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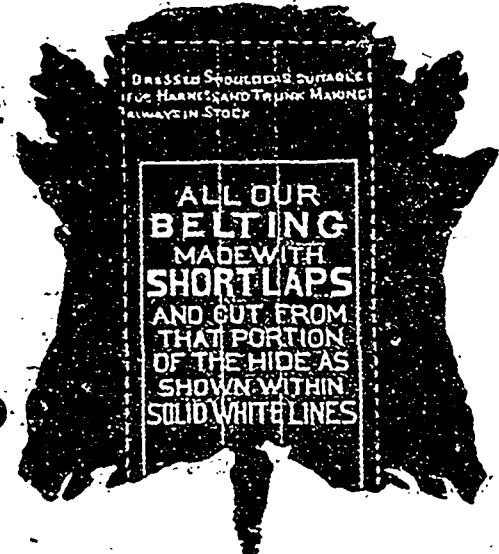
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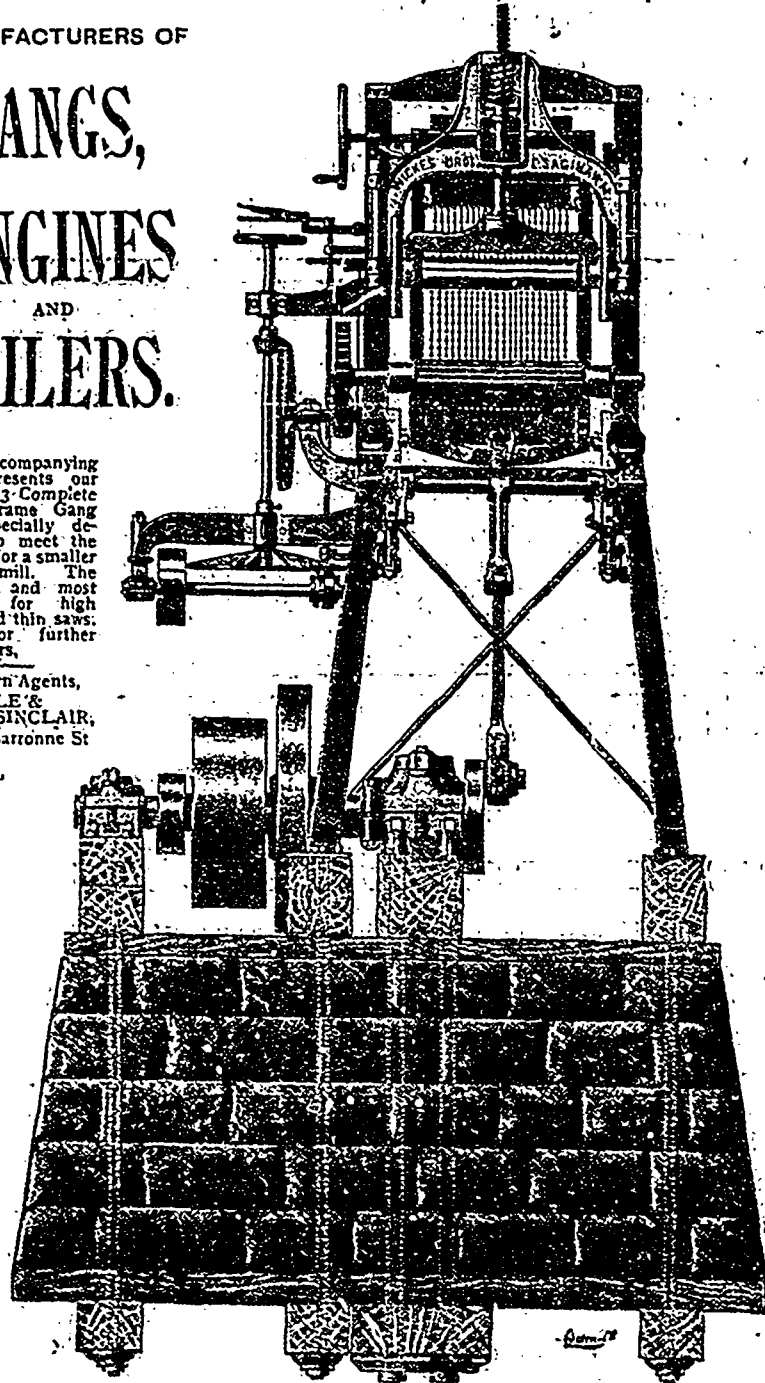
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THE CANADA LUMBERMAN.

VOLUME XII. |
NUMBER 9

TORONTO, ONT., SEPTEMBER, 1891.

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WHEN WE PLANT THE TREE.

WHAT do we plant when we plant the tree?
We plant the ships which cross the sea;
We plant the mast to carry the sails;
We plant the planks to withstand the gales -
The keel, the keelson and beam and knee;
We plant the ship when we plant the tree
What do we plant when we plant the tree?
We plant the houses for you and me,
We plant the rafters, the shingles, the floors,
We plant the studding, the lath, the doors,
The beams, the siding, all parts that be;
We plant the house when we plant the tree.
What do we do when we plant the tree?
A thousand things that we daily see;
We plant the spire that out-towers the crag,
We plant the staff for our country's flag,
We plant the shade, from the hot sun free;
We plant all these when we plant the tree.

SAW MILL BUILDING.

BY J. H. MINER.

ARRANGING a mill to cut 10,000 feet in ten hours, with seven hands, including piling of lumber and arranging bill stuff, may sound a "little off" to those who are employing twice that number of men.

First, it is best to set the mill with end to a hillside and receive the logs on a car. This is best where bills are cut on short notice, as logs can be received from both sides of the track.

If logs are to be sawed as they come, they may be received more conveniently from the side. In this case it is much better to build an overhung roof, so that all in front of the carriage will be clear. The logs should be dropped as closely to the mill as possible, to save much rolling.

The carriage I have partly described. What is wanted is a cheap, quick and reliable overhead turner. The cost of machinery, of course, must be carefully compared with labor. Fifty dollars will put up a log turner which fifty days running will pay for in the saving of the man, to say nothing of the increase in cut. A great drawback in small mills is not having a log-turner; to get the same results requires two, sometimes three extra men.

To construct the log-turner, put a 36x8 inch friction pulley on a three inch shaft four feet long. This shaft is set, say three to six inches over the end of the head-blocks. Next a two-inch shaft with 8x8 paper or wood friction pulley on the outer end, working in a sliding box. This shaft extends back over the saw mandrel, where power is taken. The feed shaft should be reduced about one-third. Use not smaller than twenty-inch pulley on saw mandrel, or larger if the logs are heavy. If the feed rig interferes with putting the pulleys in right, increase the size or diminish the pulleys. The belt being a quarter-twist, will necessitate the driven pulley being larger to get farther from the saw. Few sawmills are constructed so that a turner of this kind cannot be used.

The question of the chain comes next, but not in a tricky intermediate friction. On the end of the three-inch chain shaft a wood spool, say eight to twelve inches diameter, is placed; around this is wound a rope with a heavy weight attached to hang out of the way. The lever that handles the friction is arranged with a brake working on the face of the large iron pulley. The sawyer pulls his lever gently, unwinding the chain as desired which is done while sawing. The chain remains just where left. This constitutes the best and most reliable rig out. It cannot get out of order and is quick.

The sawyer, setter and one man to roll down logs constitutes the saw crew. The log-deck man handles the chain while setter attends to releasing the dogs.

While log is being sawed up he is rolling down or bringing in logs on a car. The sawyer stands behind the saw to down the boards (which is the proper place for him.)

The first five or six rollers are made live by simply attaching a sprocket wheel on the end of roller shaft, which should not be less than one inch, and must extend through the roller, which must not be less than ten or eight inches in diameter, as the sprocket wheel must be two inches smaller, to allow an inch board to protect the operators. The first roll is driven with a three-inch belt from the saw mandrel. The link belting or chain drives the rolls by simply passing over the top of the sprockets, except the first and last. Rollers may be made of dry hardwood with a key pin through the center, or they will soon become loose and worthless. A rig of this kind will cost but \$30 above the ordinary rig, and give thirty to forty feet of live rolls, as desired.

The space between car track and rolls should be about thirty inch. The siding can be placed on skids beyond the track and edged on main saw when in the way. The swing saw should be five feet ahead of the longest log that can be cut. Two men behind the sawyer will place the lumber, the bill stuff being dumped on skids beyond the swing saw and stock lumber taken to destination on car or lumber truck.

A word here about lumber cars. Few of them are labor savers. They are constructed very small, heavy wheels, running on rough bearings in wood at that. I have seen many such cars require two good men to get back in the mill. The wheels should be large and light running in babbitted boxes, with a frame just heavy enough to keep the car square on an iron track.

One man with two cars can take care of 15,000 feet of lumber. One man can do the piling, which will be about one-half the mill cut where bills are cut, otherwise two men will be required. Then a boy to fire and all goes along well. The slabs are cut into four-foot lengths, as most suitable for lath. The surplus may be kept away with a cart or carried out on a separate dumping car to a place out of the way, where most of edge trimmings must go.

