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CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS AND MILLERS' GAZETTE

VOLUME XIII.
NUMBER 6.

TORONTO, ONT., JUNE, 1892

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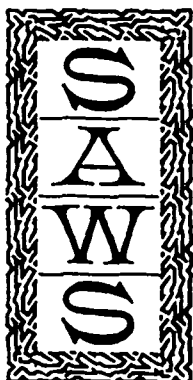
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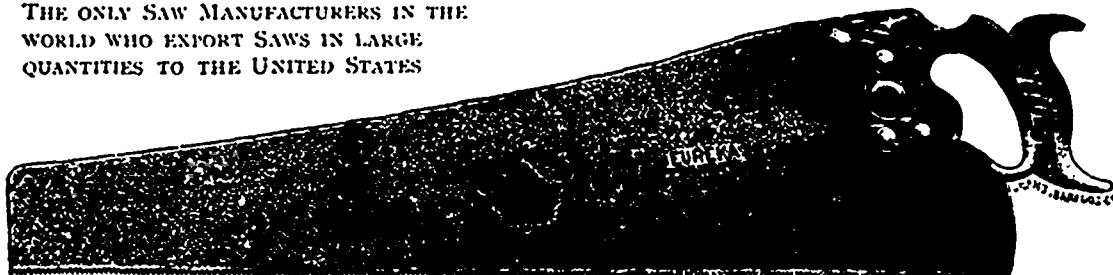
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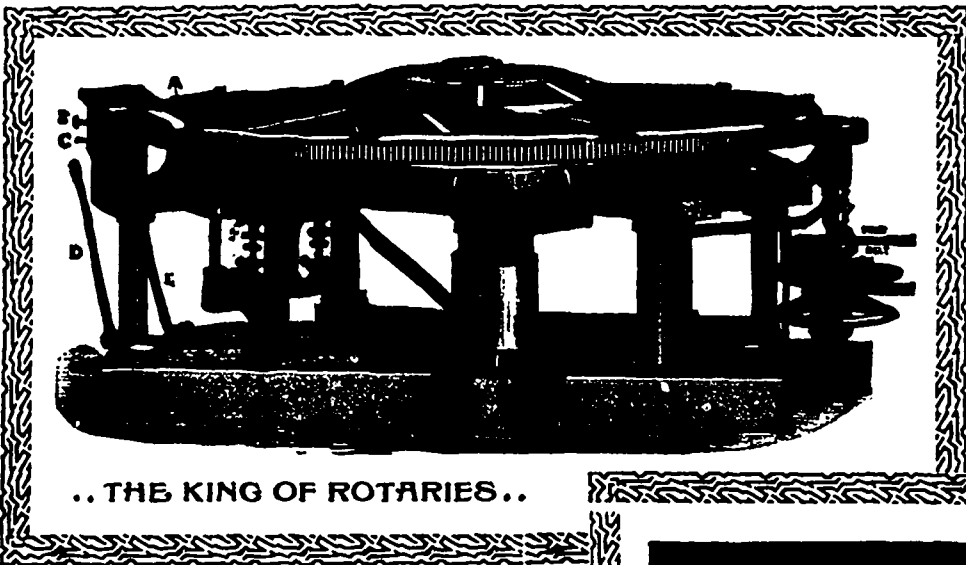
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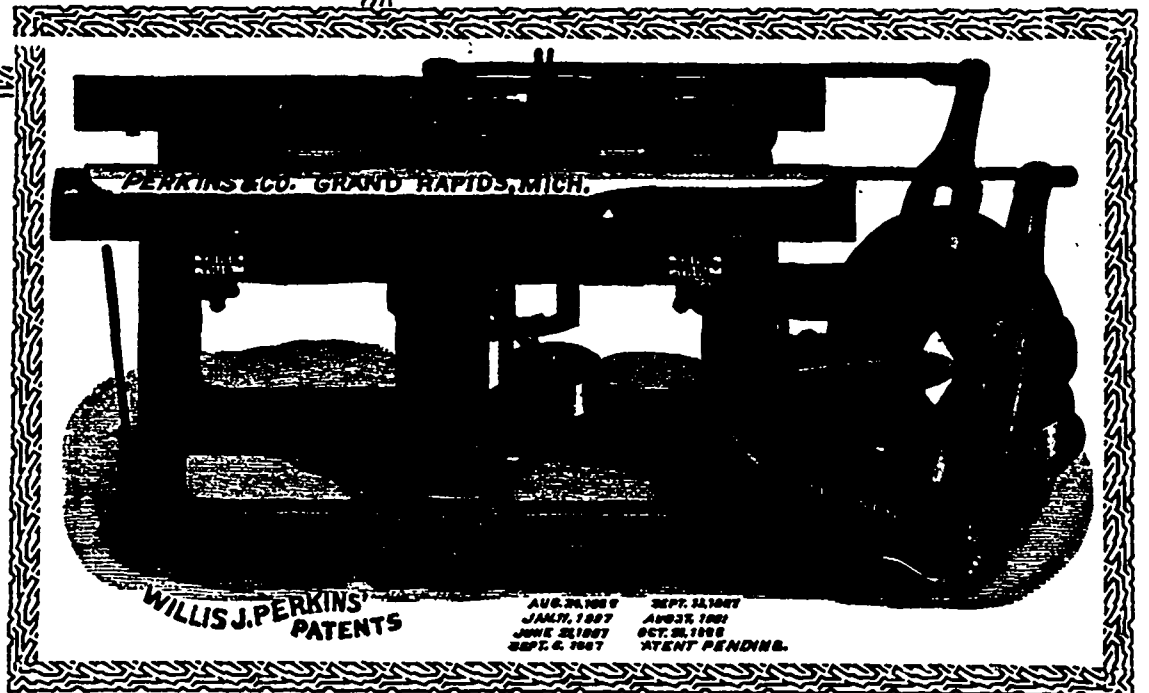
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THE CANADA LUMBERMAN

VOLUME XIII.
NUMBER 6.

TORONTO, ONT., JUNE, 1892

TERMS, \$1.00 PER YEAR
(SINGLE COPIES, 10 CENTS)

CHARACTER SKETCH.

MR. J. B. MILLER.

"Every person has two educations, one which he receives from others and one which he gives himself."—Gibbon.

IN the LUMBERMAN character sketch of a month ago we told the life-story of one of the pioneer lumbermen of this country, Hon. J. K. Ward, of Montreal. We shall talk this month of one of the younger men of the trade. Mr. Ward is seventy-two years of age. Mr. J. B. Miller, of whom we now write, has yet to celebrate his thirtieth birthday. Between these two leading representatives of the Canadian lumber trade there can be drawn not a few parallels, as well as contrasts. Mr. Ward's activity in business, at an age when men usually seek retirement and ease, is an illustration of the vigor and continued effort that may accompany years of active work. In Mr. Miller, who is president of the Parry Sound Lumber Co., one of the largest concerns in this province, operating several mills and extensive timber limits, we find a type of the young men of the present day, who are to be found everywhere, controlling many of our largest commercial concerns.

Mr. Ward represents the lumber trade of Quebec with its own individual conditions and indigenous characteristics. Spruce more than pine is the product of that province. Mr. Ward has shown his loyalty to his convictions in the valiant battle he has waged for a readjustment of the spruce duties on lines more conducive to the growth and prosperity of this important wealth-producing element of Quebec. In Ontario, where Mr. Miller's interests are placed, white pine is king, and from his point of view we can understand that the president of the Parry Sound Lumber Co. has no serious quarrel with the duties on lumber as they rule at present, whilst he would be satisfied, doubtless, were it so decreed that we should have entire free trade in lumber.

It was a saying of Napoleon that "he never blundered into victory; he won his battles in his head before he won them in the field." Mr. Ward could never have attained the success that crowns his seventy-two years busy life, nor would it have been possible for Mr. Miller to have grasped the details and volume of business that were given over to him before he had reached his majority, owing to the declining health of his father, who was principal of the Parry Sound Co., and handled these with magnificent success ever since, without each first fighting out their respective battles in their head. "With what do you mix your colors?" was the innocent enquiry put to a celebrated artist by one who had been dazed with the beauty of the work he was viewing. "With brains," was the laconic but forceful reply of this master on canvas. This is the element that Mr. Miller for twelve years past has thrown into the management of his varied and extensive undertakings.

Mr. J. B. Miller was born in the County of Leeds in July, 1862, consequently he is a month away from his thirtieth birthday. His father was J. C. Miller, M.P.P., a lumberman of extensive operations, who died in 1884. The younger Miller was educated in Toronto, primarily at the model school, following up the years at that institution with a course in Upper Canada College. His father's health declining he abandoned his academic studies in 1880 to assume the responsibilities of the extensive business conducted by the senior Miller. How completely he fitted into the large niche which the continued illness of the father, followed later by his death, made necessary, has been intimated in what is already written of this sketch, and finds ample illustration in the growth, extent and present position of the Parry Sound Lumber Company with its manifold connections and operations.

The principal mill of this company is that on the

Seguin river, having a capacity of 15,000,000 feet annually. Every facility has been given to manufacturing in the first-class equipment of the different mills of the company, and in shipping conveniences in the erection of splendid docks from which an immense barge, the largest lumber barge in the upper lakes, and costing \$100,000, plies, connecting with several ports of the Georgian Bay and Lake Huron. Over 400 square miles of pine lands, heavily timbered, are held by Mr. Miller.

Mr. Miller is interested in a number of commercial undertakings in Toronto; prominent among these is the extensive works of the Polson Iron Co.

In 1883 he married Miss Hunter, daughter of Robert Hunter, now deceased, and formerly of the firm of Hunter, Rose & Co., Toronto.

Mr. Miller is a resident of Toronto. During the summer months, with his family, he finds no inconsiderable enjoyment voyaging around and exploring the many beauties of nature that have their place in the picturesque region of Muskoka and Parry Sound.

Standing an onlooker at Eton one day, observing the students at their games, Wellington remarked: "It was



MR. J. B. MILLER.

there the battle of Waterloo was won." "All work and no play makes Jack a dull boy." Taking an occasional respite from the laborious duties imposed by a business of the size of Mr. Miller's, he but acts on the lines so wisely suggested by the remark of the Iron Duke. He takes a lively interest in military affairs and is a lieutenant in the Queen's Own. Just how genial and sociable Mr. Miller is at all times ask those whose privilege it is to join him in one of his yachting expeditions, or in other ways meet him in social intercourse.

LABOR-SAVING DEVICES.

NEW machines can not be prevented, nor should they be, since they enrich the world, and have made the workingman's progress to be what it is already. He never had a fraction of his present comfort till steam machinery began to do his work for him. House, clothing, good food, education, clubs, newspapers, all his advances are the result of modern machinery. It is the Atlas which carries the world's welfare on its shoulders; every bit of work it does is so much lifted from the strain and drudgery of the laborers as well as of the rest of us. By cheapening production it increases consumption,

which calls for more labor, which new labor is easier than before the machine went to work. Think of the toil of the old fashioned farmers in the harvest, compared with that of him who now sits on his reaper and binder in comparative ease all day! The workman who learns to understand new machinery rapidly and helps to work it, is the man of his time, and this should be the model and ambition of all. The times reward the nimble and quick-witted—which all should make haste to become. And the duty to do so is laid upon them by nature, not by society. Society can not prevent men from thinking out improvements which nature puts into their heads. And, therefore, the workman must keep himself right with nature, as, indeed, he is learning to do.

The readjustment of laborers consequent upon the perpetual invention of improved machines is a source of perpetual disturbance everywhere, and always has been in civilized societies. So are changes of fashion, as when shoe buckles went out, a large body of buckle makers were brought to destitution. Both, however, are only a part of the general social movement, which is incessant and endless. The only way the individual can keep his place is by enlarging his range of industry. The workman must be quick to learn new things. He must cease to think of stopping the flood of novelties, and learn to swim in it. Business men of all kinds are troubled by the same instability of affairs. He who will not change is submerged; he who changes with the times gains by the times' changes.

POLISHING WOOD WITH CHARCOAL.

A METHOD of polishing wood with charcoal, now much employed by French cabinet-makers, is described in a Parisian technical journal. In this cosmopolitan city may be seen many articles of furniture of a beautiful dead-black color, with sharp, clean-cut edges and smooth surfaces, the wood of which appears to have the density of ebony. As against furniture rendered black by paint or varnish, the difference is so sensible that the great margin of price value between the two kinds of work explains itself. The operations are much longer and more minute in the case of charcoal polishing, which respects every detail of carving, white paint and varnish would clog up the holes and widen the ridges. In the first process only carefully selected woods are employed, of a close and compact grain; they are covered with a coat of camphor dissolved in water, and afterwards with another, composed chiefly of sulphate of iron and nutgall. These two compositions, in blending, penetrate the wood, giving it an indelible tinge, and at the same time rendering it impervious to the attack of insects. When sufficiently dry, the surface of the wood is rubbed at first with a hard brush of couch grass and then with charcoal of substances as light and pliable as possible. Any hard grains remaining in the charcoal scratches the surface instead of rendering it perfectly smooth. The flat parts are then rubbed with natural stick charcoal, and the indented portions and crevices with charcoal powder. Alternately with the charcoal, the workman also rubs the furniture with flannel soaked in linseed oil and essence of turpentine. Repeated punctions cause the charcoal powder and oil to penetrate into the wood, giving the furniture a beautiful color and also a perfect polish without any of the flaws of ordinary varnish.

A THREE CENT STAMP DOES IT.

ON receipt of a three cent stamp we will mail free to any address a copy of our little hand-book entitled "Rules and Regulations for the inspection of pine and hardwood lumber," as adopted by the lumber section and sanctioned by the Council of the Board of Trade, of Toronto, June 16, 1890. Address, CANADA LUMBERMAN, Toronto, Ont.

VIEWS AND INTERVIEWS.

A Logging
Wrinkle.

Somebody thinks themselves clever. We let our readers have the benefit, be it much or little, of the following wrinkle in logging which is somewhat freely going the rounds of the Canadian press. This is what our friend says: "As a rule it takes two men to pull a 6 or 7 ft. saw, but this way one man and a small pole will do the work. Cut a small pole the size of a fishing rod about 8 ft. long. Then tie a strong cord 3 ft. long, having a small hook to fasten in the eye of the saw, to the small end. Force the larger end of the pole in the ground on the opposite side of the tree you wish to saw and pull. The spring in the pole will pull the saw back every time."

Wooden Shoes
In Europe.

We had something to say some months since of the extent to which wooden shoes are worn in the western states, but it is in Europe that the wooden shoe is more in vogue. Recent estimates place the number in Europe who wear wooden shoes at 70,000,000 people, one jobbing house in Paris disposing of 1,000,000 pairs each year. The ordinary every-day sabots are made of basswood, but there are finer shoes made of other woods. Basswood is light and does not split. In Europe poplar and willow are used, but poplar is inferior to basswood, and willow is the best of all. Beech makes a good shoe, as do walnut and birch. The harder, finer woods are used for Sunday shoes in the old world, but in this country, where sabots are worn for rough tramping only, the cheaper woods answer the purpose. Basswood is bought in stove lengths at \$2 a cord. A cord of wood will make 60 to 80 pairs, so it can be seen that the material does not cut much of a figure as to cost of production. The wholesale price for wooden shoes in this country is \$3 a dozen for adult sizes, \$2.40 for medium, and \$1.80 for children's sizes.

Slipshod
Employers.

The employer does not hesitate, and rightly, to condemn the indifferent workman. The man who does not throw heart into his work, whether it be ruling a kingdom or sweeping a street, is a useless workman. But, who makes the careless workman, in part, at least? Slipshod methods, as the system of the shop, have no little to account for. To use the illustration of one writer on the subject: "Hurry up, it's good enough," has spoiled many a good man, and if an employer habitually crowds his men with more work than they can properly accomplish, denies them the right, as it were, to honestly perform their allotted tasks, he has only himself to blame if eventually they become as careless as he is. Where such shiftlessness involves a loss to the customer it becomes culpable dishonesty, and the employer who permits this has only himself to blame if he becomes eventually the victim of his workman's lack of rectitude. We are weary of reading dolorous complaints and criticisms where the power to remedy the evils complained of rests with the complainer. There would be an immediate and permanent decrease in the number of lazy and negligent workmen if every employer kept up to the mark himself and had those he paid do the same thing. It is the old story: like priest like people, like master like servant.

