saturdays, when she will leave at 3 p.m. for Port Hope direct.

Dealers in stock will find this the cheapest and most expeditious route to Oswego, Boston, Albany, New York, etc., etc. For further information apply to

R. CRAWFORD, Port Hope, w17 or O. F. GILDERSLEEVE, Kingston.

GRATEFUL—COMFORTING.

EPPS'S COCOA

BREAKFAST.

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

Made simply with boiling water or milk. Sold in packets and tins only (4-lb. and 1-lb.) labelled

JAMES EPPS & CO., Homoeopathic Chemists, London, England. 110-1y

HOP BITTERS.
(A Medicine, not a Drink.)
CONTAINS
HOPS, GUCHU, MANDEARKE, DANDELION.
AND THE PUREST AND BEST MEDICAL QUALITIES OF ALL OTHER BITTERS.
THEY CURE
All Diseases of the Stomach, Bowels, Blood, Liver, Kidneys, and Urinary Organs. Nervousness, Sleeplessness and especially Female Complaints.
\$1.00 IN GOLD.
Will be paid for a case they will not cure or help, or for anything impure or injurious found in them.
Ask your druggist for Hop Bitters and try them before you sleep. Take no Other.
D. I. C. is an absolute and irrefutable cure for Drunkenness, use of opium, tobacco and narcotics.
SENT BY CIRCULAR.
All here sold by druggists.
Hop Bitters Mfg. Co., Rochester, N. Y., & Toronto, Ont.

SALE BY TENDER
OF EXTENSIVE STEAM

Saw-Milling Property

AT Parry Harbour, Georgian Bay, and Valuable Timber Limits in the Parry Sound District.

The SAW-MILL is complete in its appointment, and has a cutting capacity of 90,000 to 100,000 feet per day of twelve hours.

The LIMITS cover an area of 220 square miles in the Townships of Montello, Humphreys, Christie, Ferguson, Hagerman, McKellar, Spence, and Shawanaga, besides the purchased rights to cut the timber from numerous lots in the same Townships, and contain a large quantity of standing pine.

The whole establishment is in complete condition and active operation, and is excellently situated for the manufacture, sale and shipment of timber.

Tenders for the whole property, including plant, will be received until the 20th August next, addressed to the General Manager, Ontario Bank, Toronto, by whom terms of payment and any further information will be furnished on application. No tender will be accepted unless satisfactory to the vendors. 417

IRWIN & BOYD

Commission Lumber Dealers,

FORWARDERS,

Shipping & General Agents

PORT HOPE.

LUMBERMEN

will save money by going direct or sending to F. CRUMPTON, 83 King St. East, Toronto, for their Watches and Jewellery, or Silverware and Clocks, etc. If you cannot come yourselves send your orders and I will guarantee just as good satisfaction as by a personal selection. Goods guaranteed exactly as represented or your money refunded. Watch and Jewellery repairing and manufacturing by competent workmen at reasonable prices. We make a specialty of HEAVY CASED WATCHES suitable for Lumbermen.
Prices cheerfully furnished on application.

Remember the address,
F. CRUMPTON
83 King St. East,
TORONTO.

THE GROWTH AND DECLINE OF LUMBER ECONOMICALLY AND COMMERCIALY CONSIDERED - THE TRADE AS IT IS TO-DAY.

We find the following in the Brooklyn Eagle: Four years ago the then Secretary of the Interior reported that from all the information he could obtain there was not enough timber in the whole of the States to last thirty years. In 1878 a timber journal estimated the supply to last twenty years. Yet, notwithstanding these assertions, doubtless based upon accurate figures, merchantable lumber to-day is cheaper than it was ten years ago. Proof of this fact will be given further on. How to reconcile this apparent discrepancy is one of the purposes of this article. Statistics, as a rule, are not interesting to the general reader, and they will be avoided as much as possible, except where absolutely required for necessary illustration. The primary causes of the depletion of our forests (apart from the necessary clearing for homesteads and corn fields) are waste and carelessness. On taking up a farm the first thought and act of the farmer was to cut down every tree growing on it; and he never seemed quite happy until the last one had fallen. His government's idea was doubtless to make every square inch of his land productive. The result of late years has shown him how great was his mistake. With the clearing away of the timber he has pretty well cleared away the climate also, and he has succeeded in reducing the number of rainy days to the detriment of his crops. Possibly some one will reply "but our grain products of late years have largely increased. How do you account for that?" True. This, however, is due to increased emigration and increased acreage in virgin soil, but it does not apply to the older settled States, as New York, Massachusetts, Indiana, and many others. The trouble has been that the boundless forests of the North-west promised to endure forever, and their seemed no incentive to any care of the original growth of timber. The fine old forests of the South have been more shamefully ill-used than those of the North. The negro has so little regard for trees that he never fails to cut down the young saplings, because they yield firewood with less trouble than other trees. To appreciate more fully the rapid exhaustion that is now going on, it should be stated that it was quite usual, thirteen years ago, for a square timber to average in length from seventy to seventy-five cubic feet per log, whereas, at the present day, the average of the season's log crop does not average beyond fifty-five cubic feet—an average decrease of say seventeen feet in thirty years. Against this place the fact it requires something near 150 years for a pine tree to attain maturity, and a fair idea will be formed of the seriousness of the situation. The initial causes of this rapid decline, it has been stated, are waste and carelessness. With regard to the waste, how does it arise? Take pine and hemlock as illustrations. In cutting out a square stick of pine lumber, twenty-five per cent. is loss. A long train of dry chips marks the route from the spot where the tree is felled to the place of transportation on the wagon on the rough road. These trains, for they are almost as inflammable as gunpowder, easily catch fire, and when once started thousands of acres are in danger of destruction. Again, only one pine tree in every five is cut down in sound, for mercantile purposes. Consequently, four are left to rot in the woods, and thus increase the danger. Instead of utilizing the healthy parts of the stick, by using it up, thousands of dollars literally rot in the ground, annually, through this want of foresight. But would it pay to transport these unsound trees to a saw mill? Undoubtedly it would, for while the neglected stick may be quite useless as square timber, it would be useful for mouldings, laths and various other purposes for which pine is used. In the future, when pine becomes much scarcer than it is now, the collection of felled trees that have hitherto been supposed to be useless, will become a very valuable business. The same remarks also apply to hemlock. Thousands of these trees are stripped of their bark, year by year, and are left to share the same fate as the pine. As to carelessness: Forest fires mainly proceed from the want of precautions on the part of lumbermen and hunters, who fail to see that

their camp fires are properly extinguished. A sudden breeze, a spark falls on a dead leaf, and, behold, a conflagration. In several instances fires have been known to originate from a passing locomotive, the smokestack of which has not been provided with a safeguard. But very few cases have been reported of extensive forest fires where engines have been furnished with this necessary article. Thus we see the results of waste and carelessness. It is a singular fact that very few fires are caused by lightning, which is almost invariably accompanied by heavy rain storms. Mr. Stewart Thayer, an English journalist, who has given the subject much attention, said in his evidence before the Select Standing Committee of the Canadian House of Commons, in April, 1878 (see report, p. 123):—"I have never been able to trace fires to lightning. I have been able to trace them, however, to almost every other cause." At a meeting of the Liverpool Board of Trade last fall the same gentleman remarked that it was within the bounds of moderation to say that within the past ten years the supply of timber that had been recklessly and unnecessarily cut down would, at the average rate of legitimate consumption, have lasted one hundred years.