While edging up, the log deck man assists in placing siding on carriage, the sawyer and setter placing it. The sawyer will have ample time at noon or evenings to attend to machinery. By using a good inserted tooth saw a few moments "pointing up" will be all that is required of him, while the setter can change teeth when necessary.

I recently saw a letter from a reputable firm which is cutting 50,000 feet per day of yellow pine with an inserted-tooth saw, using "shot-gun" feed. They would not have a solid saw. This is an exception, but it is not impossible with the right style of saw.

FORESTS AND DESTRUCTIVE INSECTS.

THERE can be little doubt but that insect pests as a general rule attack only those trees which have been debilitated and weakened, of which state some of them are good judges. As a remarkable instance of the instinct shown by an insect, it may be mentioned that the writer, when exploring timber land on the Nashwaah river, in New-Brunswick, having to camp in the woods, built his fire against a large spruce, which he used as a back log. The ground was covered with moss, and the roots exposed. On them the fire was laid. The tree when left next morning was badly scorched. Two or three days after, on returning to this place, the borer was seen hard at work depositing her eggs in the doomed tree.

W. Somerville, lecturer on Forestry, Edinburgh University, says: "The most common cause of the production of a large quantity of breeding material is

a severe gale, or a succession of severe gales, such as we experienced in Scotland some years ago. At that time, as will be remembered, whole woods were leveled with the ground over wide areas of country, and for some years afterwards the timber could neither be cut up nor marketed. That, then, was an opportunity for *Hylurgus piniperda*, as well as for all bark beetles, to increase at a prodigious rate, and one which the results show that they were not slow to avail themselves of."

Precisely the same thing has occurred in New Brunswick, where, after a heavy gale, by which large extents of forest were blown down, great destruction was made among the standing trees by bark beetles, so much so that on one brow among 100 spruce logs but 10 were found to have been cut from living trees, the other 90 having been destroyed by beetles. The forests which suffered most after the gale referred to, which is locally known as the "Saxby," were those consisting of large trees which had been cut among. Where lumbering had been carried on for some time and the larger trees cut away, little harm was done by the beetle, due no doubt as well to the circumstance that the trees in the latter instance were not so tall, and consequently not so obnoxious to the effects of the gale, as to the fact that as there were fewer trees standing on the same area of ground, they would be better supplied with sustenance from it than the original forest would have been had it remained intact, and thus the tree which had been cut among were endowed with sufficient vitality to resist the insects' attack.

Spruce woods gain much by being cut among and the larger trees removed, since the danger of attacks from insect is thereby lessened, and light and air being more freely admitted, the growth of the remaining trees is greatly facilitated thereby. EDWARD JACK.

Fredericton, N. B.

THE MANUFACTURE OF SPOOLS.

AS MAY well be imagined, the immense number of spools used and thrown away every year requires that the business of making them should be conducted on a large scale, and with facilities for rapid production. Birch wood is preferred. The wood is first sawed into sticks of four or five feet long and seven eighths of an inch to three inches square according to the size of the spool to be produced. These sticks are thoroughly seasoned. They are sawed into short blocks and dried in a hot air kiln. At the time they are sawed, holes are bored perpendicularly through each block which is set on end under a rapidly revolving, long-shanked auger. Next, one whirl of each little block against some little knives that are turning at lightning speed, fashions it into a spool according to the pattern desired, and that, too, at the rate of one second for each set of knives. A row of small boys feed the spool making machines by simply placing the blocks in a spout, selecting the best and throwing out the nobby and defective stock. The machine is automatic but there are some things which it cannot do, hence the employment of the small boys above mentioned. After the spools are turned they are placed in a large drum and revolved rapidly until they have taken on a fine polish. For some special purposes they are dyed yellow, black or red, according to taste. When one sees a spool of thread marked "200" or "300 yards," it does not signify that the thread has been measured, but that the spool has been gauged, and is supposed to have that amount of thread upon it.

The Interior Department at Washington has ordered a permanent government post to be established on the Rainy river, near Fort Francis, 150 miles north-west of Duluth, for the purpose of watching timber stealers from Canada.

THE CARE AND ABUSE OF SAWS.

SECOND only to the proper tension of the saw is the care of the teeth, and the want of it is responsible for much of the bad sawing seen in almost every saw mill. Here is where the tramp filer gets in his work, being only a degree less mischievous than the tramp hammerer. He generally "knows it all," and has a lot of pat technical phrases picked up while hanging around some saw manufactory or by listening to some good workman. These he hurls at the head of the defenseless proprietor or manager with such oracular gravity and assurance as to impress him with his vast knowledge of saws, an illusion which generally lasts till there is not a single saw in the mill that will do good work. With a fairly good sawyer, who can make some suggestions as to the shape of the teeth, now and then, the agony may be prolonged; but it generally winds up with having all the saws sent to the repair shop, under the impression that something is the matter with the tension, or, at least, that the fault is any where but with the teeth.

The tramp hammerer and filer are a gold mine to the repair shop, the proprietor of which seldom takes the trouble to report to the saw mill owner the imposition he is subjected to, though he must be fully aware of it.

A circular saw may have pretty bad teeth and still do fair work, provided there is a good man at the lever, who knows when and how to favor it, and provided the power behind it is sufficient and the speed is high and well-maintained. But a tooth once out of shape is bound to grow worse, until it will absolutely refuse to make merchantable lumber, or even any lumber at all. There are so many different ways in which a saw tooth may be wrongly dressed, that but a few of the more common ones will be mentioned here.

A very common and glaring fault is in swaging. The tooth, to work easily and smoothly, must be so shaped that it will cut like a chisel used to cut across the grain. It was stated in a former paper that the cutting edge of the tooth should be dressed at right angles with the face of the log. A careless hand may swage one corner longer than the other. If the outside corner be the long one, it will not have the bad effect it will if it is the inside corner, provided always that the opposite tooth is swaged the same way, even though only the two teeth are so swaged; but the next two teeth will have an extra amount of work to do.

If the pair of teeth are thus filed, they will present an inverted V shape to the wood, and leave a ridge in the centre of the kerf for the next tooth to cut away in addition to doing its own work.

A good many filers pooh pooh so small a fault, but there is just where the trouble begins. It is seldom a single abuse of a saw that renders it unserviceable, but many little abuses working together, the avoidance or correction of which marks the skilled workman.

A common fault is in swaging the teeth, with the swage held at such an angle that the force of the blow comes on top, so as to turn the tooth upward. This causes the tooth to strike the wood at an angle leading into the log, as though in beating out the farther side of a mortise the chisel were held with the handle toward you. This gives the tooth more of a pulling hold on the wood than it can cut, causing it to break its hold, thus tearing, jamming, pounding out the sawdust instead of cutting it out as it should.

To illustrate this, take a framing chisel and work out the farther side of a mortise. Hold the handle toward you, the straight side of the tool being from you. Drive it into the timber a half inch or so, then push the handle from you, and continue to drive the chisel down until you have pushed it back to a perpendicular, and then note how much force it required. You will observe that you lose nearly the entire effect of the leverage of the wedge shape of the chisel in forcing out the chip, and instead of it coming out mechanically, by the force of the blows of the mallet, it has to be pried out by muscular force. Compare that force with that required to be exerted on from 6 to 10 saw teeth, swaged as described, all driven into the log at once, and with the much deeper hold of a 10 or 12-inch feed, in a large log. The extra steam power thus wasted is often enormous, and with an engine just large enough for the work, with the saw in good condition, is often the

source of much vexation and unmerited growling at the engineer.

But by far the most serious result is the straining effect on the rim of the saw, resulting in a stretching that will soon take the "dish" out of the saw, and if persisted in producing a "slack rim." This latter condition will be first detected by a rattling of the saw between the guides, necessitating their tightening up to the point of heating the saw plate, and finally such a flapping of the tail of the saw as to impair the smoothness of all the lumber sawed.

If only a part of the teeth are of this character, as often happens, the filer not knowing enough to detect the difference, or at least not realizing the effect, the action of the saw will be peculiar, an alternate catching hold and letting go that will have a jerky effect on the engine, and cause the saw to give forth a whirring sound, as if it were out of balance, or some of the teeth were longer than others, making it "out of round."

Occasionally a filer will discover he has swaged his teeth in the manner described, and has sense enough to know it will have a bad effect, and will endeavor to correct it by filing. This can be done, of course, but it involves extra labor and much unnecessary filing away of the points, and a loss of a portion of the effect of the swage. With abundant steam power behind a saw swage as here described, it will work right along, doing fairly good work, with now and then a broken tooth when the vicious hold happens to be on a particularly wiry knot, until at last the constant straining and pounding produces the effect on the tension already noted, and the saw has to go to the repair shop to be rehammered, but never again to do as good work as before.

Everybody concerned outside of the repair shop, will wonder what caused the slack rim, the true cause not being suspected. In nine cases out of ten the blame will be saddled on the sawyer, on the supposition that he has allowed the saw to get some wrench or twist. And right here is an illustration of the theory stated in a former article, that a sawyer should at least have a theoretical knowledge of filing. In that case he would be able, not only to vindicate himself, but to detect the errors of the filer, who, if not amenable to advice or suggestion, could soon be made to give place to a better man.

