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CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS AND MILLERS' GAZETTE

VOLUME XIII. NUMBER 9. TORONTO, ONT., SEPTEMBER, 1892. TERMS, \$1.00 PER YEAR SINGLE COPIES, 10 CENTS

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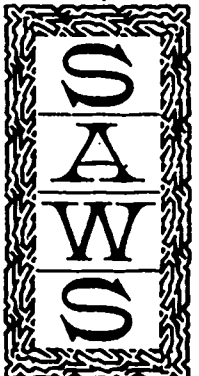
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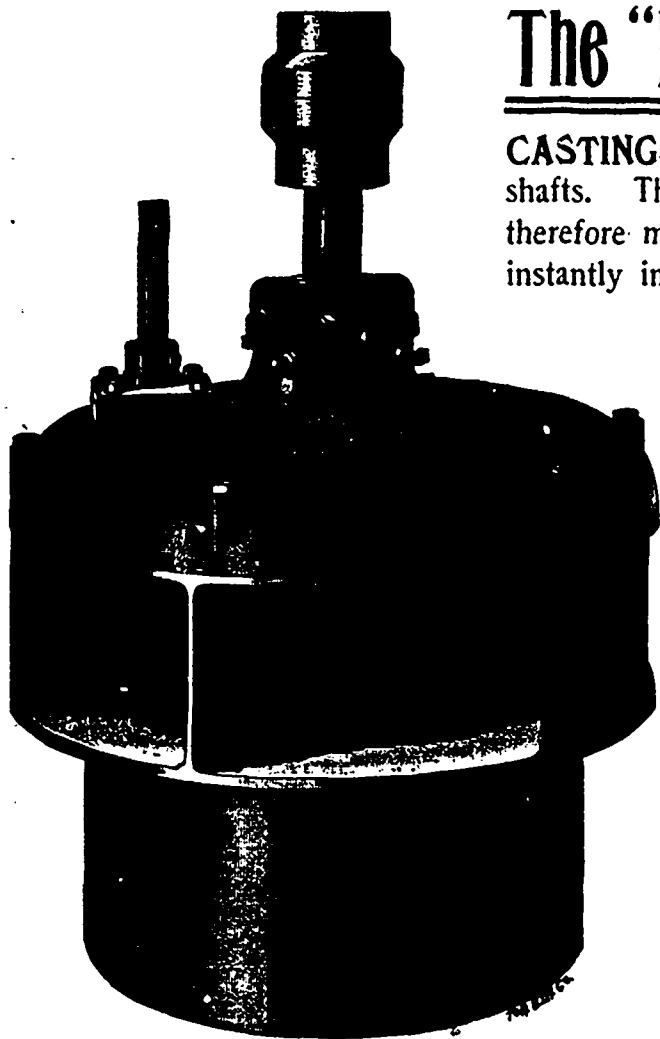
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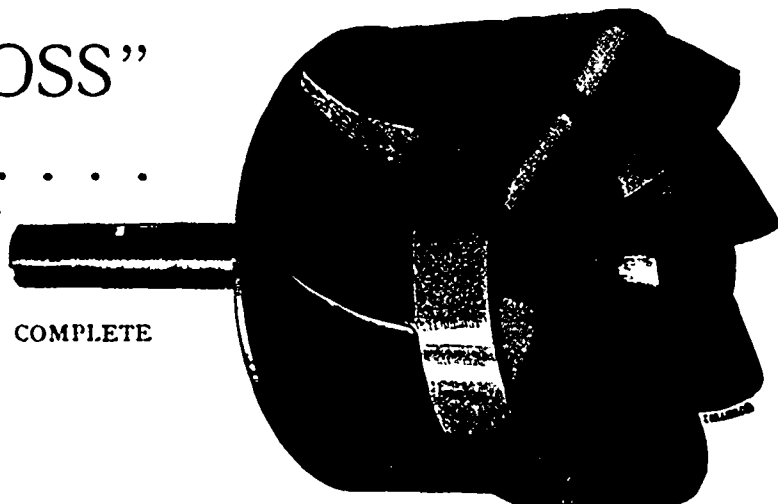
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THE CANADA LUMBERMAN

VOL. XIII.
NUMBER 9.

TORONTO, ONT., SEPTEMBER, 1892

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

BY THE WAY.

AN option held by J. T. Hurst and S. O. Fisher, two Michigan lumbermen, on seventy-two square miles of timber on the Walnapitae River, Georgian Bay, has been closed. The limits were owned by McArthur Bros., of Toronto, and the consideration, it is stated, is \$550,000. The expectation is that a cut of 250,000,000 feet will be realized from the property. Fifteen years ago, so runs the story, McArthur Bros. paid \$75,000 for these limits. The difference between \$550,000 and \$75,000 is a tidy sum. Would our Henry George friends take this as a case of unearned increment?

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Among several reasons given by a Chaudiere lumberman for the boom in lumber this year is this: "A feeling has suddenly grown up that the lumber trade has reached a kind of crisis, or, in other words, that the forest supplies have come to a point where they have turned on the down-hill grade towards depletion. Under such a belief, or fact, prices must keep up right along, and far-seeing lumber dealers are endeavoring to hustle in all the stock they can before the product market takes another jump." It is difficult to realize that such a crisis in lumber has yet been reached in Canada, though the period has been hastening undoubtedly by our prodigal treatment of the forests of late years.

x x x x

THE United States Congress has adjourned, but among the list of bills that received the official assent we do not find the Bryan free lumber bill. It vexed the bosom of our friends of the Northwestern Lumberman, and was the subject of columns of protests from certain lumbermen throughout the country, who thought they saw in it "a monster of such frightful mien," that were its provisions to become law the immense lumber business of the United States would immediately vanish into thin air. We are glad that relief has come to break the tension of anxiety which, along with the hot spell, was commencing to prove excessively overpowering. The man who wants his lumber on an easier basis is not in it this time, and must grin and bear his lot yet a little.

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THE American agent at Waubauskene, Ont., having raised the question whether rafts of saw logs shipped from Canada across the lakes to the States, being exempt from duty, are subject to the requirements of certified invoices, the authorities at Washington have quoted the provisions of section 4 of the act of June 10, 1890, which says no merchandise exceeding \$100 in value except personal baggage can be admitted to entry without a duly authenticated invoice or bond for the production of such invoices. There would seem to be no good reason why this regulation should not apply to logs. Its application does not carry with it the payment of duties, their exemption being already provided for, whilst an official record of the logs received in the States from Canada, would, for statistical and commercial reference, prove very useful.

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IN a little hand-book recently issued by the Western Retail Lumbermen's Association we have a good index of the business intelligence and strength of this organization. The membership embraces about 150 firms and the territory extends over the C.P.R. main line as far west as Indian Head and all their branches in Manitoba to their terminus; the N.P. railway in Manitoba and M. & N. railway to its terminus. The book before us gives full list of the members, constitution and by-laws of the association, and the inspection rules of the Northwestern Ontario and Manitoba Lumber Association, governing and grading white and red pine lumber. A freight tariff is not the least important feature of the

book. The association is one that means business and holds its members up to its by-laws under a penalty for breaking the price list agreed upon, so that if caught, they shall on conviction, pay the difference on the whole bill in question of the wholesale cost and the retail price at that point, into the funds of the association. Should a dealer refuse to pay on the second offence he will be expelled from that association and the Wholesale Dealers' Association, for it is a joint one, and the honorary members shall be notified by the secretary that such party is no longer a member. This latter notification is equivalent to saying: "Don't trade with him."

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Benjamin Harrison is not the only man engaged in the business of retaliation. To pay the United States back, in its own medicine, for placing heavy duties, under the McKinley Bill, on Australian wool, the legislators of the Antipodes have decided to retaliate against the United States by imposing a duty of \$6.25 on Oregon pine. Our British Columbia correspondent intimates that this action will no doubt stimulate trade between that province and Australia. We do not think that the fears entertained of British Columbia fir being included under the high tariff, because of a wrong understanding of names, need give anxiety. The tariff measure is leveled against the United States, and Australia can have no object in closing out our woods. The total exports of the products of the forest from Canada to Australia last year amounted to \$254,973, including pine deals to the value of \$12,950; spruce deals, \$45,853; laths, palings and pickets, \$4,942; planks and boards, \$187,591. This is not a very large trade, and will bear increasing, but it is to be remembered that the market in Australia has been severely depressed for a year and more and dullness still prevails. During the past year the United States exported to Australia, under the head of "wood and manufactures of," deals, boards and planks to the value of \$1,123,066; lath, \$16,317; palings, pickets and bed slats, \$10,727; shingles, \$1,125; box shooks, \$2,931; staves and headings, \$19,545; all other lumber, \$28,431, sawed timber to the value of \$206,754; hewn timber, \$3,229; logs and other timber \$1,260.

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It is the habit of some United States lumber journals to belittle the quality of Canadian woods, though the readiness with which American operators secure large holdings of timber in this country is a striking illustration of a contradiction in terms. But the best testimony touching the character of our timbers is that of the men on the spot who have an experimental acquaintance with our woods. Referring to parts of the Georgian Bay district, Michigan lumbermen, who are at work on the Vermillion, Whanapitae and Spanish rivers say that in size and extent there is no timber grown in their state that will equal the timbers of these territories. From the information that reaches us through our Michigan correspondent and from other sources there can be little doubt that United States lumbermen will put in a particularly active season in the Canadian woods the coming winter. We are losing the sawing of part of this timber because of it being towed to Michigan mills, but it becomes more apparent each month that these conditions will be altered in the near future. We intimated last month that the purchasers of the Dodge estate, a Michigan concern, who had intended towing their logs to their mills on the other side would now do the sawing in Canada. We hear of other United States firms who are seriously considering the problem whether it would not pay best to erect mills at various desirable points adjacent to their limits, saw their lumber here, and ship direct to United States ports by means of barge and tugs. The argument is that this would pay better than towing the logs over and afterwards shipping.

THE NECESSITY OF A STANDARD RULE FOR BELTING.

BY C. R. TOMPKINS, M.E.

THE question of the power that may be transmitted by leather belts has been so frequently discussed in the various mechanical and trade papers that it would seem as if some definite standard of value ought to have been established long ago. But still there seems to be as wide a difference of opinion between those who claim to be experts as ever. Each one seems to have his own theory, and sticks to it, whether correct or not.

One cause for this difference of opinion is in the amount of tension that a belt should be submitted to, for we are all well aware of the fact that the greater the tension the greater will be the frictional resistance upon the face of the pulley, but economy and durability in many cases are left out of the question altogether. It should not be a question of how much power can be transmitted by a belt of certain width, but rather how much power can be safely and economically transmitted by the same.

Here the main question arises upon which "doctors" disagree. One author says a belt one inch wide will resist a strain of 675 pounds, while another well-known author says: "A leather belt will safely and continuously resist a strain of 350 pounds per square inch of section." Now, while a good piece of leather belt one inch wide might support a weight of 350 pounds without breaking, this is no criterion to go by. A belt is never made of one solid piece of leather, but is formed by joining several pieces together by cement, rivet or lacing, and as the strength of all material is no greater than its weakest place, that point must be taken for the basis of all such calculations. Again, suppose a belt joined together by either process would stand a strain of 350 pounds to the inch in width without breaking, the question arises whether it is practical or economical to any belt at that tension. Take, for example, a belt 12 inches wide and subject it to that tension, the whole stress would be $12 \times 350 = 4200$ pounds, or two and one tenth tons. Now, I submit to any practical mechanic how long would a belt of that width last under that stress, or what would be the effect upon the journals and box of a shaft three inches or less in diameter that are so frequently driven by belts of that width. The question of how much stress will a leather belt stand without breaking is not the question to be taken into consideration in practice, but rather what is the most practical stress for economy and durability. Now, it has been demonstrated by numerous tests made by the writer that an average belt one inch wide, when joined together by either of the methods referred to, parted at a stress of 210 pounds, and this being the case, and it is conceded by all mechanical experts that in practice no body should ever be subjected to a strain greater than one-half its ultimate strength, it follows that in practical use a leather belt should never be subjected to a stress greater than 100 pounds to the inch in width, which, in the case of a 12 inch belt, the standing stress would amount to 1,200 pounds, which is all that should be required of it, and if the conditions are such that a belt of that width will not transmit the required power at that tension, rather than to increase the tension and destroy the belt, it is better and more economical in the end to increase the size of the pulleys and thereby increase the speed of the belt, for the power of a belt in all cases is the speed multiplied by the stress.

The power given out by a belt under a certain stress is another question upon which there is a wide difference of opinion. But this question is so easily tested by any one who will take the trouble to do so, it would seem as if it should have been settled long ago, and a definite standard arrived at.

For the benefit of any who may desire to satisfy

themselves, the following directions may be useful: Procure a pulley of any convenient size with sufficient width of face to accommodate two belts. It should be perfectly flat on the face and smooth, and mounted upon a shaft perfectly round and smooth, which may rest upon a pair of balancing bars or centers, so that it will be free to move in any direction. Next procure a good average belt one inch wide and fasten one end to the floor, and pass the other end over the pulley, and to this end suspend a weight of 100 pounds. The belt should be so attached to the floor that when the weight is suspended the belt will embrace just one-half the circumference of the pulley. Now, the power of a belt is simply the friction between the under side of the belt and the face of the pulley, governed by the stress to which the belt is submitted, for, according to the established laws of friction, the frictional resistance between any two bodies in intimate contact increases as the weight. Therefore, as we have submitted the belt in question to a stress of 100 pounds, and that being the weight pressing against the face of the pulley, it only remains to find the power necessary to overcome this frictional resistance and cause it to slip. For this purpose one end of a strap, about the same thickness as the belt, should be attached to the face of the pulley and passed over it, so as to draw in the opposite direction to the weight. Now, if sufficient weight be attached to the strap to overcome the friction of the belt and cause it to slip under this pressure of 100 pounds, that weight will represent the frictional power of the belt. With a smooth-faced iron pulley and a belt of average thickness, that weight will not vary materially from forty pounds. The writer has tested this at different times and under different conditions, and while belts that were strictly new have in most cases fallen a little short, old belts that were worn and greasy gave a trifle more, but the average belt that had been used but a short time gave near enough to forty to say that the frictional power of a leather belt is forty per cent of the stress. Tests were also made in the same manner with belts two, three and four inches wide, with the same results, so that it is also quite safe to say that the frictional power of a belt is as the stress, regardless of width. That is to say, that with the same stress of 100 pounds, the four-inch belt slipped with the same force or weight of forty pounds; but with a stress of 400 pounds upon the four-inch belt it required a weight of 160 pounds upon the strap to cause it to slip, thus proving what has already been stated, that the frictional power of a leather belt under ordinary circumstances is equal to forty per cent. of its stress, regardless of width. That, consequently the frictional power of a belt twelve inches wide under a standing stress of 1,200 pounds, would be no more than a six-inch belt under the same stress. But while the twelve-inch belt would only be required to stand a stress of 100 pounds to the inch in width, the six-inch belt would necessarily be subjected to a stress of 200 pounds to the inch. Therefore, it will be seen that if a stress of 1,200 pounds be required to transmit a given power, it will be more economical to use a belt twelve inches wide than one of six.