THE REMEDY.

The remedy is simple enough and suggestive. In Europe every forest of any extent has its regular staff of officers and rangers, whose special duty it is to watch over its safety. Open spaces and broad belts of cleared land are kept up on purpose to keep fire from spreading. The ground is not incumbered with such a quantity of debris as is usual in the United States and Canada. There the people employed in the forests are interested in their preservation, and stringent official regulations control all others.

THE CLIMATE.

The subject of forest depletion is not alone important in its relation to the waste and consumption of timber. In its climate aspect it has great significance. The reports issued by the United States Government prove that a most notable change has taken place in the climate of the New England States, in New York State, New Jersey, and also in the Southern States.

In this State, where the error of a total clearing away was first observed, the replanting of forest trees has been attended with very good results. In these sections the rainfall has largely increased, and the rainfall is more evenly distributed throughout the season than in districts almost completely denuded of timber. On the prairies of Kansas and Nebraska, where a good natural growth of wood is lacking, the results obtained from the planting of forest trees are even more strikingly illustrated. The planted forest serves as a good wind break, and the influence of the wood's growth is seen in lessened periods of drought and an increase in crops. What is needed, however, is accurate information about the branches of trees adapted to particular soils, and to provide this the Government has set apart an appropriation, and placed in charge of the work Mr. Charles Sargent, professor of arboriculture in Harvard College. In San Francisco the cultivation of the almond tree has been attended with great success, as also that of the eucalyptus, or blue gum tree, indigenous to Australia, and admirably adapted for firewood. In the vicinity of San Jose there were planted last year 350 acres in almond trees, and the growers claim that it is the best paying industry in that part of the country—the profits being larger than are obtained from any other enterprise. In Massachusetts the Legislature has given large tracts for forest culture, in addition to liberal bonuses for the best variety of trees grown within a certain period. This part of the subject is especially interesting, but sufficient has been said to show that the public attention is being aroused to the absolute importance of remedying a condition of affairs which is becoming more serious every year. To ameliorate a climate presenting violent contrasts of temperature, there is only one method—that of planting wherever the nature of the soil will permit, and forming settlements under the shelter of these plantations.

THE LUMBER TRADE TO-DAY.

It was stated at the outset of this paper that merchantable timber is cheaper now than it was ten years ago. In an interview with a well-known lumber merchant of New York, who is

thoroughly posted on the subject, he said:

"Yes, lumber is much cheaper now than ten years since. The white pine was worth \$75 per 1,000; to-day it is quoted at \$55. Pitch pine, ten years ago, was \$45; now it is worth \$32.50. Hard woods, with the exception of black walnut, are also cheaper. Ash is now worth \$50 per 1,000; ten years ago it was \$75. It is the same with oak. Spruce then realized from \$25 to \$30. To-day I can buy it for from \$17 to \$20."

"How about black walnut?" "Black walnut is the same price to-day as it was ten years ago (\$120 per 1,000, jobbing price). But four years since the price of black walnut that now sells at \$120 was \$90. The reason is that we can see the end of it. It is now brought from the Missouri River to Indiana to be sawn up. Ten years ago it was growing at Indiana's own door."

"But how do you account for the cheapness in other woods, especially pine?"

"Over production. And yet the building trade was never more brisk and exports were seldom so large as now. But you must remember that the over production of lumber is the natural outcome of good times, and growers will soon see the mistake they are making by not saving their timber till they can get more for it."

"What will take the place of black walnut?"

"Mahogany from Mexico, which sells at from sixteen to twenty cents a foot."

"Does the export of square timber continue as large as formerly?"

"Well, I am scarcely prepared to say, but I should think not, because we are now manufacturing a class of goods that formerly were made from the log."

"What class may I ask?"

"We are sending, for instance, house trimmings to Scotland, as mouldings, sashes, etc. There is quite a trade springing up in portable houses in Chicago that are shipped to the West India and Australia. Formerly these were made in Norway and Bavaria, right near the forests. But America is getting ahead of those places."

"Does the introduction of iron in buildings affect the lumber interest?"

"Not much, as yet. I do not know but that it may eventually. In some large buildings that are going up iron beams, and even iron laths, are being extensively used, though whether they will stand the test of oxidation remains to be seen. These are used mostly in fire-proof buildings. The beams cost fifty cents more than wood beams."

"What is your impression about the scarcity of the lumber supply, taken as a whole?"

"The difference in the prices I have quoted does not carry out the supposition that the capacity of our forests is seriously declining, but there is no doubt much waste in the cutting of trees. But that waste is being rectified by new industries springing up by which much that was formerly thrown away is now utilized into mouldings, small panels, etc. If I were a proprietor of a pine forest I should decidedly keep my timber standing until it paid me to cut it. But I am not, being interested in buying all I can as cheaply as possible. You see it makes all the difference in the world how a man is situated. My impression is that at the present rate of consumption the people will only realize the full value of their timber when it is nearly all gone. But that is their business. My business is to sell."

Upon inquiry at the offices of a large sash manufacturer on Barclay street, who does an extensive export business, one of the partners said:

"We are shipping sashes and mouldings to London, and the trade is growing every year. In time it may turn out quite a large industry, as it is only of late years that the British have taken to buying such goods of American manufacture."

The over production theory certainly appears to be borne out in the following figures taken from the Lumberman's Gazette, for the week ending June 25, when the total shipments of lumber, lath and shingles from the Saginaw, with comparisons, were as follows:

Table with 2 columns: Lumber and Shingles/Lath. Rows for 1880, 1881, and 1878.