Squaring the
Wage Question.

It does not seem unlikely that the eight-hour-day agitation at the forthcoming general elections in Great Britain may overshadow even the Home Rule question, which is being kept in the front of the Liberal platform. Whether in the older world or this newer country the wage question never downs. We seem not to touch bottom; it looks sometimes as though we did not try to reach bottom. We deal with systems, not men; and imagine we can square all men with the same measuring rule. Centuries of experience have proven the futility of the effort, though we still go on in the same perverse lines. Why not try dealing with men for a change? The Lumber World asks the question: "Can the salary question be perfectly squared? That is, can an employer, who pays so much a day, do anything to encourage an active, industrious, intelligent and skilled workman, and to draw out his best qualities? Or can he do anything to spur up the indolent, loafing, ignorant

and clumsy man alongside? Evidently not, so long as the work is paid for by the hour rather than by the product. I am convinced, from long observation of men in shops, that the best way to grade men's wages is to grade by the output. In other words, wherever piece-work is possible, the employer and employee alike will be better served by counting pieces and paying by the piece. That method puts a premium upon the good work of the skilled worker, and it puts a discount upon the bad work of the bad worker. It is no encouragement to a particularly good worker to have his superior work bunched with the inferior work of his elbow neighbor, and to be paid just the same as the man whose fingers are all thumbs and who would rather loaf than work. It simply encourages the inferior worker to go on and remain inferior." Does not this sound like common sense? Where the method has been adopted its common sense practicability has been shown. What is required is a more general application of the rule.

Masts
100 Feet High.

What would lumbermen say in this day of ship-building to masts 100 feet high? But we write of the past not the present. A writer on the subject of ship-building among the ancients says: "Large ships were not unknown to the ancients, and some of the most roomy attained dimensions equal to ships of modern times. Nevertheless they were unmanageable monstrosities, almost at the mercy of wind and wave, and utterly unfit to cope with the fury of a hurricane. Doubtless we are indebted to travelers' tales for the detailed descriptions that survive the lapse of ages. Constantius conveyed from Heliopolis to Rome an obelisk weighing 1,500 tons, and, in addition to this long-coveted monolith, the ship carried about 1,200 tons of pulse stowed about the small end of the obelisk in order to bring the ship on an even keel. In 268 B.C., Archimedes devised a marvelous ship for Hero of Syracuse. Her three lofty masts had been taken from Britain. Luxuriously fitted sleeping apartments abounded, and one of her banqueting halls was paved with agate and costly Sicilian stone. Other floors were cunningly inlaid with scenes from the "Iliad". Stables for many horses, ponds stocked with live fish, gardens watered by artificial rivulets and hot baths were provided for use or amusement. Ptolemy Philopator possessed a nuptial yacht, the "Thalamegon," 312 feet long and 46 feet deep. A graceful gallery, supported by curiously carved columns, ran round the vessel, and within were temples of Venus and Bacchus. Her masts were 100 feet high, her sails and cordage of royal purple hue."

Tongues
In Trees.

"Sermons in stones, texts in trees, books in the running brooks, and good in everything," as Shakespeare so broadly expressed it, was perhaps the thought in the mind of a writer in the St. Louis Lumberman when he descanted as follows on the language of trees. He has said. "The lumberman is never out of school when in the woods. All he wants is a pair of good optics and an ounce or two of reflective brain. With these in operation he need never be blank in his mind or without a free library. The study of an acorn, a cedar cone or a pine seed will steady the observer's faith in the value of little things, the necessity of time for growth and maturity, and what, when united, the products can do, even of trees, supposably created to furnish warmth for cold fingers, or be transformed into shingles, fence posts or barn doors. A grove of oaks may shelter a spring that can irrigate a county; a cluster of cedars may stay an avalanche, and a clump of pines turn the course of a mountain torrent. If the observer is disposed to envy the higher status of his neighbor or friend the willow that clings to the swamps or the stream; the fir tree to the crag; and the cedar to the solitary morass, and each in its place maturing in size and serving its purpose, is a lesson of content by no means thrown away in this age of unsatisfied ambition and untiring energy. Again, if the woodsman is disposed to be critical with his circumstances, to look on the dark side of life, and in his struggle with adverse conditions he weakens in backbone and grit, he can see in the old oak that has been rocked in the storms of a hundred years that it is what it is by its brave contest with tempest and gale. It is sturdy

and vital, when others of its kind, sheltered in ravines and protected in forests, have long ago succumbed to the tap of the woodpecker and the tooth of time. It is in this way and only by this process of struggle and courage that the sturdier qualities of character are in any case developed. A study of this kind is good for any man in the dumps. The fact that no tree is useless, however cheap in the market or outside of demand, is a practical lesson to the man who is apt to demur at his lot or his talents. The cedar cannot say to the pine tree: "You are of no use," or the walnut to the willow: "You are a waste of space and leaves." If one is put into furniture and the other into barn floors, and one is utilized in a palace and the other in a laundry, each has its place and specific value. There was no spoilt timber in the plan of creation, and from a witch hazel to a red-wood tree, the uses of each, as the wheels and springs in a watch, are practically indispensable to the interests of all. It is so in human life; no man worthy of his mother's milk is without value in the economy of nature."

THE ORIGIN OF SAWMILLS.

It cannot be denied that our forefathers executed their work well, but in many respects they were peculiarly wasteful in both time and material to attain this end. This can be particularly noticed in the latter case in the history of sawmills. Owing perhaps to their prejudices or the superiority of splitting timber over sawing timber in the simple early mills, sawmills were not encouraged to any extent until the seventeenth century, although their invention dates much farther back. Even this sounds a crude age for this ingenious tool to be used, but we must not forget that the invention of the saw by the Greeks dates far back into the misty ages of time. When we compare this age and the time which elapsed before its universal adoption, we see how great our forefathers' prejudices against new inventions were. Indeed so great was the quantity of timber wasted by splitting in Russia in the sixteenth century that Peter the Great forbid it to be transported on the Neva. But in spite of this, split timber is still used for many purposes because of its superior strength and toughness. Germany in ages back is well known to have been a great inventive country, and we find that the Germans had the honor of erecting the first sawmill on the banks of the little river *Raur*, in the fourth century. The early mills were all either driven by wind or water, and this early mill was driven by water. True, this mill is stated to have been for sawing stone, but there is no doubt that those for sawing wood were erected contemporaneously. This mill appears to have been the only one erected for hundreds of years, for they were not universally used, and many later writers speak of sawmills in their time as new inventions. The next instance we find of a sawmill is in the records of the City of Augsburg, which states that three were erected on the banks of the Hanvey brook in that city in 1332, owned by the Hospital of the Holy Ghost. Again when the Infant Henry of Germany sent settlers to the new found island of Madeira, in the fifteenth century, he ordered them to erect sawmills, in order to convert some of the beautiful timbers found there into deals. The city of Breslau had a sawmill in 1427, which produced a yearly rent of three marks. In 1490 a sawmill was erected in the forest of Erfurt. Norway, that timber-covered country, owned its first sawmill in 1530, for we read in 1543 of a deal tithe being instituted by Christian III. All these early mills had only one blade in a reciprocating frame, and those having several blades in one frame were not used until 1575, when several of that kind were erected on the banks of the Danube. Holland, which at one time owned more sawmills than any other country, erected its first in 1596, at Saardam. In England sawmills had the same fate as the crane at Strasburg. They were violently opposed by the hand sawyers, and the first one erected, that near London, in 1663, had to be abandoned, and the one at Limehouse in 1767 so excited the rage of the populace that they pulled it down. Circular saws and driving sawmills by steam power were probably contemporary, and they were first erected just about a century ago. Sweden owned the largest sawmill in the world at that time one driven by a watermill 12 ft. in breadth, which drove seventy-two frame saws. What would they say to our circular saws now?

BAND SAWS FOR LOG SAWING.

It is not alone in this country, but abroad, that the band saw is engaging the attention of practical machinists. We illustrate on this page a special band saw for log sawing, manufactured by A. Ransome & Co., of Stanley Works, Chelsea, London, S.W., Eng., a concern that has a world-wide reputation for high-class sawmill and wood-working machinery. The merits of the particular machine in question have been brought to public notice very recently through the inspection made of one of these machines, that was about to leave the workshops for Tasmania, by a company of scientific and practical men connected with the trade.

The claim is made by the Messrs. Ransome & Co. that while their machines possess the best features of the machines made on this side of the ocean, for ensuring rapid work and facility of manipulation, they have been still more designed to meet the requirements of a market like Canada, where economy of timber and the production of smooth and true boards, with a moderate expenditure of power, are likewise indispensable.

The log sawing machines now in use may be classified under the three following heads: (1) vertical timber or log frames; (2) rack circular saw benches; (3) horizontal single blade saw frames; and it may be useful to place on record in a summarized form the advantages which the makers of these special band saw machines claim for them as the results of practical working.

As compared with a vertical timber frame—(1) The band saw, taking only one cut at a time, enables the sawyer to see what internal defects there may be in the log, or how the figure of the wood is developing, and so to convert it to the best advantage. (2) The band saw cuts very much faster than the vertical frame, the effective speed on the cutting edge of the saw being 7,000 feet a minute, as against about 200 feet a minute, which is the effective speed of the cutting edge of each saw in the vertical frame. (3) The time lost in changing saws on the band saw is about half an hour a day as against two to five hours a day lost in changing and shifting saws in the vertical frame.

As compared with the rack circular saw bench—(1) The band saw will do as much work as the rack circular saw bench with much less power. (2) The band saw saves about 70 per cent. of the wood which is wasted by being cut into sawdust with the large circular saws used in the rack bench. The band saw when cutting oak or elm logs wastes a full sixteenth at each cut. The rack bench doing the same work with a 62 inch saw wastes fully five-sixteenths at each cut. Thus, when sawing a log 24 inches square into boards one inch thick, the band saw would produce four more one inch boards than could be obtained from the same log if converted at the rack bench. (3) The band saw makes much smoother work than is obtainable from a circular saw, and the surface of the wood is not marked by the back of the saw.

As compared with the horizontal single blade saw frame—(1) The band saw will cut vastly more than any horizontal single blade saw frame in the market. (2) The band saw takes up considerably less space in the mill than the horizontal frame. Assuming a log twenty-four inches square by twenty feet long required to be cut into boards one inch thick, the band saw would saw the log completely up into twenty-two boards in the same time as it would take the horizontal frame to cut off the first two boards, the waste of wood being the same in each case.

The particular machine shown in our illustration stands twenty feet high from its base plate to the summit

of the upper saw pulley. Its saw pulleys are eight feet in diameter. The blades used on it are eight inches in width, and their lengths are nearly sixty feet. When cutting they travel at the rate of 7,250 feet per minute. The weight of the machine complete with its traveling carriage is twenty tons.

This machine will saw right through a maximum depth of seventy-five inches, and will square and convert logs up to seven feet in diameter. The wooden section (dogged on the traveling carriage) showed a log of the maximum diameter which the machine can convert. It girths about twenty-two feet. A lot of blue gum wood of this average section, and fifty feet long, would weigh nearly fifty tons.

The rate of travel of the log, while the saw is cutting it, is variable up to fifty feet per minute. Where smaller logs are to be cut a still higher rate of speed is obtainable.

Messrs. Ransome & Co. will cheerfully furnish to readers of the CANADA LUMBERMAN any particulars



RANSOME'S SPECIAL BAND SAW FOR LOG SAWING.

of the band saw not included in the description here given. Woodworkers are likely to be interested in a number of machines constructed by this concern, and which are fully described and illustrated in catalogues and circulars. They also manufacture several machines and appliances for keeping large band saws in order, a patent automatic saw-sharpening machine being one of the most useful. This machine will sharpen in about 20 minutes what would take 4 hours to sharpen by hand.

SHAFTING.

BE sure that the shafting has a firm foundation, that the hangers are strong enough and not spaced too far apart, that they are lined up in good shape and well provided with means of lubrication. It may pay to reduce the size of shafting as you go further from the engine, for everything that helps to take friction from the engine load is beneficial; this requires careful calculating, however, and should not be done by guess work; it does not pay.

LINING UP AN ENGINE.

THE easiest way to determine whether an engine shaft is out of line depends considerably on the style of the engine, as with some engines it can be done quite easily and by simple means, while in others more inconvenience and greater difficulties are experienced in lining, says the Stationary Engineer. As a stationary engine is attached solidly to the foundation, it may be leveled and squared. With the frame of the engine level, a level placed across the guides should show these to be level also, then a plumb line dropped in the path of the crank, so that the line will come at the centre of the length of crank pin when the pin is above the shaft, and again when it is moved to the lower part of its travel, will show that the shaft is level. This point might also be determined by the use of a level, if enough of the shaft is exposed to accommodate the length of the level. To determine whether the shaft is in line on a horizontal plane, run a line parallel with the guides and determine whether the crank pin strikes the line at the same point when near both the outward and the inner points. If the leveling and establishing of the line are carefully done, the engine can be placed exactly in line, or a trial in this way will show how much it is out of line.

To thoroughly line up an engine and get all parts in their proper position, the piston, crosshead and connecting rod must be removed and a line drawn through the cylinder and projected beyond the outer point reached by the crank pin in its travel. This line must be centered accurately in the cylinder, measurements being made at both ends and the work carefully done, so that the line is at equal distance from the sides. A very trifling variation in the distance of the line from the sides at either end of the cylinder will be multiplied at the crank end. The line can be fastened in any convenient manner at the crank end, but at sufficient distance beyond, so as not to interfere with the movement of the crank. With the line in position, the guides should be carefully adjusted and the adjustment made accurate, as must all other adjustments and measurements when lining up the engine, or best results cannot be obtained.

A good and careful workman can show his qualities to good advantage in this kind of work, for here a variation of half a hundredth of an inch may be "good enough" to suit some, but the line should be drawn closer than this. With the cylinder and crosshead in line, the next thing is to line the shaft. This can be done by removing the shaft from the bearings, replacing the caps of the journal boxes and running a line through them, and then testing with a square and plumb line or level, adjust the bearings, so that the shaft will come in line. If the shaft bearings are badly worn we should prefer to line the shaft while in position. This can be done by blocking the shaft so it is level with the center line of the engine, and placing it also at an angle of 90°, as shown by the square, to the center line of the engine. The height of the shaft can be obtained by leveling from the center line to center of the shaft. If it is necessary to re-babbit the bearings, the old babbitt should be removed from the boxes before the shaft is placed in position; then, when accurately in line, re-babbit the boxes in the usual way.

THE MYSTERY.

A WRITER in an engineer's paper properly says that when old grate bars, scrap iron and similar weights are hung on the safety-valve lever (to prevent the valve working at the proper time), there is always a deep mystery connected with it—and that mystery is, what prevents an explosion?



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J. S. ROBERTSON,

EDITOR.

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

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

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

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

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

PROBLEMS OF THE TRADE.

THE recent failure of Gall, Anderson & Co., of this city, has served to make bare some of the weaknesses, that have honeycombed the lumber trade of the country for a number of years. A list of direct liabilities aggregating \$59,000 carries with it several obvious inferences; and when to this amount is added a bank indebtedness of \$93,000, to secure which the best assets of the estate had been pledged as collateral, perhaps it is not surprising that the dividend paid to the direct creditors does not exceed nineteen and a-half per cent. The assets of the estate have been sold to Mrs. Gall for \$11,552, she arranging the bank claim and paying the preferred claims and liens.

Some of the creditors are disposed to dispute the claim of the bank, but it is not known of any legal steps being taken in that direction. Banks usually look out for themselves, and make sure of the methods they adopt in dealing with a customer. The position of the ordinary creditor is not likely to be helped by the safeguards that the bank lays hold of to make itself solid, but in this respect it is only another case of "the devil take the hindmost."

Where the creditor is more frequently misled is in the false impression he obtains of the assets of the debtor. He steps into a customer's shop and he sees around him a vast quantity of valuable machinery and stock in various conditions of manufacture. He looks into the yard and there sees piled up thousands of feet of lumber. He comes to the off-hand conclusion that the assets are abundant and he cannot run much risk in making a sale of \$2,000 or \$3,000. As a matter of fact the whole concern may be hypothecated to the bank.