There is a difference of opinion as to how the corners of a tooth should be left. Some very good filers, supported by very good sawyers, claim they should be left as sharp angled as possible toward the body of the tooth. Others, and probably the majority, swage out pretty full, and file the side angle as near a right one as possible, keeping the tooth nearly full as far back as the amount of swaging will permit. A third class swage sufficient to allow of dressing the side of the tooth to an exact right angle to a slight depth, say one thirty-second of an inch, then reducing the angle more or less sharply. A fourth class, generally experts, swage out fuller still, and make a right angled side surface of twice or three times the depth last described. Every style of tooth has its strenuous advocates, with strong arguments to back them. The first assert that the less swaging the better, its effect being to drive the particles of steel back one upon the other, compressing them and then spreading them sidewise, and that the repeated compression and expansion will tend to crystallization, rendering the edge liable to crumble, which will more than offset the lack of wear in the sharp corners.

The second class argue that the sharp, angular corners, while requiring much less swaging from regular wear, are more liable to be broken by contact with any hard substance, like a knot or foreign body like gravel, imbedded in the bark or sap; that they wear off so fast, under the most favorable circumstances, as to require such frequent swaging as to amount in the end to really much more than if swaged out fuller at first.

The third class repeat the arguments of the second and go a step further, asserting that the danger of crystallization is very remote and not to be compared with the danger of breakage of corners to which all angular-sided teeth are liable. In addition they call attention to the wedge action of the tooth that loosens the particles of wood the cutting edge has severed; that with the sharp angular point, the wedge acts only to the ex-

tent of the thickness of the body of the tooth, which, being so much narrower than the cutting edge, leaves a triangular ridge from the line of the cut of one tooth to that of the next, and that, notwithstanding the wide cutting edge, the kerf is practically not wider than the thickness of the saw plate, the lumber thus being left with an uneven surface; while the narrow kerf between the grooves made by the points of the teeth renders the saw liable to being heated, even to the extent of ruining the tension.

This is a correct theory that is perfectly easy of demonstration by watching the action of such a saw while in the kerf, and noting the ridgy surface of the lumber it makes. The advocates of this class of teeth claim that the small amount of square side they get gives them practically the full benefit of the wedge in breaking squarely off the particles of sawdust, at least to such an extent as to give sufficient width to the kerf, to avoid pinching the plate, and also to give room for the tooth to clear itself. They, too, deprecate further swaging on account of the danger of crystallization, claiming they have found the limit.

The fourth class emphasize all the claims of the third, except as to the sufficiency of the wedge action. They scout the idea of danger of crystallization, and claim that all the straight side that can possibly be obtained is necessary to the perfect action of the saw, and that if it were possible to carry the full width of the edge back to a line with the cutting point of the next tooth, perfection would then be reached; that the tooth would wear long enough to do as much and as hard work as the carpenter's framing chisel, and the surface of the lumber would be as smooth as though jackplaned.

The claims of these four classes of teeth, when analyzed, lead to the following conclusions: The sharp angular pointed are the poorest made. They are bad for the saw, as they require such frequent filing from constantly getting the corners knocked off. They are liable to uneven wear, thus causing unequal work of the several teeth. The liability to heat the saw and the tendency to make rough lumber should forever debar it from any first-class mill. No sawyer, with any regard for his reputation, will submit to using a saw with such teeth, as, in nine cases out of ten, he will be blamed for its faults.

The second class are only a degree better than the first, and should be ruled out, though there are probably more such teeth in use in this country than of any other kind, a majority of inserted teeth being of that shape.

The third class of teeth are a compromise between the extremes. They do good work, hold an edge nearly as well as the longer sided ones, and keep their corners out in pretty good shape till the whole edge is dulled. The teeth wear evenly, thus preserving the roundness and consequent balance of the saw. A fair amount of the wedge effect is obtained, and, up to a certain amount of feed, the lumber made is fairly smooth. But beyond that point there is the same fault as in the other—ridgy lumber—more or less pronounced as the saw is favored or crowded by the feed. The kerf, however, is shaved out fairly wide, so there is seldom heating of the saw from pinching.

With the machine swages in use in many saw mills, it is probably difficult to go beyond this point until some improvement is made.

It will be apparent to the reader that this theorizing is largely based on the use of the hand swage, and this is a correct basis when it is remembered that with all the improvements in them, and their cheapness, the machine swages are not in use in more than 20 per cent. of the mills of the country, and automatic sharpeners or filers in not more than 50 per cent.—*Northwestern Lumberman.*

A firm at Dresden are successfully manufacturing tool handles and shafts from compressed paper chemically prepared. They are very hard and firm and have the additional advantage of being non-conductors of heat. Another German firm is making pulleys of pasteboards pressed by hydraulic power, having an iron core and casing. They are supposed to take up less room, generate more friction and are water proof.

WOOD-WORKING CHIPLETS.

BY JOB.

MR. OWNER, call down your fireman. Don't you know that those vast volumes of dense black smoke that issue from your smokestack every 20 or 25 minutes, means something very serious in the way of a draft on your profit account? Ask your fireman why such volumes of black smoke, which is simply coal heated enough to drive it apart, but not enough to burn it, should be sent out to blacken the landscape. Ten chances to one he cannot tell you why. He may not even know that these regular eruptions mean a loss to you.

All the same they do. It is a double-ended loss, too, a regular two-edge-cut-both-ways knife that chisels away your profits at a fearful rate. In the first place, he shovels in too much coal at one time, having let the fire burn too long without replenishing. In the second place, he throws in the fresh coal in a heap here, a heap there, and a heap over yonder, instead of spreading thinly and evenly over the whole bed of fire. The unusual quantity of cold fuel reduces the heat in the furnaces, lowers the steam pressure for a time, and causes a loss. Then the heaps become heated enough to allow unburned coal to pass up the chimney. That causes another loss. In this way the bad method of feeding the fire simply uses up the heat, which ought to make steam out of the water in the boiler, to volatilize and carry away the coal that ought to be used in making steam.

See? You ought to if you do not. Your chimney belches out thousands of cubic feet of half gaseous coal every day, wasting the money you paid for the coal, shortening the service it performs for you, subjecting your plant to unnecessary wear and tear and dirt, and all because your fireman, left to his own devices and ignorant of what he is doing, goes on shoveling coal in the wrong way, at the wrong time, and in wrong quantities. Call him in. Call him down.

The subject of firing leads directly up to the question of the general building, use and treatment of steam boilers. Here is a table compiled by an inspection and insurance company, showing the number of explosions of steam boilers, giving a summation of the results of bad construction, bad treatment and bad management in general for 12 years:—

Year.	Explosions.	Killed.	Injured.
1879.....	132	208	213
1880.....	170	259	535
1881.....	159	251	313
1882.....	172	271	359
1883.....	184	263	412
1884.....	152	254	251
1885.....	155	220	278
1886.....	185	254	314
1887.....	198	264	388
1888.....	246	331	505
1889.....	180	304	433
1890.....	226	244	351
Total....	2,159	3,123	4,352

Of course, this is only a partial table, made up from the records of a single company, with no attempt to make it absolutely complete. It is an instructive, really a destructively instructive, showing. Look over it and then set about finding whether your own steam plant is not in such a shape that it is a promising, or threatening, candidate for a front place in the record of catastrophes for 1891. Foresight with steam is far better than hindsight.

NATIONAL FORESTRY PAYS.

THE government of France has expended \$30,000,000 so far in re-foresting, and it is estimated that \$34,000,000 more will be necessary before the mountain slopes are re-clothed and the farming lands reclaimed, and all because the State did not interfere in time to prevent the consequences brought about by the greedy private owners. It is not generally known that in Europe every State owns more or less forest property, which under a competent administration, yields a large revenue. Prussia appropriates annually \$8,000,000 for her present administration, but she receives \$14,000,000 in return, leaving a net revenue of \$6,000,000, and all German States, as well as Austria, Italy and France have a net income of \$1.50 to \$4 from every acre they have in forest growth.

ADVICE FOR YOUNG FOREMEN.

FIRST, don't be self-conceited; this is one of the commonest diseases of young foremen. At first, no doubt, you will be modest and careful enough, but after one month has rolled by, and you find the shop is not a total wreck under your management, modesty will very likely give way to a satisfaction that will make you ridiculous if you don't check it. Don't ever let in the idea that you have done better than others could do, and don't imagine that the shop couldn't run without you. There are lots of sensible men in every shop, who size the boss up very correctly. They will know just what your calibre is, and you can't fool them. Therefore don't try. Don't ever pretend to know it all. If your men are convinced that you are fairly well informed they will respect you. But they will instantly detect and despise any false pretences in this line. Moreover, when you really do know a thing, show it by your actions, rather than by words.

Don't be afraid to ask advice when necessary. There are men in that shop, I'll be bound, from whom you can learn a big lot. Therefore, when you are "stuck" on some problem that would puzzle anybody, don't be ashamed to seek counsel of some level-headed man in the shop. He can probably help you; and, if the problem is a hopeless one, you at least have the comfort of good company in your perplexity. But don't ask advice habitually or needlessly; and, if possible, counsel in each case with the man who is to do the work; in question. Don't go over his head to some one else; it hurts his feelings, and don't work well. When, for instance, a difficult pattern is to be made, full of novel and peculiar features, consult the head molder as well as the pattern-maker. Above all things, don't fall into the habit of always leaning on the same man, or the same two or three men for advice; it will ruin you all.