Again, in the comparative statement of stock on hand in the Chicago market on June 1, the figures are as follows:

Table with 2 columns: Lumber and Timber. Rows for 1878, 1879, 1880, and 1881.

In the one case it will be noted that while the sales from the Saginaw were much less on the date specified this year than in 1880, the accumulations of stock on the Chicago market on June 1 have been increasing until the present season. The reason of the sudden decline in 1881 is owing not to the fact that the over production has been sensibly reduced, but that prices have fallen so low that dealers can no longer afford to hold their stuff. Were it otherwise, it would be found that the shipments from the Saginaw would have increased in 1881, instead of being reduced. The same remark applies to other lumber centers. F. J. H.

Tree Cisterns.

It has long been known, through the reports of travellers, that in certain arid districts of Africa water is often found, even in the driest seasons, in hollow trunks of the great baobab tree (Adansonia), and it was supposed that the prevalence of water was, so to say, natural; but it appears from the investigations of officers attached to surveying parties sent out by the Egyptian Government, that these reservoirs are neither formed nor filled by the accidents of nature. They are in reality prepared and filled by the inhabitants of the country, who carefully remove the decapod and spongy fibers from the interior of the trunk and laboriously transfer water to the cisterns thus made, bucketful by bucketful, from neighboring pools in which it collects in the rainy season. The importance of these reservoirs is illustrated by the fact that trunks containing 15,000 gallons of water are not uncommon in Kordofan, and that individual trunks have been measured which might store 33,000 gallons. The officers of the survey wrote that it would be well for the Egyptian Government to organize a service for the protection and maintenance of these trees on the post roads and telegraph lines, so that couriers, linesmen, inspectors, etc., might always find a store of water. They cite one particular post-route, where in times past the people of the country had carefully filled the Adansonia tree during the season of rains, and thus ensured water during the dry seasons for much travel. But when troops were moved in that direction, the inhabitants took alarm, abandoned the vicinity, and neglected to fill the trees, so that the road became as good as impassable.

The Sand Blast.

Among the wonderful and useful inventions of the times is the common sand blast. Suppose you desire a piece of marble for a grave stone; you cover the stone with a sheet of wax no thicker than a wafer, then you cut in the wax the name, date, etc., leaving the marble exposed. Now pass it under the blast and the sand will cut it away. Remove the wax and you have the raised letters. Taking a piece of French plate-glass, say two by six feet, cover it with fine lace and pass it under the blast, and not a thread of the lace will be injured, but the sand will cut deep into the glass wherever it is not covered by the lace. Now remove the lace and you have a delicate and beautiful figure raised upon the glass. In this way beautiful figures of all kinds are cut in glass and at a small expense. The workmen can hold their hands under the blast without harm, even when it is rapidly cutting away the hardest glass, iron or stone, but they must look out for finger nails, for they will be whittled off right hastily. If they put on steel thimbles to protect the nails, it will do little good, for the sand will soon whittle them away, but if they wrap a piece of soft cotton around them they are safe. You will at once see the philosophy of it. The sand whittles away and destroys any hard substance—even glasses—but does not affect substances that are soft and yielding, like wax, cotton, or fine lace, or even the human hand.

TRAVELLERS AND TOURISTS should always be provided with Dr. Fowler's Extract of Wild Strawberry, the best remedy in the world for curing suffering brought on from eating unripe or sour fruits, bad milk, impure water, change of water and climate. The great remedy for all summer complaints.

OUR QUEBEC LETTER.

RENEWED ACTIVITY IN WHITE PINE—IMPORTANT TRANSACTIONS—RULING PRICES—CONTINUED STAGNATION IN HARDWOODS—MINING.

A period of almost unprecedented inactivity in the Quebec market, lasting over several months, has been broken, so far as white pine is concerned, by several important transactions within the past two weeks, which are worthy of special notice for two distinct reasons: the size of the sales and the prices obtained. Last week a large lot of lumber in the Bridgewater cove changed hands at an advance of a half cent per foot over the price agreed upon last year for another lot of the same quality lying right alongside of it.

Amongst the most noteworthy of recent sales are the following: 370,000 feet of Mr. McLaren's white pine, 60 feet average, 16 inches, has been sold at 25 cents, measured off.

Another lot of square, white pine, 53 1/2 feet average, and containing 150,000 feet, has changed hands at 23 1/2 to 24 cents.

Messrs. Sharples & Co. have recently purchased, through a broker from Jonathan Francis, 300,000 feet of square, white pine, 50 feet average, for 23 cents.

One of the cheapest lots sold this season was 50,000 feet wanow white pine, small average, purchased by Messrs. R. R. Dobell & Co., at the following figures: 18 inches, 22 1/2 cents; 18 1/2 inches, 23 1/2 cents; 19 inches, 24 1/2 cents. This sale cannot be considered an indication of ruling prices. At present writing, holders are firm at the figures given for the previously mentioned transactions, and even higher prices may, in the opinion of some old dealers, be looked for. The prospect of a temporary settlement of Irish affairs appears to have given rise to increased confidence in the home market, which, thanks to the Atlantic cables, has found its almost instantaneous echo here.

HARD WOOD.

The stagnation in hard wood continues. Buyers seem to have formed a strong combination for the purpose of bringing down prices. Manufacturers and their Quebec agents, especially in oak, are holding purchasers to last year's bargain. There are no prospects of an immediate decline either in oak or staves. Holders can afford to wait. The Banks are not pressing for their money, having no particular demands for it, while their collateral is as good as gold, and cannot be again produced for its present cost.

MINING MATTERS.

There is undoubtedly a boom just now in gold mining matters in the now famous mines of Beauce. With the opening of this summer's season comes the news of the development of more mines, and the erection of many more extensive works for the mining, crushing and washing of the earth and quartz containing the precious metal. Mr. Ainsworth, agent of the Clareuco Mining Company, has just erected immense works for the washing of the gold. The water is furnished from the Labranche River by an artificial canal 780 feet long. The quartz mill has been in operation since April last, and during the last three months has given every satisfaction. This company's works are upon what is known as lot 13, Gilbert River. Lot 14 is worked by Mr. Smart for the Beauce Mining and Milling Co., which has lately acquired a new engine for the quartz mills, and is engaged in opening up new pits. Mr. McRea is opening new pits this season on lot 15, which in 1867 yielded gold to the value of \$17,000. Capt. Richards has commenced operations on lot 16, and on the "Brancho," a new company of work, composed of Messrs. DeLery, Rodrigue, Chapman, and others.