The liabilities of Gall, Anderson & Co. are represented in fifty-nine amounts. These are divided as follows: Eight under \$100; eleven from \$100 to \$300; seven, \$300 to \$500; twelve \$500 to \$1,000; eleven \$1,000 to \$2,000; four \$2,000 to \$3,000; four \$4,000 to \$5,000. Nearly all the leading lumber firms both of city and

country rank on the estate. The insolvent firm was of course in business on a considerable scale; but does not an analysis of the liabilities, in the light of the information that is now in creditors hands, indicate that credit was given with a prodigality that is outside the bounds of safe trading? We suppose the reason for this is not hard to seek. The size of the list of creditors is evidence that the opportunities for buying were not few and far between. They could only have served as a feeder to overtrading because of the easy road they furnished to secure credit. All were anxious for trade and, as a prominent lumberman remarked when discussing this case, which the LUMBERMAN has taken simply for the purpose of illustrating its remarks: "There is no lumberman but what has some lines of stock he is solicitous of selling; if he does not make the sale, competition is so keen, someone else will, and risks are taken against one's own better judgment."

In a word, too many men are engaged in the lumber business, and yet probably there has been no time in the history of the trade, in Toronto at least, when so little capital was seeking investment in this direction. Writing in the terms of an interview on the E.L.I page, it can hardly be said that Toronto has a wholesale trade worthy the name and commensurate with the importance and magnitude of the lumber industry. A large business is necessarily done, as the metropolis of the province it could not well be avoided; but it is a broken trade, divided among what wholesalers there are, an army of commission men and the mills. Anyone, if he has the money, can go direct to the mills and buy a carload of lumber assorted to meet his particular requirements.

This matter of ignoring the middleman and buying direct from the producer is to some extent an evolution of present-day business methods in almost every line of trade. Whether the effect on business in general is beneficial is open to serious question. It takes away from the manufacturer the advantage gained in having his accounts in comparatively few hands, of whose financial standing he can more readily be advised and know. In its stead he multiplies his accounts and the expense and labor of looking after them; and if his eggs are not all in one basket, the many in which he has placed them are too often made of exceedingly flimsy material, and in too many cases will not carry safely what is in them. Relatively the same general principles apply to the lumber trade, whilst special and particular conditions govern its operations.

One result of banishing the yard trade at any market centre, is that there is no standard system of inspection. It must always be so where each mill makes up its own particular lot of lumber to suit the particular customer. A need of inspection is a need that ought not to exist in the lumber trade, and one that is not conducive to the best interests of the trade in its entirety.

Difficulty in regulating prices is likely to be experienced where the yard system is abolished and lumber is distributed from the mills. This has been the experience for some time in the yellow pine market of many of the Southern States, where there is no coherence among the trade; everyone buys from the mill, and each mill has its own price. It is claimed, owing to the very wide producing field in the south, and the want of converging points for shipping stocks, that these conditions cannot be avoided. The disastrous effect of this line of operations is nevertheless fittingly illustrated in these southern conditions.

Where there is no market centre for the carrying of the various products of the various mills, and distribution goes out from no place in particular, the interests of millmen are prejudiced to the extent that they do not succeed in placing before the trade generally the full producing strength of the mills. The consumer is necessarily at a disadvantage when without a centre to which he may go for the different varieties of lumber that his business may require.

How far these conditions have been a factor in the present disorganization of trade in Toronto and serve to explain the cause of the losses sustained by lumbermen here and elsewhere, is a point on which there is perhaps a division of opinion. We are likely to return to the question in a future issue and we shall be glad to have the lumbermen themselves "speak out" through these columns, which are open to all.

FORESTRY IN QUEBEC.

A CORRESPONDENT, writing to a local journal, pleads for greater forestry preservation in the province of Quebec. He notes with approval the steps taken by the Ontario Government in appointing a commission to enquire into the methods and expense of maintaining a forestry reserve in this province and hopes that the new Commissioner in Quebec "will address himself to the problem of forest conservation." An attempt, it appears, was made under a former administration to inaugurate a system of forest reserves, but it never took any active shape. "There were under license," we are told, "in 1890 in the upper Ottawa agency, in round numbers, 21,000 square miles; lower Ottawa, 6,000; St. Maurice, 11,000; Saguenay and other eastern agencies, 19,000; in all, 57,000 square miles. About 3,000 square miles of the above have been abandoned, and there are 16,000 square miles upon which no operations have been made during the last five years." All told, there is 38,000 square miles of territory under license in the province of Quebec, upon which more or less lumbering is constantly carried on. Not more than one-half of this is pine-producing, and the remainder is largely spruce. "The comparative value of the Upper Ottawa, and the River Rouge in Argenteuil, both about equal in area, can be judged," says this correspondent, "by the fact that only 305 miles have been relinquished in the Upper Ottawa agency, while 3,674 miles have been relinquished in the agencies east of the river Rouge. If any active effort will be made towards preserving our white pine it should be directed towards the Upper and Lower Ottawa agencies of 27,000 square miles; but it is fair to assume that scarcely half of this area is pine-bearing, or what lumbermen call a pine country."

On this data it may not be possible to calculate very closely just the time when the forests of Quebec will be shorn of their present timber wealth, but each year undoubtedly brings that time nearer. It is a hopeful sign, under these circumstances, to find those interested in the lumber affairs of Quebec giving thought to the question of forestry preservation, and we may wish that the Provincial Government, which has need to conserve all the wealth possible to itself, will give practical effort to the suggestion to look with vigilance after this important source of wealth within its own borders. This province will watch with interest its movements.

Forestry to-day, as we have pointed out in these columns before, is a question of practical importance to every lumberman, besides having a distinct national bearing, and that Government which aims to move wisely along these lines, will be moving for the future gain of its people. It is pleasing to observe that the able paper by Hon. J. K. Ward, published in the May LUMBERMAN, is having no small influence in creating thought among our eastern lumbermen concerning this matter.

A LUMBER SUIT.

THE case of Simpson Rennie against Brown and the Utterson Lumber Co., which has been in litigation for a considerable time, has at last been settled by the Supreme Court, judgment being in favor of the plaintiff. The Utterson Lumber Co. is composed of J. W. Lang, ex-Ald. W. W. Park, James Todhunter, Wm. Mitchell, of Toronto, and Mr. Steele, of Brampton. The property of the company consists of a large sawmill on Mary's Lake, Muskoka. Years ago the owner was Robert Brown, to whom Simpson Rennie, a Scarborough farmer, loaned \$2,500, and took a mortgage on the mill and adjoining eighty acres as security. Long afterwards it was found that the mortgage had accidentally omitted mention of the mill, and as the land was worth little, Rennie would lose his money unless he could make the mortgage apply to the mill. The omission occurred by reason of the fact that the mill stands on posts in the lake and does not touch the land. Before the Toronto men bought the property Rennie says he gave them notice of his claim, but the mill was part of a bankrupt estate about 1888, and they bought it from the assignee, R. H. Gray, of Toronto. Rennie was successful in his action to hold the mill on the mortgage before Justice Falconbridge, again in the Court of Appeal and again in the Supreme Court. The costs, it is said, now amount to \$3,000, or more than the mortgage.



"As usual," writes P. O. Byram, of Madawaska, N.B., "our bluenose lumbermen generally lose about one week of the best brook driving in spring by being so narrow and contracted in intellect, that to save one cent and lose one dollar, they fail to have their men on hand before the water rises, and pick the ice out of small streams, instead of waiting for the sun to thaw them out. Providence has smiled on them for the last few years, but by all appearance this year, to their sorrow, Providence will not indulge in too much procrastination, and will leave their lumber in the streams as a warning to take time by the forelock and be always ready. I hope I may be a false prophet, for lumbermen have made money this year, but I fear they will be like a good cow giving milk, kick it over in the drain."

* * * *

"Rain," said Mr. Andrew McCormick, the well-known lumberman, "is still wanted up the Upper Ottawa and until it comes heavy and soon the lumber industry suffers. On some of the streams in the upper country there is no more water now than there was last fall. All the spring water has run away, and as for the north water, it is of no use for the drive. On some of the drives the lumbermen are talking of discharging their men and leaving the logs where they are for the present year. The streams on the north side of the Ottawa river are much more in need of water than on the south side. I have been over thirty years in the lumber business, but in all that time I never saw such a want of water. What we want is a whole week's rain to swell the rivers and unless that comes before the 10th of June things will get into a bad shape, for the timber and logs will be 'hung up.' The mills will not be seriously affected this year, for there are logs enough in the several booms on the Ottawa river to keep them going, but next spring and summer there might be a scarcity of logs to saw until they are drawn out of the small streams and swept down the Ottawa."

* * * *

"So much uncertainty is associated with the sale of lumber in the city," remarked Mr. John Donogh, of Donogh & Oliver, "that not only are we not pushing sales, but in some cases we prefer to be without business. Even with firms that are supposed to be in good standing, we are learning by sad experience that they have no more bottom frequently than the man who makes no pretense to be held up with abundance of capital. The curse of business all through is the loose credit system. Gall, Anderson & Co.'s failure is a case in point. Everyone supposed the firm to be in a good position. They were selling lots of lumber, but when the crash came we found they were doing trade as recklessly as many who had gone before them. One can easily understand the temptations to this kind of business. Obligations had to be met, and the man in a corner is ready to sell his lumber to almost anyone, if he can only get paper that the banks will accept. Protected themselves, the banks in too many cases accept this indifferent paper to relieve other paper of no better quality, and only when trouble comes does the trusty lumberman find out the real condition of his customer's estate." The general outlook of the lumber trade, Mr. Donogh considered, was encouraging.

* * * *

"I can hardly give you any reason why there is no Canadian lumberman's association," said Mr. James Tennant, "not but what there is need for an organization of the kind." We all know why the old cow crossed the road. "Because she crossed the road." And there's no lumberman's association because there's no lumberman's association. I have not been able to discover any better reason in my talks with lumbermen either this month, or at any other time in my calls upon them. "Everyone just now," continued Mr.

Tennant, "is talking about this failure and the other that is occurring in the lumber trade. I need only refer to the assignee's list of liabilities of the most notable failure of the month, Gall, Anderson & Co., to show how widely are the ramifications of this business. Lumbermen, almost from Dan to Beer-Sheba, are to be found represented in that list of \$58,000. It is not to be supposed that a union of lumbermen, no matter how solidly they hold together, is going to banish insolvency. Like the poor, the unfortunate in business will always be with us. But a little more cohesion among members of the trade, a greater amount of confidence, one in the other, would enable us very often to give to one another pointers and suggestions of the conditions of those to whom we are selling stocks that if acted upon would keep our ledgers free of many a bad account."

* * * *

"A union of local lumbermen," said Mr. Eyer, of Reid & Eyer, Toronto, "is no doubt an end much to be desired. We are working at cross purposes to-day, where, if pulling together and meeting in council occasionally, we could arrive at conclusions that would be generally helpful to the whole trade. But so far as arriving at a uniform price basis, I do not see how that is possible the way trade is broken up in this city. What is needed to get trade into healthy channels is the yard system, where stocks of standard and wantable lumber will be kept. Then there could be an intelligent system of inspection and prices fixed on that inspection. To accomplish this end it is necessary that men with capital embark in the lumber business. They don't do so now and the result is we are almost without a wholesale trade in this city. We have no lack of lumbermen. All a man has to do to-day to get into the lumber business in Toronto is to secure desk room in an office, print some letter heads and envelopes, and announce himself a lumber merchant. He can solicit orders and he can secure from the mills whatever lumber he wants in mixed carloads. When lumber is sold in this way, it is a case of every man for himself, and a basis of inspection is out of the question. I am not going to say that the mills should refuse to sell lumber in this manner. They can hardly do otherwise in the present shape of trade. I do not know of a single mill that pretends to sell its supplies to one concern only; but when trade gets round to that point where the millman will sell only to the wholesaler, leaving him to do the jobbing, the lumber business in this city and the country generally will be in much better form. 'All things come to those who wait,' and we will get where we ought to be—some day. 'The sweet bye and bye' will yet be the lumberman's goal."

* * * *

Mr. Edward Jack tells in the N. Y. Lumber Trade Journal of the manufacture of lasts in the province of New Brunswick. On the banks of the St. John river and its tributaries large bodies of beech and maple of excellent quality are found and are utilized in the manufacture of last blocks. The chief operator is Mr. Ora Gilpatrick, of Danforth, Maine. His operations are carried on upon the Keswick river, about 30 miles from the city of Fredericton. The valley of this river is traversed by the Canadian Pacific railway (New Brunswick division), which gives a ready means of transportation to the cities of the United States. Mr. Gilpatrick employs about 75 hands. His camps are distant on an average from the Canadian Pacific railway about five miles. The plan of operations is as follows: After the camps are built and clears in the woods and roads made to the maple ridges, the trees on which have been previously examined, the choppers proceed to cut down such trees as they judge suitable for their purposes. No logs less than 10 inches at the top end are made use of. After the tree has been cut down the log is hauled to a large vacant space in the forest which had been cleared in the autumn, and which is known as the "yard." Here they are piled in rows or tiers. At each yard there is a portable engine of about 12-horsepower, which drives a drag saw for the purpose of cutting the logs into lengths of from 10 to 15 inches. As these lengths are sawn they are removed by the marker, who has a pattern for the shape of the block. This he marks on the end of the section, which is then passed on to the "chippers," whose duty it is to split the section and roughly chip the

blocks according to the pattern above referred to. When this is done they pass into the hands of the "sorter," who places each block into its proper division, that is to say, as misses', women's, men's and boys' lasts. After having been thus assorted they are hauled on sleds to the drying sheds on the line of the railway. These are nearly open sheds, roofed over so as to keep off any rain which may fall. In the drying shed each kind of block is placed by itself. Blocks for rubber work are forwarded "green." They are kiln-dried before use. Those to be made use of for the manufacture of leather boots or shoes are allowed to remain in the drying sheds until the month of September. Eastern maple is much better for last purposes than that growing in the western states, the wood of which is of a much softer character.

* * * *

The lumber firm of J. & T. Charlton are well known both in our own country and the United States. They are Canadians, and the senior member, Mr. John Charlton, has for years been a representative for Norfolk in the House of Commons, and one of the ablest members of the Liberal party. The firm are large operators at Little Current, and interested in timber limits in the northern section of the province. They also carry on a business at Tonawanda, N.Y., as sawmill owners and lumbermen. A week ago I had a chat with Mr. T. Charlton, who is the resident member of the firm at Tonawanda. "Southern pine," said Mr. Charlton, "is coming into competition with Canadian pine on the American side of the border. A considerable quantity is finding its way to New York. In some respects Southern pine is better than Canadian pine. I think the advantage is with the former for flooring and outside sheeting. The pick qualities are better than anything we can get in Canada; some of it is as hard as oak. Southern pine affects Norway. We have not bought any Norway for years. I am inclined to think that it was the intention of the author of the McKinley Bill to have included Norway under the one dollar duty; but not being a practical lumberman he was not aware that Norway and white pine were two different woods. The South is rich in timber and prices will keep down for years." Replying to an interruption from the interviewer, Mr. Charlton said "that any additional cost in freight, because of distance, was offset by the price. The genuine lumberman in the South has a rather hard road to travel; with the poor workmen, who have only their earnings to depend upon, the position is aggravatingly tough. It is a common matter for a man to get hold of a sawmill for a season. He engages his workmen and starts cutting, paying them just as little on account of wages as it is possible, putting them off with one excuse and another until he gets near the end of the season. In the meantime he has been shipping out his lumber. The men are informed that this is in the hands of New York dealers, who have not yet paid for it, and he presumably starts off to look after his account. In the words of a popular ballad: "But he never came back again;" and the men are done out of their season's wages. Next year a new proprietor comes to occupy the mill, and, as a new man, he is taken to be an honest man, the workmen learning when too late to help themselves, that they have once more been deceived. You can understand how difficult it is for the honest, reputable lumberman of the South to meet the class of competition that is part and parcel of these methods. The unprincipled adventurer, paying little or almost nothing for his labor, cuts under the other every time, so that to-day legitimate lumbering is not profitable in the South." Touching the tariff question Mr. Charlton said he would certainly like to see free lumber, but he doubted very much if it was coming. "Just now there is more election talk than real business going. I certainly think that the considerable influx of Canadian lumber into the United States during the past year has affected the price of American lumber. It has been an additional element of competition."