The following rule may be deduced from the foregoing tests: To find the power that may be safely transmitted by a leather belt, when the speed and stress are given, multiply the speed of the belt in feet per minute by forty per cent. of the whole stress and divide by 33,000. Assume the twelve-inch belt first referred to at a tension of 1,200 pounds to move at a velocity equal to 2,000 feet per minute. First, forty per cent. of 1,200 is $12 \times 40 = 480 \times 2,000 = 960,000 \div 33,000 = 29$ horse-power.

The foregoing rule is based upon the supposition that the belt embraces just one-half the circumference of the pulley, but where it embraces more or less it has been found that the frictional power increases or decreases nearly in proportion to the square root of arc of contact.

THE AGE OF TREES.

RECENT information gathered by the German forestry commission assigns to the pine tree 500 and 700 years as the maximum of life, 425 years to the silver fir, 275 years to the larch, 245 years to the red beech, 200 years to the birch, 170 years to the ash, 145 years to the alder and 130 years to the elm.

VIEWS AND INTERVIEWS.

Historical Trees.

On the road from Therapia to Buyukdere, on the Bosphorus, there stand in a beautiful meadow several splendid plantains of immense size. They have been several times struck by lightning, split down the middle, and in some cases part of the trunk has been consumed by fire. Nevertheless, they are still fresh and vigorous, putting forth fresh leaves and branches every year. Under their shade Geoffrey de Bouillion, Duke of Lorraine, encamped in the year 1096, with a portion of his suite, when on his way to rescue the holy places from the thralldom of the Saracen; and popular belief attributes to this circumstance the wonderful vitality of these trees.

Age of the Oak.

We learn of the "early ripe" and what is sometimes the corollary of this, the "soon rotten." There is none of the latter element in the composition of the sturdy oak, which woodmen are proud to refer to as the monarch of the forest. Prof. Marshall tells us that the oak in a general way requires to grow from 120 to 200 years before it is fit to cut for large timber. Left alone, it may live for 1,000 years, but the proportion of good timber in trees after a certain age rapidly diminishes. There are many trees still standing in this country which are from 800 to 1,000 years of age. The oak rarely bears fruit at all before it is fifty to sixty years old, and seventy to eighty years is a more general age. When the fruiting season has once been reached, the tree goes on producing acorns every year; but it is noteworthy that heavy crops of good seeds only recur every five years or so, the yield in the interval being inconsiderable. This is in accordance with Hartig's discovery that in the beech, for instance, the tree goes on storing up nitrogenous materials and salts of phosphorous and potassium during the first seventy or eighty years of its life, and then suddenly yields these stores to seeds.

Not all Gain.

The age belongs to the specialists. An all-round man in any calling, and especially in mechanical lines, will look far afield to find his proper niche in this day. The place is not easy to find, nor is it easy to find the man, when the place and work are waiting. This point is nicely illustrated by a writer in the Industrial World, who, entering somewhat philosophically into his subject, gives expression to thoughts that are practical and suggestive. Recently this writer needed some sheet metal work done in accordance with drawings prepared by him. "Forty years ago there could have been found in any American village of two thousand population a tin shop wherein this job would have been done at once and well done. After a long search a good general worker of sheet metals was found who was willing to undertake the job. He was not found in a sheet-metal-working establishment, but in a shop where model machinery is a specialty. Such shops as these cull out from numerous applicants such as can demonstrate all-round skill in their respective trades. They are usually men well advanced in life. As they drop away, one after another, it becomes more and more difficult to supply their places. The decrease of manual skill and of artistic sense among mechanical workmen results not merely from want of such all-round practice as they got half a century ago, but from a want of that sort of loving interest in their work which the old-timers used to feel, when they could put something of their individuality into everything that they made. Nowadays the workman has simply to work out a design—or rather, to run a machine to work out some part of a design—prepared by some artist whom he does not know and never has seen. The general result may be beautiful when the different parts are assembled, but the workman feels that he has no personal share in the production of its beauty. He has become a regulator of a machine; he simply sharpens tools, adjusts them, keeps his machine oiled, and puts into it the material to be worked upon. All the precision, the nicety of operation are due to the manimate rather than the living tool. What interest can such work beget? What lofty ambition can it stimulate? What workman when the bell rings the time to quit work feels reluctant to leave his task or lingers over it to bring out some beautiful effect

or interesting combination that he feels he must see before he can depart contentedly? If machines were invented to play billiards, and only by their use could this king of games be played, how long would the game be a favorite? If violins could be performed upon only by automatic mechanism, or pictures painted only by machine-actuated, self-charging brushes, who would be charmed any longer by art? Neither the artist nor the dilettante; the artist and the dilettante would cease to exist. So, while we have gained much from the enormous increase in labor-saving machinery that has characterized the latter half of the present century, we have lost what probably will not soon be restored, the love of work and pride in work for its own sake, the love and pride that were the parents of mechanical skill; skill which, now they are dead, is itself decaying. The loss appears inevitable to those who scan the social horizon philosophically; it is, however, no less to be regretted because unavoidable. This tendency of labor-saving machines was many years ago pointed out by Ruskin, who, in the light of the fulfillment of his prediction, proved only too true a prophet. It is this effect upon the masses, more than unequal distribution of wealth, that is separating society into distinct classes." The wonderful progress of the nineteenth century is not all gain.

A Bit Of Advice.

An axiom that found place in the copy-book head-lines of our school days read: "Whatever is worth doing is worth doing well." It was not always adhered to then, nor is it to day. This is the view, apparently, of our contemporary, Hardwood, who talks as follows of one of the sins of the lumber trade: "When times are a little dull, prices a little off and sales anything but brisk, the temptation comes to the average manufacturer to try to even up things by working in a few boards a little off grade which he has heretofore been in the habit of throwing down a grade or two, thus making the grade enough poorer to correspond with lowered prices. There is also a disposition to slight the various stages of manufacture, such as careful turning of the log, edging, trimming, etc., with a view to crowding the output to the maximum limit, thus increasing quantity and decreasing cost at the expense of quality of manufacture. This is the very poorest policy a manufacturer can possibly adopt. Under the conditions named is the time, if ever, when he should look closely after the manufacture of his stock; see that the best is got out of every log; that it is sawed smoothly and evenly; that it is edged carefully and trimmed to a nicety; that it is sorted with discrimination and piled with the utmost care, even to the mill culls, and when ready to ship see that the sorting is kept fully up to grade. Now is the time to gain a reputation for perfect manufacture and good grades. The manufacturer who maintains his reputation on these points during times of slow sale and weak prices will always have the best of whatever trade there is going, and will be sure to feel the first effects of a revival when it does come and he can take his pick of customers. When times are dull, instead of yielding to the temptation suggested to keep up profits, let the manufacturer look about for leaks in the business itself. See that no one is shirking, that there are no deadheads on the pay-roll, that every man is doing a full day's work; look closely after the work in the woods and see that every tree is cut to the best advantage and that teams and men are kept on the move all the time; see that everything is snug and trim and in good repair in the mill, that there are no stoppages on account of broken or weak belts and toggled up machinery; look after the furnace grates and the fuel and the entire steam-making apparatus. In short, when times are dull, the way to meet them is to follow up the business so closely as to make the very best quality of lumber at the lowest possible cost consistent with fair wages to employes. In lieu of this it were better to shut down and wait for better times, for any attempt to get even by any methods at all questionable will inevitably result in making matters worse in the long run."

A tree was cut in the Puget Sound forest recently from which seven cuts were taken without a knot, their combined length being 179 feet. The tree scaled 48,000 feet.

THE "BOSS" TURBINE WATER WHEEL.

THE accompanying illustrations represent a new turbine water wheel recently placed upon the market by the Wm. Hamilton Manufacturing Company, Ltd., of Peterborough, Ont.

The "Boss" turbine wheel is the outcome of a series of very many expensive experiments through a long period of years, and every point devolved, either by practical use or scientific test, has been seized upon in deciding precisely what is the best construction of every part of the wheel. The result of their experiments is the "Boss" turbine wheel of to-day.

The prominent features of this wheel claimed by the manufacturers are those of economy, simplicity of parts and durability. At no period of our country's history has there been such a demand for a first-class turbine wheel as now. Population and wealth have multiplied, but water powers have not, and not only this, but the volume of water in many streams has greatly diminished.

In the "Boss" turbine wheel the owners of water powers will find a motor not only unsurpassed in its strength and mechanical simplicity, but seldom equalled in its power and percentage, when varied from half to full gate. The wheels, during the many trials that the different sizes were subjected to, showed a percentage of useful effect of from 87 to 92 per cent. of that of the water, a percentage, we believe, that will be hard to beat. This percentage is not only what the wheels tested by means of the dynamometer has shown, and under the most favorable circumstances, but what is actually being done by the different-sized wheels recently placed by the above firm throughout the province.

The wheel is simplicity itself—no gates to choke or clog, and all parts liable to injury are under cover and protected. The wheel case and draft tube are of one casting. The case has a series of graduated chutes so constructed as to direct the water upon the periphery or outside of the buckets at all points of the gate opening. The gate is circular in form and is mounted upon the wheel case, and has a series of balls interposed between the flange of gate ring and wheel case, forming the bearing; by means of the balls the friction between gate ring and case is reduced to a minimum. The gate is placed between the wheel case and the runner and revolves horizontally, there being a series of openings on the gate ring to register with openings or chutes on the wheel case. The gate is opened or closed by means of a rack and pinion under cover of the dome and protected from injury.

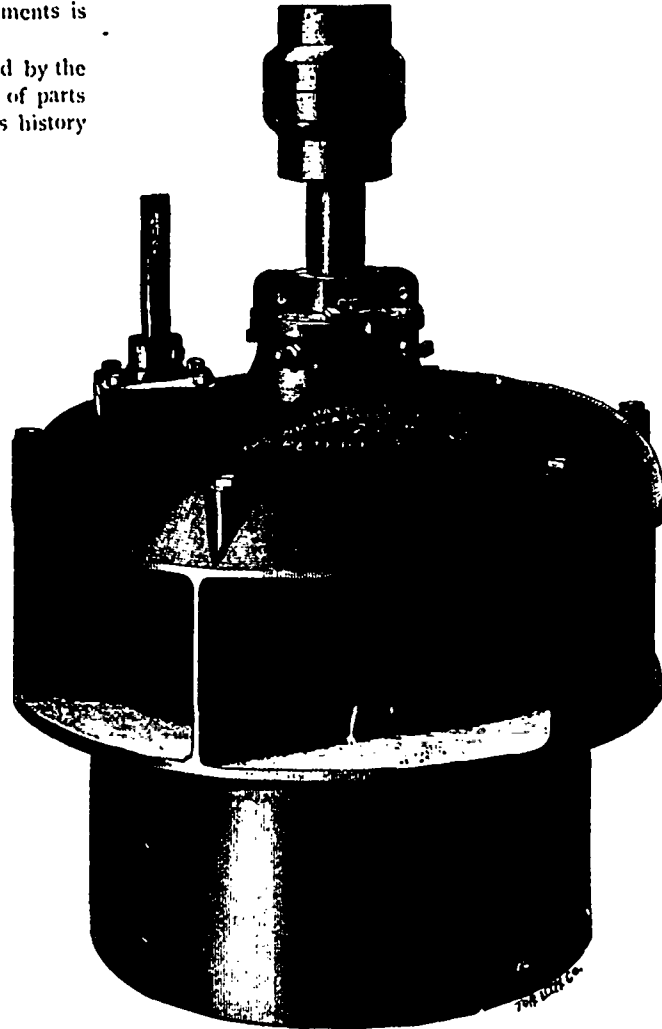
The runner is of one continuous casting, having no bolts or bands to become loose. The illustration clearly shows the construction of the runner.

The wheel is completely covered in by the dome, upon the neck of which is carried the stuffing box, by means of which the wheel is aligned true. The construction of the stuffing box is a departure from the old-time method, requiring no hardwood blocks, being made in two parts bolted together and held upon neck of dome by means of screws. The operation of aligning the wheel shaft is done by means of screws shown on side of neck of dome. To remove the wheel for examination or repairs occupies very little time, the flume being empty and admittance being gained by the removal of the bolts as shown on dome or cover; the wheel is then ready for removal. One feature, and a desirable one, is that the wheel is removed from the top instead of through the bottom, thereby saving much time and annoyance to the millwrights or others who may for any reason require to remove the wheel or put it in place.

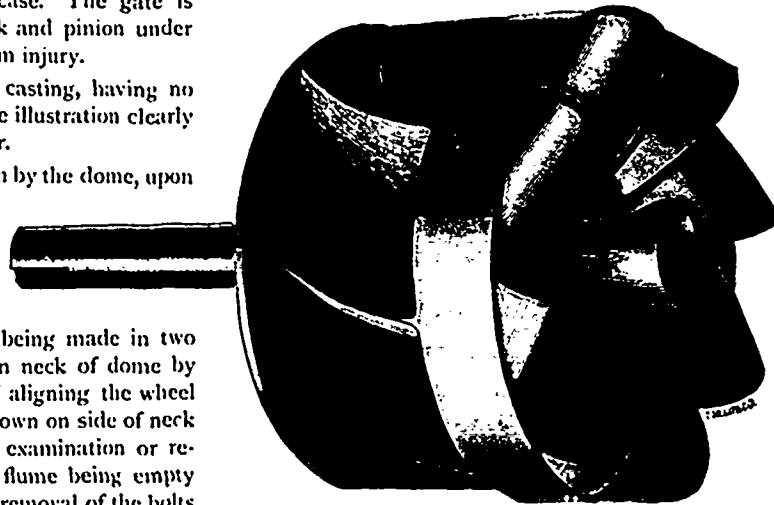
The wheel consists essentially of six castings; there are no gate rods or bolts to get out of order. From the illustrations it will be conceded at once that the design of the wheel and the arrangement of parts are such as

to merit the commendation of all who have the care of or who may use water wheels.

The wheel is manufactured in fourteen sizes, from six up to sixty-two inches. All who contemplate the improvement of water powers are invited to correspond with the above-named firm, who will furnish plans and estimates or other information upon all forms of water wheel work, including wheels erected upon horizontal as well as vertical shafts.



This wheel is highly suitable for woolen mills, grist mills and electric light plants requiring steady motion, and easily controlled by governor, and it is strong and substantial for saw mill and mining or other heavy work.



SAWMILL ECONOMICS.

It was, only a few years ago, capable of demonstration that there had been little, if any, advance during the last forty years in the average product of the saw mills on a per capita basis. The old muley saw would cut about 2,000 feet per man, employed from the pond to the yard, and the circular or band saw mill of five or six years ago would hardly do as well as that; but within a comparatively short time there has been a substantial

gain in economy of production. This has been brought about by minor appliances and by a more perfect arrangement and systematizing of the business.

It used to be said that the steam log turner had doubled the capacity of the saw mill. This was to a certain extent true. It did largely increase the output of the mill, but it entailed added labor and increased the number of hands in other parts of the establishment, so that the per capita of the production was but little changed. The high-speed feeds also greatly increased the output without in any corresponding manner decreasing the cost. Now it is no uncommon thing to see a mill which turns out 3,000 feet per capita or better, though still in a majority of cases the production will be at or below the 2,000 feet mark.

Perhaps two of the chief factors in reducing the amount of labor are the log "kicker," so called, which removes the log from the chain as it is brought into the mill, and the log loader. Not infrequently a mill can be seen which is doing rapid work with no one at all on the decks, and very commonly one to two men will take care of a double-deck mill. Right in that spot there has been a saving of from two to four men. Another great saving has been made in handling cants to the gang or boards to the edger. Transfer appliances have done away with one to two men on each side of the mill. Again, transfers to the trimmers from the edgers have reduced the number of hands employed, and devices for automatically sorting lumber to lengths, and other conveniences at the tail of the mill, have lessened the number of hands at that point.