The most important operators, however, in this district, both as regards the number of its employees and the extent of its works, are the Canada Gold Mining Co. (limited), represented here by its chairman, Mr. Gordon, of London, and by Mr. Walter Moodie, manager. The scene of its operation is upon lots No. 12 and 13. The works of this company are immense. More than one hundred men are now employed by it in the shafts, puddling machines and quartz mills. Upwards of eighty tons of earth and gravel are pulverized daily.

The Titanic Iron Works at Baie St. Paul will probably ere long be re-opened. A deposit of

native silver, said to have been worked in a primitive manner under the French regime, has been discovered near the same place, partly by the aid of old records in the Crown Lands Department here. The fortunate holder has invited members of the Geological Survey to visit the site, and the readers of the LUMBERMAN shall be kept posted as to the result of their investigation.

LUBRICANTS.

The *Scientific American* says, in answer to a number of correspondents, we publish the following:—

The desirable features of a good lubricant or unguent may be briefly stated thus: It should, first of all, reduce friction to a minimum, should be perfectly neutral, and of uniform composition. It should not become gummy or otherwise altered by exposure to the air, should stand a high temperature without loss or decomposition, and a low temperature without solidifying or depositing solid matters. The question of cost and adaptability to the requirements of light or heavy bearings are also important considerations.

The finest lubricating oils in the market—those used for watch, clock, and similar delicate mechanism—pro chiefly prepared from sperm oil by digesting it in trays, which clean lead shavings for a week or more. Solid stearate of lead is formed, and remains adhering to the metal, while the oil becomes more fluid and less liable to change or thicken on chilling.

Sperm oil is used for lubricating sewing machines and other light machinery. Some of the oils sold for that purpose contain cotton seed oil and kerosene, and others are composed largely of mineral, sperm, or signal oil—a heavy, purified distillate of petroleum.

Good heavy lubricating oil is made from heavy paraffine oil (a distillate of petroleum). Owing to "cracking" (decomposition of the vapors of the heavy distillate into lighter products), which takes place in the still, the crude oil contains a large per cent. of light offensive oils, too thin for lubricating purposes. In Morrill's process these are separated by blowing superheated steam through the oils, heated just short of its boiling point in the still, the lighter oils being driven off, a neutral, nearly odorless, heavy oil, gravity 29° B. to 26° B., and boiling at about 575° Fahr., remaining. When mixed with good lard oil it makes an excellent and cheap lubricant.

Common heavy shop and engine oils are commonly variable mixtures of heavy petroleum or paraffine oils, lard oil, whale or fish, palm, cotton seed and resin oils. There are nearly as many of these composite oils in the market as there are dealers in such supplies. The following is one of them.

Petroleum.....	30 per cent.
Paraffine oil (crude).....	20 "
Lard oil.....	20 "
Palm oil.....	9 "
Cotton seed oil.....	20 "
	99

Solid or semi-solid unguents, such as mill and axle grease, etc., are prepared from a variety of substances.

PORT HOPE.

The following is a statement of lumber, etc., shipped from Port Hope for the periods named, as obtained from the books of the Harbour Master, viz.:—

LUMBER.	
April.....	3,607,376 feet.
May.....	8,518,176 "
June.....	12,552,340 "
July, (to 11th inclusive).....	4,414,015 "
Total.....	22,181,806 "

SHINGLES.	
April.....
May.....	10,250,000
June.....	5,654,250
July, (to 16th included).....	1,850,500
Total.....	17,760,750

POSTS, ETC.	
April.....	80 cords.
May.....	198 "
June.....	106 "
Total.....	383 "

THEY ALL DO IT.—Everybody uses "TELEBRARY" for the teeth and breath, the newest, brightest, coolest little toilet gem extant. Try a 5 cent sample.

J. K. POST & CO.
LUMBER MERCHANTS
And Shipping Agents.
OSWEGO, N. Y. ^{L1217}

Flexible Board Rules,
With Steel Head, either Cleveland or London make, at \$1.75 Each.
GEORGE STETHEM,
PETERBOROUGH, ^{L10}

S. S. MUTTON & Co.,
Wholesale Lumber Dealers
TORONTO.

We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.
S.P.S.—Also on hand 120 M dry Oak 2 to 4 inches thick, will be sold cheap to close it out. ^{L1416}

JAMES HADDEN,
MANUFACTURER OF
Shingles and Dressed Stuff.
Foxmead, P. O., County of Simcoe, Ont.
Two Planers for sale or exchange for a Boiler. ^{L120}

P. FREYSENG & CO.
PROPRIETORS OF THE
Dominion Cork Cutting Co
BY IMPROVED MACHINERY.
S.P.—All kinds of Corks in stock and Cut to Order. Corks & Life Preservers a Specialty. Corkwood, Tiafoil, Capsules, Wire, &c.
71 Jarvis Street, TORONTO. ^{L110}

A. L. UNDERWOOD
WHOLESALE DEALER IN
White Pine, Basswood & Hardwood,
82 King Street East,
TORONTO, ONT. ^{L110}

J. G. EDWARDS
HARDWARE MERCHANT,
LINDSAY.
BELTING, FILES, BABBIT METAL,
1y **CHAINS, ROPE, and** ^{L17}
LUMBERING SUPPLIES.

SAMUEL WINDRIM,
MANUFACTURER OF
Agricultural Implements, Etc
MILLBROOK, ONTARIO.

HAVING DISPENSED WITH THE SERVICES OF AGENTS, I take this opportunity to bring to the notice of intending purchasers of Reaping Machines, that I have now on hand a quantity of the Celebrated

HANLAN REAPER,
which has NEVER BEEN BEATEN YET, and am prepared to allow the Agents commission—FIFTEEN PER CENT—on all purchases. ^{L1711}

Penetanguishene Foundry
AND
MACHINE SHOP
CRAIG & CAMERON, Proprietors.

The undersigned beg to announce to the public that they are prepared to make all kinds of Mill and Steamboat Brass and Iron Castings. All kinds of FLOW CASTINGS kept on hand. Flow Points and Landalides a specialty. We have first-class machinery and are prepared to do all kinds of TURNING or PLANING on short notice. We hope by strict attention to business and moderate charges, to merit a share of the public patronage. S.P.—All work guaranteed. ^{L1217}

G. A. CRAIG,
C. CAMERON.

KERR BROS.

PRACTICAL
Founders, Machinists,
And Millwrights.

Manufacturers of Marine and Horizontal and Portable
Engines, Boilers
Grain Elevators & Steam Hoists,
Saw and Flour Mill Machinery.