* * * *

A strong delegation of lumbermen waited on the Quebec Government and urged a modification of the practice imposed by the late Government of granting special permits to third parties in territory already licensed. The Government promises the matter serious attention.

MICHIGAN LETTER.

(Regular correspondence CANADA LUMBERMAN.)

YOUR readers will be interested in various figures concerning American purchases of Canadian timber, that are passing current in different parts of the State. I give them as they come to me from a variety of sources without entering into a discussion of their import, if any special import or significance is to be attached to them, nor do I stand sponsor for the entire exactness of every statement made.

The Bay City correspondent of a Chicago lumber journal, controverting the oft-repeated story that Michigan mills would soon come to a standstill for want of logs to saw, has told us quite recently that "within the past year arrangements have been perfected whereby a vast quantity of timber, not tributary to the Saginaw River, is to be brought here to be manufactured," and that this includes deals that will "transfer 3,000,000 feet of Canadian timber to this river to be manufactured, a supply equal to a cut of 500,000,000 feet annually for six years." McKeon & Glover, a Bay City firm, and who rank among the largest loggers in the country, say that they banked 33,000,000 feet of logs in Georgian Bay waters last winter, and 25,000,000 feet of these will come to Saginaw. Their estimate is that 130,000,000 feet of Canada logs will come to the Saginaw River this season. Isaac Bearinger, of Sibley & Bearinger, another Michigan concern, says that his firm owns \$200,000 worth of logs in the Georgian Bay region. Other interests are represented by Wm. Peters, who owns a mill at Bay City, and is believed last year to have purchased over 300,000,000 feet of Canada pine; C. K. Eddy & Son own 407,000,000 feet there; the Spanish River Lumber Co., of which E. T. Carrington, of Bay City, is president, owns over 200,000,000 feet; J. W. Howry & Son have been operating in your territories for some years; the Saginaw Lumber & Salt Co. and the Emery Lumber Co. are extensive operators; the Messrs. Bliss, McClure and others individually and collectively are said to control not less than 1,500,000,000 feet of Canadian timber. These cases are outside of the two important transfers of the Dodge estate and Pattee & Perley to United States capitalists and mentioned in the LUMBERMAN last month, and which represented investments, respectively, of \$750,000 and \$800,000.

PIECK STUFF.

F. M. White, of Saginaw, who for some time represented D. L. White & Co., of Albany, N.Y., is going into the export of hardwood logs and timber in New Orleans.

Merrill & Co. have rebuilt the two dams that recently went out on the Molasses, hanging up 7,000,000 feet of logs, but even with the aid of the dams the prospects for getting the logs down is unfavorable. Fully 100,000,000 feet of logs know of the low condition of the water in this section. Unless aid comes the expense of handling them will be increased.

The Butler and Peter Salt and Lumber Co.'s mills at Butterville were burned on the 10th inst. The loss is estimated at \$250,000 with about half insurance. Four hundred men are thrown out of employment.

SAGINAW, Mich., May 25, 1892.

PICA.

OTTAWA LETTER.

(Regular correspondence CANADA LUMBERMAN.)

ON the morning of Monday, 9th inst., the news was carried throughout our streets that there was a strike at the Chaudiere, about fifty employees of Buell, Orr, Hurdman & Co. having refused to go to work. On the Saturday previous they had been asked to commence work at six o'clock instead of seven o'clock. This the men refused to do unless they received an increase of wages. When seven o'clock Monday morning arrived the men took off their coats ready to begin work, but were notified by the foreman that in working ten hours a day their wages would be reduced from \$7.50 a week to \$6.50. Happily the trouble was speedily gotten over. The millowners held a meeting and decided to pay one dollar a week more than they had been paying last year for eleven hours a day. This was satisfactory to the men; as one of them said: "We don't want a strike. We want work. Eleven hours is a pretty long day but we don't mind that so much as long as we get the increase of pay. We all owe money and can't afford to be idle. There are hundreds of men in the mills who would positively refuse to quit work if ordered." The mills are now pretty well started on the season's work and, with the labor difficulty at an end, a prosperous trade is expected.

Recent rains have removed, in part at least, the uneasiness among mill-owners consequent upon the low condition of the water in the tributaries to the Ottawa River. About 45,000 logs for the Hawkesbury Lumber Co. have already been passed down this year. It is stated some 630,000 logs were cut up the Gatineau this winter by Messrs. Gilmour, MacLaren, Rathbun, Edwards and Boyle & McCracken. The MacLaren firm, it is said, have made about 100,000 feet of square timber. Boyle & MacCracken are bringing down 160,000 feet of dimen-

sion timber for the Lachine market. E. B. Eddy will, it is stated, receive 1,000 cords of pulpwood from the Gatineau district.

INDIFFERENT LENGTHS.

Ex-Ald. Thackeray has the sympathy of his fellow-citizens in the loss sustained by the burning of his planing and sash mill on the 10th inst. The fire broke out in the engine room, and immediately a line of hose belonging to the mill was laid, but when the water was turned on burst at a defective coupling. The fire brigade responded quickly to the alarm, and soon streams were playing on the flames, but the mill was doomed, and in less than an hour \$30,000 worth of damage was done. The machinery destroyed was valued at \$31,000, whilst manufactured lumber amounting to \$25,000 was destroyed. There is only \$10,000 insurance, of which \$5,000 is in the Aetna. The mill was destroyed about three years ago, and handsomely rebuilt. In this connection Mr. E. B. Eddy has done a generous act, as is ever his wont, having notified the Thackeray firm that owing to the disastrous conflagration which swept away their handsome mills, that he placed his mill and machinery at their disposal. At present Mr. Thackeray has a very heavy list of orders and contracts on hand, the non-fulfilment of which would prove a serious disappointment and inconvenience to their customers, the more so at this busy season of the year. Mr. Eddy says he will either finish their orders himself for them or allow them the use of his machinery to do so themselves.

McLaren & Co.'s cuiler, Wm. Stirling, has returned from up the Gatineau and states that some 300,000 logs are now on their way down for that firm.

It was hoped that the persons who proposed to form a company to work the Casselman lumber mills would have proven successful in their plans, but it seems not, and the liquidator will proceed to dispose of the estate.

Buell, Orr, Hurdman & Co. are having a new office building erected which will give increased office accommodation and additional platform room for tracts and lumber.

Mr. Alex. Lumsden, of New Edinboro', is bringing down a raft of 175 cribs of square timber from the Kippewa and Temiscamingue tributaries on the upper Ottawa.

Dry mill wood is becoming very scarce. The dealers' stocks are about run out.

Saturday afternoon about four o'clock a boy named Andrew Kelly, of the Chaudiere, met with a severe accident by falling from the top of a wood cart which was heavily loaded with blocks. His left shoulder was dislocated and a cut two inches long was inflicted on his head, it having come in contact with the hub of the wheel.

OTTAWA, Ont., May 23, 1892.

BRITISH COLUMBIA LETTER.

(Regular correspondence CANADA LUMBERMAN.)

QUITE a history belongs to the engines used to drive the machines of the large sawmill of the Moodyville Sawmill Co., at Burrard Inlet. They were originally built by Humphrey and Tennant, an English firm of engineers of world-wide reputation, many of whose engines are to be found in the older vessels of the British navy to-day. The particular engines in question were first placed in a man-of-war Sparrowhawk, which was used as a despatch boat during the Crimean War, and did good service against the Russians in the Black Sea. The vessel was finally condemned in Victoria in 1872, on account of the boilers giving out, and was sold for what she would fetch. She was bought by Messrs. Mooly, Deitz and Nelson (the former the founder of Moodyville, and the latter the present esteemed Lieutenant-Governor), who were at that time projecting a larger mill than the small one that they had then, and which was run by water-power with an auxiliary engine. The cylinders are forty-two by thirty-six inches, and the engines were changed from compound vertical to horizontal high pressure. They make sixty revolutions, carrying forty pounds of steam, and develop about 260 horse-power, sufficient to run the mill with the aid of a water-wheel with thirty-two feet head, which is so arranged that the lath mill and planers can be run without getting up steam, should the mill be shut down.

During the past six months important improvements have been made in the Moodyville mill, conducted under the superintendence of Mr. E. Cadwaladder, the present millwright, who has held that position for twenty years. Ten years ago this mill was averaging only 40,000 feet per day; to-day it averages 100,000 feet every ten hours. The mill is owned and operated by the Moodyville Lands and Sawmill Co., Ltd., of which Mr. Johann Wulffsohn, of Messrs. Wulffsohn and Bewicke, Ltd., is managing director, with headquarters at Vancouver. Mr. J. H. Ramsdell is general manager; Mr. A. V. C. King, accountant; L. Card, foreman; J. S. McWhinnie, log foreman; G. Brown, storekeeper; E. Cadwaladder, millwright, and J. S. Randall, machinist.

COAST CHIPS.

A small sawmill is being built by Mr. Yates on the Sloean River, East Kootenay.

G. O. Buchanan, of Revelstoke, has been granted timber leases to the extent of 1,760 acres at the head of Sloean Lake, estimated to contain about 9,000,000 feet of lumber. In all probability a sawmill with a capacity of 20,000 feet a day will be erected there in the immediate future.

A logging camp has been started on Burnaby Lake by Messrs. Smith, MacPherson and Rowling. The little steamer Bute has been placed on the lake to tow the logs to the entrance of the Brunette River, down which they will be floated to the Fraser. Two dams will be built at the head of the Brunette to assist in floating out the logs.

Galbraith and Sons, well-known local lumbermen, have lately added a shingle mill to their sash and door factory, on Tenth Street, the capacity of which is 35,000 shingles per day. Several large orders for shingles have already been looked.

The logging trade of the province is in a large measure controlled by J. McKinnon and Norman McDougall, who met a few days ago in solemn conclave and decided to raise the price of logs. Their contention is that there is nothing to be made at the business at present prices. McKinnon's camp is located at the head of Port Neville, and McDougall's at Seymour Narrows. This combine will operate somewhat against small loggers and mills which depend on loggers for their supplies.

NEW WESTMINSTER, May 21, 1892.

R.

CENTRAL AMERICA LETTER.

(Special correspondence CANADA LUMBERMAN.)

YOUR readers, whom I would judge are cosmopolitan in their tastes, doubtless have curiosity, if not interest, in learning something of lumbering in other parts of the world—possibly in Central America. I write of some of the peculiarities of lumbering here.

First comes the mill; it is a good one, made by the Waterous Engine Works Co., of Brantford, but ordered specially for the kind of work it has to do, and it does it to perfection. There is the big saw-edger, cut-off saw, tie-spotter and borer, and resaw on the deck. The mill is 125 feet long by 25 wide, with lean-to fur boiler, engine and filing room. The timber is so heavy that we have to use an overhead log turner on nearly every log, and rollers to end of mill for delivering lumber and timber. The timber is of a great many different kinds, some extremely hard, such as nispero, chanco chere and quisera-colpachi; others are softer, such as era cedar (Spanish) and mahogany. We have some oak, but very much harder than Canadian oak. Occasionally we cut an incense tree and scent up the whole neighbourhood while doing it. Another tree called soap bark makes banks of foam for miles down the small stream that carries away the surplus saw dust. I have seen the foam three feet deep and completely covering the stream at a little cataract on the route. Nispero logs are very hard on saws and require a newly-sharpened saw for every log. Sometimes they are very large and then we have to sharpen twice for one log. There seems to be a

SANDY SUBSTANCE IN THE TREE

that just wears the edges of the teeth away in no time. It takes forty yoke of oxen to keep the mill going beside what is brought in by train. We brought out cross-cut saws and chains for logging, but the natives will not use them. They cut every log with an axe that has a straight handle six feet long, and looks something like a grubbing hoe. The logs are all pointed and a hole bored through the point and a pole made fast to it with raw-hide ropes and the other end of the pole tied to the yoke with the same material. The yokes are fastened to the oxen's horns with long leather straps passed around the horns and crossed over the forehead, so the oxen draw by the horns and forehead altogether. I have seen eight yoke of oxen drawing one log, and it sounds just a little odd to hear the drivers coming up to the mill in a long string with their, "Ak ye carajo. Diabolo sin verguensa Demonio conbenow," which translated would be, "Go on, confound you; devils without shame and condemned." Demons though they be, they get in a lot of logs, and not overly expensive. Cutting and hauling (less than a mile at present) costs eight dollars per 1,000; the lumber averages \$60 per 1,000 at the mill when cut; so you see there is a little margin for profit. Lumber does not sell by the 1,000 but by the piece, and I give you a list: boards 12 inches wide and 11 feet 4 inches long, 70 cents each; 2 x 4 inches, 55 cents; 3 x 4 inches, 75 cents; 2 x 3 inches, 45 cents; 4 x 4 inches, 95 cents; cedar board 8 cents per inch in width, 1 1/4 x 6 inches, 65 cents; 1 x 6 inches, 50 cents; 2 x 2 inches, 30 cents; 1 x 3 inches, 30 cents; 1 1/4 x 3 inches, 35 cents. This is all 11 feet 4 inches long, extra length double extra price. The price for sawing is from 25 cents to 40 cents per cut. One day we cut a log for a man that cost him \$11.25. This just took ten minutes so you see a

GOOD MILL PAYS

in this country even by the M. or cut either. The mill belongs

THE NEWS.

ONTARIO.

to Minor C. Keith, a very large railroad contractor. He also has thousands of acres of bananas growing, large sugar and coffee plantations and thousands of acres of portrero where he fattens cattle for the markets of this country. The mill is situated on the Naranjo (orange) estate which has 12,000 acres in it and is used for coffee, sugar and portrero. Mr. Keith is now rebuilding his sugar mill on this estate and will soon be able to turn out about ten tons of sugar daily. There are tramways to take the cane to the mill, and one will soon be finished to take the slabs from the sawmill to the sugar mill for fuel.

We have the most beautiful climate here imaginable, never too hot to work and certainly never cold. Most all workmen go bare-footed, and lots of children can be seen naked till they reach the age of twelve and fourteen. Monkeys are plentiful and make many a dainty dinner for the mill hands—Jamaica negroes. A family of baboons live in the trees just above the mill and their howls will not let any person oversleep themselves. Some of the hands have some queer pets. One has a tame watusa, others have monkeys, and one has a snake skin hanging up in his room that was too long to stretch on an 11ft. 4in. board. Workingmen's wages are very low, about \$1.35 and \$1.50 Costa Rican money, which at present is worth about one-half of American gold. The manager and sawyer get good salaries, and some foremen, but nothing to tempt one to leave Canada and put up with the living of this country. Mr. Keith is adding a planing, sash and door mill to his sawmill. The commonest kind of a door is worth \$25 here. He is thinking also of a wheel factory; a pair of cart wheels sell for \$120. There is a steam wood-splitter connected with the mill, and a planer, each of which has a separate engine to drive it.

JAMES INKSETTER.

LA GLORIA, C.A., May 2, 1892.

FIRES AND CASUALTIES.

FIRES.

Bentz and Pilatzkis sawmill at Eganville, Ont., burned to the ground.

Cozens & Bell, sawmill, etc., Sault Ste. Marie, Ont., burned out.

James Thompson's mill at Orkney, Ont., has suffered from fire. Loss, \$5,000.

The furniture factory of Dowling and Leighton was destroyed by fire on the 15th ult.

The pulp department of the Georgetown mills, Ont., was partially destroyed by fire on the 15th ult.

CASUALTIES.

A man named Woods had his thumb cut off by the saw while edging in a mill at Oro Station, Ont.

Alexander Milsap was instantly killed by the breaking of a balance wheel in a mill near Sundridge, Ont.

E. Black, formerly of Belleville, Ont., but now of Williamsville, lost a finger by a planer in a sawmill.

Joseph Ledue, an Ottawa riverman, was dangerously hurt while chopping wood in a Lower Town hotel yard.

Two boys lost their lives at Sutton, Ont., while playing on a raft. They fell off together and were drowned.

Herbert McMillan, while measuring logs at Holmes Landing, N.B., was carried off by the logs and had his arm broken.

Edward Farron, of Elora, Ont., had his right leg broken while drawing logs from the river flats at his farm in Pilkington.