A well known millwright of the Northwest makes the assertion, and professes to be able to back it by a sufficient moneyed guarantee, that he can build a mill that will cut an average of 5,000 feet per man employed, counting from the foot of the log haul up to the tail of the mill, including the men who place lumber on the trucks ready to go into the yard. This arrangement, however, would not include the shingle and lath departments, except the men on the slashet, as those departments are independent, and should be figured by themselves in considering the capacity of the mill.

It is also probable that the band mill has had considerable to do with lessening the amount of labor employed. One edger and one trimmer could be arranged easily to take the product of two bands, and in any kind of timber the number of logs handled with the band is not so great as it is with the circular.

It seems to be evident that the saw mill business is coming to its perfection of development. Until the advent of the band mill and the appliances mentioned, with others, the sole result of invention and improvement has been to increase the production of the mill without effecting a saving in labor; but with the constantly increasing prices of logs, with the close competition prevailing and the appreciation by the manufacturers of the necessity for the utmost economy in the production a new era has dawned.

THE UTILIZATION OF WIND POWER.

THERE is a windmill in London perched high up on a timber tower erected on the top of a building on the City Road, not far outside the old "City" boundary. It has a sail of thirty feet diameter, and is quite a big affair when one climbs to the top of the tower. But what I specially wanted to note was the fact that this windmill is lighting the premises over which it stands.

Its upright shaft, which comes down from the mill, drives a horizontal shaft which carries a large belt pulley, and by this large pulley is driven a small dynamo. The dynamo generates a current which charges a battery of accumulator cells, and these in turn "drive" the lamps. At times, when the wind is low, the speed falls below what is proper for charging the secondary battery. To prevent this being charged at such low speed there is a cut-out held in by a magnet and kept out by a coiled spring.

When the magnet is weak the current is cut off from the accumulators, but when the dynamo is running at a fair speed the magnet is strong and pulls the switch into contact and the charging proceeds. The mill will run and charge all night and all day. In quiet weather it runs much of its time slowly, and, therefore, uselessly, but it also runs the night through, and I suppose would on an average do eight hours work in twenty-four.



PUBLISHED ON THE FIRST OF EACH MONTH

—IV—

ARTHUR G. MORTIMER

OFFICE.

75 CANADA LIFE ASSURANCE BUILDING
TORONTO, ONTARIO

TERMS OF SUBSCRIPTION:

One Copy One Year, in advance \$1.00
One Copy Six Months, in advance 50
Foreign Subscriptions, \$1.50 a Year

ADVERTISING RATES FURNISHED ON APPLICATION

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 smaller 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.

ONTARIO'S TIMBER RESOURCES.

WE are hearing a good deal about the denuding of our forests. Just to what extent this has been the case in thirty-two of the older settled counties and districts of Ontario is told in the seventh-annual report of the Clerk of Forestry for this province.

In Carleton, Halton, Lennox, Lincoln, Northumberland, Ontario, Peterborough, Wellington and Dufferin (with the exception of Melancton and East Luther townships, which are still under the process of clearing for settlement) only about five per cent. of timbered land remains in each county. This consists chiefly of elm, ash, maple, beech, tamarack, with little, if any, pine. Take Brant, Huron, Hastings and Simcoe, and the average is from eight to ten per cent. of the total area. Dundas, Middlesex, Norfolk, Perth, Waterloo, Welland and Wentworth can claim of timbered lands from fifteen to twenty per cent.

We come then to a number of counties where the showing is from one-quarter to one-third of the area. About one-fourth of Essex is still in timber, principally black ash and soft maple. Scrubby oak will be found in a few localities, but all other merchantable timber has well-nigh disappeared. Kent has about twenty-five per cent of the total area in timber land, and includes elm, black ash, basswood, hickory, beech and maple. Oak and walnut were once plentiful, but no supplies of either of any consequence remain. Mr. Phipps, the Forestry Commissioner, does not lose an opportunity here to point a very practical moral. These valuable woods were nearly all exported at a time when they only commanded a sufficient price to pay for the labor of cutting and marketing them. The reckless and improvident regard for the future with which these invaluable forest resources were exported can now be realized when it is considered that oak that sold fifteen or twenty years ago at \$4.50 per thousand feet could now be marketed at \$25 per thousand, and walnut, which then only brought \$14 per thousand feet would to-day command \$100. The

wooded portion of Lambton is about one-fourth its entire area.

In Elgin perhaps one-third of the county is still wooded land. Considerable beech, maple, elm and ash are distributed over part of the county; there is also oak, hickory, chestnut, whitewood, cherry, sycamore, butternut and black walnut in smaller quantities. In the eastern portion of the county there is a large quantity of pine. In Glengarry we find principally maple, birch, beech, basswood, rock elm, black ash, hemlock and some white pine, with smaller quantities of cedar, tamarack, balsam and balm of Gilead.

A good deal of maple is to be found standing in Prescott, where, at a rough estimate, one-third of the county is still timbered land. The other leading varieties of timber which remain are elm, beech, birch, basswood, cedar, hemlock, spruce, tamarack and balsam. The most plentiful kinds of trees found in Renfrew are white and red pine, white spruce, maple, tamarack, birch, beech, red and white oak, ash and elm. The portion of the county still in timber is probably one-third of the whole.

About one-half of the county of Bruce is cleared land but the area yet in timber is being rapidly diminished. Fears are expressed that unless means are adopted to prevent the indiscriminate destruction of the woods, the experience of older-settled counties will be repeated in Bruce. The most numerous represented kinds of trees are cedar, hemlock, basswood, maple, white and black ash; very little pine.

We continue to look to Muskoka as a lumbering district. What are the conditions? Probably about three-fourths of the district is still uncleared land, though lumbering operations have been carried on extensively throughout this area. Nearly all the pine of a marketable character has been cut, and the hemlock is rapidly being removed. Mr. Davies, in the ELI page, tells of the saw-fly in Muskoka, which is doing serious hurt to the hemlock. The predominant varieties of timber which remain are ash, oak, basswood, maple, birch, cedar, tamarack, spruce and balsam. The timber, it is stated, has been cut indiscriminately; many rocky tracts, which are utterly useless for any other purpose than timber growing, have been completely stripped, or, after being partially cleared, devastated by fire.

In the Parry Sound district the proportion of land now in timber, not counting the scrubby second-growth that is coming up over the land devastated by forest fires is about sixty per cent. of the whole. The chief varieties of timber extant are maple, beech, hemlock, cedar, tamarack, spruce, red oak, pine and birch. It is remarked that the Georgian Bay has sunk some four feet within the last eight years, which some are disposed to attribute to the disappearance of timber about the head waters of the streams which debouch into it.

The county of Oxford contains about five hundred thousand acres of land, of which about one hundred thousand are nominally in forest. Not more than two-thirds of this will be beech and maple, the rest being composed of various woods such as oak, ash, hickory, chestnut and walnut. There was formerly abundance of pine, but it is long since cleared. In southern Victoria there is not more than ten per cent. of forest land, but in the remainder of the county to the north the proportion of uncleared land is estimated at about sixty per cent., though considerable areas of this have been overrun with bush fires. The principal kinds of timber remaining in the southern part are cedar, tamarack and spruce in the swamps, and some hardwood, which is rapidly diminishing. The pine is nearly all gone. The leading varieties in the northern sections are maple, hemlock and cedar.

All told there are some fifty-two counties and districts in Ontario. Not even the minimum of five per cent. of wooded land is likely to be discovered in many of the remaining twenty counties unparticularized in the forestry clerk's report. But among the districts not named are Algoma and Nipissing, two of the most richly wooded territories in the province. With some fairness a share of the Chaudiere timber wealth might also be considered as belonging to Ontario; at least it lies contiguous to this province, though actually in Quebec, and it is within Ontario that some of the largest saw mills,

which transpose the logs into merchantable lumber, are located.

Carefully calculating what remains of wooded land in a large number of counties, and remembering especially its rich abundance in certain special districts, it will be granted that a timber famine is not yet imminent in Ontario. And yet one cannot consider the history of the thirty-two counties the forestry report has singled out for mention without being face to face with the fact that similar extravagance in the management of almost any other department of business, public or personal, would have long since resulted in disastrous bankruptcy.

The effect upon agriculture, the rivers and streams of the country, and the character of the climate are all questions suggested by the conditions stated. The matter of immediate consideration would seem to be the utilization of such methods, and the exercise of those plans, that would result in a wise husbanding of the residue of timber that remains to the province, while at the same time placing no unnecessary embargo upon it as a commercial product.

HABITS OF WORKINGMEN.

HOWEVER distasteful the admission may be, it is nevertheless too true, that the evils of intemperance hit the working classes harder, and in wider extent, than probably any other section of the community. No testimony on this point is stronger, and more direct, than that given in a letter from Master Workman Powderley a year or so ago.

It has sometimes been said that workingmen employed in lumbering operations, particularly shantymen, are victims of the cup in an aggravated degree. When free from the labors of the woods, like the sailor when he reaches port, after a long voyage, it is too often the case that many of these woodmen will visit the first saloon that comes in their path, and this is not usually far away, and there spend most, if not all, of a season's earnings before closing a drunken carousal.

Signs of a better day dawning are indicated in the interest shown of late years by our churches and temperance organizations sending missionaries into the lumber camps, furnishing healthful reading matter, and in other ways endeavoring to cast sunshine into a manner of life dismantled of many elements of gladness. The solicitude of the lumbermen for the comfort of their employees is shown in the improved conditions of shanty life contrasted with those of earlier years. And so far as the personal habits of the men are concerned the employer can only be anxious that these be improving and uplifting in their character. Not only from a humanitarian point of view, but even from the standpoint of the coldest utilitarianism, this desire would most surely prevail. Mr. D. T. George, a prominent lumberman in the Maritime provinces, stated recently before the Royal Commission, meeting in New Brunswick, that he employed a large number of men, but "did not employ drinking men." He bore testimony to the efficacy of the Scott Act in rural districts, and "that it had reduced drinking in the cities and towns." Mr. J. Rister, manager of the planing mill at Fredericton, N.B., had found the operations of the Scott Act beneficial to his employees and to the community.

This view of the question is fast taking hold on all employers of labor in the present day; even those who are not entirely abstemious themselves often make it a sine qua non in contracts with employees that they be total abstainers.

Workingmen themselves are not slow to take note and be guided by these altered conditions. They see the preferences that rightly are given to the employee, who even though not so bright and clever a workman, is yet to be depended upon. Moreover, to themselves and their families, they know that increased comforts necessarily follow a life of temperance and frugality.

HELPING LUMBER INTERESTS.

WHEN the Parry Sound railway to Arnprior is completed no industry will experience the advantages of the boon greater than the saw mill men. A direct route through to the United States will then be enjoyed, and in this respect Arnprior will be on a level with Ottawa.



THE well-known lumber veteran, A. R. Christie, was just in from the Georgian Bay district when I met him a few days ago. "Oh, yes," said he, "the mills are somewhat busy; those that have anything to cut; but we are not so terribly in want of lumber as some people would make one believe. We will make a mistake if an excess of lumber is again cut by the mills. Prices are better than they were; they had need to be; but an overplus of stocks will not help prices."

* * * *

"We are well pleased with the business situation," said Mr. John Donogh, of Donogh & Oliver. "Local business is, of course, quiet enough. You will have noticed how building permits have fallen off in the city; but outside business is satisfactory. We are doing a good business with the States. We have taken over the business of the Proctor Lumber Co., of Buffalo, and made that a branch of our business. Mr. Charles W. Pleyter, who is well known to the American trade, is our representative. Our Mr. Oliver, who was north among the mills lately, reports the larger part of the season's cut as having changed hands. Prices are stiffening and all signs point to better times for the lumber business."

* * * *

Mr. Wm. Palmer, of Random, Trinity Bay, Newfoundland, is a lumberman of the distressed colony, who has been visiting relatives in London, Ont. Mr. Palmer has been peculiarly unfortunate in his losses by fire. He had suffered considerable loss by forest fires in the early part of the month, and had just reached St. John's to market a boat load of lumber when the great fire broke out by which the product of his season's operations went up in smoke. He says it is impossible to describe the sufferings of the ten thousand homeless people of all ages, sexes and conditions, who are encamped in the parks and waste places of the city with no means of support other than what is sent them by the charitable people of the world. Mr. Palmer is on his way to the Northwest to see what are the prospects there for a new start in life.

* * * *

Among the many summer visitors to Toronto the present season was Mr. Francis E. Lloyd, professor of botany and forestry in the Pacific University, Forest Grove, Oregon. It was my pleasure to meet Mr. Lloyd during his stay here, and our conversation, it was to be expected, turned on the subject of forestry. I was interested in learning that forestry will be made a subject of considerable importance in the curriculum of the Pacific University. The soil is congenial, and I have no doubt that reflectively, if not directly, the lumbermen of Oregon will be influenced by the teaching of the university on this subject. I suggested to Mr. Lloyd that his teachings would probably be more theoretical than practical, remarking that I supposed this was the position of botany as a subject of university teaching. "Botany, it is true," said Mr. Lloyd, "has a strong esthetic side, and it is natural, as it is ordinarily taught in our schools and seminaries, that we should view it in this light. It also occupies an important place as a scientific subject, and this ought not to be forgotten. But it has a decidedly practical, business, every-day side in what we term economic botany. Treating the question in this light we think of a plant like cocoa as one eminently adapted for domestic uses. How can it be made more productive? In what way can its virtues be strengthened? What treatment needs be accorded it to improve its growth? These and many other questions have to be considered in a study of the economic relations of cocoa. So with scores of other plants used for domestic, medicinal and mechanical purposes. And it is as an economic question I shall teach forestry. Every year gives impressiveness to the

question. Because of the immensity of the timber resources of this continent we have been wickedly prodigal in their destruction. But if the history of European countries is worth anything to us, we can only continue this waste at a terrible cost to generations yet unborn. Briefly, my aim will be to show up in clearest possible light that a knowledge of the principles and practice of forestry will pay."

* * * *

Prof. Saunders, Dominion Commissioner for the World's Fair, in an interview has said that timber will be one of Canada's greatest displays. Four thousand feet of space has been set apart for this country and a good slice will likely be used by the lumbermen. British Columbia will be well represented in timber products; probably 1,000 feet will be given up to lumber exhibits from that province. It has been decided that the sections of logs to be shown are to be of a uniform height of three feet six inches. They will stand on a platform eight inches above the floor, so that they will be at the most convenient height for people to inspect them properly. They will be shown in the rough and polished, some cut so as to show the tangential appearance of the wood, and so on. The uniformity in height will allow of ready comparisons of the timber from different parts of the country. What was specially wanted was a good representation of specimens of our commercial lumber. Mr. Nicholas Awrey, M.P., Ontario Commissioner to the Chicago Fair, has sent out 600 circulars to the lumber dealers of this province, and is meeting with a ready response from them. He is anxious that the province should make a display of its finest woods. In the exhibit of wood and wood products there is good reason to expect that Canada will make a large and noteworthy display at the Columbian exhibition.