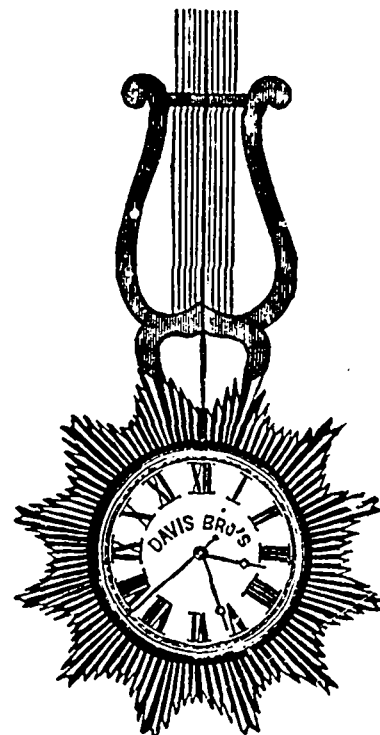
With Latest Improvements A SPECIALTY.
The ABEL EDWARDS CENTENNIAL TURBINE WATER WHEEL.
RODEBAUGH'S SAW FRAME, MILL DOGS and SAW GUIDES.
WATER WORKS, THE LATEST AND MOST IMPROVED, MADE TO ORDER.

LIGHT and HEAVY BRASS and IRON CASTINGS.
S.P.—Plans and Specifications on application. ^{L11}

The Walkerville Foundry
AND
MACHINE WORKS.

Walkerville, Ont., June 1881. ^{L2110}

SUN CLOCK



IF YOU WANT A GOOD RELIABLE
WATCH
At a REASONABLE PRICE, call at
DAVIS BROS.

130 Young Street, Toronto.

N.B.—Repairing Promptly Attended to.

Quotations are: River brands, \$2.10@2.20 for clear butts and \$3.10@3.20 for XXX; country brands, \$2.00@2.10 for clear butts and \$3@3.10 for XXX.

RAILROAD FREIGHTS.

The following are the present railroad freight tariffs from the Saginaw Valley to principal points, for 10 tons, as reported by Mr. O. Waters, Commercial Agent M.C.R.R.:

Table listing railroad freight rates for various locations including Albany, N.Y., Burlington, Buffalo, N.Y., Boston, Mass., New York City, New Haven, Ct., Portland, Me., Rochester, N.Y., Rome, N.Y., Syracuse, N.Y., Springfield, Mass., Schenectady, N.Y., Utica, N.Y., and Worcester, Mass.

CHICAGO.

JULY 20.-The principal change in prices since last report has been in piece stuff, which was advanced again on Saturday to \$11.50 and \$12 for ordinary lengths, by which is meant eighteen feet and under. Longer stuff is higher in proportion. These figures are said to be obtained without difficulty, though some of the dealers continue to talk of a possible reaction in the prices of this kind of lumber later on.

CARGO QUOTATIONS.

Table listing cargo quotations for items like Joist and scantling, green, Mill run, choice green, Mill run, medium, green, Mill run, common, Shingles, standard, Shingles, extra A, and Lath.

LAKE FREIGHTS.

Table listing lake freight rates for destinations such as Manistee, Muskegon, Ludington, Grand Haven, Mesuminee, Sargus Bay, White Lake, and Ford River.

Receipts and shipments of lumber and shingles for the week ending July 19:

RECEIPTS. SHIPMENTS.

Table showing receipts and shipments for Lumber, Shingles, and other materials.

Receipts and shipments of lumber and shingles from January 1 to and including July 19:

RECEIPTS. SHIPMENTS.

Table showing cumulative receipts and shipments for Lumber, Shingles, and other materials.

MINNEAPOLIS.

The Mississippi Valley Lumberman of the 22nd ult. says:—All things work together for good to such as raised their price lists promptly and regularly, which remark we explain as meaning that those firms and markets who first took our advice and raised prices have netted the largest amount of satisfaction and money while those who have hung back would like to hire some one to kick them.

Dubuque, Davenport and other river cities have all the trade they can handle at the late advance. Minneapolis is getting rid of over 5,000,000 feet per week and only sawing about 5,500,000 feet. Heavy log sales are reported from the St. Croix where they are closing out the remnants of their winters cut at good round

prices. Logs elsewhere are becoming valuable. A sale is reported of 5,000,000 feet at Oakkosh to the Diamond Match Co., at \$17 per M. for Wolf river logs. Eastern Michigan is having her full share of prosperity as will be noticed in our Bay City report.

ALBANY.

JULY 25.—The following are the River Freights:—

Table listing Albany river freight rates for destinations like New York, Bridgeport, New Haven, Providence, Fall River and Newport, Pawtucket, Norwalk, Hartford, Norwich, Middletown, New London, and Philadelphia.

Quotations at the yards are as follows:—

Large table listing various lumber and wood products with their prices, including Pine, Spruce, Hemlock, Ash, Cherry, Oak, Basswood, Hickory, Maple, Chestnut, Shingles, and Lath.

OSWEGO, N.Y.

JULY 25.—The following are the quotations:—

Table listing Oswego, N.Y. quotations for items like Three uppers, Pickings, Pine, common and dressing, Common, Culls, Mill run logs, Siding, selected, 1, 1 1/2 inch, Selected, 1 and 1 1/2 inch mill run, Strips, 1 and 1 1/2 inch mill run, 1 1/2 selected for claspboards, Shingles, XXX, 18 inch, pine, XXX, 18 inch, cedar, XXX, and Lath.

BUFFALO.

JULY 25.—The following are the latest quotations for cargo lots:—

Table listing Buffalo cargo lot quotations for Uppers, Common, Culls, Dressing stocks, and Dressing sidings.

LOGS.

The Stillwater Lumberman says:—Gillispie & Harper report the following log sales: Page, Dixon & Co., Dubuque, 140,000 feet; Renwick, Shaw & Co., Dubuque, 400,000 feet; Quincy Lumber Co., Quincy, Ill., 600,000 feet; Gale & Wightman, Port Byron, 500,000 feet; Dubuque Lumber Co., 70,000 feet; Hemingway, Rarkley & Co., Lansing, Ia., 600,000 feet; St. Croix Lumber Co., 100,000 feet; C. N. Clark, Dubuque, 200,000 feet. By the steamer Nina, 14 string raft to Gardner, Batchelder & Co., Lyons; and 8 strings to C. L. Coleman, by the Rugby; 14 strings, by Mark Bradley, to Taber & Co.