Four boilers of the Midland Salt and Lumber Co.'s plant at Milland, Mich., exploded, killing four men and seriously injuring four more.

Robert Charters is thought to have been fatally injured by a blow from a swinging hand-spike; he was employed in John Irvine's mill, Dundalk, Ont.

A sad accident happened on John Bell's drive on the Coldwater River, Ont., where Mr. Young, of Eady, was so badly injured that his recovery is doubtful.

Benjamin Brooks, employed in Brooks' sawmill, Golden Valley, Ont., was severely scalded on hands and legs, by the explosion of the boiler. The mill was burned to the ground.

William Baylis, a workman in the lumber camps near Vancouver, B.C., committed suicide on the 10th ult. by shooting himself through the head. He is supposed to have come from near Toronto.

Conrad Kuhl, a machinist, was instantly killed in the sawmill at Elmwood, Bruce Co., by the breaking of the large driving belt. Deceased was about fifty years of age, and leaves a wife and six children.

Mr. Hopkins VanValkenburg met with a very painful accident in the sawmill at Norwick, Ont., probably losing the sight of at least one of his eyes, if not injuring both. A large belt on one of the wheels broke and struck him in the face with great force, felling him to the ground. He will be confined to his house for some time to come.

A new sawmill is being erected at Elora.

There is talk of a pulp factory at Bracebridge.

Martin Bros., lumber, St. Marys, have dissolved.

S. D. Grout, lumber, Vankleek Hill, has assigned.

Thos. Reaburn is operating a portable sawmill at Lisle.

Low water is causing anxiety to lumbermen at many different points.

Smith Bros. & Gibson, planing mill and sash and door factory, Brussels, have assigned.

Business is reported lively at Novar, sawmills are going and houses are in course of erection.

The Whaley Lumber Co.'s mills, at Huntsville, are cutting large quantities of lumber and shingles.

Mickle, Dymont & Son's mill, at Severn Bridge, has been put in first shape for the season's work.

The new shingle mill of the Georgian Bay Lumber Co., being built at Wauhaushene, is nearly completed.

Part of Gilmour's big mill, Trenton, has commenced work, and it is thought the whole mill will be in operation in a few weeks.

J. D. Lebel, lumber, London and Sarnia, Ont., is offering fifty cents on the dollar, and shows liabilities of \$17,000, and assets of \$13,000.

The big lumber mills at Rat Portage and Norman are in full swing, and the expectation is that they will run night and day throughout the season.

A heavy downpour of rain in Luther township is welcomed by the local lumbermen, who have a considerable quantity of logs to get down the streams.

The Lindsay Post says: M. M. Boyd & Co., of Bobcaygeon, have about 100,000 logs, cut during the past three seasons, awaiting a chance to float them down.

H. J. McMillan, of Meaford, has shipped 25 car loads of square timber to England. The timber was principally elm and ash, measuring from 20 to 60 feet in length.

The local press proclaim the new tug now being built at Collingwood for the Emery Lumber Co., to be "a regular clinker, and will be by far the best on the Georgian Bay."

Lumbering is dull in Washago, only one mill running. Not less than thirty men have signified their intention to go to the Northwest and grow up with the country.

Kendall Kennedy, of Hobart, whose mill was recently burned down, is rebuilding it, and will soon have it in running order. Mr. Kennedy has a large stock of lumber and shingles to cut.

W. H. Petrie, a constant advertiser in the LUMBERMAN, has received a large order from the Buffalo Drop Forge Co., Buffalo, N.Y., for iron tools. He anticipates further business from the same source.

While loading timber on the train at Holland Centre, Robert Stewart met with a sad accident, which will disable him for some time, in getting his leg jammed between two skids, which broke it in two places.

Mr. J. F. Beck, Secretary for the C. Beck Manufacturing Co., says that both of their big sawmills at Penetang will be kept busy all the summer and that one of them will have to run night and day, to get their stock out.

It is now a good many years since timber or logs were last taken down Hurd's Creek from Lake Clear. This year the Messrs. Moran, of Renfrew, have a drive of logs to come down it. A good many of the old rivermen doubt if they will get out.

J. Dovey & Son intend towing their logs from Fenelon Falls to the mill at Lindsay by means of a hermaphrodite craft. It is a large shanty punt fitted with paddle wheels and small engine and boiler, and is christened "The Flying Dutchman."

While a teamster, of Tilbury East, was driving home from Tilbury Centre late one night recently, he was held up by a gang of three men. The three men took from the teamster's wagon a large quantity of goods. It was supposed that they were men employed in McMackon's mill, Romney, as three men suddenly left there early next morning.

A raft of square timber, the first of the season, reached Pembroke in tow of the Alex. Fraser, a fortnight ago, and, after being fitted out with cabins and provisions, left for Quebec. The raft was got out by Messrs. Barnet & Mackie, and was sold to Dobell & Co., of Quebec, who supply the British Government with timber. It contains 2,700 pieces in 108 cribs, and is said by competent judges to be one of the finest rafts of square timber ever on the Ottawa.

W. P. Warner has sued the Minnesota & Ontario Lumber Company, of Norman, in the St. Paul courts to recover a bal-

ance of \$2,600 for legal services rendered by him, H. F. Stevens, Harris Richardson, C. H. Fautleroy and C. C. Lawrence. The accounts of the other attorneys were assigned to the plaintiff. The services sued for were rendered to W. J. Macaulay and Dennis Ryan, who formed the defendant corporation and assumed the liabilities of the firm of Macaulay & Ryan.

Mossom Martin Boyd, the well-known lumberman, of Bobcaygeon, Ont., for the provisional directors, has made application to Parliament to revive and amend the act to incorporate the Lindsay, Bobcaygeon and Pontypool Railway Co., and to extend the time for commencing and completing the same, also to reduce the capital stock; and also for power to extend the proposed line of railway from the village of Bobcaygeon through the Township of Galway to a junction with the Irondale, Bancroft and Ottawa Railway at or near Irondale, in the provisional county of Haliburton, and for other purposes.

QUEBEC.

Eli Audet, contractor and lumber, Ascot Tp, has assigned.

F. McCaffrey, sawmill and lumber, Nicolet, has assigned. Liabilities are given at \$50,000.

Elie Lachance, sawmill, general store, etc., St. Provede; curator advertises stock, etc., for sale by tender.

The timber that was taken out near Ramsay by Booth and Hale during the past winter, is now being shipped by C. P. R. to Papineauville.

S. Dalpe, for twenty-five years a manufacturer of carpenters' planes at Boxton Pond, wants to turn his business into a joint stock company.

NEW BRUNSWICK AND NOVA SCOTIA.

This season's lumber cut on the Upper St. John River and its tributaries in New Brunswick is expected to reach over 125,000,000 feet. This estimate does not, however, include a large amount of lumber cut on the Medusnakkik.

The mill property formerly owned by R. E. Fitz Randolph, of Dalhousie, N.S., and by him set to the firm of Spinney & Mack, of this place, and recently sold by the assignee, has been purchased by Messrs. Charles, John and Edward Piggott, the latter being a son of Mr. John Piggott. They have also bought the lands, some 1,400 acres, which belonged to the property, and will carry on a general milling business, commencing this spring. The machinery connected with the mill, which is valued at some \$4,000, is nearly new and in excellent condition, while over 1,500 logs are now in the pond, and every effort will be made to increase the number while the weather permits. The present owners are energetic men.

BRITISH COLUMBIA.

Alfred B. Dixon, sawmill owner, Mission City, has assigned to Hugh Voudall, of New Westminster.

George O. Buchanan, sawmill, on Kootenay Lake, will remove and rebuild at Kaslo City during the summer.

The Brunette Sawmill Co. have shipped per barque Ursus Minor, three-quarters of a million feet of lumber for Sidney, N.S.W.

The Michigan Lumber Co., of Vancouver City, have decided to discharge the Chinese now employed by them, to the number of thirty-five; they having concluded that white labor is preferable and cheaper in the long run.

The Kendall band saw, manufactured by the British Columbia Iron Works, for Messrs. George Cassady & Co., of False Creek, is giving great satisfaction. The saw will cut 10,000 feet of inch lumber per hour. This machine enjoys the reputation of being the smallest and most powerful of its kind in the world to-day. The saw-carrying wheel is only five feet in diameter, the whole machine being driven by an eight inch belt. There is also a great saving in lumber on account of the cut made by the band saw.

MANITOBA AND THE NORTHWEST.

F. J. Defehr has started in the lumber trade at Rosenfeld.

Murray and McDiarmid, builders, Winnipeg, have dissolved partnership.

H. B. Mitchell, of Millwood, has taken out over 2,000,000 feet of logs this winter.

John Law, of Neepawa, Man., has disposed of his lumber business to Thomas Harrison, Sr.

Mr. Inglis, of Deseronto, is to be manager of the new Winnipeg branch of the Rathbun Lumber Co.

Mr. Thomas McNea, from Markdale, Ont., has entered into partnership with Mr. J. Hanbury, of Brandon, owner of the Brandon Planing mills. A large business is done.

Mann and Durham, of Brandon, have assigned. They started business about four years ago with a capital of \$1,500. To-day the Keewatin Lumber Co. has a judgment against them of \$10,000, and A. B. Law & Co., private bankers, one for \$22,000.

TRADE REVIEW.

Office of CANADA LUMBERMAN, May 31, 1892.

THE GENERAL SURVEY.

SO far as the lumber trade of Toronto is concerned, it is dull, unsettled and unsatisfactory. Recent failures, prominent among which is that of Gall, Anderson & Co., have accentuated these conditions and it is hardly likely that the end is even yet.

A month ago millmen were seriously alarmed because of the continued dry weather. It looked as if the large majority of logs cut during the past winter were to be hung up for a more convenient season.

Stocks of lumber on hand are exceedingly light. Better grades, in fact, are not to be had for the brightest gold dollars.

Recent communications from Winnipeg state that the immigration going into Manitoba and the Northwest this spring is the largest since 1882, the boom year. New towns are growing up fast and building operations in these and the older towns assures a hopeful trade in lumber.

Our correspondent at the Coast writes us that all the mills in or adjacent to New Westminster and Vancouver and on Vancouver Island have renewed their promises to maintain prices as per price list. A committee has been appointed who are to investigate all reported infractions of the agreement and as a deposit of \$1,000 is in their hands from each party to this agreement, to be forfeited if they are found guilty, it is likely to be strictly carried out.

UNITED STATES.

More particularly in sections where excessive rains and floods have been prevalent during the month the lumber trade has experienced a depressing effect. These conditions apply to Kansas, Nebraska, Missouri, Iowa, and to a distressing extent in Mississippi.

FOREIGN. South American trade is looking up a little, but only a little. British Columbia is sending out some shipments to this point. Boston reports tell of a few important shipments from her port, and so with other shipping centres. Things are brightening, and when nearing the fall months a good trade with this country may be expected.

TORONTO, ONT.

Table with columns for 'CAR OR CARGO LOTS' and 'YARD QUOTATIONS'. Lists various lumber types like '1 1/4 in. cut up and better', '1 1/2 in. flooring, dressed', etc., with prices.

MONTREAL, QUE.

Table with columns for 'MONTREAL, May 31, 1892.' Lists lumber types like 'Pine, 1st qual., per M \$35', 'Oak', 'Walnut', etc., with prices.

OTTAWA, ONT.

Table with columns for 'OTTAWA, May 31, 1892.' Lists lumber types like 'Pine, 1st qual., per M \$35', 'Pine, 4th qual., deals', etc., with prices.

BOSTON, MASS.

Table with columns for 'EASTERN PINE—CARBOL OR CAR LOAD.' Lists lumber types like 'Nos. 1 and 2', 'Clapboards, 4 ft., sap', etc., with prices.

WESTERN PINE—BY CAR LOAD.

Table with columns for 'WESTERN PINE—BY CAR LOAD.' Lists lumber types like 'Uppers, 1 in.', '1 1/2 and 2 in.', etc., with prices.

SPRUCE—BY CARGO.

Table with columns for 'SPRUCE—BY CARGO.' Lists lumber types like 'Scantling and plank, random cargoes', 'Vard orders, ordinary sizes', etc., with prices.

SHINGLES. Spruce, Pine, 18 in., extra, Pine, No. 1, Cedar, sawed, extra, Clear, Extra, No. 1, Cypress, No. 1, 18 in.

OSWEGO, N.Y.

WHITE PINK. Three uppers, 1 1/2, 1 1/2 and 2 inch, Pickings, No. 1, cutting up, No. 2, cutting up, In strips, 4 to 8 wide, selected for moulding strips, 14 to 16 ft.

SHING. 1 in siding, cutting up, picks and uppers, 1 in dressing, 1 in No. 1 culls, 1 in No. 2 culls, 1 in No. 3 culls.

12 and 16 feet, mill run, 12 and 16 feet, No. 1 and 2, larn boards, 12 and 16 feet, dressing and better, 12 and 16 feet, No. 2 culls.

12 and 16 feet, mill run, mill cull out, 12 and 16 feet, dressing and better, 12 and 16 feet, No. 1 culls, 12 and 16 feet, No. 2 culls, 12 and 16 feet, No. 3 culls.

Mill run, mill cull out, Dressing and better, 6, 7 or 8, mill run, mill cull out, 6, 7 or 8, drg and better.

XXX, 18 in pine, Clear butt, pine, 18 in., XXX, 18 in. pine, Stock cedars, 5 or 6 in., SHINGLES, XXX, 18 in. cedar, Clear butt, 18 in. cedar, XX, 18 in. cedar.

No. 1, 1 1/2, No. 2, 1 1/2, No. 1, 1 1/2, No. 2, 1 1/2.

BUFFALO AND TONAWANDA, N.Y.

WHITE PINK. Uppers, 1, 1 1/2, 1 1/2 and 2, 2 1/2 and 3 in., 4 in., Selects, 1 in., 1 1/2 to 2 in., 2 1/2 and 3 in., 4 in., Fine common, 1 in., 1 1/2 and 2 in., 2 in., 2 1/2 and 3 in., 4 in., Cut g up, No. 1, 1 in., 1 1/2 to 2 in., No. 2, 1 in., No. 2, 1 1/2 to 2 in., No. 3, 1 1/2 to 2 in.

12x10 and 12 in. (No 3 out), 12x6 and 8 in. (No. 3 out), 12x3 and wider, 18 in. XXX, clear, 18 in. XX, 6 in. clear.

No. 1, No. 2, 1 1/2.

ALBANY, N.Y.

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

Sawed Pine, ex. XXXX, Clear butts, Smooth, 6 x 18, Pine, SHINGLES, Hound butts, Hemlock, Spruce.

SAGINAW, MICH.

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

SHING. Clear, 1/2 in, 3/4 in, Select, 1/2 in, 1 1/2 in.

TIMBER, JOIST AND SCANTLING. 2x4 to 10x10, 12, 14 and 16 ft., 18 ft., For each additional 2 ft. add \$2; 12 in. plank and timber \$1 extra; extra for sizes above 1 in.

SHINGLES. XXX 18 in. Climax, XXX Saginaw, XX Climax, 18 in. 4 in. c. h., LATH, XXX 18 in. cedar, Clear butt, 18 in. cedar, XX, 18 in. cedar.

THE ANDREWS LUMBER DRIER.

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

The Andrews lumber drier, illustrated herewith, has a double inner wall, reaching nearly to the ceiling and nearly to the floor, and extending toward the middle of the drier; also a tight outer wall of rolled hard brass. The space between these two walls forms a down flue, communicating at its foot with an extension flue at the bottom of the kiln. Above these bottom flues are the steam coils which furnish the heat.

In the car drier the lumber is placed upon cars outside the kiln and is rolled in on tracks. The cars stand directly above the coils and close enough to get the advantage of the radiant heat. The air from the heaters passes up slowly through the lumber, taking up moisture from it, and then goes over the inner wall down the side flues to the bottom. On its way down, as it comes in contact with the sheet-brass outer wall, its moisture condenses on the cool metal and trickles down. By means of small gutters on the inside of the metal walls near their foot, the water is conveyed out of the kiln. The air, having thus parted with much of its moisture, passes through the bottom flue to the coils to be heated again, its partial dryness now making it more effective than common air for this purpose; yet this air is still so tempered with moisture that no absolutely dry air comes in contact with the lumber except at the dry end of the kiln. This circulation goes on continuously until the seasoning is complete.