* * * *

Mr. Wm. Davies, the well-known provision merchant of this city, who spent some time in the vicinity of Lake Joseph, Muskoka, this summer, is authority for the statement that wide-spread damage is being done to the hemlock forests of that district by a voracious little animal that completely strips the limbs of leaves, rendering the tree almost lifeless. A branch of a blighted tree was shown to Dr. Wm. Brodie, of this city, a prominent entomologist, well versed in conditions in this country. He has expressed the opinion, without having seen a specimen, that the destructive work is chargeable to the larvæ of the saw-fly. He thinks, however, that it must be closely related or identical with the species (*lophyrus-abietis*) that has destroyed the foliage of evergreens in several of the Eastern States and in Quebec. In New England the larvæ of this fly has been especially destructive. The male is about a quarter of an inch long and two-fifths inch in expanse of wings; black above, brown below, the wings with changeable tints of reddish, green and yellow. The legs dirty yellow, antennæ like short black feathers curled inward on each edge. The female is three-tenths inch long and one-half inch in expanse; yellowish brown above, with blackish stripe on each side of thorax; dirty yellow below; antennæ short and tapering, nineteen-jointed, serrated on the outside. The larvæ, which are about half an inch long, live in large swarms, curling the hind part of the body around the leaf while feeding. The head and anterior parts are black, body pale green with longitudinal stripes, below yellowish; they become almost yellowish at last. From this description anyone may identify the fir sawfly.

* * * *

"One must stick close to the cushion these days," said Mr. Meaney, city manager for Robert Thompson & Co., "if he is to make business pay. I have done very little holidaying this summer. Present business is quiet; local trade is dull as ever; but throughout the country the outlook is undoubtedly hopeful. So soon as farmers can get over harvesting we may expect them to engage in building operations, which many of them have been deferring for years, because of hard times. At the mills we have had a busy season, particularly in deals for the British market. Our Mr. Thompson is in Glasgow, Scotland, at the present time, where we have a branch house." Mr. Meaney told me a good story to show how local builders will scheme to do up the lumberman. It is not an easy matter for the specu-

lative builder to secure credit these days. Toronto lumbermen have had their own experience of that kind of business. "But some of them will try all sorts of methods to get the best of us," said Mr. Meaney. "A good square lie gives no worry. A certain individual made application for credit a while ago. He was putting up two or three houses. He wanted rock bottom prices, as everything would be paid, he said, inside of 30 days, which would give time, if necessary, to put a lien on the property. When our bill was something under \$100 I considered it best to look for some money. I found bricklayers and others were on a similar mission. Enquiry was made only to discover that the property had never been transferred to the individual in question. The owner of the property claimed lumber, bricks, and all other material on the ground as necessary to protect himself, leaving everyone else out in the cold. The culprit himself skipped the town, and then had the gall to send back an affidavit saying that he and Mr. Owner had deliberately planned to defraud every man from whom they could secure material of any kind. Of course, it was a clear case of fraud, but our amount was too small to make it worth while putting on costs. One needs to be wary of Toronto speculative builders; don't you think so?"

* * * *

"The question of how best to promote the material progress of Canada," says Mr. R. W. Phipps, the well-known Forestry Commissioner for this province, "is one to which much attention has been devoted. It is felt that in the past the development of the country has not been in proportion to the resources at our command, and the manifold attractions offered for settlement. Various proposals have been from time to time submitted with a view to the more rapid expansion of our commercial and industrial interests. It seems not a little singular that while this problem occupies so prominent a place in the minds of Canadians they should suffer one of the principal sources of national wealth and prosperity to be wasted. I refer to our forests which, apart from the present and prospective value of the timber supply, are indispensable to the continued prosperity of our yet more important agricultural interests. It ought to be generally known the indiscriminate cutting down of the timber tends greatly to impair the productiveness of the soil. A certain proportion of wooded country is necessary to ensure a steady water supply and prevent the land from becoming parched and sterile owing to the want of moisture during the summer season. Ignorance or indifference to this great natural law has always resulted in National ruin. The process is gradual, extending over a lengthened period, but none the less sure. Climatic changes set in which render the labor of the cultivator less productive and the crops less abundant. The country is no longer able to support the population which formerly derived their subsistence from the soil and famine drives many to seek homes elsewhere. Scientific forestry explains the function performed by the forest as the great natural storehouse of moisture, large quantities of which are absorbed and retained by it after every heavy rain, and given out gradually into the water courses or by evaporation into the atmosphere. Where no trees exist the water runs rapidly off the torrents and in a day or two the ground is as dry as ever. It follows that the reckless clearance of the country has inflicted great injury on agriculture besides diminishing the sources of our future supply of wood. It is time that this destructive process was arrested—the remaining woods, especially in our frontier countries, carefully preserved—and measures taken to redeem in some degree the mistaken recklessness of the past by replanting. I am glad to note the fact that the Provincial Government has set apart a forestry reserve of considerable extent in the back townships where some of our principal rivers and streams have their source, which will prevent them from being dried up to mere rivulets owing to the destructive process. But much more remains to be done in this respect. The private effort of the farmer and the land-owner ought to be encouraged as well as his duty to do what he can for the benefit of the province. The planting of bush as well as by the means of soil and climate will be a prosperous agricultural c

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE statement has been made that not in a score of years has there been a more ready sale for lumber and at better prices than this year. Thus far the lumber interests of this district are enjoying a favorable season's trade. The one difficulty experienced is that common to the trade in other lumber sections, viz., the scarcity of saleable lumber. We hear of dealers buying logs and having them manufactured themselves to meet pressing demands of customers.

These conditions do not, however, presage a larger cut than usual. On the contrary the opinion is held that the cut will be lighter than was anticipated earlier in the season. The stock on hand in manufactured lumber at the close of the season last fall amounted to 342,000,000 feet, and probably 100,000,000 feet of this was sold for spring delivery, reducing the actual stocks to that degree. A good demand existed throughout the winter, breaking pretty well into the remaining surplus. An active season's cutting, with supplies of logs readily available, would have overtaken the call for stocks that existed all along, but, as has been pointed out in these letters before, logs were slow to come to the fore; mills stood idle for some weeks and, what is more, as you know, a migration of several of the larger operators has taken place to other fields. It is estimated that the cut will reach 600,000,000 feet, and it may be 700,000,000.

BITS OF LUMBER.

The Alpena Cedar Co. has been incorporated with a capital stock of \$60,000.

The Gladwin hoop mill will be in charge in future of Mr. C. H. Hood, the former owner, Mr. Saylor having retired and removed to your country where he will engage in a similar line of trade.

The mills at Tawas are reported to be liberally stocked with Canadian logs, that point being ready of access for rafting. Sibby and Bearinger will manufacture 23,000,000 feet of logs here this summer.

In ten years the lake shipments of lumber from Saginaw ports has fallen off from 413,162,875 feet to 174,423,000 feet. The explanation is that the traffic has been diverted from the water routes to the railroads.

News from Bay City is that Canadian logs, in large quantities are at the mouth of the river, but some delay is being experienced in getting them to the mills, where they are much required. Turner and Fisher are in receipt of a raft of 26,165 pieces, scaling 2,811,040 feet, from Spanish River.

Among Michigan lumbermen who are engaged in the activities of lumbering in Canada, either on their own account or on behalf of others, may be mentioned E. L. Pratt and Thomas Pickard, Charles Woods, Charles Moore, McKeon & Glover, G. N. Fletcher and Sons, Alger Smith and Co., J. T. Hurst and S. O. Fisher. Their interests are chiefly in the Georgian Bay district.

James Hamilton, of Bay City, is under contract with F. W. Gilchrist and W. H. Potter, to cut 80,000,000 feet of pine. He expects to cut at the rate of 20,000,000 feet a year. A steamer, chartered by Mr. Hamilton, left Alpena for Thessalon, Ont., with camp supplies and outfit the early part of the month. F. W. Gilchrist and T. W. Fletcher have contracted to cut 100,000,000 feet of pine on the Sauble River, Georgian Bay district, for Ben. C. Morse. The cut for Mr. Morse this winter will be 5,000,000 feet, and 25,000,000 feet per year subsequently.

PICA.

SAGINAW, Mich., Aug. 22, 1892.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

EVERYTHING I said last month touching the remarkable activity in lumber circles this season can be reiterated with renewed emphasis and fresh detail. Lumber is booming. The daily shipments at the Chaudiere are heavier than for years. Prices are firm and stiffening. As will be noted from particulars I shall give further on in this letter appearances point to a continuance of the season's activity by enlarged operations in the woods the approaching winter.

A development in the class of lumber shipped to Great Britain is interesting to note. The call of the British market had until late years been altogether for square timber. John Bull had an idea that he could save his particular requirements far better than one by the Canadian manufacturer. Consequently he had the logs trimmed down to what is known as "square" timber. About ten years ago Mr. Cox, an Englishman, regularly visits this market, and is by no means a supply of thin lumber, which is being cut here. Since then the trade has been increasing, and our English friends are getting their lumber here cheaper than they used to. This increase in this trade works

favorably for our mills, which of course secure the benefit of the extra outlay for sawing.

ANOTHER BIG LUMBER DEAL.

Lumber changes on a large scale in this district this season are becoming somewhat common. One of the most important is that completed this month in the purchase by F. R. Booth, of the booms, piers, mills and piling grounds, wharves, docks, and all the plants connected with the Perley & Pattee buildings in Ottawa. The price paid, to use Mr. Booth's words, was "under a half million dollars." The mills purchased lie alongside those of Mr. Booth. It is rumored that Mr. Booth has been planning for some time extensive improvements in the terminal facilities of the Canada Atlantic Railway at the Chaudiere, and this he could not accomplish without first acquiring the Perley & Pattee mill property. The death of Mr. Perley in the recent past opened the way for a sale of the estate of this firm. Mr. Booth will take possession of the newly purchased property at the close of the sawing season. Perley & Pattee have still 1,500 square miles of limits to dispose of. Just what their plans will be for the future is uncertain. One rumor is that they will erect new mills on their Petewawa limits.

Another large transaction that is likely to be closed any day is the sale to Mr. A. Lumsden of about 400 miles of timber limits on the Kippewa and Temiscamingue, the property of the late James Maclaren. The transaction is one representing from \$200,000 to \$300,000.

WORK IN THE WOODS.

Preparations for work in the woods are active. Buell, Orr & Hurdman have already sent about 100 men up to their shanties to make repairs for the opening of fall operations. Shepard & Morse have a large gang at work on their recently acquired limits on the Kippewa. The limits are familiarly known as the old Pierce limits. They will open ten shanties, and when their force is complete it will embrace 500 men. Alex. Gordon, of the firm of Booth & Gordon, who will operate on the Kippewa and Gordon Creek, says that they will send a large number of men into the woods this month. Other firms of the Chaudiere are moving in similar lines and the engaging of gangs of men for these purposes is a leading work of the month.

A NEW LUMBER CONCERN.

The purchase of the timber limits of the late David Moore, which took place on the 11th inst., has brought into existence a new lumber concern known as the Moore Joint Stock Lumber Company, and composed of E. D. Moore, C. A. Moore, F. D. Moore, W. Moore and H. T. Moore and Mrs. E. S. Skead. The company intend carrying on the business formerly carried on by their father and operations will be commenced this winter. Shanties will be opened at once and about 500 men will be employed getting out timber this winter. The Kippewa limits are thickly covered with excellent timber, and it is thought the firm will only take out square timber for the first year. The sum of \$255,000 was paid by the new company for the limits sold at auction, comprising eight berths, which cover fifty miles each.

SHORT PIECES.

Lumber shippers complain of a dearth of cars for the freight of local consignments, though there is every accommodation for export trade.

Messrs. Perley & Pattee will erect on the site of the old Baldwin mill. It is now being demolished, a power house for the Ottawa Electric Co.

Shantymen's wages will range the coming season from \$24 to \$25 per month, and arrangements with hands on square timber are being closed at \$40 per month.

Maclaren & Co. are negotiating the sale of all lumber piled in the Ottawa yards, about 6,000,000 feet. Rumor states that the Rideau falls power and the old Maclaren's mill will be sold by Edwards & Co. to an American syndicate for electrical purposes.

T. Walklate, superintendent of lumber for the C.P.R., is authority for the statement that the shipments of square timber from Chapleau and Eau Claire for England via Quebec are through for this season. Two million five hundred thousand feet have passed through his hands between these points.

Shepard & Morse will work their new Pierce limits with splendid energy. They will at once get out two rafts of square timber for the English market, which, it is claimed, will be of very superior quality and will fittingly inaugurate the company's operations. They will specially cultivate a South American trade turning out lumber adapted for that market. They will also go extensively into log making and lumber manufacturing on their own account. Mr. Robert Hurdman will be in charge of this branch of the work, and his long experience in shantying will be most valuable to the firm. Last year's cut of logs will be manufactured this year at Conroy's mill on Lake Deschene by arrangement with that firm.

OTTAWA, Ont., Aug. 22, 1892.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

SHIPPING intelligence tells of a fair measure of activity in lumbering circles. Several clearances and a number of arrivals are to be noted. The British ship Nineveh, 1174 tons, Captain Broadfoot, arrived in port in ballast on the 4th inst. from San Diego, under charter to load lumber at the Hastings mill for Sydney on owners' account. The same date the American barkentine, Robert Sudden, 594 tons, Captain Uhlberg, sailed from Vancouver with a cargo of lumber from the Hastings mill, consisting of 375,437 feet of t. and g. flooring, and 395,703 feet of rough lumber, making a total of 771,140 feet. The value of the cargo was \$8,797. She is bound for Iquiqui. On the 8th the Chilean ship Hindostan, 1,543 tons, Captain Welsh, sailed from Vancouver with a cargo of lumber from the Moodyville mill, consisting of 999,702 feet of rough, and 200,139 feet of clear lumber, making a total of 1,199,841 feet. She has also 1,503 bundles of laths, the value of her cargo being over \$11,000. The American schooner, Robert Searles, 570 tons, Capt. Piltz, has been chartered to load at the Hastings mill for Adelaide at 41s. 3d., and word is received that she had arrived at Port Townsend from San Diego. The Norwegian ship, Morning Light, 1,216 tons, which loaded a cargo of lumber for Melbourne the early part of the year, may probably load here again. British bark Zabena Gowdy, 1,087 tons, Capt. Manning, loading lumber at Vancouver for Wilmington, Del. Chilean ship Atacama, 1,235 tons, Capt. Caballero, loading lumber at Moodyville for Valparaiso.

COAST CHIPS.

Local trade holds its own.

The Brunette saw mill have closed up their Mud Bay logging camp for the season.

Houston and Wilson will shortly erect a machine shop and sash and door factory at Golden.

Messrs. Wiggins and Green have the honor of establishing the first steam saw mill on the River Talusintac.

J. McLaughlin, one of the patients admitted to the Vancouver smallpox hospital, was an employee of the Buse saw mill at Hastings. The authorities are taking steps to quarantine the mill.

A considerable loss has been sustained with a boom of logs anchored in the cove between Deadman's Island and the Park, and many of which have broken away and passed through the Narrows.

Mr. W. Clark is in charge of a new camp at Hemming Bay for the Hastings saw mill. The camp will be situated on the lake and a railway will be built from the lake to suit water and the logs handled by locomotive power.