Since the first of March Hugh Sutherland & Bro. have received by rail 748 cars of lumber, amounting to about 7,480,000 feet, besides over two million feet by water, a large portion of which was shipped by the North-West Navigation Company to Brandon. They have found it necessary to keep their saw-mill, Winnipeg, running night and day, and even now they cannot keep up with the demand.

DULUTH.

The Lake Superior News says:—The long faces of our lumbermen about these days are supposed to be owing to the rise of \$1 per M on lumber. The Chicago and Minneapolis markets advanced some little time ago, and our lumbermen have concluded not to get left. The extraordinary demand for lumber, and the hanging up of so many logs this spring are the causes of the rise. It is said that one firm in Duluth will make from \$10,000 to \$15,000 by this rise.

LIVERPOOL.

The Timber Trades Journal of the 25th June, says:—

The past week has shown a little more liveliness than some of its predecessors, but this in a great measure is due to the auction sales, which have added to the ordinary amount of work done by private treaty. The arrivals have been few, and have consisted chiefly of spruce deals; and, as the demand for these goods is falling off, we have a drooping market, as will be seen from the particulars of last Friday's sales detailed below, when Messrs. A. F. & D. Mackay offered two cargoes from St. John, N.B., one from St. Margaret's Bay, and some stored lots, together with birch timber, Quebec pine deals, and other woods. There was a fair attendance of buyers, and although there was an indication of desire to meet the wishes of the buyers, a part of one cargo of St. John, N.B., and about two-thirds of the cargo from Margaret's Bay were withdrawn. The stored spruce deals also were withdrawn, for want of competition, and the prices bid for the American black walnut, 45 logs, did not seem sufficiently high to warrant a sale, as only 4s. per foot was offered for the largest wood, viz., 20 to 24 in. deep. The spruce deals sold as follows:—

Table listing Duluth and Liverpool spruce deal prices for various sizes and origins like St. John, N.B., Margaret's Bay, N.S., and rough boards.

On the same day Messrs. Farnworth & Jardine offered a cargo of Pensacola hewn pith pine timber just landing, which met with good competition, and about two-thirds of the cargo was sold at the following prices:

Table listing prices for Pensacola hewn pith pine timber in various sizes and depths.

The remainder of the cargo was withdrawn. The Timber Trades Journal of July 9th says:—With the arrival of several timber laden vessels from Quebec the quays are now beginning to wear a busy aspect, but so far there has not been much done in the way of delivery out of the fresh import.

From the usual monthly return given below it is evident that in nearly every article the stock is in excess of what it ought to be at this time of year, yet we must not overlook the fact that the consumption has not shown any marked decrease, for it compares very fairly with that of the corresponding month of last year.

A Fool Once More.

"For ten years my wife was confined to her bed with such a complication of ailments that no doctor could tell what was the matter or cure her, and I used up a small fortune in humbug stuff. Six months ago I saw a U. S. flag with Hops Bitters on it, and I thought I would be a fool once more. I tried it, but my folly proved to be wisdom. Two bottles cured her, she is now as well and strong as any man's wife, and it cost me only two dollars. Such folly pays."—H. W., Detroit, Mich.—Free Press.

DRYBRID.—Strengthen your digestion—tone the stomach for utilizing and assimilating every atom of food you take; the body needs it for strength and vigor. Zopher cleanses the entire system, stimulates the liver, keeps you regular, and able to eat ten-penny rails. Letters and postal cards come in daily, telling of cures and help from Zopher, from Brazil. Positive proof of the health and vigor it gives in a ten cent sample. Ask your druggist.

GLASGOW.

The Timber Trades Journal of the 25th June says:—

There has been rather an improved feeling in the wood market here during last week.

On Thursday, the 16th inst., Messrs. Edmiston & Mitchells brought forward to public sale, at Yorkhill Wharf, an attractive assortment of Canadian and Norwegian goods, also parcels of black walnut, &c. There was an unusually large attendance of town and country buyers, the Auction Hall being quite filled. Of the Quebec deals, the extra breadths (12 in. and broader) were most in demand, and sold fairly well, and will be seen from the prices under-noted.

For the walnut timber, which was only of ordinary quality, there was spirited competition, a considerable proportion going to the east coast.

On Wednesday, the 22nd, Messrs. Singleton, Dunn & Co. held an auction sale of deals, viz., a large cargo of St. John, N.B., spruce just discharged ex steamer. There was a good demand, the entire cargo being sold at prices as under-noted.

The stock of spruce deals now in first hands here is extremely light.

AUCTION SALES.

On 22nd inst., at Glasgow, Messrs. Singleton, Dunn & Co., brokers

Table listing auction sales for St. John, N.B. spruce deals in various sizes and quantities.

St. John, N.B., spruce scantlings— 9 to 24 ft. 6 x 3 and 2 1/2 in. 9jd. 9 to 25 " 5 x 3 " 8jd. 9 to 25 " 2 to 4 x 3 10d.

St. John, N.B., spruce deal ends 7 to 10 x 3 9d.

The Hart Emery Wheel Co., of Hamilton, commenced operations in the early part of 1880, and from their experience since that time the following statement is deduced:—At the commencement they procured from Detroit persons well versed in the business, who soon imparted to the others engaged a practical knowledge of the business, after which they were returned to their former places of employment in Detroit. Since the start on a small scale the business has day by day increased, until now seven times as many hands are engaged as formerly. Wages are also higher, in most cases rising fifty per cent. The sales are growing larger day by day, and the facilities for manufacturing this class of goods are being increased to fill the growing wants of the consumer, while the charge for their product is greatly lessened. As to the effect of the tariff on their trade the company are fully satisfied with its workings. They have a protection of 7 1/2 per cent., which to a great extent debars American competition; and at the same time their goods are of better quality than those furnished on the other side of the line.

D. GILMOUR, Esq., of the firm of Gilmour & Co., was in Campbellford on Monday last, with a view to shipping lumber there. If he is successful in purchasing a suitable site, the Company will also establish a regular supply depot, like unto the one recently built by Messrs. Rathbun & Son.

Honoured and Blest.

When a board of eminent physicians and chemists announced the discovery that by combining some well known remedies, the most wonderful medicine was produced, which would cure such a wide range of diseases that most all other remedies could be dispensed with, many were skeptical, but proof of its merits by actual trial has dispelled all doubts, and to-day the discoverers of that great medicine, Hops Bitters, are honoured and blest by all as benefactors.—Democrat.