By this process the lumber is dried in a moist air at a high temperature, and this has been found to give wonderful results. The humidity of the air is so gradually, effectually, and, at last, so rapidly lessened that warping and checking are reduced to a minimum.

This continued use of the same body of air, without access of cold currents, saves a large part of the heat, and hence, in this respect, is more economical than any system yet devised.

This kiln does its work perfectly either in summer or winter. Summer drying by the Andrews process and drier is usually done in a few hours less than winter drying. The temperature within the kiln is so much higher than that outside that the metal walls are very efficient as condensers—the inside temperature is seldom less than 150°, especially toward the finish, while the outside air in summer ranges from 90° down to 50°. Thus the metal walls of the drier, which are very nearly of the temperature of the outer air, are from 60° to 100° colder than the drying room, their efficiency increasing as the inside temperature rises. This difference between outside and inside temperature is amply sufficient for condensing purposes.

The Andrews is a continuous process. In other systems, when the engine or fan is stopped, both the source of heat and the circulation cease. With a kiln full of green lumber in the process of drying, this stoppage is often the cause of losing the entire contents from mould and mildew. In this kiln, as long as steam is allowed to pass from boiler to kiln it will work even at a very low pressure. In the car drier as each car is loaded it is rolled into the drying room and pushed forward. This is repeated each day until the kiln is filled with cars. When the cars have passed through the kiln and reached the delivering end they are ready to take out and unload upon the rear platform; or they can be rolled upon transfer cars for unloading elsewhere. The lumber from this process is natural in color, bright, and lively. In the construction of this kiln much labor and

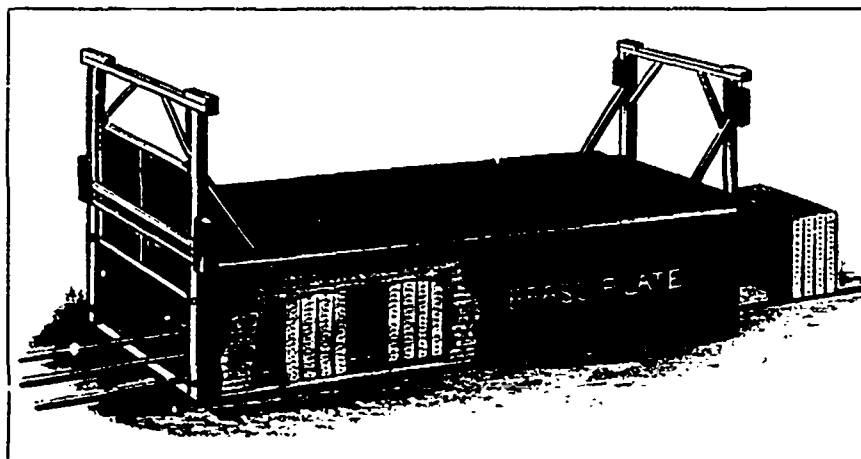
material are saved, as it is of the simplest form. No expensive foundation or separate house for engine, blower, and heater is needed. All kilns sold are furnished with automatic steam fire extinguishers, which do away with any suspicion of danger from fire, thereby lessening fire risk, a point that fire insurance companies have for a long time been trying to impress upon lumbermen and manufacturers of wood-work.

Further particulars regarding this drier will be cheerfully furnished by addressing the Dominion Dry Kiln Co., Canada Life Building, Toronto.

TRADE NOTES.

The Dodge Wood Split Pulley Co., of Toronto, advise us of a very brisk spring business. The larger class of sawmill men are becoming better acquainted with the wood split pulley and we learn are now patronizing the Dodge Co. quite liberally. They argue that when such firms as Hurdman's, of Ottawa, Gillies, of Braeside, Rathbun, of Deseronto, etc., etc., can find it profitable to adopt the Dodge patent pulleys, that it is fairly reasonable to say it would pay every sawmill man in Canada to look into the matter and see if they do not require Dodge Wood Split Pulleys.

A man by the name of C. B. Dudley, who claims to have some reputation as a chemist, has recently made some analysis of anti-friction metals among which is the Magnolia Metal. There are gross errors in the analysis of Magnolia Metal, and those of other anti-friction metals are incorrect. H. G. Torrey, U.S. Assayer in U.S. mint service, New York, has written the following so far as Magnolia is concerned: "In the analysis of Magnolia Metal, Dr. Dudley has overstated one constituent part, and has omitted tin (which it always contains) and other materials. On the same page is given an analysis of antimonial



THE ANDREWS LUMBER DRIER.

lead, which may be correct, but not an ounce of this is ever used in Magnolia Metal."

Nothing in connection with machinery is of so much importance as good metal for its frictional parts. Trying to be economical in this respect can only be accomplished by using the best metal you can get; and we say every man to his trade. Not every man can make Habbitt. The trouble with Habbitt is it cannot be made twice alike. You would not take your watch to a blacksmith for repairs, though a good man in his way. Mr. Alonzo W. Spooner, of Port Hope, makes a reliable metal for all such purposes. People may advertise and say all they like against his metal (copperine) but we know it is doing the best and hardest work in Canada, and that it is gaining in favor every year. We admire his saying that it is Canadian made and stumps the world. There is no bark on his talk.

A POOR GIRL WINS \$15,000.

The Province of Quebec lottery continues to pursue the even tenor of its way in no manner molested by the officers of the law, who are fast cleaning out the People's and other libraries that endeavored to secure a foothold in Quebec. The Provincial Government makes an exception in the case of this particular lottery and extends to it the protection of special legislation. On May 4 a drawing took place when the capital prize of \$15,000 was won by Miss Mary Donovan, 113 Dufresne Street, Montreal, Quebec. In this case Dame Fortune was not blind. Miss Donovan belongs to a poor but highly respectable family. The father, now dead, was one of the good parishioners of Reverend J. J. Salmon, parish priest of St. Mary's Church, Craig Street, who takes pleasure in recalling the merits of this good man. The mother, left a widow, depended mostly for a living on her daughter's daily labor.

THE MAIL BAG.

NEWS BUDGET FROM BRITISH COLUMBIA.—Mr. J. B. Kennedy, president of the Brunette Sawmill Co., is in Manitoba and the Northwest on business. Morton Bros. Nicomekl Sawmill, B.C., have sold their old boiler and engine to make room for larger and stronger ones, to enable them to meet the demands of a growing trade. Mr. Ernest Buse has sold his interest in the sawmill near Hastings to the Buse Milling Co. Mr. George B. Shaw, a prominent lumberman of Wisconsin, is expected to visit British Columbia very shortly. The Mechanics Mill Co., of New Westminster, has assigned. Henry Drum and P. A. Paulson, of Tacoma, Wash., have secured an option on 40,000 acres of timber land in British Columbia, tributary to Victoria, and propose to organize a syndicate for the purchase of a mill and the working up of the timber.

NEW BRUNSWICK BUDGET.—A Madawaska, N.B., correspondent of the St. John Telegraph tells us Mr. A. Cushing, of St. John, 11th May, came to look after the Alagash drive of about 3,000,000, which is under the management of W. J. Noblis. It will reach the corporation limits shortly. Robert Conner's drive is about in the limits of the corporation. John A. Morrison's drives are all out in the Main River at St. John. His one on two mile brook has formed a jam, and in all probability he will be put to a lot of trouble to break it. Neil McLean has abandoned his drive on Nigger brook. W. H. Conliff's drive on the Alagash is coming along nicely. Stephens and Dickens drives are together; it comprises about 7,000,000; Robert Conners has it in charge. Burgess' drive is about in River St. John; Tidley, Tirreck, Cranford and Burgess' drives on Grand River are nearly into and soon will be in Main River, St. John. Burgess' drive in Little River is partly out, Beaver brook and Ryan brook more or less left behind; what he has on Main stream will be down in a few days. Water falling fast. Never was a finer spring for driving the St. John River, the water low and keeps about the same pitch; those who have the corporation drives above and below Grand Falls must make a small fortune, unless through their own fault. The last few weeks the Main River has been running thick with logs, and will not leave St. John mills in fear of a supply to meet their demand.

SAULT STE. MARIE, MICH.—A deal has been closed here by which Frank

Perry, of this city, Lewis A. Hall, of Bay Mills, and J. L. Norton, of Lockport, Ill., composing the Perry Lumber Company, bought 192 square miles of the Canadian Indian reservation tributary to the Goulais and Hatchawanna rivers, about forty miles above here. The bonus paid for the right to cut timber was \$50,000 after which came the timber royalties. The deal will reach into the millions, and will result in pine, spruce and cedar operations of immense proportions. The Soo Paper Company, of Niagara Falls, N.Y., will build two mills at the mouth of the Waiskay river, ten miles above here. One will cut lengths of spruce into pulp wood and the other will be a cedar mill. Docks will also be built. The company owns over 12,000 acres of spruce and cedar lands at the Waiskai. Mr. Perry has long been a heavy operator, and Mr. Hall is of the well known firm of Hall & Buell, a concern that has handled from 50,000,000 feet upwards in upper Michigan for years. He is also a member of the Hall & Munson Lumber Company, of Bay Mills. O. E. Elsemore, with James T. Hurst, has left for Canada for the purpose of looking over some timber limits on the Wahnapitac river with the view of investment. John Boyle, of London, Ont. has purchased a quantity of timber on section 22, town 20-2 West, Gladwin county, this State, and is building camps to lumber this summer.

THE REDDAWAY BELTING.

The "Camel" brand of belting, advertised by F. Reddaway & Co., of Montreal, Que., in another column, has claims that it is worth the while of those interested to carefully examine. This firm supplies all kinds of linen belts, fire hose, etc.

THE LUMBER TRADE ABROAD.

—It is said that 30,000 wooden spoons are made in Russia from birch every year.

—The sawmill men at Lacrosse, Wis., who were out on strike, have been defeated.

—Forest fires are prevailing throughout Prussia and are causing an unusual amount of damage.

—Over 10,000 sawlogs passed down in a flood on the Kentucky River, from the neighborhood of Frankfort.

—Maine has lost one of its old lumbermen in the death of Mr. Justus Hathaway of Medford, at the age of eighty-four.

—The Postmaster-General of England is inviting tenders for the supply of South of England oak for telegraph arms.

—Lightning struck the Forestry Building at the World's Fair grounds May 2. It did little damage except splitting several timbers.

—The Hattburg veneering factory at Marshfield, Wis., has orders ahead for 150,000 barrel heads and all the cheese boxes they can make.

—A rich lumberman and a member of the Michigan Legislature has found out that his marriage with Brigham Young's nineteenth wife, Ann Eliza Young, who acquired celebrity as a lecturer, is a failure.

—Juniper is becoming known as a substitute for cedar and cypress for nearly all the uses for which the latter woods have hitherto been utilized. In Mississippi, juniper telegraph poles, piles and large timber are in great demand.

—The S. K. Martin Lumber Co. are by far the largest holders of dry shingles of all grades in Chicago to-day. Mr. Martin stated a few days since that he did not know a single concern manufacturing standard shingles at the present time; and that the great mistake most mills make is to allow the quality of their shingles to deteriorate after the wholesale dealer had gone to the trouble and expense of introducing their product to the trade.

—Labor troubles are reported from California. Isaac Miner, a lumberman operating two mills near Arcata, attempted during the past month to increase the working hours of his labourers from ten hours to eleven and a half, but the men refused to work. It is rumoured that a mill in Eel River Valley will also reduce wages, and it is presumed that some others may soon follow or stop operations altogether unless conditions change.

—William Anderson, of Eau Claire, Wis., a member of the logging firm of Anderson Brothers, disappeared a couple of weeks ago, and although nearly every point in the north-west has been asked for tidings by wire, no trace of him has been found. The missing man has a wife and three children at Eau Claire, and is well off financially. His brother believes he has been killed and robbed of \$500 he had with him, or has committed suicide.

STEEL RAILS, ETC.

SEVERAL THOUSAND FEET "T" RAILS, 10 and 20 lbs. to the yard. A large quantity of flat strap rail for tramways. 20 pair wheels and axles, all in good second-hand condition, very cheap.

JOHN J. CARTS HORE,

49 Front Street West, Toronto.

WANTED AND FOR SALE

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

SAW MILL FOR SALE

IN PROSPEROUS TOWN ON GEORGIAN BAY, eighty h.p. engine, modern improvements, capacity 25000 per day, mill and water convenience, siding to lumber piles. Easy terms. Whole or half interest. Plenty of stock can be bought. Write for particulars. Lock box 7, Hepworth station, Ont.

THOROUGHLY EXPERIENCED LUMBER BUYER WANTED.

APPLICANT MUST BE FAMILIAR WITH ash and elm lumber. None but men of undoubted ability need apply. State age, experience and references. P.O. BOX 2144, New York, U.S.

WANTED TO BUY

GOOD CANADIAN TIMBER LIMITS AND Georgian Bay saw logs. Address, BEN BIRD-SALL, Whitney Building, Detroit, Mich.

FOR SALE

AT KINGSTON FOUNDRY & MACHINERY Co. (limited), two Sawmill Engines, cylinders 13 x 21, fly-wheel 9 ft. 6 in. diam, driving pulley 7 ft. x 18 in. face—new— at a bargain.

WORTHINGTON COMPOUND STEAM PUMP FOR SALE.

STEAM CYLINDER 12 AND 18 1/2 INCHES diameter; water cylinder, 10 1/2 inches; length of stroke, 10 inches; speed, 75 to 125; capacity, 530 to 890 gallons per minute; 2 1/2-inch steam; 3 1/2 exhaust; 8-inch suction; 7-inch discharge; capacity, 4 to 6 good fire streams. This pump supplied the city of Bradford for several years satisfactorily for fire and domestic supply when its population was over 10,000. It is in thorough order and will do equally as good service as when new. For prices and further particulars address **WATEROUS ENGINE WORKS CO.,** Bradford, Canada.

TO RENT.

LARGE PLANING MILL WITH EXCEL- lential facilities. Railway switch into premises. Also Flat, with or without power, steam-heated, suitable for all kinds of woodwork. Apply **J. F. CANNIFF,** 36 Toronto St., Toronto.

WHITE BIRCH AND SOFT ELM WANTED.

LUMBERMEN HAVING 1-IN. RED BIRCH and 4-in. dry Soft Elm, first and second, for sale, please communicate with **W. W. BROWN,** 202 Main Street, Buffalo, N.Y.

WANTED.

SAWERS AND FILERS

TO SEND ME THEIR ADDRESS, AND I will send free instructions on hammering saws that is certified to be worth from \$50 to \$100. **J. H. MINER,** Bixvi, Miss.

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

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

HARDWOOD LUMBER BOUGHT, SOLD OR received on consignment. **TUCKER DAVID,** lumber commission merchant, 202 Eleventh Ave., N.Y.

WANTED FOR CASH
Ash and Soft Elm

MOSTLY ONE-INCH, SOME ONE-AND-A- quarter and one-and-a-half inch, strictly first and second, must be of uniform color; also common. Furthermore, Ash and Oak squares from one-and-a-half to four inches thick. Can also use Soft Elm Logs 20 in. and over in diameter for export; Red Birch Lumber 1, and 1 1/2, all thickness; also Red Birch squares 5 x 5 and 6 x 6, to feet and over long, good squares. Address all particulars as to dryness, quality, quantity on hand and price, to P. O. Box 2144, New York, N.Y.

A. M. DOIGIE, President. **W. J. SHEPPARD,** Superintendent.
JAS. SCOTT, Vice-President. **C. P. STOCKING,** Treasurer.

The Georgian Bay Consolidated Lumber Co.

MANUFACTURERS OF

PINE LUMBER, BILL STUFF, SHINGLES AND LATH

Shipments by Vessel or Rail

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NORTH SHORE NAVIGATION CO.