Be calm and deliberate. No matter what emergencies arise, don't act, or give orders, or talk at all without giving yourself time to think. I have often had a perplexing job come into the shop, or a bad break occur, late in the afternoon, that paralysed me. In such a case I always looked it over coolly and deliberately, and gave no sign of what I thought of it, or what I intended to do. In fact, I didn't know; but, ten chances to one, an hour's study after supper, when I had time to think, would clear away the difficulty, and in the morning I would go at the job so easily that they all thought I intended from the start to do it that way.

In such cases it generally pays pretty well to note carefully and silently any suggestions that may be dropped by any of the men; I have learned a lot in this way.

Keep your temper, don't ever speak roughly to your men; no treatment can be too good for a good Canadian machinist. If a man is not good enough to be well treated, you don't want him. And don't ever get angry at a hard job, or a poor tool, or an accident—it makes the men laugh at you.

STEAM MOTIVE POWER IN 1700.

THE discoveries which are from time to time made in the Egyptian tombs authorize the belief that many of the inventions and machines of the present day were known to the ancients and used by them. A correspondent who is curious in such things, sends us the subjoined extract from the "History of China," Pere du Halde, which was published in 1741 (folio edition). It is certainly nothing less than a miniature locomotive and steamboat which was here noticed. The extract is taken from a description given by Du Halde of the various inventions made by the Jesuit missionaries in China for the instruction and amusement of the Emperor Kanghi, who died in 1722. The inventions there described were about the beginning of the eighteenth century:—"The pneumatic engines did no less excite his Majesty's curiosity. They caused a wagon to be made of light wood, about two feet long, in the middle whereof they placed a brazen vessel full of live coals, and upon them an eolipile; the wind of which issued through a little pipe upon a sort of wheel, made like the sail of a windmill. This little wheel turned another with an axle-tree, and by that means the wagon was set a running for two hours together; but for fear there should

not be room enough for it to proceed constantly forwards, it was contrived to move circularly in the following manner: To the axle-tree of the two hind wheels and at the end of this beam another axle-tree passed through the stock of another wheel, somewhat larger than the rest: and accordingly, as this wheel was nearer or further away from the wagon, it described a greater or lesser circle. The same contrivance was likewise applied to a little ship with four wheels; the eolipile was hidden in the middle of the ship and the wind issuing out of two small pipes, filled the little sails, and made them turn around a long time. The artifice being concealed, there was nothing heard but a noise like wind, or that which water makes about a vessel."—*The Engineer.*

THE BOTANY OF TREES.

TIMBER trees are known botanically as exogens, or outward growers, because the new wood is added underneath the bark outside that already formed. The whole thing consists of (a) Pith in the centre, which dries up and disappears as the tree matures. (b) Woody fiber, or long, tapering bundles of vascular tissue, forming the duramen or heart-wood, arranged in rings, of which one is considered to represent a year's growth, and interspersed with medullary rays or traverse septa, these consisting of hard, flattened plates of cellular tissue, known to carpenters as silver grain, felt, or flower, and showing most strongly in oak and beech. After the tree is a few years old, the heart-wood becomes comparatively dry and hard from the compression produced by the newer layers. (c) Albunum or sap-wood, which is the immature woody-fiber recently deposited. In coniferous trees the sap-wood is only distinguishable when dry by a slight greenish tinge; when wet, it holds the moisture much longer than the heart-wood, and can be detected in that way. (d) The bark, which is a protecting coat on the outside of the tender sap-wood. It receives additions on the inside during the autumn, causing it to crack and become very irregular in old trees. The mode of growth is as follows: In the spring the moisture is absorbed and rises through the stem as sap to form the leaves; during summer the leaves give off moisture and absorb carbon, which thickens the sap; in autumn the sap descends inside the bark, and adds a new layer of wood to the tree.

NOT CARELESSNESS.

AN IDEA as to what opinions some practical men have as to what is, and what is not carelessness in the management of a steam boiler, is furnished by evidence recently given by an expert engineer, when under examination in regard to a boiler explosion. He was asked, "How did the explosion occur? Was it on account of carelessness?" He replied "No, there was no carelessness about it. The boiler was simply worn out." So that running a worn out boiler, liable to explode any day and to kill a few dozen people, was not carelessness in the sworn judgment of an engineer! Probably he thought it showed carefulness. It certainly proved that more care was taken to create a terrible risk than to avoid it, and that carefulness over a few dollars caused criminal carelessness about human life, as do most boiler explosions.

TRADE NOTES.

The following is the description of a new two-spindle borer just constructed by the Cant Bros. Co., of Galt, Ont: It is designed to perform with accuracy and in one operation, that class of work in which two holes can be bored at any given distance and angle, as in dowelling, chair, cabinet and other similar work, thus effecting a very great economy of time and labor. In most of those hitherto constructed, the angle has been from the horizontal to the perpendicular, one bit being thus brought exactly above the other. But in this one the two bits are mounted in an adjustable head, which swivels around one of them, so that they may be set at an angle from the horizontal line of the table. The range of adjustment is from a horizontal to a perpendicular.



PUBLISHED ON THE FIRST EACH MONTH BY
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 \$1.25 a Year.

Advertising Rates Furnished on Application.

POLITICAL AND COMMERCIAL MORALITY.

It should be possible for a citizen of the Dominion to express an opinion on the revelations at Ottawa, made during the present session of Parliament, and in doing so not to have laid at his door the charge of partizanship. And yet the thoughts of our people, and many of the thinking people, are so honeycombed with partyism, that it is difficult to write or speak on political corruption, and not have a party interpretation placed on one's words.

Neither political party can afford to throw the first stone at the other, for unfortunately the scandals that fill the air, and which in too many instances have developed into hard realities, have not been confined to either political party. The one act does not in any way off-set the other, though here the disposition is to work the "saw off" method, which is a demoralizing method, however applied. We say that it is unfortunate, that this demoralization has been general in its character, because it reveals under-methods of conducting the business of the country that the more unscrupulous of politicians have always said were common to both parties, but which the better citizens had hoped had not obtained so strong and sure a foothold on Canadian soil. Now it will be good manners to say less, for a time at any rate, of the purity of Canadian politics in contrast with those of other countries.

We are not encouraged in history, either ancient or modern, to expect the best ensample of things moral, from those who sit in high places. Yet the people will look to those who rule over them for suggestions as to right ways of acting and living; and there is more than a grain of wisdom in the old saw, 'like father, like son, like master-like servant'. The truly loyal citizen, for he only is loyal who is loyal to truth, must regret with deep and sincere poignancy, that in the politics of this country the ideal set by those in high places has been of this demoralizing character.

The question has a commercial side, that should come home with force to businessmen. The revelations referred to have shown to what extent dishonesty—for this is the Anglo-Saxon of the matter—has been practised, not alone by the men placed in positions of honor by their country, but by the employee who has been engaged by these men to do certain work, and been paid to do it. We know how any business man would have dealt with these people had they been in their employ and been guilty of like offences. But the point we aim at is this: Mercantile business, however it may be with politics, is built upon the one foundation stone of confidence, one in the other. It is not capital that gives strength to business; it is the confidence that business men have in one another—in their ability, their judgment, their energy, and above all their honesty. When this confidence is shaken down comes the whole fabric, like a house of cards. Men in the employ of the government of the country cannot accept presents from contractors, commissions and bonuses from those to whom they have given government orders, and do this thing continuously without these influences being felt in the regular channels of commerce. Employees, those who are not servants of the government, but servants, it may be, of some large lumber company, will be tempted and influenced by the example set them, to abuse the trust placed in them, for their own personal gain. Peculation, em-

bezzlement and breach of trusts are not unknown quantities in the commercial world to-day. Happily they are the exception—though unhappily not as exceptional, as they should be—but once set moving and the evil will spread like a prairie fire.

This is a view of the matter, that business men cannot afford to ignore; and while the LUMBERMAN takes the broad view, that as citizens we should each and all rise in our strength and 'lend a hand' to whosoever is honestly desirous to purify the political atmosphere, it insists with every emphasis on stamping out this business dishonesty, because of the general hurtful influence it must create in commercial circles everywhere.

FREE TRADE IN LUMBER.

IN our correspondent's column we publish a letter from a well-known citizen of Algoma, in which he makes several direct enquiries relative to the question of free trade in lumber. In the early months of the year when lumber circles were agitated on this question, we devoted considerable space to the subject. A reference to the files of THE LUMBERMAN, by our correspondent, or any other reader interested, will furnish, in a large measure, an answer to the enquiries now made. Then it was supposed, that the question would come before Parliament at its first session, and on that account it took rank as a live question of the day. Parliament has since met, and we have had the announcement of the Premier that the matter will not be introduced in the House until another session; that it is likely to be a factor in the reciprocity negotiations with the United States' government in October next.