Among the exports from Nanaimo for the past quarter were 46,000 pickets and 1,715,000 feet of lumber valued at \$7,799 to Chili; 63,500 feet lumber valued at \$789 to Russia; 962,000 feet lumber and 132,000 laths valued at \$8,121 to Australia; and 54,000 feet lumber and six spars valued at \$699 to Gilbert Islands.

Dr. Dunn, late of Hall Bros. and Co., Three Rivers, Que., and Messrs. Rathbun and Co., Deseronto, Ont., has got employment at the Hastings mill in Vancouver. He worked at the building of the Maclaren-Ross mill till it was completed, then at Grant and Kerr's, Ladner's Landing, putting in additional machinery.

Although "Douglas fir" is classed as "Oregon pine" in Australian markets it is to be hoped that the duty they have imposed on the latter will not apply to the former. Should it not, shipments from British Columbia may be expected to increase shortly, even though that trade is very dull at present. The promises made the New Westminster Board of Trade that these numbers would be correctly named and quoted separately in their market has not yet been carried out.

The Brunette Saw Mill Co. have put themselves in good shape to fight the flames should circumstances require this step. They have purchased from the Gutta Percha and Rubber Manufacturing Co., of your city, who are well represented in this province by Mr. W. L. Ogle, a complete fire-fighting outfit, consisting of 500 feet of Maltese cross hose, hose reel, play pipes, and all necessary accompaniments. The fire hose is the same as is used by the city fire department, and the couplings are threaded so as to fit the waterworks' hydrants.

Mr. Sargeant's mill at Nelson broke all previous local records for fast sawing on Friday of last week, when one gang cut 97,230 sup. feet of merchantable lumber. The logs sawed were pine for about six hours; the remainder of the day they were cutting spruce. The men who can claim the greatest amount of credit for this big day's work are: D. Creighton, engineer; George Meagher, foreman; P. Gorman, edger, and Wm. Dolan, surveyor. On the same day the lath machine—Matthew Gorman, foreman—cut 48,800 laths.

NEW WESTMINSTER, B.C., Aug. 18, 1892.

THE NEWS.

ONTARIO.

—The planing mill of W. Donnel, Peterboro, has been enlarged.

—Logs are coming down the Gatineau in large numbers since the breaking of the jam at the Cascades.

—The McLennan steam saw mill, at Casselman, is well nigh completed and will likely be running in a few weeks.

—The employees of Cane & Sons, lumber, Newmarket, excused to Hiawatha island the latter part of August.

—McLachlin Bros., Arnprior, are about to build a new saw mill on the bank of the river a little south of the present saw mill.

—Negotiations are pending for the purchase of the Brennan & Sons sawmill property and timber limits in Bethune and Sinclair by the Rathbun Company.

—A lad named O'Neil, an employee of the Capital Planing Mills, Ottawa, lies in a critical condition from injuries received by a pile of lumber falling and striking him on the back.

Messrs. Stone and Fagan are handling with success three large drives consisting of 100,000 pieces belonging to Dickson & Co., of Peterboro. These logs are from the Scott limits.

Alexander Fraser's raft of square timber has been tied up at Portage du Fort, Que., owing to low water. The remaining raft of the season to pass Ottawa is Mr. Barnett's, of Renfrew.

The Ontario Government will sell the unsold timber limits at the head waters of Madawaska, Pettewawa and Muskoka rivers. This sale is necessitated by the building of the Ottawa and Parry Sound railway through this tract.

—The Ashburnham saw mill of the Dickson Co. is kept busy sawing ties for shipment on the C.P.R. to various points. The C.P.R. have been loading cedar ties from the mill for the past two months. About a thousand are shipped away daily.

—Alex. Lumsden has passed over the Chaudiere slides a raft of pine timbers got out on the Montreal river. It is pronounced the finest that has gone down the Ottawa river this year. There are 140 cribs in the raft and the average is seventy feet.

—A jobber of the Ontario Lumber Co., named Robert Smith, who resided at Pembroke, and did business at Comanda Creek, Parry Sound, has left the country. There are some creditors, and one of them, Neil McEachern, took out a writ of attachment against Smith's property.

—Rumor has it that an American company will shortly commence work on the erection of a pulp mill near Pembroke. The mill will probably be used exclusively as a spruce pulp mill. It is also said that they have purchased a water privilege on the Pettewawa where they will establish a poplar pulp mill.

—An explosion of sawdust occurred in the Ottawa river just above Nepean Point, causing a sensation on the river and throwing the water about fifteen feet in the air. The sawdust bank formed below the Rock Island is gradually growing larger, and lengthened, so that the Hull ferry is obliged to run much out of its course to avoid it.

—A correspondent of the Peterboro Examiner from Young's Point says: "I must put in a good word for all the men on the drives that have passed through here so far this season. They have been most orderly. Scarcely a drunk man was to be seen and last week there were over two hundred men in and around here. This says a good deal for them."

The following logs have been brought down the Ottonabee River and adjacent waters this season: Strickland and Co., 60,000 pieces; Dickson and Co., 225,000; The Rathbun Co., 100,000; Gilmour and Co., 46,000; Geo. Hilliard, 15,000, making a total of 446,000 pieces. A delay of about six weeks occurred owing to low water and high winds.

—A local paper is authority for the statement that an arrangement has been entered into by a syndicate whereby the executors of the estate of the late Mr. Hilliard, of Peterboro, have agreed to let them have the valuable mill property known as the Blythe mills, for a certain sum, unless they shall, on or before Monday, the 5th day of September next, receive a substantially better offer therefor.

The wholesale lumber dealers of Rat Portage, together with friends to the number of over 100, including many from Manitoba, excused to the Rainy River on the 10th ult. Music was furnished by the Winnipeg band, and before reaching home Alex. Black, on behalf of the Retailers' Association, moved a vote of thanks to the wholesale dealers, which was carried with great cheering. Several other gentlemen, including Hon. R. Watson and Mr. Gilmour, also made short speeches, congratulating the hosts on the success of the excursion.

QUEBEC.

—Dobell, Beckett & Co., of Quebec, have purchased this year's lumber cut of W. C. Edwards & Co., of Rockland. The price has not transpired, but it is understood to be at full market rates.

—The Crown Lands Department of Quebec has made up a collection of samples of wood growing in the provinces for presentation to L'École Forestière Nationale de Nancy, France. The samples are 4x8 inches, neatly planed, and the hardwoods varnished. The samples were as follows: Basswood, balsam, firwood, white spruce, white cedar, rock elm, white pine, hemlock, hard maple, white birch, white oak, white ash, tamarac, red and black oak, red cedar, black birch, butternut, red pine. A similar collection for the Chicago exhibition will be prepared.

—Two important actions have been entered for decision at the next sitting of the superior court at Aylmer, Que., by Messrs. Gilmour and Hughson, lumber merchants, against Mr. Alonzo Wright, ex-M.P. In the first action Gilmour and Hughson claim a certain strip of land situate and crossing certain lots in the sixth, seventh and eighth ranges of the township of Hull as their property. The land in dispute was formerly used as a deal slide connecting with an old saw mill, of which the old firm of Gilmour and Co. became proprietors several years ago. In addition to the property the plaintiffs also claim possession of the slide, which still is serviceable, and over Mr. Alonzo Wright's property adjacent to his residence and through the very center of his large and beautiful garden at Chelsea. The plaintiffs in the second action claim a portion of an island situated in the Gatineau river opposite Mr. Wright's residence which has been occupied by the defendant and used as a summer resort. Some time ago notarial protests were served at the instance of Gilmour and Hughson, requesting Mr. Wright's consent to a surveyor determining the lines in both cases, but the request was refused, hence the present legal proceedings.

MANITOBA AND NORTHWEST.

—Timber in the Cypress hills, Assiniboia, has been burning for some days.

—Capt. Robinson is building an addition to his planing mill at Selkirk, Man. He purposes putting in a saw and carriage with which to cut the logs taken out last winter at Fisher bay. The logs will be brought in on barges, as the captain thinks there is too much risk in rafting them in.

BRITISH COLUMBIA.

—The B. C. Paper Mill Co., of Alberni, has purchased the little steamer Lily, which they will use in connection with their business.

—Hill Bros. intend starting a saw mill with a capacity of 20,000 to 30,000 feet per day on Wilson Creek, near Eldorado, City, West Kootenay. The price of lumber there at present is \$100 per M.

—It has been decided that the Canadian building at the World's Fair shall be roofed with B. C. cedar shingles; and various other provincial woods, it is expected, will be used in the construction of the building.

FIRES AND CASUALTIES.

FIRES.

Kelly Bros. steam saw mill, at River Hebert, N.S., destroyed by fire; loss \$12,000.

A fire broke out in Moffat's planing mill at Carleton Place, Ont., but was discovered in time to be quenched by a Carr chemical engine.

The Lindsay Lumber Co.'s mills, Lindsay, Ont., were struck with lightning and the whole building was quickly wrapped in flames. The mill was burned to the ground and 200,000 feet of lumber, 200,000 shingles and a quantity of bill timber, the stables attached and some dwellings in the vicinity. The mills were built by Thomas Dean, of Lindsay, two years ago. The exact amount of the loss is not yet known, but it is considered to be between \$15,000 and \$20,000, with \$4,500 insurance.

CASUALTIES.

Two children, a boy and girl, were drowned while playing on logs, near Casselman, Ont.

A lad, Johnnie Wilson, nine years of age, was drowned while playing on a raft at Lanark, Ont.

Frank Moffatt had his fingers badly cut at Cane & Sons wood-working concern, Newmarket, Ont.

A lumber hand named Arthur Seguin, of Hull, Que., had his foot crushed while at work loading lumber.

Peter Bernard, knot sawyer on the shingles in the M. and O. mill, Norman, Ont., had the index finger of his left hand cut off.

A millwright named John Linnoek, employed at E. B. Eddy's paper mill in Hull, Que., had his arm severely crushed while repairing some of the machinery.

Hugh Reynolds, a young man, was accidentally drowned, while working at the Pacific Coast Lumber Co.'s mills, B.C.

Mrs. W. T. Bell, while crossing the bay at Cameron and Kennedy's boom, in Norman, Ont., fell into the water and was drowned.

A little daughter of Mr. Hebert, of Bedford, Que., had all the fingers of one hand cut by the planing machine in Goslet's saw mill.

Angus Mackay, while working at the planing mill at Tiverton, Ont., received a severe cut in the ball of the eye by a flying splinter.

Ed. Quinn, of Peterboro, Ont., is suffering from a severe wound in the abdomen inflicted when putting a belt on a pulley at his saw mill.

A boy named Frank Smith, ten years of age, was drowned at Humphrey's mill pond, five miles from Moncton, N.B., while playing on logs.

David Turnhill, of Paris, Ont., while at work with a circular saw in his factory, received a cut severing the forefinger entirely from the hand.

Joseph Gravelle, of Hull, Que., an employee of Perley and Pattee's mills, Ottawa, Ont., received severe injuries on his leg by a board striking him.

John Bulman, of Michigan, foreman in E. L. Pratt's lumber camp, in the Georgian Bay district, Ont., is reported to have been drowned a few days ago.

A millwright named D. V. Waite, in the employ of the Pacific Coast Lumber Co., New Westminster, B.C., lost three fingers while running a shingle machine.

Joseph Vaillancourt, a mill hand employed at the Deschene's mills, Ottawa, Ont., was struck on the head by a heavy belt, while it was in motion, and dangerously hurt.

Marshall McIntosh, a clerk on the drive of Barnett & Mackie, at Gordon's Creek, near Pembroke, Ont., was drowned while endeavoring to carry some chains across the gap.

E. B. Rochefort had the flesh stripped from two fingers in the left hand, and two fingers of the right hand badly bruised, when working at a hand saw at the axe factory at Galt, Ont.

Maxime Villeneuve, working with the Keewatin Lumbering Co., Keewatin, Ont., while piling lumber last week had both bones of the forearm fractured by some of the lumber falling on him.

Henry Miller, when at work at the edging table in the saw mill of J. and J. R. Gillies, at White Lake, Ont., was struck in the abdomen with a piece of board, and died in a short time.

Alexander Brown, of McDonald's logging camp, near Victoria, B.C., was engaged loading logs on the cars when his foot slipped and he fell between the landing and the car, and was crushed to death.

David Hanson, of Hanson's Mill, on the Nashuaak, N.B., while working among the machinery was caught among the belting and thrown against the shaft securing a wound fully eight inches long in his back and extending into the spinal column.

Willard Thompson, an employee of Thomas Johnston's shingle mill, at Rat Portage, Ont., got his head in contact with a saw and received a wound four inches long and cutting deep into the head. He lost largely of blood before medical aid could be secured.

Fears are entertained that Edward Boilleau, a foreman in Bronson and Weston's mills at the Chaudiere is drowned. He was put on night duty on logs and has been missing since. Boilleau was an employee of the firm for years and was always regarded as a steady and reliable man. He was married and has a wife and three children.

As Barnett & Mackie's raft was passing the rapids at Duchesne recently, a crib struck on the rocks. One of the hands, Joseph Lalleur, of Little River, Que., near Carillon, was thrown off by the concussion and, despite the efforts of his companions, was swept over the rapids and whirled to death. Lalleur was forty-eight years of age and leaves a wife and four children.

At Morrison's mills, Fredericton, N.B., a belt which runs to govern the engine came off, starting the machinery at a prodigious speed. This burst the supping wheel, in which are set a number of knives for peeling the bark off cedar logs. The knives flew in all directions. Craig, who was standing about ten feet from the wheel at the time, was struck in the hip with terrible force and reeled to the floor unconscious. McCuskey and Rider, who were at a greater distance from the wheel, were also struck by some of the knives and painfully but not dangerously wounded. Craig was removed to the Victoria hospital, where he died a few minutes after his arrival. The deceased was fifty-five years old and leaves a widow and five children.

TRADE REVIEW.

Office of CANADA LUMBERMAN, August 31, 1892.

THE GENERAL SURVEY.

CONFIDENCE, some one has said, is a plant of slow growth, but once firmly fixed it is possessed of remarkable procreative powers.

One of the best evidences of the restoration of confidence in commerce is indicated by the advances in bank stocks and securities that has been a feature of the stock market within the past month.

Lumber is feeling the boom. Our reports from every important centre show that the lumber trade is assuming a position to-day that it has not enjoyed for many years.

In our own province the fall trade in lumber is likely, because of these conditions, to be brisk.

Trade with the States is assuming large and increasing proportions. Trade in the States, as we have remarked further on, is good.

One needs only to peruse our news pages and special correspondence from different points to be assured that the woodmen will have a busy time the coming winter.

QUEBEC.

Figures, which never lie, at least not in this case, show a large increase in the quantity of timber culled and measured at the port of Quebec compared with those of a year past.

Table with 3 columns: Lumber type (Waney white pine, White pine, Red pine, Oak, Elm, Birch and maple), 1891 quantity, 1892 quantity.

Late advices from Great Britain report freights as follows: Montreal to Glasgow, 42s. 6d.; Montreal to Cardiff, 38s. 9d.; August, Quebec to Cardiff, timber, 17s.; deals, 40s.; Quebec to Lenth, 700 to 800 stands, 20s., and 46s. 3d.

BRITISH COLUMBIA.

Conditions on the coast are, on the whole, agreeably

satisfactory. Local trade is holding its own. The noticeable improvement in the South American trade affects the situation here probably more quickly than at any other lumber point in the Dominion.

UNITED STATES.