ROYAL MAIL LINE

To Sault Ste. Marie and Georgian Bay Ports

STRS. CITY OF MIDLAND, CITY OF LONDON, FAVORITE AND MANITOU

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

The **CITY OF MIDLAND** and **CITY OF LONDON** will leave Collingwood every Tuesday and Friday on arrival of G.T.R. morning train from Toronto and Hamilton, calling at Meaford. Leave Owen Sound same days at 10.30 p.m. after arrival of C.P.R. train from Toronto, connecting at Warton with night train from the south, and calling at intermediate ports to **Sault Ste. Marie.**

Steamer **FAVORITE** will leave Collingwood **Mon-** days and **Thursdays** after arrival of morning train for Parry Sound, Byng Inlet, French River and Killarney, connecting there with above line of steamers for the "Soo." Returning will make close connection at Midland on **Wednesdays** and **Saturdays** with trains for the south and steamer **MANITOU** for Parry Sound.

Steamer **MANITOU** will make regular trips from Penetanguishene, connecting with trains from the south, only at Midland on **Monday, Wednesday, Thursday** and **Saturday** for Parry Sound, connecting there with Steamer **FAVORITE** for Byng Inlet, French River and Killarney, where connection is made with above "Soo" line of steamers.

For tickets and further information apply to any agents G.T.R. or C.P.R., or to

C. E. STEPHENS, Sec.-Treas., Collingwood | **W. J. SHEPPARD,** Manager, Waukegan

ENGINE AND PLANER FOR SALE

A 20 TO 25-H.P. LEONARD ENGINE AS GOOD as new, is at present running sawmill, cutting 5,000 to 8,000 per day of ten hours. Also a 24 inch planer and matcher in good order. Would exchange planer for a large engine.

ROBT. BELL, JR., Box 35, Hensall, Ont.

WILLIAM FOSTER

Lumber and Commission Merchant

RECEIVER AND FORWARDER OF

LUMBER, LATH AND SHINGLES

... CORRESPONDENCE SOLICITED ...

OWEN SOUND, ONT.

TIMBER BERTH FOR SALE

BERTH NO. 35, CONTAINING 36 SQUARE miles, situated on French River, within about twelve miles of Georgian Bay. There is a large creek and other smaller streams crossing the same which empty into the French, and containing large quantities of Pine Timber. Has never been lumbered on.

Apply to

EXECUTORS OF JOHN BROWN (deceased) Room No. 2, Drake Building, Easton, Pa.

SHINGLE MILL FOR SALE

SITUATION:

The Trethewey Falls Shingle Mill is new, built 1891, on the South Branch of the Muskoka River, 5 miles from Bracebridge, near South Falls switch N. & N.W. R.R. With the mill are 5 acres of land, large boarding house, team horses, wagon, sleight, etc., etc., in fact complete equipment for mill and lumber camp.

MACHINERY:

Consists of Little Giant Luffel Wheel (60 horse power), Box Shingle Machine, Jointer, Splanter, Drag, Butting and Knot Saws; Endless Chain Butter, Bull Wheel, etc., etc. Building is 70 x 40 heavy frame, with room and shafting placed for second shingle machine. Belting complete and everything in good running order. Circular saw could be added with small expense.

TIMBER:

Is abundant for 50 miles above the mill on the waters of the South Branch—many townships being yet owned by the government—besides thousands of acres of decayed pine, four or five thousand acres of which can be bought immediately. There is also about 400,000 feet of timber at mill which can be purchased with it, so that buyer can commence cutting at once.

The estate must be wound up, and will bear the closest examination. For further information, address

THE CANADA LUMBERMAN, Toronto, Ont.

J. D. SHIER

MANUFACTURER OF

Lumber, Lath & Shingles
BRACEBRIDGE, ONT.

... THE ...

FLINT & PERE MARQUETTE RAILROAD

FROM

Port Huron and Detroit

Is the Short Line to

SAGINAW AND BAY CITY

(Centres of the vast lumber interests of Michigan)

MT. PLEASANT, CLARE, REED CITY

BALDWIN, LUDINGTON, MANISTEE

AND

MILWAUKEE AND MANITOWOC, WIS.

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

The line thus formed is a short and direct route from

NEW YORK BUFFALO MONTREAL TORONTO

to **ST. PAUL, DULUTH** and **Pacific Coast points.**

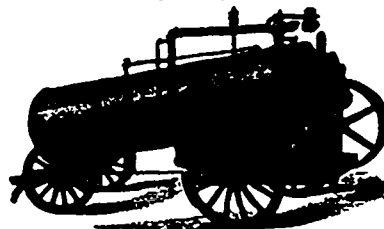
Write either of the undersigned for Folders, which contain Maps, Train Schedules and a great deal of information of value to those contemplating a trip to any of the above-mentioned points.

W. H. BALDWIN, JR., General Manager. **W. F. POTTER,** Gen'l. Sup't.

A. PATRIARCHE, Traffic Manager.

GENERAL OFFICES: **SAGINAW, MICH.**

The MONARCH BOILER (Patented) and HERCULES ENGINE



Portable from 6 to 70 horse power. Surpass portable steam power heretofore produced for strength, durability, compactness and the ease with which they can be moved.

The 70 horse power can be taken over the roughest roads, or into the forest, and set up as easily and quickly as an ordinary 20 horse power portable engine, and as firm as a brick-set stationary engine. Engines and boilers of every size and description. Rotary Saw Mills, Shingle and Lath Machines, Saw Grinders, Planers, etc. Mill machinery and supplies of every description. Every boiler insured against explosion by the Boiler Insurance & Inspection Co. of Canada.

Write for circulars.

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Successors to **A. ROBB & SONS,** Amherst Foundry and Machine Works, Amherst, N.S.

ESTABLISHED OVER 40 YEARS.

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.. Sail, Tent and Awning Maker ..

231 George St. and 154 King St.

PETERBOROUGH

Canoe, Yacht and Boat Sails made to order. Perfect Fit Guaranteed. Every description of Lumbermen's Supplies and Waterproof Clothing.

Rochester Bros. : : COMMISSION AGENTS

Limits bought and sold on commission. Limits travelled and carefully prepared. Estimates given.

Some first-class berths on the North Shore of Lake Huron and on the Upper Ottawa now in our hands for sale.

Communications confidential. References given.

36 Rochester St. Ottawa

E. STEWART, D.L.S.

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Timber Limits

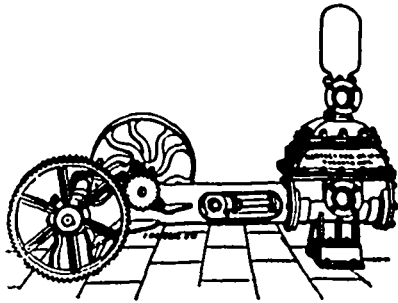
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TORONTO, ONT.



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TORONTO 20 FRONT ST EAST TELEPHONE 475 THE J.C.McLAREN BELTING CO MONTREAL

Representative Lumber Manufacturers and Dealers

Town	Railway, Express, or nearest Shipping Point	NAME	BUSINESS	Power, Style and Daily Capacity
Ottawa, Ont.	Ottawa	Booth, J. R.	Lumber, Wholesale and Retail	Steam, Circular and Band Mill
"	"	Broson & Weston Lumber Co.	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Band, 450m
"	"	OTTAWA LUMBER CO.	Lumber, Pine, Spruce, Hemlock, Wholesale	Wat., Gang and Band, Saw 400m, Lath 70m
"	"	Perley & Pattee	Saw and Lath Mill, Pine, Wholesale	
Parry Sound, Ont.	Utterson	Conger Lumber Co.	Lumber, Wholesale and Retail	Water, Gang, Circular, Saw 90m, Shingles 20m, Lath 30m
"	Parry Sound	Parry Sound Lumber Co.	Saw, Shingle and Lath Mills, Pine, Wholesale	2 Mills, Water, 1 Band, 2 Gangs and 3 Circulars
Muskoka Mills, Ont.	Penetanguishene	Muskoka Mill and Lumber Co., Head Office, Arcade, 26 King St. W., Toronto	W. Pine Lumber, Lath and Mill Stuff, all lengths	
Alexandria, Ont.	Alexandria	McPherson, Schell & Co.	Cheese Box Factory, Pine, Spruce, Cedar	
Almonte, Ont.	Almonte	Caldwell, A. & Son	Sawmill, Pine, Lumber, Hemlock, Hardwoods	Circular, 3m
Barrie, Ont.	Barrie	Dymont & Mickle	Sawmill, Pine, Spruce, Cedar, Hardwoods	Steam, Circular, 40m
Barrow Bay, Ont.	Warton	Barrow Bay Lumber Co., Limited	Saw, Shingle and Heading Mill, Pine, Cedar Oak, Oak Railway Ties, Laying Blocks	Steam, Circular, 16m
Blind River, Ont.	Blind River	Blind River Lumber Co.	2 Saw, Sh. and Lath Mills, Pine, Hem., Bl. Birch	Stm., Band, Cir., S. 75m, Sh. 60m
Bobcaygeon, Ont.	Fenelon Falls	Boyd, Mossom & Co.	Lumber, Wholesale and Retail	
Bracebridge, Ont.	Bracebridge	DOLLAR, JAMES	Lumber, Shingles, Wholesale	
Barrie, Ont.	Barrie	Burton Bros.	Lumber, Wholesale and Retail	
Byng Inlet, Ont.	Byng Inlet	Georgian Bay Consol. Lumber Co.	Sawmill, Pine, Hemlock, Birch	Steam, Circular, 20m
Calabogie, Ont.	Calabogie	Carswell, Thistle & McKay	Lumber, Wholesale and Retail	
Collins Inlet, Ont.	Collins Inlet	Collins Inlet Lumber Co.	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	
Comber, Ont.	Comber	Ainslie, J. S. & Bro.	Saw and Stave Mill, Pine, Hardwoods	Steam, Circular, 6m
Glanville, Ont.	Pinkerton	McIntyre, N. & A.	Saw, Shingle and Lath Mill, Timber Laths, Hemlock, Pine, Lumber, Hardwoods	Steam, Cir., Saw 14m, Sh. 20m
Hamilton, Ont.	Hamilton	BRADLEY, MORRIS & REID CO.	Lum., Tim., Pine, Hem., Hwdc., Whol. and Ret.	
Huntsville, Ont.	Huntsville	Reath, Taft and Turnbull	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 25m
Hamilton, Ont.	Huntsville and Katrine	Thomson, Robert & Co.	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular, 4m
Keewatin, Ont.	Keewatin	Dick, Manning & Co.	Sawmill, Pine, Hardwoods, Wholesale	Steam, Circular
Lakefield, Ont.	Lakefield	Keewatin Lumber & Mfg. Co.	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Water, Band and Circular, 100m
Little Current, Ont.	Sudbury	Lakefield Lumber Mfg. Co.	Lumber, Wholesale and Retail	
"	"	Charlton, J. & T.	Sawmill, Pine, Ash, Birch, Oak, Wholesale	Steam, Circular, 25m
"	"	Conlin, T. & J.	Sawmill, Pine, Ash, Birch, Oak	Steam, Circular, 25m
"	"	Rowry, J. W. & Sons	Lumber, Wholesale and Retail	
London, Ont.	London	Gordon, James	Exp. and dir. in Am. Hwdc. made to specification	
Longford Mills, Ont.	Longford	Longford Lumber Co.	Saw and Plan. Mill, Hemlock, Hardwds., Whol.	Steam, Band and Circular, 100m
Midland, Ont.	Midland	Peters & Cain	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 15m
Mount Forest, Ont.	Mount Forest	Greensides, W. S.	Cherry, White Ash, Hardwoods, Wholesale	
Norman, Ont.	Norman	Saw and Plan. Mill, Tim. Laths and Logs, Pine	Lumber, Wholesale and Retail	Steam, Circular, 4m
Louise, Ont.	Elmwood, G.T.R.	Minnesota & Ontario Lumber Co.	Hardwoods, Shingles, Lath, Handles	Steam, Circular, 20m
Toronto, Ont.	Toronto	S. B. Wilson & Son	Lumber, Wholesale	
"	"	Campbell, A. H. & Co.	Lumber, Wholesale	
"	"	Ontario Lumber Co.	Lumber, Wholesale	
"	"	Shannon Shingle Manufacturing Co.	Shingle Mill, Pine, Cedar	Steam, 8m
"	"	Victoria Harbor Lumber Co.	1 Saw, Shingle and Lath Mills, White Pine, Whol.	Stm., Cir., Gang and Band, 120m
Warton, Ont.	Warton	Miller, B. B.	3 Sawmills, Lumber, Barrel Heads	Steam and Water, Circular, Portable and Stationery, 10m
Beckingham, Que.	Beckingham	Ross Bros.	2 Sawmills, Pine, Spruce, Hardwoods	Circular, Gang and Band, 150m
Chaudiere Mills, Que.	Chaudiere Stn.	Broakey, John	Sawmill, Pine, Spruce, Hardwoods, Wholesale	Water, Gang, 150m
Cookshire, Que.	Cookshire	Cookshire Mill Co.	Saw, Shingle, Planing, Stave and Heading Mill	Steam, Circular and Gang, 60m
Montreal, Que.	Montreal	Dufresne, O. Jr. & Frere	Sawmill, Pine, Spruce, Hemlock, Hdwds., Whol.	Steam, Circular and Band, 50m
"	"	Roberts, Joseph & Pils	Saw and Planing Mills, Sash, Doors and Blinds, Int. Fin. Spruce, Hardwoods, Wholesale	Steam, Circular, 200m
"	"	SHEARER & BROWN	Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	
Meadville, H.C.	New Westminster	WOODYVILLE SAWMILL CO.	Sawmills, P. Fin. Spruce, Cedar, Hardwoods	2 Stm., 2 Wat., Band, Cir., 40m
New Westminster, H.C.	"	Brunette Sawmill Co.	Saw and Planing Mills, Sash, Doors and Blinds, Fir, Cedar, Spruce, Hardwoods	Steam, Circular, 20m
Canterbury, N.H.	Canterbury Stn.	James Morrison & Son	Sawmill, Pine, Hardwoods	Steam, Circular, 35m
Bridgewater, N.S.	Bridgewater	DAVIDSON, E. D. & SONS	1 Saw, Shgle. and Lath Mills, Pine, Spr., Hwdc.	Water, Circular and Gang, 200m
Toronto, Ont.	Toronto, Ont.	W. N. McEachren & Co.	Lumber, Wholesale	Com.
Toronto, Ont.	Toronto, Ont.	James Tennant & Co.	Lumber, Lath, Shingles, etc., Wholesale	Com.