This is the immediate position of the question—it is not to-day in practical politics. Approaching it as a question of the future, though it may be the near future, and referring to our correspondent's letter, we may say, speaking broadly, that we believe that the consensus of opinion among lumbermen, is that entire free trade in lumber with the United States would be helpful to the general interests of the trade in both countries. At present, if it is not paradoxical to say so, this free trade is only partial. Our logs go into the States free, but our lumber, though not taxed as high as before, still has the impost of one dollar placed on it. This fact no doubt operates to a measurable extent, and more particularly in some localities than others, against the manufacture of lumber in our own country. It would seem likely, that if there were entire free trade with the United States, that the American lumbermen, who become purchasers of our logs, would prefer to manufacture their lumber at the mills adjoining where the logs would be cut and ship in this shape to their own side of the lines. It has already been shown in these columns that the shipping rates by vessel from the North Shore are sufficiently favorable to the shipper in that locality to influence him to do this. It will strike the average man as an unbusiness like method to take the logs away from the mills, that are at their door, so to speak, when these logs, before being marketable, have to be made into lumber: providing the duty in the case of both logs and lumber was removed.

We think of one influence that might operate against this course; the American lumberman is in many cases owner of his own mills on his own side of the lines; it pays him best to keep these mills running; he has local interests to serve, and he would be willing to pay the expenses of towing the logs to his own mills.

Facts are clear that at present our logs are, in no small number, going across the border. This spring the Midland and North Shore Lumber Company sold their limits to an American firm, Merrill & Ring of Saginaw, Mich., \$25,000 being, we believe, the sum paid, and this winter the new owners will cut a considerable amount of timber, and in the spring they are more than likely to tow this product to the States, there to be manufactured into lumber. The people, along the north shore of the Georgian Bay naturally feel grieved at this condition of affairs. But until we have free trade in lumber, it is difficult to suggest a remedy. Fortunately the conditions are local and not general. Get away from that particular section of the Georgian Bay, marked on the one side by Sault Ste.

Marie and on the other by Parry Sound, and we find our lumbermen sending the manufactured lumber by rail into the States, and not shipping logs.

This has to be remembered in discussing the question of free trade in lumber: we have not the whole "say." Friend McKinley has to be considered. Senator Flint warns us, that when making a bargain with the Yank watch which way he holds the stick he is whittling. If he whittles inward to himself he is making the best of the bargain. If he whittles outward some one else is getting the bargain. We have to remember the whittling stick and the whittler in this matter.

WORKING UNITEDLY.

TWO events of recent occurrence in the lumber trade serve as practical illustrations of the advantages to be attained by united effort on the part of the members of this trade. Our reference is, in the first instance, to the labor boycott in the city of New York, when in May last the Lumber Handlers and Lumber Truck Drivers' Association of that city endeavored to force the lumber dealers to come to their terms. Without going into particulars, it is enough to say that the end sought was, as in all like cases, to obtain better terms from their employers, and failing to accomplish this by more amicable methods, the objectionable resort of a strike and boycott was employed. This step was resented with vigor by the Lumber Trade Association, and with complete success. There were features of the strike, that furnish suggestive matter for an article on the relations of employee to employer, and of working men to workingmen's unions; but our purpose here in referring to the matter is simply to show to the lumber trade, that there is only one way of meeting a difficulty and that is by all pulling together. The end to have been attained might have been any other than meeting an employees strike; it might have been to accomplish some reform or meet a difficulty within their own ranks; whether one or the other, if the trade had been divided success could not have been expected.

A more recent illustration comes from the lumber trade of England; not a fight this time with labour, but a battle in Parliament with the railway operators of the "tight little island." Elsewhere we give particulars of the trouble, and for this reason do not need to particularize here. The outcome is asked: not entire success; and it would appear, for the reason, that the trade were not throughout the battle acting as a united body. It is true that when, within the past few months, the gravity of the situation was realized, they quickly got close together and worked as one man. Back in 1889, however, when it was known that the trouble was upon them, and then it was that their forces should have been brought together, and careful thought, the outcome of concerted action, have been given to the question, the trade, to borrow the words of an English lumber contemporary, were found at "sixes and sevens." It is pleasing to know that even at the eleventh hour, something has been accomplished.

No question is before the Canadian trade to-day to stir up the fires of enthusiasm that usually seem needed to bring any body of men of any particular class together. Were a question of this kind to assert itself are the trade ready to meet it? And after all, are there not matters that call for "talking over" together? All through the past season there has been an undercurrent of dissatisfaction among the trade, because of the tendency to cut prices and otherwise to draw away from safe and careful methods of doing business. We do not say, these are crying evils of the trade, but they are of sufficient importance to call for a little consideration; and no better time than the present could be found. The country is on the eve of the most prosperous fall's business that has greeted the people of Canada for many years. The lumber trades will certainly reap the gain that will come from the country's splendid harvest. How far the profits of this extra trade will be theirs will depend on what plans they shall adopt to secure these profits.

We are impressed with the thought, that it would be a good thing for the lumbermen of this province to get together in convention early this fall and talk over trade matters. Why not?

EDITORIAL NOTES

THE *Northwestern Lumberman* of Chicago warns manufacturers of tierce staves and headings to give Chicago a wide berth, except when advised that stock is wanted. Tierces have reached such a beggarly price that they can be made and sold only at a loss, and 20 cents is all the journeyman cooper gets, at that.

THE millmen's strike of St. John, N. B. is in the meantime at an end. The *Globe* of that city says: "Apparently a *modus vivendi* has been reached between some of the millmen and some of the owners which ought to be satisfactory to the former. Practically nine hours are admitted to be a day's work, and under that the mills will resume, leaving to the future to decide the rate of wages to be paid. The ratification of the terms is in the hands of the Millmen's Union. They appear to be satisfactory to all who have heard of them."

RECENT figures issued by the United States Department of Agriculture show a very great increase in the production of lumber within the past ten years. The total annual product of all kinds of material is about 25,000,000,000 cubic feet, equal to a solid bulk of a mile square on the base and a little more than one-sixth of a mile high. It is equal to the annual increase of 500,000,000 acres of forest in fair condition. The value is about \$1,000,000,000, being ten times that of the entire gold and silver output, three times the product of all the coal and other minerals, and nearly three times the farm value of the wheat crop. It exceeds the gross income of all the railroads and other transportation companies. Ten years ago manufacturers of all kinds held the first place in importance as measured by dollars, agriculture second, and forests and products ranked third. The lumber industry now occupies the second and possibly the first place.

OUR knowledge of the behavior of American timber under stress is based upon very incomplete and antiquated series of tests, and until very recently no attempt had been made to supply a want so keenly felt by every engineer and architect who has to deal with wooden construction. The rules of Gordon and Hodgkinson, as applied to wooden pillars, are very old: Mr. Tratwine has done some good work, but his experiments are confined practically to pine, and Charles Shaler Smith, in his excellent formula for the breaking load of square or rectangular pillars, also limited his experiments to white and yellow pine. Mr. Kilkardy has tested long pillars of Riga and Dantzic fir; and other scattered data, of more or less value, are to be found. But the first exhaustible series of tests of American woods ever attempted is now in progress at the testing laboratory of the Washington University, as directed by Prof. J. B. Johnson. These tests are being made under the auspices of the Forestry Division of the U. S. Agricultural Department.

AN American contemporary "desires to enter a protest against the promiscuous use of the term 'lumber mills,' instead of saw mill, planing mill or otherwise, as the case may be. Sometimes one is meant for 'lumber mill' and sometimes the other. In a trade sense a saw mill is where lumber is manufactured, and it is confusing to call a planing mill by any other name. A shingle mill, stave or heading mill, or any saw mill which does not manufacture lumber, should be definitely designated, where there is a desire to give information that can be understood. If there were uniformity in the use of the term 'lumber mill' it might be regarded admissible, but as now used it is a sort of omnibus term that is more or less inane." In Canada the lesson might be extended still further. With the average local newspaper the bare word "mill" is made to cover every conceivable place that can boast a smoke stack. We are told improvements have been made at John Jones' mill, or that the mill at Jackson's corners has

been burned down, or that a new mill is being built at Scugog, but the imagination is left to fill in the blank telling what class of article is to be manufactured within the four walls of the building named.

THE firm that handles thirty-seven millions of spruce yearly, says, that for the next ten years the bulk of the spruce timber in Maine will be made into pulp. Spruce, they say, makes tougher paper than poplar. The vastness of Maine's timber wealth is probably realized by few. Every year now 500,000,000 feet of logs are cut in this state. On the Penobscot River, logging got its first start in 1816, when Maine was still a province of Massachusetts, and in that year 1,000,000 feet of lumber were surveyed at Bangor. By 1831 the output of the river mills had increased to 30,000,000 feet. It is estimated that prior to 1832 there were sawn on the Penobscot 200,000,000 feet of lumber; in the period from 1832 to 1855 inclusive the output was 2,969,847,201 feet, while in the thirty-five years since, 5,892,197,717 feet have been manufactured at the river mills and shipped from the port of Bangor, making a grand total of 9,062,044,918 feet of timber that have been taken from the forest bordering one great water course of the state since the inception of the industry in 1816. Undoubtedly spruce is King in Maine.