By THE TIMELY USE of the Extra-t of Wild Strawberry, you may avert all disagreeable summer complaints, diarrhoea, dysentery, cholera morbus, etc., nothing is so pleasant in its cure, so rapid, reliable and effectual, as Dr. Fowler's extract of Wild Strawberry. And the value of this medicine is an antidote in our stomach, colic, cramps, soresickness, vomiting, and other irritations of the stomach and bowels is incalculable. It is safe and sure and should be carried in the haversack of every traveller and tourist.

ROBIN & SADLER

594, 596, 598, St. Joseph St.

MONTREAL

Manufacturers

of

LEATHER BELTING

Fire-Engine

HOSE,

Lace Leather,

Mill Supplies, &c.

1878

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. 1878



The QUEEN'S HOTEL, TORONTO, CANADA

McGAW & WINNETT, Proprietors.

Patronized by Royalty and the best families. Prices graduated according to rooms. 1879 527

F. E. DIXON & CO.

MANUFACTURERS OF PURE BARK TANNED

LEATHER BELTING

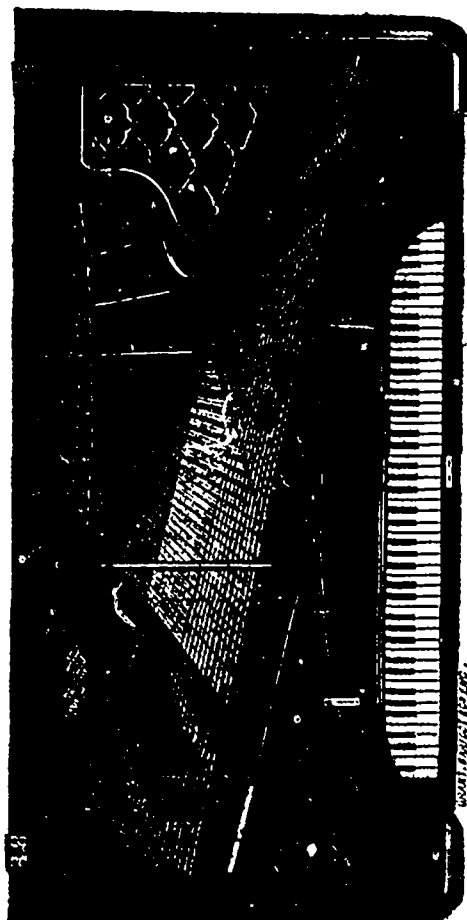


First Prize, Provincial ExhibitionOttawa, 1875
First Prize, Provincial Exhibition.....Hamilton, 1876
First Prize, Provincial Exhibition.....London, 1877
First Prize, Industrial Exhibition.....Toronto, 1879
First Prize, Industrial Exhibition.....Toronto, 1880
International Medal, Centennial Ex.....Philadelphia, 1876



None genuine unless with a STAR on the head of rivets. Send for Price Lists and discounts. 01.17

81 Colborne Street, Toronto.



The Rainer Piano Always Triumphant!

CARRIES OFF THE HONORS OF 1880 AS FOLLOWS:

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

SEND FOR CATALOGUE.

RAINER, SWEETNAM & HAZELTON,

MANUFACTURERS,

GUELPH, ONTARIO. 11

National Manufacturing Company

202 SPARKS STREET, OTTAWA.



Manufacturers of Tents for Lumbermen, Sportsmen, Camp Meetings, Photographers, Lawn and Military Encampments, with or without extra roofs, all sizes and styles, white or fancy striped, sidewall proof or plain. Prices from \$5 upwards. Flags of all descriptions, (regulation size)



made of the best of silk-finish bunting. CAMP BEDS (Bradley's Patent) the best bed ever invented; size when folded 2 x 6 in.; 3 feet long, weighing only 11 pounds, but strong enough to bear the weight of any man. Waterproof wagon and horse-covers, tarpaulins sheets, coats and leggings of every description made to order on the premises. Special rates to Lumbermen. Send for catalogue and price list to

NATIONAL MANUFACTURING CO.,
202 Sparks Street, Ottawa

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

GILBERT HART, Detroit,
President.

JAMES T. BARNARD, Hamilton,
Secretary-Treasurer.

SAMUEL BRIGGS, Hamilton,
Superintendent.

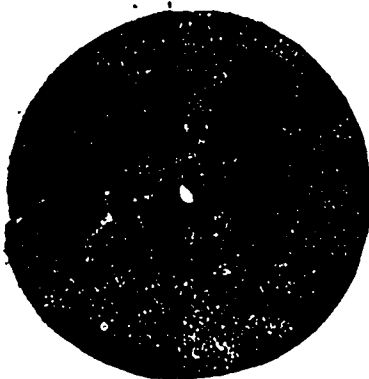
MANUFACTURERS OF THE CELEBRATED

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. CATHARINES.

JAMES ROBERTSON, ESQ.,
MONTREAL.

Messrs. JAMES ROBERTSON & CO.,
TORONTO.

WE ALSO REFER TO

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

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

STEAM SAW MILL OWNERS

Have your Boilers thoroughly Inspected and Insured against Explosion by

The Canadian Steam Users' Insurance Association

HEAD OFFICE, 9 VICTORIA STREET, TORONTO.

SIR ALEX. CAMPBELL, President.
HON. JNO. McMURRICH, Vice-Pres.

GEORGE C. ROBB, Chief Engineer.
A. F. JONES, Secretary-Treasurer. 1917

35 Horse Mill! on Bay Chaleur makes Norwegian Captains Exclaim
"They are the Best Cut Deals we ever saw Shipped"

R. H. MONTCOMERY
 writes from New Richmond, Bay Chaleur, P. Que., 12th June, 1891:—"Have just come from Mill. She is working well and doing good work. Got up steam from cold water in 25 minutes. We cut yesterday, (all spruce logs) 19,536 feet. When in the mill this afternoon, took out my watch and timed the mill. She cut 1 spruce log, 12 feet long, in 60 seconds. I am much pleased with my mill. He writes again 2nd June:—"My 35 Horse Power Belted Mill still loaded, say they are the BEST CUT DEALS they have ever seen shipped. The above Mill is our 35 H.P. Out-of-Engine; return tubular boiler, No. 2 saw iron cut 35 ft logs; Kinders Chalmers Bull-wheel; Slab saw; New Brunswick Edge; Single Trimmer; Sawdust carrier; Deal table, etc., put into operation. Waterous Engine Works Company, Brantford Canada."