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

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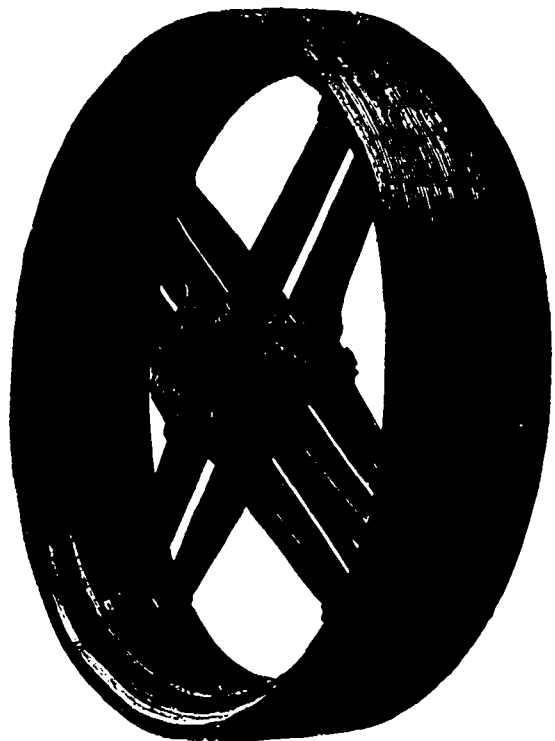
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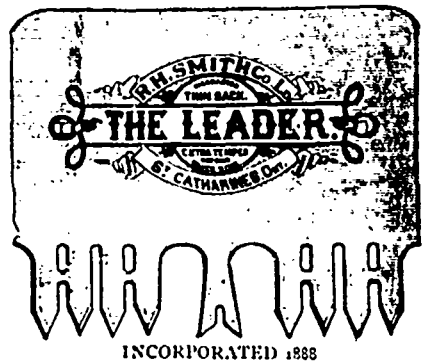


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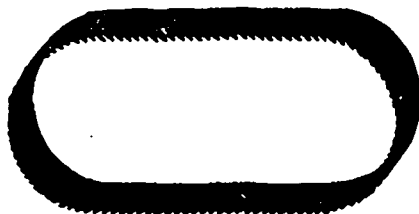
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SIXTEEN REASONS, AND HOW TO AVOID THEM



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

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

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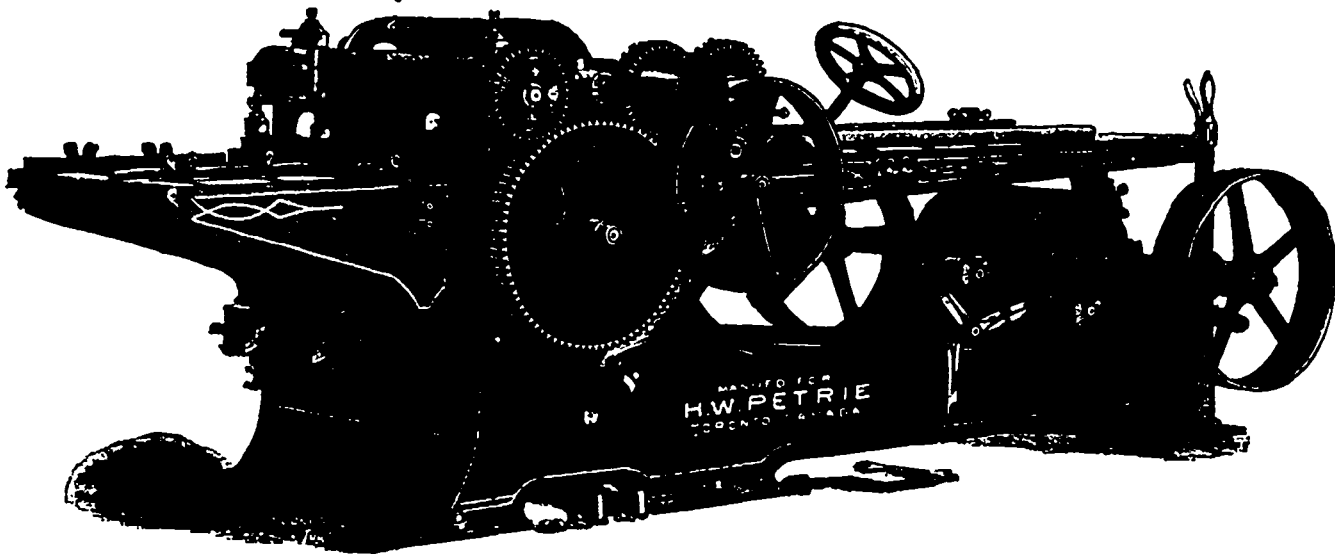
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THIS machine is of an improved design and can be used for rapid matching, surfacing or fine panel work in either hard or soft wood. The cylinder is of forged steel, the boxes being seven inches long. A pressure bar is on each side of the cylinder, thereby enabling the machine to do first-class work. It has two speeds for feeding, one for pine and the other for hardwood. Both top and bottom rolls are four inches in diameter, and all the four are driven by heavy gearing, thus ensuring a reliable feed. The matcher spindles are of steel. The side heads move up and down with the bed, and each head can be moved backwards and forwards by means of screws and crank at side of machine.

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Has Certainly Come to Stay

And you will be wise to intelligently and carefully investigate, when you will be sure to find:

1. That all the new mills in the States of 20,000 capacity up are Band Mills.
2. That Band Mills are replacing gangs and circulars in old mills.
3. That they produce 8 to 15 per cent. more lumber than the circulars from the same logs.
4. Lumber is truer, less waste, nearer size, saving freight and dressing.
5. As economical as the gang, with all the cutting advantages of the circular.
6. CAPACITY AS GREAT AS THE CIRCULAR.
7. With improved automatic tools saws are no more difficult to manage than gangs or circulars.

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If the above statements are correct, can you afford to continue as you are? Will not the investment of \$2,000 to \$3,000 in a Band Mill be one of the best investments you can make? Will it not return more than its cost in cutting the first season's stock and be a source of continual profit?

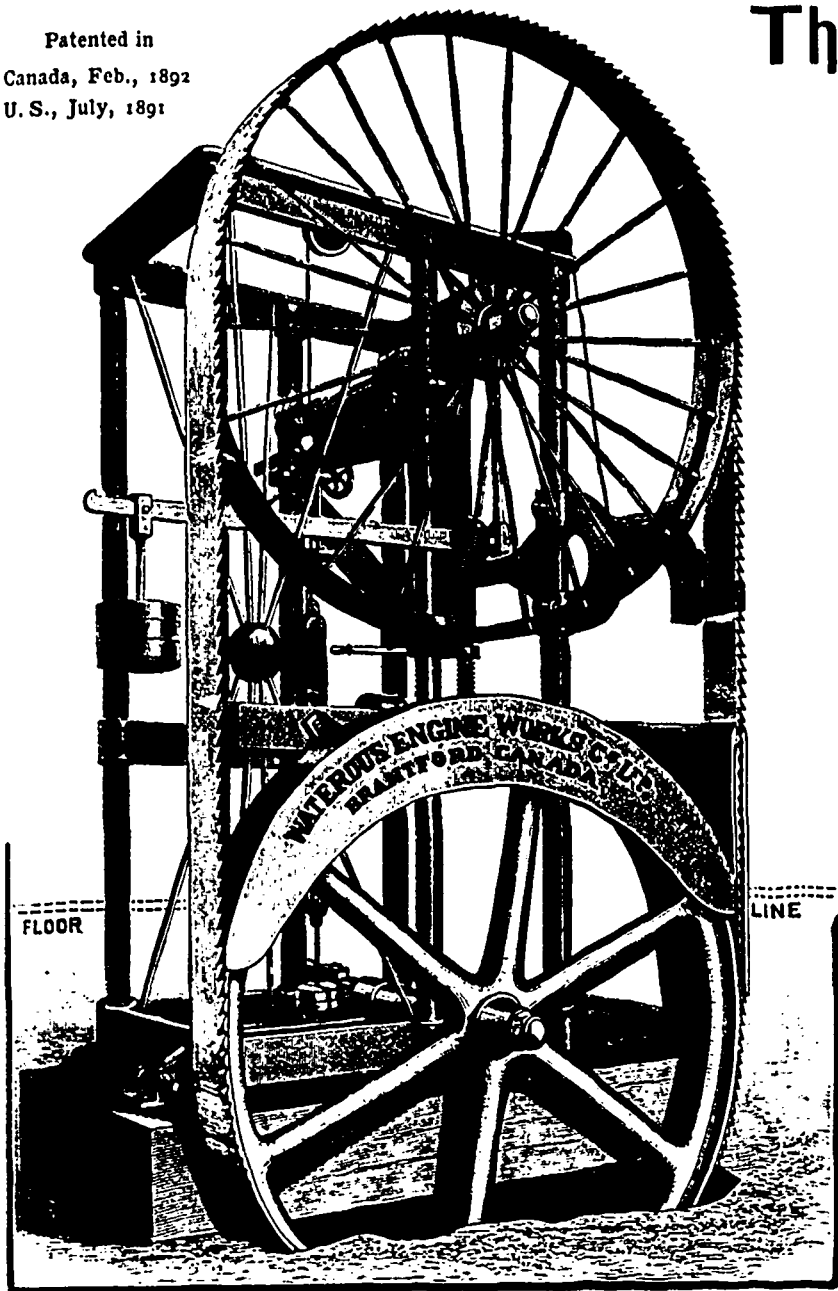
Having Decided to Purchase a Band Mill

We would refer you to the claims we make for our Band Mill

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2. **WHEELS LESS THAN 1 1/2 FEET APART**, while in other mills the usual distance is from 4 1/2 feet in the shortest to 7 1/2 feet in the longest.
3. **REDUCED COST IN SAWS**, 8 to 15 feet being saved on each saw.
4. **BESIDES A SAVING IN COST**, the short saw brings the bottom of log where it comes in contact with saw (in our mill) 5 feet from where saw leaves the upper wheel. In ordinary mills it is 8 feet to 12 feet, or longer. The further the point of the saw that comes in contact with the log is from the upper wheel, the more readily it gives to the pressure applied, creating a tendency to run back on the lower wheel, while it remains stationary on the upper wheel. When this occurs the saw is buckled at the log or broken at the upper wheel. The advantage in favor of this trouble not occurring is, in our mills over other mills, fully 50 per cent. in our favor. This enables us also to run the saw on the No. 2 Mill under a tension of 3,600 lbs., being 700 to 900 lbs. less than ordinary. The great advantage of getting nearer to the upper wheel can be further illustrated by trying to run a belt off at the delivering pulley, and then try to run it off at the receiving pulley, and note the difference.
5. **WHILE DOING AWAY** with outer bearing to wheels to gain the advantage of bringing wheels closer together, we secure the same effect by bringing the inner bearing in each instance to the centre of the wheel, the line of greatest strain, by coring out hub of wheel. Bearings of wheel shafts are 18 to 19 inches long and extra heavy.
6. **HEAVY TRIANGULAR FRAME** supporting upper wheel and shaft, giving what is equal to a 4-foot bearing on the front centre column, making binding impossible when adjusting the tension.

Most sensitive tension, power adjustment to upper guide, and many other features common to all mills.



No. 2 BAND MILL
8-foot Wheels, 10-inch and 12-inch Saws

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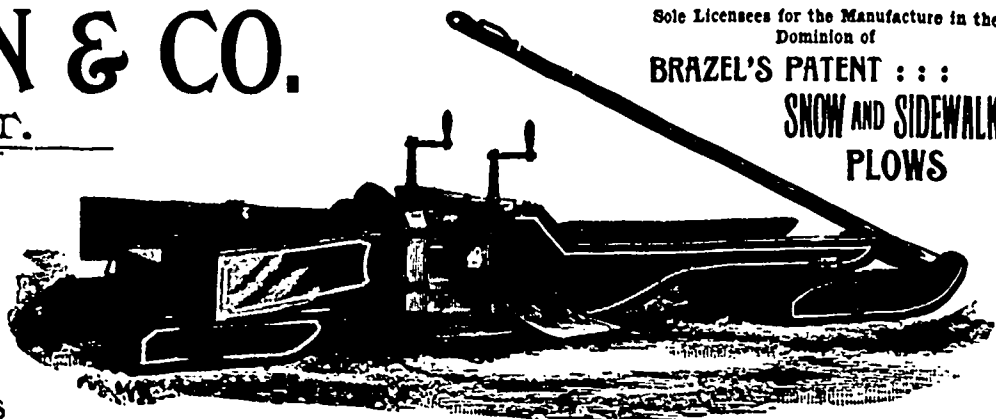
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Lumbermen's Tools

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Skidding Tongs, Pike Poles, Goldshuts, Lumber Bob Sleighs



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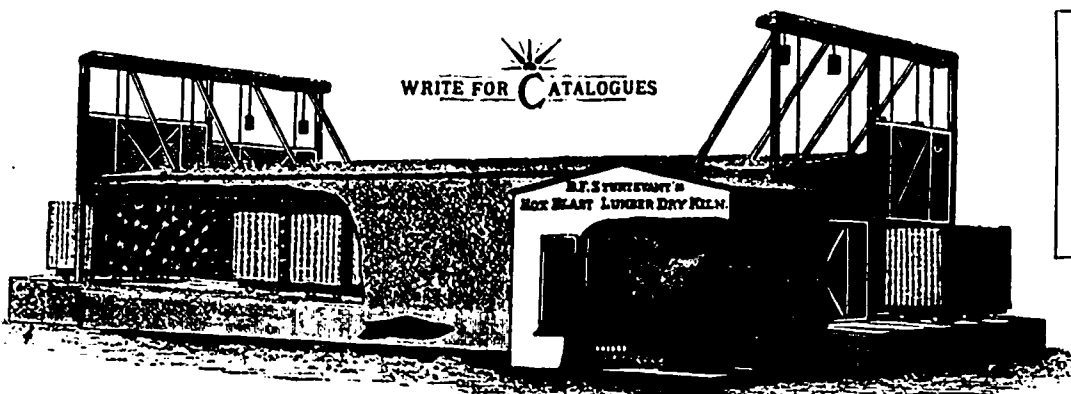
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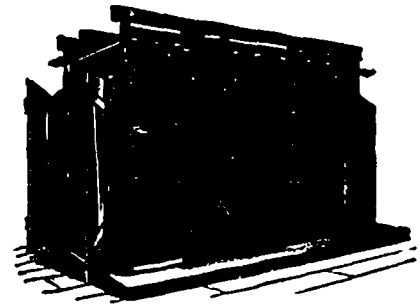
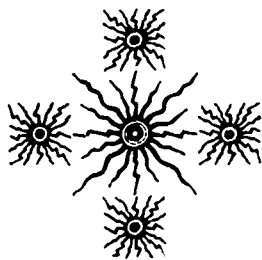
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For all kinds of Lumber, Staves
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Especially adapted for the Rapid Drying
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HAS BEEN PROVED TO POSSESS THE FOLLOWING POINTS OF EXCELLENCE:

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ITS remarkable efficiency depends upon its peculiar mode of applying heat to, and eliminating moisture from, the air used in drying. We use no fan, engine or other device that requires constant attention, nor do we waste heat by a special chimney or ventilator, nor do we reduce temperature by introducing cold-water pipes or freezing mixtures for condensing purposes. We use a perforated pipe under the lumber, so arranged that, when required, the air at one end can be impregnated with additional moisture. This penetrates evenly the lumber above it, softening the surface, and is of very great advantage where case-hardened lumber has been put into the drier.

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THE TORONTO BLADE
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LANCE TOOTH

Dauntless Shingle and Heading Machine

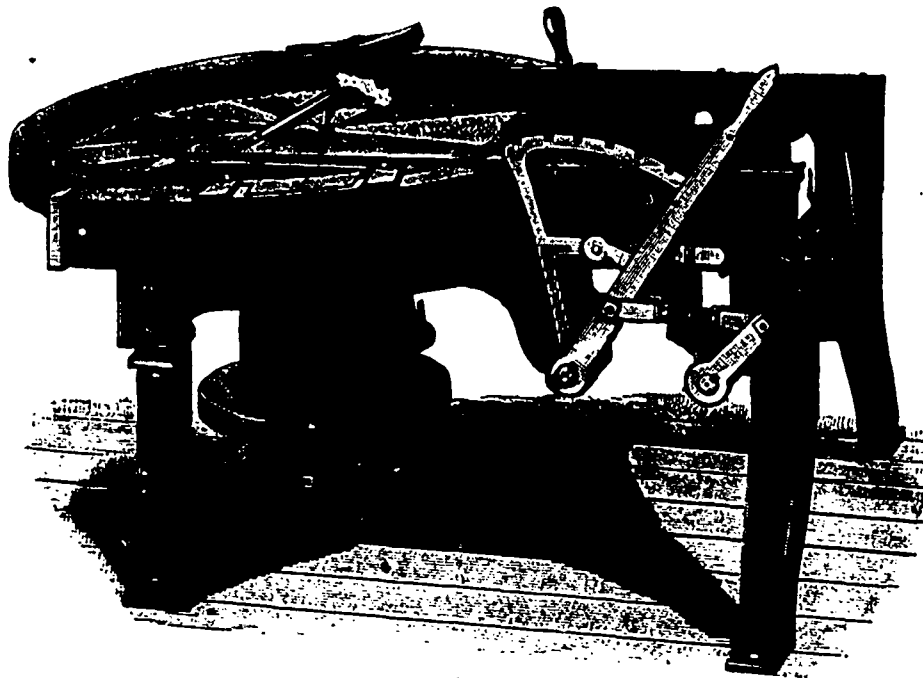
∴ WILL make more Shingles per day than any self-acting machine with vertical saw in existence, and more Shingles from the same quantity of timber.

THE FRAME

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

THE CARRIAGE

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



— CAPACITY FROM 25,000 TO 50,000 PER DAY —

Also Manufacturer of other kinds of . . .

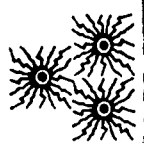
- Shingle Jointers
- Both Self-acting and Hand-feed
- Shingle Machines
- Packing Boxes
- Bolters
- Drag Saw Machines
- Stationary and Portable Sawmills
- Double Edgers
- Single Edgers
- Slab Saw Rigs
- Bull Wheel Rigs
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