EVERYTHING we are told has been created for a good purpose, and we can not hold that the Omnipotent is else than omnipotent and question the word as given to us. Perhaps it serves as an active illustration of the other statement that is found in Divine record, that in many things we see, as through a glass darkly. For when we read that a peculiar insect is creating havoc by destroying the foliage, which is a thing of beauty, and in turn the tree, which is a thing of utility, the most orthodox are apt to become doubters. A recent newspaper dispatch from the State of Pennsylvania has brought the word that a peculiar worm has been discovered among the hemlock timbers of that section of country. The lumbermen had noticed that the tops of the timbers on the mountain were turning brown, and on investigation it was discovered that the defected trees were covered with myriads of worms. A remarkable scene is presented in the "choppings," where the bark peelers are at work. The worms are swarming about the men by the millions, while on all the trees from Coudersport to Port Allegheny, miles and miles of trees are turning brown, and ruin is threatened to vast lumber interests of that section. The worm that is doing the damage is of the "measuring worm" species, about an inch long, and nearly an eighth of an inch in diameter. Reports from Glen Hugel, Elk county, and from the east side of the county, state that the same worm is devastating the hemlocks there. A crisis confronts the whole population of the entire hemlock region of New York and Pennsylvania. The worm is steadily advancing and spreading and working destruction with inconceivable rapidity.

ENGLISH lumbermen are greatly exercised over certain clauses that have been introduced into the railway Bills passed at the present session of the British House of Commons. It would appear that the matter of railway rates and charges of the various British railway companies have for years been in a chaotic condition. As far back as 1883 Parliament made a movement to bring order out of chaos, the opinion being quite general among members of parliament and in commercial circles that it was absolutely necessary that the powers which parliament had conferred upon railway companies should undergo revision and codification. In 1888 Parliament took steps in this direction. The railways were called on to submit a classification and schedules of their proposed maximum rates, to the Board of Trade. Arrangements were then made for traders to submit their objections to the propositions of the railway companies. From August 1888, up to the present the matter has been under the consideration of a special committee, eventuating in the bill now passed, which, so far as the clauses affecting the shipment of lumber are concerned, is of an extremely radical character. The proposition is, that lumber which has hitherto been shipped by measurement is

to be shipped by weight, and other changes are made in the mode of classification that will have an injurious effect on the trade. The force of some of the changes will be better understood, "when" to use the words of *Timber*, of London, England, "we assert that besides fixing several impossible conditions, it was proposed in some instances to increase rates and charges on timber by no less than 200 per cent., which if imposed in practice, would have rendered the carriage by rail, of the description of timber effected, a matter of utter impossibility." The whole usage of the trade has been clustered around the methods of the railroads of carrying lumber by measurement, and we can well understand the indignation that has been aroused by the present innovation. A courageous fight was made before Parliament, not with very great success, for the Bill, slightly amended, has passed the Upper House, and received the Royal assent. But the trade are thoroughly aroused, and they will as one man, push forward the agitation, hoping at the next session of Parliament to have the obnoxious legislation revoked.

A POPULAR, and there would seem to be good reasons for saying it, a wise admonition of the day is, "learn every boy a trade." It is well known that the professions and commercial pursuits are over crowded. Of course there is room "up top" in all these callings, but only the few can get there; though all can try, and the most unlikely, apparently, often succeed. The mechanical trades are not so crowded, and employment in these can frequently be obtained when the doors are closed on other sides. To employ a colloquialism, "a trade is a handy thing to have by one." Can one learn every boy a trade? Not as readily as the simplicity of the question would suggest. A clause is to be found in the regulations of the labor organizations of the day, which restrict the number of apprentices in each shop or factory. One may make application at a shop to have his boy apprenticed to some given trade, and their may be room for him, or what is just as likely, the maximum number of apprentices has been reached, and the boy cannot be placed there to learn the trade he would wish. It is not difficult to understand the argument from the labor side for this restriction: too many apprentices, too many journeymen; over supply of journeymen, a reduction in the standard of wages. All the time a fundamental principle of political economy is forgotten, viz: that the demand will certainly regulate the supply. The father who is considering the question of placing his boy to a trade, will not seek that trade where he knows that two men are to be found for each one who is wanted. He does not do this under the apprentice restriction clause, he would not do it were this clause an annuity. The existence of this restriction to-day bars out many a desirable youth from learning the trade of his choice. It has a hurtful moral effect upon the ambitious workman, who says to himself: "My bread and butter is sure enough. It is not because I am a better workman than my bench mate, that I am here to-day and obtaining certain wages; the union fixes this thing regardless of the individual. Why should I strive to improve myself in my work? I would gain nothing by it." We do not need to look far afield to see trouble and injustice arising from these conditions constantly. They confront the man, who has not a direct interest in either the plans of the capitalist or the labor union, further than that general interest in the commonwealth which makes him anxious to see every citizen a better citizen by having the opportunity and encouragement given him to make of himself all that is make-a-ble. In Pittsburgh, Pa., troubles arising out of these conditions have led the Builders' Exchange of that city to establish trade schools where boys will be taught the bricklaying trade without any restrictions; and our contemporary, the *Builders' Gazette*, of that city is exerting its influence to have trade schools established to meet like necessities in other trades besides that of bricklaying. Nor is this proposition confined to the people of Pittsburgh alone. We find other localities moving on similar lines. Just as the evils of the system are general, so may we expect that the remedy, when once carefully worked out, to be just as wide in its scope.



“IN REGARD to the statement in an American paper,” said Mr. John Donogh, “that heavy purchases of Canadian pine of common grades by American lumbermen, has forced down the price of Michigan pine in the eastern markets about \$1, I don't think there is anything in it. We are into these markets all the time, and our experience has not shown us that any such reduction exists, when one wants to buy. About home-trade, August has been a dull month, so much so that we have called in our salesmen, but we could hardly look for anything else in the country with farmers very busy. I think that trade will be good this fall.”

Among the shippers of Canadian hardwoods, who are doing an encouraging export trade, is James Gordon, of London, Ont. I had the opportunity of a few words with this dealer a week ago. “I ship in considerable quantities,” said he, “to Glasgow. Lately I have been developing a satisfactory trade in broom handles, that gives promise of an encouraging growth. The matter of freights gives us some trouble. The Grand Trunk railway are not as considerate of western shippers as they should be, and when we do bring them any ways nearly to time, it is only after a good deal of pressure.”

I dropped in on Mr. Geo. Hastings, one of our city lumbermen, the same day that the census returns for the Dominion had been published. “The showing is a bad one,” said he. “The money that we have been throwing into worse than sink holes, *vide* Ottawa revelations, wants to be employed in intelligent and energetic ways for peopleing this country. We know where the money has gone, but we don't do anything with the fellows who got it. How you or I would have fixed them if they had played any such business in our offices. But you ask about lumber. Things are dull. There has been precious little doing this summer. I don't anticipate much activity this fall. Even if the farmers have more money than usual, the season is too short for them to do much in building. In any case they have a good many old scores to wipe off, the accumulations of several bad harvests.”

“Selling timber limits to American capitalists,” said Mr. John Bertram, one of the largest Canadian operators, “is not a bad thing for the workingmen. From the day Americans took hold of our limits in the Spanish River section, now some time since, wages of teamsters and other workingmen have been increased. They pay the same wages here, that they have been accustomed to give in Michigan, which is higher than Canadian wages. I have on my desk now a telegram from one of our managers in the north, asking for instructions on this very point. He has a gang of men waiting engagements, but before they will go into the woods they expect the same wages that American firms operating in the section are paying. So you see, the workingmen are really gainers, to at least this extent, through American capital being invested in Canadian timber. Of course a good many logs cut are towed across the border, and our saw mills lose the work on them, but all the money necessary to get them to this point is expended in our own country.” “You ask me,” continued Mr. Bertram, “what stock I take in the agitation for forest preservation. Not much on the lines one usually hears talked. Those who write and talk on the subject seldom have more than a sentimental or theoretical knowledge of the question. I will take them into the woods and show them thousands of young trees, the result of a natural second growth, too young for years to come to cut, but which if allowed to remain unimpaired mean untold timber wealth to the country. The danger is that before these trees reach a period of utility, the bush fire will have gotten hold of

them and this wealth will be wiped out in the flame. The kind of forest preservation that is needed is that which will provide the most complete protection against the fire touching these limits. This is to be done by the government supplying a perfect service of fire rangers. Coming back again to Americans working our limits, they are great people to do things with a rush. An American will clean out the limits he owns in one-quarter the time we do. We are not in so great a hurry as he is to get the timber all cut. One advantage, however, exists in this method: he lessens the risk of having his limits destroyed by fire. You see there are two ways of looking at nearly every question.”