Northey's Steam Pump Works

BOILER FEED PUMPS, AIR AND CIRCULATING PUMPS, STEAM FIRE PUMPS, and WRECKING PUMPS.	MINING PUMPS, PUMPS SPECIALLY ADAPTED for OIL PIPE LINES, And CITY WATER WORKS.
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No. 47 King William Street.

HAMILTON, ONTARIO.

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1917

A. NORMAN ELECTRICIAN,

4 QUEEN STREET EAST, TORONTO, ONTARIO.

Trusses for HERNIA, Rupture,

The most Durable and Beneficial kind known to Medical Science always in Stock, and fitted to the Body at Reasonable Prices.

BATTERIES FOR BATHS,

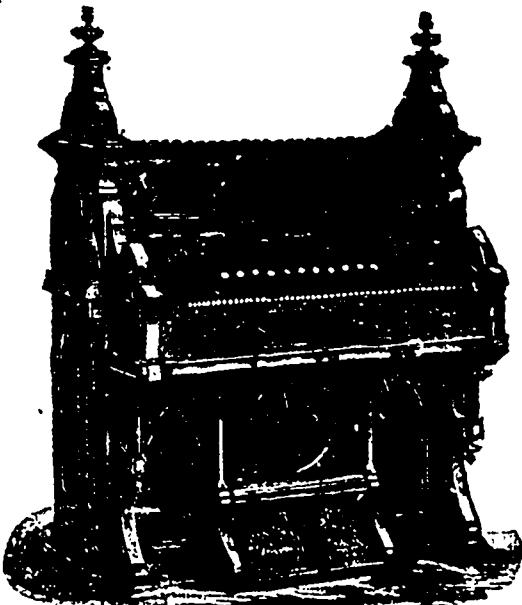
Of Special Sizes, made to order, both for Public and Private Use; and FARADIC BATTERIES always on hand. PRICES LOW. 1917

The Crowning Triumph of the Bell Organ

The Bell Organs have just received the HIGHEST AWARD and SPECIAL PRIZE (Gold Medal) at the International Exhibition, Sydney, Australia, this year for their Organs over all the English and American makers. This, along with the unlimited awards, prove that

THE BELL ORGANS LEAD THE WORLD.

WE RECEIVED
 Medal and Diploma Provincial Exhibition, 1871
 Medal and Diploma Centennial Exhibition, 1876
 International Medal and Diploma, Sydney, Australia, 1877



WE RECEIVED
 Only Medal for Parlor Organ, Provincial Exhibition, 1878
 Only Medal for Parlor Organ, Industrial Exhibition, 1879
 And Gold Medal..... at Sydney, Australia, 1880

The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. We GUARANTEE ALL OUR ORGANS for five years. Correspondence invited. Illustrated Catalogue mailed free.

W. BELL & CO.

41 to 47 East Market Square, GUELPH, Ont.

217

Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

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

SINGLE OVEN STOVE

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

DOUBLE OVEN STOVE

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

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

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

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.

MARSHALL MURRAY

Engineer and Brass-founder

MANUFACTURER OF

CHURCH BELLS

Of a TONE and PRICE



to Defy Competition.

SHIPS BELLS

ETC., ETC., ETC.

ALL REQUISITES IN BRASS FOR SHIPS FURNISHED.

ALSO,

GALVANIZED WORK.

Corner of Francois and Roch Streets,

PALACE HARBOUR, ST. ROCH, QUEBEC.

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 \$1 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, 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 $\frac{1}{2}$	} 2 in. hole.	10x $\frac{1}{2}$	} 2 in. hole.	12x $\frac{1}{2}$	} Holes, 2, 3 and 1 inch.
8x $\frac{3}{4}$		10x $\frac{3}{4}$		12x $\frac{3}{4}$	
8x1		10x1		12x1	
		10x $\frac{1}{8}$	12x $\frac{1}{8}$		
		10x $\frac{1}{4}$	12x $\frac{1}{4}$		
		10x $\frac{3}{8}$	12x $\frac{3}{8}$		

Probably more wheels 12x $\frac{1}{2}$, 12x1 and 12x1 are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1. 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 a "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 user to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities to match any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you a Tanite Wheel of similar quality. Our regular classification of Saw Gumming Wheels is as follows:

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

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

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

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

The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

M. Covel's Latest Improved Automatic Saw Sharpener

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

**CIRCULAR SAW
STEAM FEED!**

I would also call special attention to my

Heavy Circular Saw Mills

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

GRAVENHURST, August 20th, 1850.

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 14 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,

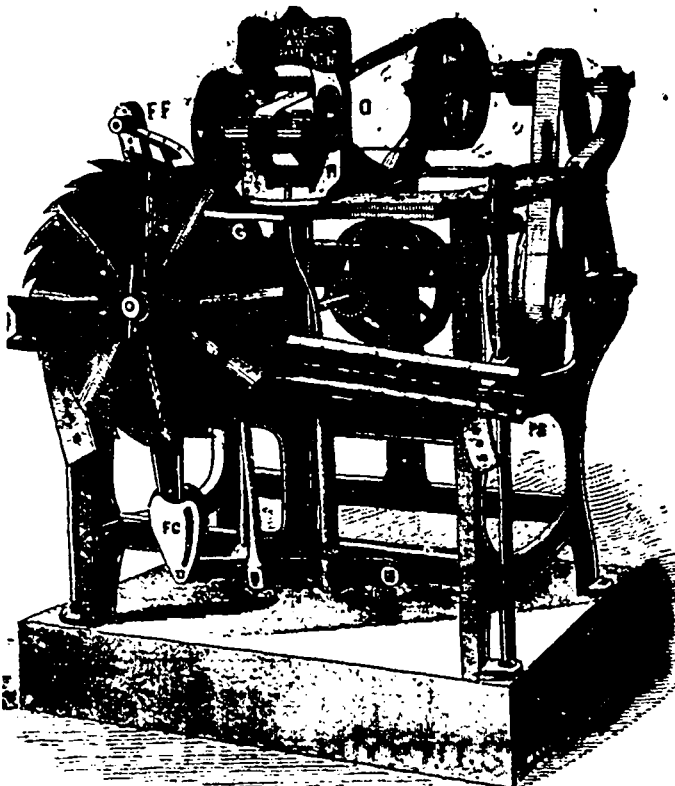
WILLIAM TAIT,
Lumberman, Gravenhurst.

Toronto, August 11th, 1850.

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 "raving" 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 any Factories of any kind, I supply the Corliiss Engine. I am justified in saying that our Style, Workmanship and Power 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.