With an odd exception stocks of lumber at the leading centres of the union are barely adequate to meet the requirements of an ordinary trade.

This is the situation, with fall trade practically commenced; and a fall trade that there is every reason to believe will be exceptionally large.

FOREIGN.

An altogether more hopeful tone pervades the foreign markets. The long looked for revival in South American conditions is nearing.

HARDWOODS.

The hardwood market is feeling the pulsations of a healthier and more profitable trade. "This improvement," says our contemporary, Hardwood, "is not true alone of walnut, cherry, birch, white oak and the finer woods generally, but also, and even in a more marked degree, of such varieties as elm, basswood, red oak, gum and cottonwood.

TORONTO, ONT.

TORONTO, August 31, 1892.

Table of lumber prices in Toronto, Ontario, including categories like CAR OR CARGO LOTS, YARD QUOTATIONS, and various lumber types with their respective prices.

OTTAWA, ONT.

OTTAWA, August 31, 1892.

Table of lumber prices in Ottawa, Ontario, listing items like Pine, 1st qual., per M \$35, and their prices.

QUEBEC, QUE.

QUEBEC, August 31, 1892.

Table of lumber prices in Quebec, Quebec, including categories like WHITE PINE-IN THE RAFT, RED PINE-IN THE RAFT, and various lumber types.

BOSTON, MASS.

BOSTON, Mass., August 31.—Trade is better than the average for the season of the year. Prices have not changed.

Table of lumber prices in Boston, Massachusetts, including categories like EASTERN PINE-CARGO OR CAR LOAD, WESTERN PINE-BY CAR LOAD, and various lumber types.

OSWEGO, N.Y.

OSWEGO, N.Y., Aug. 31.—Prices remain unaltered, with a fair trade doing.

Table listing lumber prices for Oswego, N.Y. including categories like White Pine, Siding, and Lath with various grades and prices.

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N.Y., Aug. 31.—It would be idle to say that the great railroad strike, of which this locality has been the centre, has not interfered with business.

Table listing lumber prices for Buffalo and Tonawanda, N.Y. including categories like White Pine, Siding, and Lath.

ALBANY, N.Y.

ALBANY, N.Y., Aug. 31.—The collapse of the strike in New York, with 15,000 men returning to work, has had a favorable influence on the lumber trades here.

Table listing lumber prices for Albany, N.Y. including categories like Pine, Siding, and Lath.

Table listing prices for Shingles, including Sawed Pine, Clear butts, and Smooth, 6x18.

SAGINAW, MICH.

SAGINAW, Mich., Aug. 31.—At a time when holidaying is supposed to be the vogue we find dealers and planing mill men unusually busy.

Table listing lumber prices for Saginaw, Mich. including categories like Finishing Lumber, Siding, and Timber, Joint and Scantling.

NEW YORK CITY.

NEW YORK, Aug. 31.—To the cessation of labor troubles must be attributed the improved vim with which manufacturers and dealers have taken hold of business this month.

Table listing lumber prices for New York City, including categories like White Pine—Western Grades, Shingles, and Lath.

CULLERS' EXAMINATIONS.

THE following is a list of the successful candidates at the examinations for cullers' licenses under the Ontario Cullers' Act held by the Department of Crown Lands at various points in the province on 14th July last.

- List of successful candidates for cullers' licenses, including names like J. G. Anderson, W. Benson, Sturgeon Bay, Chas. M. Beck, Jr., Penetanguishene, W. J. Beatty, Coldwater, C. W. Burns, Jr., South River, A. E. Clarkson, Midland, E. Clairmont, Gravenhurst, W. F. Cameron, Surgeon Bay, Daniel Connelly, Gravenhurst, John Dawkins, Gravenhurst, Jas. E. Doxsee, Gravenhurst, Jas. W. Falls, Sturgeon Bay, John Galway, Parry Sound, Chas. Henderson, Bracebridge, John Johnson, Peninsula Lake, William McGown, Parry Sound, Thos. McGown, Sr., Parry Sound, Patrick McDermet, South River, Angus MacKay, South River, A. J. McDonald, Longford, Angus D. McInnes, Gravenhurst, Alexander McKendry, Wauhaushene, John H. Newell, Parry Harbor, Sherman Palmateer, Gravenhurst, Michael H. Sheehan, Wauhaushene, Thomas Scott, Parry Sound, Lawrence Smith, West Saginaw, Mich., U.S.; Thos. G. Taylor, Gravenhurst; Thomas White, Parry Sound; William Watson, North Bay; Frank R. Weston, Midland.

William E. Londry, Sault Ste. Marie, Ont.; George Turgeon, Cook's Mills; Edward D. Jessup, Cache Bay; George A. Boyd, Thebes; William Matheson, Chelmsford.

PETERBOROUGH.—Theodore Ludgate, Peterborough; Thos. Bick, Bobcaygeon; John Flaheity, Lindsay; Henry Jinkin, Marmora; Maurice J. Gorman, Fenelon Falls; George Wilson, Lindsay; William Albert Davis, Bobcaygeon; James Bray, Kinnoumt; Robert A. Dickson, Keene; Stewart Shea, Campbellford; David A. Cooper, Millbrook.

ARNPRIOR.—W. P. Kingsland, Ottawa; Fredk. Buchan, Arnprior; John Harrison, Jr., Pembroke; Alex. G. Munro, Braeside; Frank N. Johnson, Ottawa; Harry Cox, Bellicra, Que.; Patrick Barrett, Arnprior; John B. Kerr, Arnprior; Thomas McNeuly, Quebec; Archibald McBride, Arnprior; Thomas Yull, Arnprior; Robert Owsen, Basin Depot; Alfred W. Brundage, Pembroke; James Labelle, Waltham, Que.; Walter M. Ross, Ottawa; Walter Kennedy, Arnprior; Elu. Labelle, Waltham, Que.; Alex. W. Thomson, Arnprior; P. Munro, Braeside; John A. Gilhes, Braeside; Thomas Brougham, Eganville; Robt. J. Blair, Arnprior; William Smith, Ottawa; Patk. Mangin, Arnprior; James Currie, Ottawa; Daniel Stewart, Braeside; Peter Marec, Ottawa; H. A. Ruttie, Carlton Place; E. Hawkins, LaBramon Flats; Benedict Richards, Ottawa; J. D. Ladurante, Ottawa; Robt. L. McFarlane, Arnprior; Frank Halliday, Mississippi; James Halliday, Springtown; John Kennedy, Pembroke.

PERSONAL.

Mr. P. H. Colston, of Pembroke, Ont., widely known in the Ottawa district in connection with the lumbering business, has recently lost his mother by death.

Mr. L. A. Lewis, head book-keeper at the Brunettee Mills, Sapperton, B.C., has joined the benedictes. The happy woman was Miss Nettie Dockrill, of Port Moody.

The death is recorded of Mrs. Charles W. Pitt, wife of the manager of the Ontario Lumber Co., at Burk's Falls. Mrs. Pitt was a great favorite and universally beloved by all who knew her.

Mr. R. W. Phipps, clerk of forestry for the Ontario Government, offers to mail to any LUMBERMAN reader, sending name and address, a copy of his recently issued and valuable report on Forestry in Ontario. His address is 251 1/2 Richmond Street West, Toronto.

Mr. Joseph Oliver, of the lumber firm of Donogh & Oliver, was elected D.G.M. of the Independent Order of Oddfellows, at the meeting of Grand Lodge held in Windsor, Ont., during the past month. Mr. Donogh is also prominent in the Order, being a P.G.M.

Colonel J. Armory Knox, of New York, the founder, and for many years, editor of Texas Siftings, has been visiting Ottawa on business for a lumber syndicate with which he is connected. He is not now in active journalism, though he contributes to his paper occasionally. He is a Scotchman by birth, and though he has lived in the United States he has never been naturalized, being still a British subject.

TRADE NOTE.

THE Waterous Engine Works Co., of Brantford, Ont., are meeting with good success in placing their band mill. A letter from R. & W. Conroy, of the Deschambes Mills, Que., published in their advertisement, is a very complimentary story. The Waterous mill is a decided change in style, with its steel columns with broad top and base in place of the one and two column mills which have previously been the only kind.

GREAT NORTHERN RAILWAY.

THE new transcontinental line of the Great Northern was opened for passenger business between St. Paul, Minneapolis and Spokane, Wash., on August 14th. Trains will leave St. Paul daily at 7:40 p.m.; Minneapolis 8:10 p.m. The solid new trains will embody every new device and comfort known to modern car builders. The coaches are of the newest roomy pattern, with high back seats, so well adapted to long distance travelling. Elegant sleepers and diners and free colonist sleepers will be used. Spokane will be reached on the morning of the third day after leaving St. Paul. The Rocky Mountains with magnificent scenery and the Flathead Valley will be passed in daylight. It will be the shortest line to Western Montana, Northern Idaho and Eastern Washington, and the only route to Columbia Falls, Kalispell, the Tobacco Plains Country, Jennings, Bonner's Ferry and the Kootenay mining region. Connection is made with steamers at Bonner's Ferry to Kootenay Lake, Nelson, Ainsworth Hot Springs, Kaslo, and the Shocan mining camps, in British Columbia. A vast area of mining, lumbering and farming country is opened to settlement by the completion of this line. The track of the Pacific extension is ballasted with rock gravel from one end to the other, and has the lowest mountain grades and easiest curves of any line in the west.

TRAVELLER AND SALESMAN FOR NEW YORK AND NEW J. England. Wanted, a young man who has a good knowledge of timber, chiefly white pine and hardwood, to solicit orders largely in the car trade. Apply with references and stating salary expected, to "Canada," office of this paper.

PACIFIC COAST SHINGLE TRADE.

THE Puget Sound Lumberman in its current issue, under the heading of "Growth of the Shingle Trade," gives a list of fifty-six new shingle mills established in Western Washington during the past six months.

In explaining the cause for this increased demand for shingles, the Lumberman says it arises from the popularity of red cedar shingles at the east, and that this popularity is due to the efforts of the North Pacific Consolidated Company.

THE LUMBER TRADE ABROAD.

A Tacoma firm has sent a carload of fir to an Illinois agricultural implement manufacturing firm to be used for wagon box boards as an experiment.

A fortune awaits the dealer who will make a specialty of importing mahogany, rosewood, satinwood, etc., from the west coast of South America to coast ports, exchanging Washington fir.

On the 6th ult. fire destroyed the Schulenburg & Boeckler Lumber company's mill in Dutchtown, Minn. It is supposed the mill was struck by lightning.

If the Minneapolis mills are going to break the record this year and make 500,000,000 feet of lumber, the thing has got to be done the last half of the season.

Michigan lumbermen still continue to invest money made out of pine boards in lake property. F. W. Wheeler & Co. have taken a contract to build a steamship of 4,500 tons for David C. Whitney, of Detroit, one of the same capacity in which Waldo A. Avery will own a half interest.

contracts to build craft aggregating \$780,000. Eddy Bros., a Saginaw valley lumber firm operating a mill at Bay City, have put a large amount of money into vessel property and have contracted with the Detroit Dry Dock company to build a steamer of 4,500 tons, to cost \$225,000.

TIMBER BERTH At Public 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 a number of smaller streams crossing the same which empty into the French. It contains large quantities of pine timber and has never been lumbered on.

EXECUTORS OF JOHN BROWN (deceased) Easton, Pa.

A SAW MILL AND TIMBER For Sale at Parry Sound

THE MILL IS SITUATED ON THE WATERS of Parry Sound and has good shipping facilities. The largest vessels on the lakes can load at the docks. The mill will cut about twenty thousand feet of lumber in ten hours, and twenty-five thousand shingles.

Apply to WM. BEATTY, Parry Sound.

AUCTION SALE

TIMBER LIMITS

SAW MILL AND LUMBERING PLANT, ETC.

THE UNDERSIGNED ARE INSTRUCTED by Messrs. Mossom Boyd & Co. (dissolved by the death of a partner) to offer for sale by auction, at The Mart, King Street East, Toronto, Canada, on

Wednesday, the Twenty-third day of November, 1892

commencing at twelve o'clock, noon, all their valuable white pine timber berths comprising sixty-eight square miles of virgin timber lands at west end of Lake Nipissing, tributary to Georgian Bay, and timber berths in the townships of Sherbourne, Snowdon, Glamorgan, Monmouth and Harvey, tributary to Trent River and Bay of Quinte.

Also their Sawmill at Bobcaygeon, lumbering plant, etc., etc. For particulars apply to MOSSOM BOYD, Bobcaygeon, Ontario, or to

Messrs. WICKHAM, THOMPSON & FITZGERALD, Canada Life Building, Toronto, Ont., Vendors' Solicitors.



SCRIBNER'S LUMBER AND LOG BOOK OVER ONE MILLION SOLD Most complete Book of its kind ever published

Gives measurement of all kinds of Lumber, Logs, Planks, Scantling; cubical contents of square and round timber; hints to lumber dealers; wood measure; speed of circular saws; care of saws; cordwood tables; felling trees; growth of trees; land measure; wages, rent, board, interest, stave and heading bolts, etc. Standard book throughout the United States and Canada. Get the new illustrated edition of 1882. Ask your bookseller for it. Sent post paid for 35 cents.

GEO. W. FISHER, Box 238, Rochester, N.Y.

or A. G. MORTIMER, Toronto, Can.

J. J. TURNER

Sail, Tent and Awning Maker .. 251 George St. and 254 King St. PETERBOROUGH

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

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.

WE WANT ALL KINDS OF HARDWOODS. Will pay cash. ROBERT THOMSON & CO., 101 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.

INSURANCE—FIRE AND MARINE. MILLS, manufacturers and merchandise a specialty. Telephone at my expense.

R. CUNNINGHAM, Guelph.

FOR SALE

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

WHITE BIRCH AND SOFT ELM WANTED.

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

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. GARTSHORE, 49 Front Street West, Toronto.

WANTED FOR CASH

Ash and Soft Elm

MOSTLY ONE-INCH, SOME ONE-AND-A-quarter and one-and-a-half inch, strictly firsts and seconds, must be of uniform color; also commons. 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 2 in., all thickness; also Red Birch Squares 5 x 5 and 6 x 6, ten 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.

Timber Limits

THOSE WISHING TO BUY OR SELL Canadian Pine or Spruce Timber Limits will please send particulars to

LEONARD G. LITTLE, Room 11, Temple Building, Montreal.

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

WILLIAM FOSTER

Lumber and Commission Merchant

RECEIVER AND FORWARDER OF LUMBER, LATH AND SHINGLES

... CORRESPONDENCE SOLICITED ...

OWEN SOUND, ONT.

SHINGLE MILL FOR SALE

SITUATION :

The Tretloway 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, sleighs, etc., etc., in fact complete equipment for mill and lumber camp.

MACHINERY :

Consists of Little Giant Luffel Wheel (60 horse power), Boss Shingle Machine, Jointer, Splitter, Drag, Hutting and Knot Saws; Endless Chain Burner, Bull Wheel, etc., etc. Building is 30 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 deeded 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.



AUCTION SALE

Timber Berths

DEPARTMENT OF CROWN LANDS

(WOODS AND FORESTS BRANCH)

Toronto, 27th June, 1892.