I heard it remarked in conversation the other day, the reference being to a gentleman recently appointed to a high position in the affairs of the country, that it would not be an easy matter to approach him for information concerning his particular department. He was set down as a pretty gruff fellow, and if he did not feel ‘right,’ he would make short work of those who might have occasion to do business with him. It is a misfortune, it occurs to me, for any man to be so built, and especially a man, whose position makes it necessary for him to meet frequently with his fellow men. All this is by the way, suggested by an interview I had a few days ago with Aubrey White Esq., Ass't Commissioner of Crown Lands for this Province, who is one of the men, that is not built after the fashion here described. A most affable and come-at-a-bleman, he is on this account, as well as for his special qualifications, eminently fitted to occupy the important position of Deputy-Administrator of Crown Lands. Mr. White had only returned a few days from a tour of inspection in the Rainy River territories, and I was anxious, in the interests of LUMBERMAN readers, to obtain his impressions of this country. “Our main purpose in taking the trip,” said Mr. White, “was to learn for ourselves the ‘lay of the land,’ and from actual observation, to be able to speak of the conditions, resources and possibilities of these territories. The party consisted of four, the Hon. Commissioner Hardy, Provincial Secretary Hon. J. M. Gibson, A. Blue, Esq., mining director, and myself. We were all immensely pleased with appearances. The lumbermen report having had a good season's trade. They ship altogether west of course into Manitoba and the Territories. And whatever they may have done hitherto, they are enthusiastically hopeful of the trade ahead of them. These hopes are built on the great crop of this year—if it is not blighted any way by frost. It was a mark of almost every one, as nightfall would appear ‘I wonder if we will have frost to-night,’ and when I consider the immense interests at stake, not simply local, but as affecting the whole country, we can all appreciate the burden of this thought. I do not know that the effect has been felt to any appreciable extent yet, but the trade in lumber in that section being confined to Manitoba and the Northwest Territories, one can foresee a possible glut in the market, or a cutting of prices to a dangerous extent, if British Columbia lumber should be pushed with too great energy into these provinces. I don't think, however, that there is any doubt, but that the product of this province better meets the requirements of the Manitobians. Yes there is a lot of timber in this section. I dare not commence to put it in figures the quantity is so great. There will be a large cut this year. I was surprisingly impressed with the conditions of the land in the Rainy River section. It is an excellent farming land, and I should say capable of producing a gratifying yield. Truly we do not know what are the resources of this Province.”

I came across an interesting representative of the lumbering industries of this country a few days ago. By name, J. McDonagh; residence, Thorold, Ont.; birth, an Irishman, and a typical son of the Green Isle; a man who can go back in lumbering in this province a full half century. “Yes,” said he, “I cut plank for the old Welland canal locks, as far back as 1843. I commenced business on my own account in 1854, and have been at it ever since. My trade in those days was largely with ship builders; our shipments went to Ogdensburgh, Oswego and Kingston. But there is no

money now to the lumber trade in ship building. Iron has taken the place of wood. Our cut was chiefly of oak timber, though in my time I have cut millions of feet of pine.” Mr. McDonagh's early years were surrounded with no small measure of romance and adventure. “I read with interest,” he remarked, “what you tell in the columns of THE LUMBERMAN each month of the work of Mr. Donogh and other modern representatives of the trade in Canada. I want to meet these younger men some day and have a chat with them on lumber matters. I tell you what, they had not the hardships to put up with that fell to the lot of the early settlers in this country.” In 1849 Mr. McDonagh was taken bad with the California gold fever. “Forty-two years ago,” he continued, “I crossed the plains of California. With some others I made the journey on foot from St. Jo to the Sacramento Valley. That's work for you. In 1850, the day the battle of Waterloo was fought, sixteen of us, all British subjects, stood on the highest summit of the Rocky mountains and had a grand view of the country around us. I was four years in California, and for two years, outside of our own party, there was not a man who could speak English. Never was a day sick all the time I was away.” Mr. McDonagh is an enthusiastic Britisher, and says he was glad to return to British soil, which he did at the end of four years, located again in Thorold, and has run a saw mill there from that day to the present. All who struck the California fields in the 'fifties did not come back rich men. Our Irish friend gathered in a good deal of the “dust” of those days and brought it along with him to Canada.

The account in this page last month of the “wonderful find” of the bone of a buffalo that had been incased in the heart of a tree cut in the Assiniboia section a short time since, which had been there for 170 years has started several curious “finds.” Mr. E. C. Grant, manager of the Ottawa lumber Co., of Ottawa, writes that he has in his possession an old Indian tomahawk, which has the following history attached to it: One afternoon while a white pine log, about 25 inches in diameter, was being run through the stock gate, it was noticed that the saws had come in contact with some hard substance in the log breaking a couple of the teeth and otherwise damaging the saws. The man in charge of the gate, immediately stopped it and had the log drawn out. When it was cut into he expected to find part of a cant dog or something of the sort, but after cutting well into the center of the log, what was his surprise, to find embedded near the heart an old Indian tomahawk, which had evidently been left sticking in the tree, which had grown completely round it. On either side of the tomahawk can be noticed the grain of the wood which has eaten well into the steel, and on the top are the cuts where the saws had worn into it when the log was being cut. By information obtained from different sources, it has been ascertained that, from the old-fashioned pattern of the tomahawk, and the depth that it was embedded in the log, that it must have been stuck there at least seventy-five years ago. The story comes from Galt of a large silver maple recently cut on one of the streets of that town. The heart was found to consist of a stick, about the size of a walking stick. How the stick got there is a mystery, but having by some means done so, the tree appears to have grown round it, taking it completely in, but keeping it distinct and intact from the new wood with which it was surrounded. A short time ago a large pine log was being sawed at the Jesse Cox's saw mill, Seymour, Ind., when the saw struck some hard substance with a clash. The engine was stopped and the side of the log was chopped into and a whole horseshoe was found, the outer end of which had been struck by the saw. The tree had been sawed down in the old Fair grounds in the north-east part of the city. The shoe was located about three feet from the end of the log, and there were twenty-six yearly growths over the outside part of the shoe, so that it is safe to say that the shoe was nailed to the tree for a hitching place for horses not less than forty years ago. The outside of the tree was smoothly grown over, and there was nothing to indicate the hidden shoe save an indistinct snarl in the bark. Who says there is nothing interesting in the life of a lumberman?

QUALIFIED AS CULLERS,

NAMES OF THOSE QUALIFIED TO DO BUSINESS UNDER THE ONTARIO CULLERS' ACT.

THE following have passed the necessary examinations and are recommended as possessing the requisite skill and knowledge to warrant their being licensed as saw-log cullers under the provisions of the Ontario Cullers' Act. The examinations were held at the towns and cities named below:—

At Arnprior—Wm. G. Austin, Renfrew; John L. Bremner, Admaston; W. H. Bromley, Thomas Bromley Pembroke; George R. Baulke, Aylmer; W. G. Boland, Eganville; Hyacinthe Caillin, Arnprior; John A. Campbell, Galetta; James R. Campbell, Pembroke; John L. Close, Arnprior; Patrick Drum, Belleville; Patrick Draper, Quyon, Que.; John Ellis, Westmeath; Alex. Ellis, Arnprior; Wm. A. Fraser, Pembroke; Wm. Fairbairn, Calabogi, Alex. Fraser, Westmeath; H. A. Fraser, Foster Fraser, Pembroke; Nelson Guertin, Petawawa; Robt. W. Gordon, Noah; J. Gaveau, Pembroke; Densmore Hopkins, Abram Hopkins, Kingston; Dennis Halferty, Eganville; Thos. A. Low, Renfrew; Michael Mulvihill, Arnprior; Andrew Moran, Rockingham; John Mulvihill, M. J. Monaghan, John B. Monaghan, Arnprior; Benjamin Mason, Westmeath; Edward Mackey, Alex. McLaughlin, Peter McLachlin, John McPhee, Arnprior; Hugh McPhee, Renfrew; Wm. B. McKendry, Arnprior; Duncan McFarlane, Renfrew; J. D. McFarlane, Stewartville; Alex. McFarlane, Renfrew; Alex. McNabb, John C. McManns, Arnprior; Peter W. McLean, Sand Point; Duncan McGregor, Burnstown; Donald McCallum, Arnprior; Robert Niblett, Osceola; James Niblett, J. F. Richie, Robert Ramsay, Robert Scrim, Wm. F. Sinn, Arnprior.

At Belleville—F. G. Richardson, M. P. Kinsella, C. M. Richardson, Peter Pomery, John Loso, Frank Jay Golden, C. T. Marsh, A. J. Campbell, Trenton; James Hart, Gilmour; Dennis Callaghan, James Manning, Trenton; Norman A. Green, Gilmour; Thomas James Barry, Hastings; P. J. Andersen, Campbellford; A. E. Simpson, Lakefield; Joseph Clarendon, Campbellford; Timothy Kenny, Enterprise; John McIlroy, Madoc; J. A. McWheeler, Richard Richards, Tamworth; Henry Kirk, Trenton; Wm. Scanlan, Enterprise; Philip Martin, Stoco; John Kirby, Belleville; Robert Kennedy, Marmora; Middy Lenayre, Campbellford; James Hayes Enterprise; John Grant, Flinton; Alex. Howe, Queensborough; Thos. Barry, Millbridge; Frank McEvoy, Campbellford.