NOTICE IS HEREBY GIVEN THAT, Under Order in Council, Timber Berths as hereunder in the Nipissing, Algoma, Thunder Bay and Rainy River districts, viz.: in Biggar, Butt, Finlayson, Hunter, McCraney, McLaughlin, Paxton, Peck, and the northerly portion of Berth Forty-nine, lying South and West of the Wahnapitae Lake, all in the Nipissing district; the townships of Lumsden and Morgan, and a small portion of territory lying North and West of Pogoniasing Lake, in the Algoma district; Berths One and Seven, Thunder Bay district; and Eleven, Twenty-seven, Thirty-six, Thirty-seven, Sixty-four, Sixty-five, Sixty-six, Sixty-seven, Sixty-eight and Sixty-nine, Rainy River district. Will be sold at Public Auction on Thursday, the Thirteenth day of October next, at One o'clock p.m., at the Department of Crown Lands, Toronto.

ARTHUR S. HARDY, Commissioner.

NOTE.—Particulars as to locality and description of limits, area, etc., and terms and conditions of sale, will be furnished on application personally or by letter to the Department of Crown Lands.

287 No UNAUTHORIZED ADVERTISEMENT OF THE ABOVE WILL BE PAID FOR.

J. D. SHIER

MANUFACTURER OF

Lumber, Lath & Shingles BRACEBRIDGE, ONT.

The Rathbun Company

DESERONTO, ONT.

MANUFACTURERS OF

Doors, Sash, Blinds, Stairs

And all kinds of House-Finishing Materials

CEDAR OIL for Purging Boilers

CORRESPONDENCE SOLICITED



The Georgian Bay
Consolidated Lumber Co.
MANUFACTURERS OF
PINE LUMBER, BILL STUFF, SHINGLES AND LATH
Shipments by Vessel or Rail
Address WAUBAUSHENE, Ont. or 24 King St. West, TORONTO

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

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LITHOGRAPHERS & ENGRAVERS.

ROBIN & SADLER
Leather Belting
SPECIALTIES
DYNAMO BELTS
WATERPROOF BELTING
MONTREAL TORONTO
Send for sample of our new SAWMILL BELT

THE AMERICAN LUMBER YARD
HAMBURG, GERMANY
OFFERS THE BEST FACILITIES FOR YARDING AND SELLING ALL KINDS OF
American Wood Goods
ADDRESS: ROSENBACHER & Co. Bankers, HAMBURG. CARL GARTNER, Agent HAMBURG.

PETER GERLACH & Co.
MANUFACTURERS OF

ALLIGATOR CHISEL-BIT SAWS
THE CHAMPION STAVE, BEADING AND SHINGLE MACHINES
ICE TOOLS AND MILL SUPPLIES
CLEVELAND, OHIO

USE SPINDERS HONOR BRIGHT
COPPERINE
BEST MACHINERY FOR METAL EXTANT.
CANADIAN MADE & STUMPS THE WORLD.
QUALITIES TO DO ALL YOUR WORK.
HARDWARES ALL YOUR WORK.
EASY AS AN OLD SHOE
GENUINE SAFEGUARD
FOR ENGINEERS
HIGH CLASS
METAL

The Dodge Patent System

... OF ...

Rope Transmission of Power

Millmen having trouble with large belts by slipping and loss of power should write us for information on our

Patent Rope Drive System

Thousands of horsepower in use in the largest and most modern mills. We contract for the complete erection of Drives of any power.

10,000 Wood Split Belt Pulleys always in stock for immediate shipment.

DODGE WOOD SPLIT PULLEY CO.
83 KING ST. WEST, TORONTO

J. W. MAITLAND—H. RIXON

J. G. AINSILE—W. STODART

MAITLAND, RIXON & CO.

OWEN SOUND, ONT.

Saw Millers and Lumber Dealers

All kinds of Building Material kept in stock

WE MAKE A ... SPECIALTY OF **LONG BILL STUFF IN ROCK ELM, PINE, CEDAR AND HEMLOCK**

Quotations furnished on application

Napanee Cement Works

MANUFACTURERS OF

HYDRAULIC CEMENT

Particularly adapted for Dams, Smoke Stacks, Foundations, Culverts, Cisterns, Cellars, etc.

Endorsed by Leading Railways and Contractors

ROACH LIME

FOR BUILDING, PLASTERING, GAS PURIFYING, PAPER MAKING, ETC.

GALT MACHINE KNIFE WORKS



MACHINE KNIVES

OF EVERY DESCRIPTION FOR

Planing, Moulding and Stave Cutting

—Send for Price List—

PETER HAY, GALT, ONT.

THE RATHBUN COMPANY

DESERONTO, ONT.

MANUFACTURERS OF

Endorsed by leading Architects
Absolutely Fire-proof Deadens Noise
Does not Crack on application of Heat or Water
About as Cheap as Wood or Brick
Weight one-third that of Brick

TERRA COTTA FIRE-PROOFING

For use in Old and New Buildings

Gives Warmth in Winter; Coolness in Summer

MACHINERY

FOLLOWING LIST OF SECOND-HAND MACHINERY for sale by The Canada Machinery and Supply Co., Bramford, Ont., dealers in new and second-hand machinery and supplies:

- ONE 2 1/2 H.P. WATEROUS FIRE-BOX PORTABLE boiler on skids.
- ONE 2 H.P. FIRE-BOX BOILER.
- ONE 4 H.P. FIRE-BOX BOILER.
- ONE 4 H.P. UPRIGHT MARINE BOILER.
- ONE 12 x 16 SLIDE-VALVE BECKETT MAKE engine.
- ONE 9 x 12 SLIDE-VALVE MORRISON MAKE engine.
- ONE 7 1/2 x 9 SLIDE-VALVE COPP BROS. make engine.
- ONE 6 1/2 x 9 SLIDE-VALVE BECKETT MAKE engine.
- ONE 2 1/2 H.P. WATEROUS MAKE UPRIGHT engine.
- ONE 6 H.P. COPP BROS. MAKE UPRIGHT engine.

- ONE AMERICAN MAKE PLANER AND matcher in good order.
- TWO 14-INCH WHEELS BAND SAWING machines.
- ONE THREE-SIDE MOULDER, GOLDIE & McCulloch make.
- ONE ONE-SIDE MOULDER IN GOOD ORDER.
- ONE BLIND SLAT TENONER.
- TWO UPRIGHT SWING SHINGLE MACHINES with jointer.
- ONE WATEROUS SELF-ACTING SHINGLE mill and jointer.
- ONE WATEROUS LATH MACHINE, THREE-SIDE.
- ONE GOLDIE & McCULLOCH MAKE double cope tenoning machine, used eighteen months only.
- TWO PONY PLANERS, 24-IN., WITH COUNTERSHAFTS, Cant-Gourlay's make, Galt.
- ONE SWING CUT-OFF SAW.
- ONE WOOD FRAME TENONER WITHOUT copes.
- ONE WOOD FRAME SHAPER.

DONOGH & OLIVER



WHOLESALE DEALERS IN

LUMBER



OFFICE

Nos. 213, 214 and 215 Board of Trade Building

Toronto, Ont.

TELEPHONES

FOR PUBLIC AND PRIVATE LINES

NO ROYALTY NO DELAYS
NO MISTAKES
NO RENTAL FEES

ALL INSTRUMENTS SOLD OUTRIGHT ESTIMATES CAREFULLY MADE FOR TELEPHONE OUTFITS

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LIST OF

SAWMILL and WOOD-WORKING MACHINERY

ON EXHIBITION IN MY WAREHOUSES

141 TO 145 FRONT ST. WEST, TORONTO, ONT.

Steam Drag Saw; 2 Automatic Sawing Machines
Improved Stave Heading and Shingle Belling Saw Machine
2 Automatic Shingle Machines and Jointers, Halls Patent
"Grand Triumph" Drop-Tilt Shingle Machine
Hall's Patent Shingle Machine and Lifter
Smallwood's Patent Shingle Machine
Swing Shingle and Heading Machine
New Goldie & McCulloch Shingle Machine
Two-Block Shingle Mill, Shingle Jointers
Shingle Knot Saw and Jointer
Lath Mills; Shingle Packers
Stave Bolt Equalizer; Foot Stave Jointers
New Spike and Axe Handle Machine
Double Edger; Folding Tables
Complete "Eclipse" Sawmill; Thmas Dill, maker
Four-head H&L and Irons for Sawmill Carriage
Drag Saw Irons

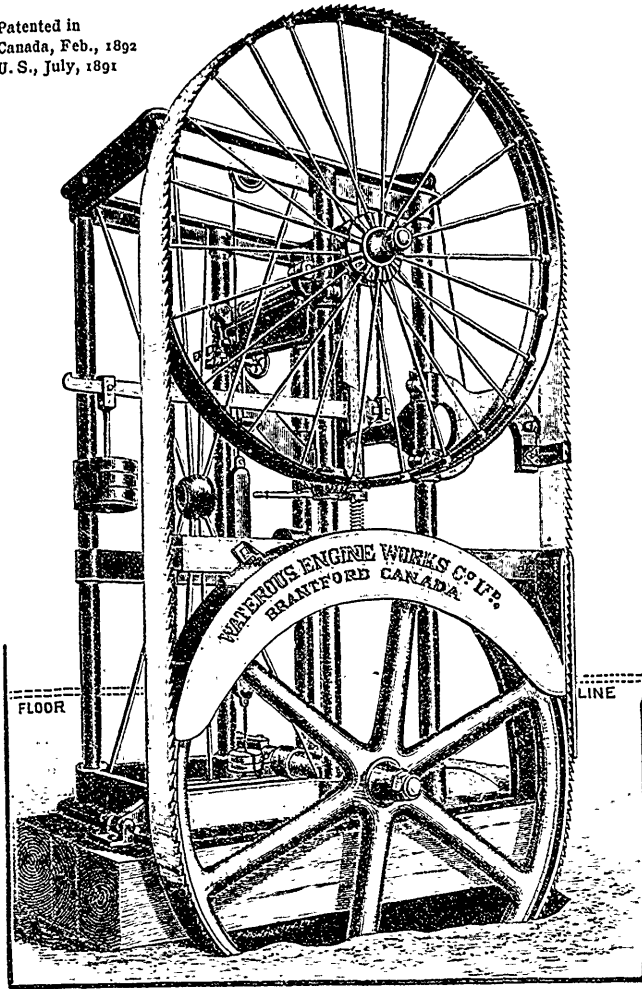
Winnie's Patent Hoop Colling Machine
Winnie's Double Mandrel Hoop Sawing Machine
Winnie's Hoop Pointing and Scaring Machine
Winnie's Double Hoop Planer
Log Handling Jack, Chain and Spool; Log Cars
Circular and Cross-cut Saw Gunners
Barrel Headers; Shingle and Lumber Saws
John Pickles & Son's English Surface Planer
No. 1 Improved Planer and Matcher; Cant, Gourlay & Co., makers
Resolving Heel Surface Planer; Cowan & Co., makers
2-in. Surface Planer; McGregor, Gourlay & Co., makers
Fourside Moulder; Goldie & McCulloch, makers
"Eclipse" Planer and Matcher; Cant Bros. & Co., makers
Fourside Moulder; McKechnie & Bertram, makers
Three-side Moulder; McGregor, Gourlay & Co., makers
Three-side Sticker; Cant, Gourlay & Co., makers

Three-side Sticker; C. B. Rodgers & Co., makers
Surface Planer; McKechnie & Bertram, makers
Surface Planer, 24-in.; C. B. Rodgers & Co., makers
Surface Planer, 24 1/2-in.; American make
Stationary Bed Planer; W. Kennedy & Sons, makers
Surface Planer; McKechnie & Bertram, makers
Sash and Moulding Machine; McKechnie & Bertram, makers
Three-side Moulder; Goldie & McCulloch, makers
One-side Moulding Machine; American make
Pony Planer, 24-in.; McGregor, Gourlay & Co., makers
New Improved Pony Planer; McGregor, Gourlay & Co., makers
Pony Planer, 20-in.; McKechnie & Bertram, makers
New Improved Pony Planer, 24-in.; Cant Bros. & Co., makers
Pony Planer, New Improved; McGregor, Gourlay & Co., makers
Pony Planer; Cant, Gourlay & Co., makers

Pony Planer; Cant Bros. & Co., makers
Pony Planer, 30-in.; Major Harper, maker
Pony Planer, 20-in.; McKechnie & Bertram, makers
Pony Planer, 24 1/2-in.; Frank & Co., makers
Pony Planer, 20-in.; Waterous Engine Co., makers
Pony Planer; Josiah Ross, maker
Pony Planer; A. E. Doig & Co., makers
Heading Planer; Goldie & McCulloch, makers
Buzz Planer, 16-in.; Cant, Gourlay & Co., makers
Buzz Planer or Jointer; Canadian make
Circular Resawing Machine; Cant Bros. & Co., makers
Circular Resawing Machine; H. B. Smith, maker
Circular Resawing Machine; McGregor, Gourlay & Co., maker
Tenon Machines, Jig or Scroll Saws, Band-sawing Machines, Power and Foot Morticers, Post-boring Machines, Swing Cut-off Machines, Saw Tables, Shapers, Sand-papering Machines, Planer and Moulding Knives, Belting (Leather and Rubber).

H. W. PETRIE, TORONTO, ONT. SEND FOR FREE CATALOGUE

Patented in
Canada, Feb., 1892
U. S., July, 1891



No. 2 Band, 8-ft. wheels, 10 to 12-in. saws, 43 ft. long.

WE CLAIM

Stiffest, Steadiest Mill built

Greatly Reduced Space Between Wheels, down to 12 or 14 inches

Ease of Changing Saws, only one lever to operate and tension not disturbed

Great Simplicity, all parts in plain view

Reduced Cost of Saws, only 43 ft. long

Most Sensitive Tension, entirely independent of straining device

The two boxes of upper shaft are connected by a heavy cast bracket, hinged to the triangular frame. The tension is applied to this bracket by weighted levers, so that the tension is most elastic and instantaneous, having nothing to move but the upper wheel, shaft and bearings. The triangular frame supporting these is moved by straining screw.

Our No. 1 Band for mills of smaller capacities has equally as good points, and has made relatively as good showing.

**WATEROUS
BRANTFORD
CANADA**

HIGH-GRADE
MACHINERY

THE WATEROUS BAND MILL

30-INCH FEED

To the revolution of a saw 43 feet long, running 10,000 feet per minute, is pretty quick work.

While watching the Waterous Band at Conroy's, men who ran single and double column American mills on the Ottawa, remarked:

"WE COULD CUT A THIRD MORE LUMBER IF OUR MILLS WOULD STAND THAT SPEED."

The Waterous Band is the steadiest and truest cutting mill built.

Heavy top and base plates, connected with 6 steel columns, gives great rigidity, permitting fast speed.



No. 2 cuts with friction feed and inadequate power 54,000 ft. per day

They threw out a circular and put in a Waterous Band, and are evidently well pleased with the change

Deschanes Mills, Tps. Hull, Que., Aug. 18, 1892.

Waterous Engine Works Co., Brantford, Ont.

Gentlemen,—We have pleasure in handing you herewith settlement for the band mill purchased from you this summer. The trial we have made of the mill for now nearly two months convinces us that the band mill is a most desirable addition to a saw mill, and, in fact, owing to its great saving in what has formerly been wasted in sawdust, should be considered a necessity.

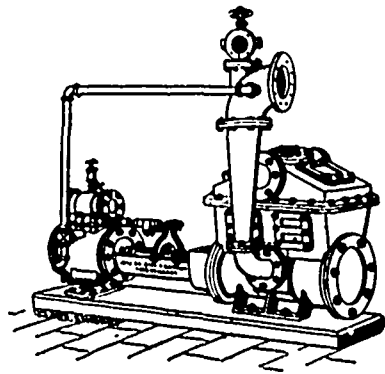
We are more than pleased with the mill; it runs as true and steady as could be desired, cuts perfect lumber and does it rapidly, we having cut from unpicked logs 27,300 feet in five hours, 17,000 feet of which was three inch, the remainder one inch. We may frankly say that we hesitated a good deal about placing our order with you, and had the mill not come fully up to your warranty you would have heard from us in a way probably not as pleasant as we hope this report will be to you.

We are, including our superintendent, Mr. Bisson, well pleased with the mill, and would certainly put in another of the same kind without a moment's hesitation. We intend increasing our power before another season, when we will have greater capacity with our band mill.

Yours very truly

R. & W. CONROY.

Order your Band Mills early for next year.



OUR INDEPENDENT CONDENSER

A Good Independent CONDENSER

IS A PROFITABLE INVESTMENT
IF YOU ARE WORKING YOUR
ENGINE HIGH PRESSURE

DON'T DELAY, BUT WRITE US PROMPTLY

NORTHEY MFG. CO., Ltd.

MANUFACTURERS . . .

TORONTO, ONT.

Representative Lumber Manufacturers and Dealers

Town	Railway, Express, or nearest Shipping Point	NAME	BUSINESS	Power, Style and Daily Capacity
Ottawa, Ont.	Ottawa	Booth, J. R.	Lumber, Wholesale and Retail	Steam, Circular and Hand Mill
Ottawa, Ont.	Ottawa	Bronson & Weston Lumber Co.	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Hand, 450m
Ottawa, Ont.	Ottawa	OTTAWA LUMBER CO.	Lumber, Pine, Spruce, Hemlock, Wholesale	2 Mills, Water, 2 Hand, 2 Gangs and 3 Circulars
Ottawa, Ont.	Ottawa	Perley & Pattee	Saw and Lath Mill, Pine, Wholesale	Wat., Gang and Hand, Saw 400m, Lath 70m
Parry Sound, Ont.	Utterson	Conger Lumber Co.	Lumber, Wholesale and Retail	Water, Gang, Circular, Saw 90m, Shingles 70m, Lath 30m
Parry Sound, Ont.	Parry Sound	Parry Sound Lumber Co.	Saw, Shingle and Lath Mills, Pine, Wholesale	2 Mills, Water, 2 Hand, 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	Steam, Circular, 3m
Alexandria, Ont.	Alexandria	McPherson, Schell & Co.	Cheese Box Factory, Pine, Spruce, Cedar	Steam, Circular, 40m
Almonte, Ont.	Almonte	Caldwell, A. & Son	Sawmill, Pine, Lumber, Hemlock, Hardwoods	Steam, Circular, 16m
Barrie, Ont.	Barrie	Dymont & Mickle	Sawmill, Pine, Spruce, Cedar, Hardwoods	Stm., Hand, Cir., S. 75m, Sh. 60m
Barrow Bay, Ont.	Warton	Barrow Bay Lumber Co., Limited	Saw, Shingle and Heading Mill, Pine, Cedar Oak, Oak Railway Ties, Paving Blocks	Steam, Circular, 20m
Blind River, Ont.	Blind River	Blind River Lumber Co.	2 Saw, Sh. and Lath Mls., Pine, Hem., Bl. Birch	White and Red Pine Lumber, Bill Stuff, Lath and Shingles
Bolton, Ont.	Fenelon Falls	Boyd, Mossom & Co.	Lumber, Wholesale and Retail	Steam, 2 Circular, 80m
Braclerridge, Ont.	Braclerridge	DOLLAR, JAMES	Lumber, Shingles, Wholesale	Steam, Circular, 6m
Barrie, Ont.	Barrie	Burton Bros.	Lumber, Wholesale and Retail	Steam, Cir., Saw 14m, Sh. 20m
Byng Inlet, Ont.	Utterson	Georgian Bay Consol. Lumber Co.	Sawmill, Pine, Hemlock, Birch	Steam, Circular, 25m
Calabogie, Ont.	Calabogie	Carwell, Thistle & McKay	Lumber, Wholesale and Retail	Steam, Hand and Circular, 100m
Callander, Ont.	Callander, G.T.R.	John B. Smith & Sons	White and Red Pine Lumber, Bill Stuff, Lath and Shingles	Steam, Circular, 25m
Collins Inlet, Ont.	Collins Inlet	Head Office, Strachan Ave., Toronto	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	Steam, Circular, 4m
Comber, Ont.	Comber	Collins Inlet Lumber Co.	Saw and Stave Mill, Pine, Hardwoods	Steam, Circular, 20m
Glamis, Ont.	Pinkerton	Ainslie, J. S. & Bro.	Saw, Shingle and Lath Mill, Timber Lands, Hemlock, Pine, Lumber, Hardwoods	Steam, Circular, 20m
Glamis, Ont.	Pinkerton	McIntyre, N. & A.	Lum., Tim., Pine, Hem., Hwd., Whol. and Ret.	Steam, Circular, 25m
Hamilton, Ont.	Hamilton	BRADLEY, MORRIS & REID CO.	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 4m
Huntsville, Ont.	Huntsville	Beath, Tait and Turnbull	Sawmill, Pine, Spruce, Hardwoods	Water, Hand and Circular, 100m
Hamilton, Ont.	Huntsville and Katrine	Thomson, Robert & Co.	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular, 25m
Keewatin, Ont.	Keewatin	Dick, Banning & Co.	Sawmill, Pine, Hardwoods, Wholesale	Steam, Circular
Keewatin, Ont.	Keewatin	Keewatin Lumber & Mfg. Co.	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Water, Hand and Circular, 100m
Lakefield, Ont.	Lakefield	Lakefield Lumber Mfg. Co.	Lumber, Wholesale and Retail	Steam, Circular, 25m
Little Current, Ont.	Sudbury	Conlin, T. & J.	Sawmill, Pine, Ash, Birch, Oak	Steam, Hand and Circular, 100m
Little Current, Ont.	Sudbury	Howry, J. W. & Sons	Lumber, Wholesale and Retail	Steam, Circular, 4m
London, Ont.	London	Gordon, J. James	Exp. and dlr. in Am. Hwd., made to specification	Steam, Circular, 20m
Longford Mills, Ont.	Longford	Longford Lumber Co.	Saw and Plan. Mill, Hemlock, Hardwd., Whol.	Steam, Circular, 4m
Mount Forest, Ont.	Mount Forest	Greensides, W. S.	Cherry, White Ash, Hardwoods, Wholesale	Steam, Circular, 20m
Norman, Ont.	Norman	Cameron & Kennedy	Saw and Plan. Mill, Tim. Lands and Logs, Pine	Steam, Circular, 20m
Norman, Ont.	Norman	Minnesota & Ontario Lumber Co.	Lumber, Wholesale and Retail	Steam, Circular, 20m
Louise, Ont.	Elmwood, G.T.R.	S. B. Wilson & Son	Hardwoods, Shingles, Lath, Handles	Com.
Toronto, Ont.	Toronto	Campbell, A. H. & Co.	Lumber, Wholesale	Com.
Toronto, Ont.	Toronto	F. N. Tennant	Lumber, Wholesale	Com.
Toronto, Ont.	Toronto	Donogh & Oliver	Lumber, Wholesale	Com.
Toronto, Ont.	Toronto	Victoria Harbor Lumber Co.	3 Saw, Shingle and Lath Mills, White Pine, Whol.	Steam and Water, Circular, Portable and Stationary, 10m
Toronto, Ont.	Toronto	W. N. McEachren & Co.	Lumber, Wholesale	Circular, Gang and Hand, 180m
Toronto, Ont.	Toronto	James Tennant & Co.	Lumber, Lath, Shingles, etc., Wholesale	Water, Gang, 150m
Warton, Ont.	Warton	Miller, B. B.	3 Sawmills, Lumber, Barrel Heads	Steam, Circular and Gang, 60m
Buckingham, Que.	Buckingham	Ross Bros.	2 Sawmills, Pine, Spruce, Hardwoods	Steam, Circular and Gang, 50m
Chaudiere Mills, Que.	Chaudiere Stn.	Breakay, John	Saw mill, Pine, Spruce, Hardwoods, Wholesale	Steam, Circular and Gang, 50m
Cookshire, Que.	Cookshire	Cookshire Mill Co.	Saw, Shingle, Planing, Stave and Heading Mill	Steam, Circular and Hand, 50m
Montreal, Que.	Montreal	Dufresse, O. Jr. & Frere	Sawmill, Pine, Spruce, Hemlock, Hwd., Whol.	Steam, Circular, 200m
Montreal, Que.	Montreal	Roberts, Joseph & Fils	Saw and Planing Mills, Sash, Doors and Blinds	Steam, Circular, 200m
Montreal, Que.	Montreal	SHEARER & BROWN	Int. Fin. Spruce, Hardwoods, Wholesale	2 Stm., 2 Wat., Hand, Cir., 40m
Mosleyville, H.C.	New Westminster	MOODYVILLE SAWMILL CO.	4 Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	Steam, Circular, 25m
New Westminster, H.C.	New Westminster	Brunette Sawmill Co.	Saw and Planing Mills, Sash, Doors and Blinds	Steam, Gang and Circular
Canterbury, N.H.	Canterbury Stn.	James Morrison & Son	Fir, Cedar, Spruce, Hardwoods	Steam, Circular, 38m
Bridgewater, N.S.	Bridgewater	DAVIDSON, E. D. & SONS	Sawmill, Pine, Hardwoods	Water, Circular and Gang, 200m

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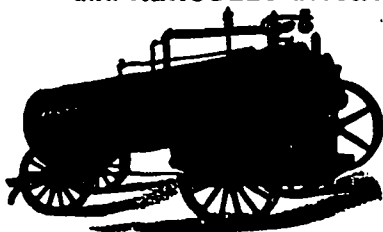
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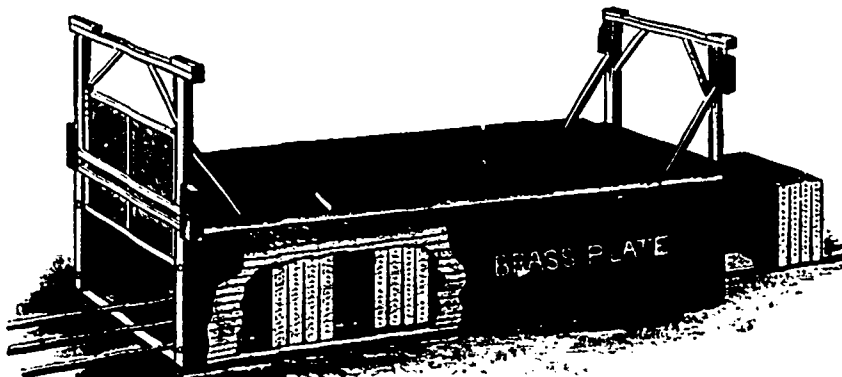
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Steamer **FAVORITE** will leave Collingwood Mondays and Thursdays after arrival of morning trains for Parry Sound, Byng Inlet, French River and Killarney, connecting there with above line of steamers for the "Soo". Returning will make close connection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

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

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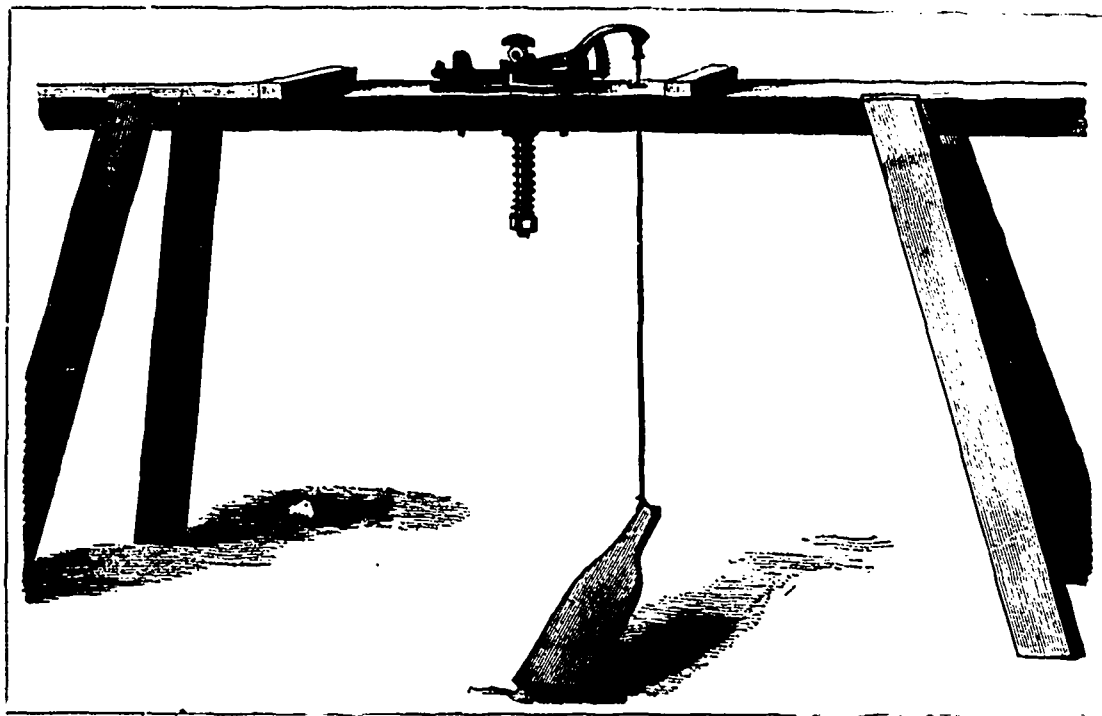
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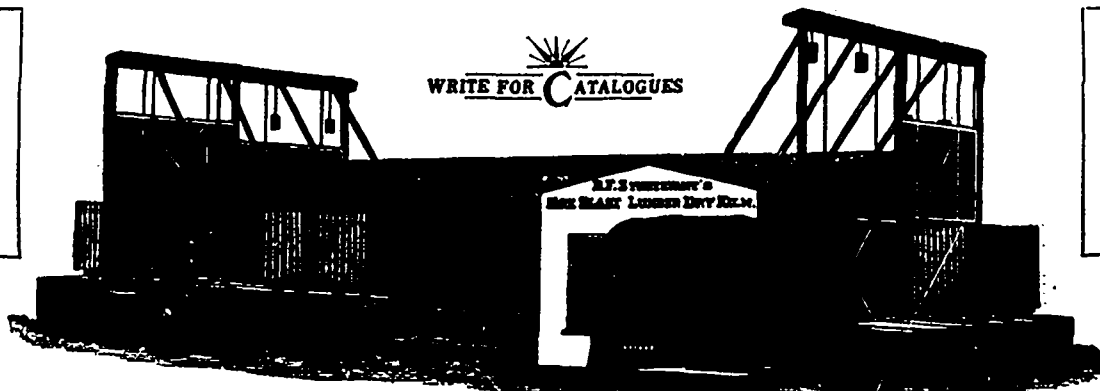
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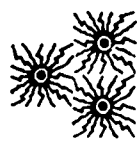
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