At Bracebridge—D. C. McKay, Baysville; Finlay Johnson, James Carson, Bracebridge; James T. Bayley, J. C. Anderson, D. H. Sutherland, Gravenhurst; Evan Richey, Brentwood; Dugald McLeod, Gravenhurst; John McEachren, West Gravenhurst; Joseph Chew, Gravenhurst; James D. Shier, Bracebridge; C. N. Taylor, Gravenhurst; R. H. Salmon, Baysville; John Hutton, Hutton House, Wm. E. Hutcheson, Robert Lee, John Spanner, Huntsville; B. F. Kean Orillia; W. R. Spooner, Katrine; W. D. Thornton, Longford Mills; Geo. F. Morris, Frank's Bay; T. J. Doyle, Eau Claire; J. Q. Adams, Longford Mills; M. M. Anderson, Almonte; Job E. Smith, Chache Bay; J. S. Morris Hoff, Arnprior; James S. McPherson, Rama; Geo. J. Overend, Longford Mills; John W. Millar, Huntsville; John Dickson, Sundridge; Hector D. McInnes, Daniel McLean, Malcom McKinnon, Thomas Pattinson, Bracebridge; Thomas B. Tait, Walter Freeston, Burk's Falls; Edwin B. Appleton, Bracebridge; Peter McDermott, Orillia; Singelton Brown, Bracebridge; James Latimer, Frank's Bay; T. A. Roberts, Huntsville; T. W. Humphery, Gravenhurst; Abm. Boland, Cartier; R. O. Miller, Gravenhurst; Archibald Menzies, Burk's Falls; Gilbert Truster, Trout Creek; Robert Jackson, Brechin; Archibald McKinnon, Bracebridge; J. W. McFarlane, A. J. Young, Cache Bay; Alfred Lloyd, Severn Bridge; James D. Allan, Bracebridge; Wm. Young, Severn Bridge; Mark Malloy, Baysville; Frank Newton, Gravenhurst; Wm. Watson, Huntsville; Andrew Ross, Longford Mills; Mark Longford, Baysville; Robert Campbell, J. M. Campbell, Bracebridge; John Humphrey, Gravenhurst; Ridley Appleby, Katrine; Robt. D. Brown, Port Sidney; Asa Mutchener, Rosseau Falls; A. C. Train, Rowan Mills.

At Mattawa—William O'Connor, Nobsong; John Tuffy, Cartier; James W. O'Neil North Bay; Napoleon King, Mattawa; Silas Brown, Klocks Mills; William Durrell, Nobsong; Ferdinand Kelly, Mattawa; Samuel Volin, Nobsong; Christopher L. McCool, Cartier; Wm. J. Snaith, Sidney C. McDonald, Mattawa; Francis Henry Thompson, Nobsong; Lewis McNamara, Klocks Mills; Andrew P. Ebert, Pembroke; Daniel A. McIntyre, Klocks Mills; John Anderson, Cartier; Alex. B. Gordon, Pembroke; Fred. A. H. Thompson, Gallander; Wm. A. Fraser, Mattawa.

At Ottawa—Henry Bell, H. M. Beach, John E. Luby, W. P. Malone, L. R. Kirby, James Riddell, Ottawa; George A. Riddell, Rochesterville; George Spargo, J. B. Soulière, Ottawa; James A. Sheels, Carleton Place; A. Carruthers, Hintonburg; Paul F. Blanchet, Andrew Albert, John W. Durrill, Ottawa; Wm. McCormack, Pembroke; John McPherson, Ottawa; Roderick

McDonald, Pembroke; Milton Knox, Andrew O'Brien, James McFadden, Wm. J. Culder, Ottawa; John O'Connor, Hintonburg; Wm. G. Purcell, Ottawa; James G. McIntosh, Carleton Place; Chris. McKay Forbes, McLaren's Depot; F. W. Brooks, Mackey's Station; J. C. Cole, James Locknan, Ottawa; Joseph R. Hogarth, Pembroke; W. H. Farrell, Ironside, Que.; Arthur Green, Alfred Allen, Joseph W. Ward, A. Stremer, Ottawa; A. A. Rice, Hull Que.; D. B. Rochester, Ottawa; L. Loughrin, Pembroke.

At Parry Sound—W. H. Lynch, Collingwood; F. A. Laurie, Parry Sound; E. C. McKinlay, Toronto; Geo. M. Aikins, French River; Louis W. French, Bying Inlet; William Wilkinson, French River; James Ludgate, Peterboro; A. H. Hucksion, John E. Waldie, French River; Percy J. Vigrass, Dufferin Bridge; William Cameron, Collins Inlet; R. W. George, R. W. Danter, John Gardiner, Parry Sound; Dean Udy, French River; Samuel E. Green, William Newburn, Jacob Lutz, Parry Sound; Edwin Hurd, Hurdville; James McDonald, John McClland, Parry Sound; P. K. Perry, W. F. Smyth, Bying Inlet North; Thos. H. Irwin, Geo. W. Webb, R. H. McClland, W. B. Beatty, Parry Sound; Louis G. Randall, D. Kitchen, French River; Robert J. Clarkson, Robert J. McNabb, Thomas Wilcox, Parry Sound; Peter F. Sheehan, Loring; John Purvis, W. S. Bird, J. H. Linton, E. Clair Fitzgerald, Frank A. Shields, Parry Sound.

At Penetanguishene—Thos. B. Shaw, Waubashene; J. M. Bird, Muskoka Mills; David Hall, Lovering; A. D. Grosette, Muskoka Mills; George Ross, Waubashene; Robert Caan, Midland; J. F. Beck, Penetanguishene; J. C. McFailand, Port Severn; August Groupe, Penetanguishene; Geo. Murray jun., Waubshene; C. E. Dawson, W. J. Lovering, Robert Buchanan, Coldwater; J. P. McDonald, French River; Nelson Sage, T. G. L. Barnes, Muskoka Mills; A. Jones, Victoria Harbor; Allen McPherson, Longford; Joshua Hill, Midland; A. G. Breed, Penetanguishene; Edwin Letherby, Midland.

At Peterboro—George Lenton, Peterboro; John J. Pearson, Lindsay; James Aylward, John C. Bell, Peterboro; Thomas Sadler, Lindsay; Thomas Johnson, Bobcaygeon; William Simpson, Hall's Bridge; Charles Hartley, William Maniece, Peterboro; George Murray, sen., Waubashene; Nathaniel Crowe, Bobcaygeon; John Coburn, Lindsay; Owen Fortune, Trenton; James Porter, Uphill; George Cochrane, Martin W. Brandon, James Swanson, Peterboro; Maurice Lane, Bobcaygeon; Edward McGrane, Lindsay; James Goulais, Peterboro; Thomas Chamberlin, J. P. Davis, Bobcaygeon.

At Port Arthur—Archibald M. McGillivray, Wm. J. Margech, Port Arthur; Joseph Maughan, Fort William.

At Rat Portage—Donald McLeod, jun., Keewatin; Wm. Murray, Rat Portage; John L. Archibald, Percy T. Roberts, Charles Grayson, Keewatin; Alexander Cameron, Patrick Albert Smith, Archibald M. Johnston, David Fraser, Norman; Donald M. Rose, Robert Hamilton, Hugh Carson, Thomas A. Magee, Richard J. Morgan, Rat Portage.

At Sudbury, Spanish River Mill and Sault Ste. Marie—Richard S. Donally, Sudbury; Joseph Vincent, Warren; Peter P. Munroe, Commanda; George W. Bartlett, Warren; John C. McCormack, Sudbury; Alex. D. McNabb, Warren; Edward G. Graham, John Paterson, Charles Ford, Wahnapitac; Henry C. Gladstone, James Mindoch, Cook's Mills; Wm. Cassidy, John R. Wells, Charles Anderson, Little Current; John K. Cameron, Spanish River; Melvine Carson, Little Current; John France, Collins Inlet; Duncan McDougall, Bracebridge; Alex. R. Dobie, Blind River; Robert Garson, Thessalon; P. B. Wall, Cheboygan, Mich.; James M. Adams, Sault Ste. Marie; Thomas G. Wigg, John F. Boyd, Stephen W. Crawford, Alex. McNabb, Thessalon; George S. Thompson, Lindsay; Darcy Oliver, Wahnapitac; Jeremiah Kelly, Sudbury; Frank R. L. Chrysler, Webbwood; Hector R. McDonald, Thessalon; Wm. D. Ritchie, Little Current; James Griffin, Spanish River; Duncan D. McGillivray, Algoma Mills; Archibald J. Campbell, Little Current; Wm. Devine, Cook's Mills; John McNamara, Bying Inlet.

IT IS poor argument to say, because mills and factories well equipped with fire extinguishing apparatus, occasionally burn, that it does not pay to put in such apparatus. Hundreds of fires are thus extinguished every year, of which nothing is heard; whereas, had the places in which they started not been prepared for fire, the loss of entire establishments would have resulted. Good mill management demands the most effective fire extinguishers obtainable.

Twenty-five per cent. economy in the use of steam does not mean the same degree of economy in fuel. Owners of steam plants have been deceived in this way and very often look upon meritorious devices with suspicion because they did not use one-quarter less coal after buying a device recommended as above.



THE QUESTION OF DUTY AGAIN.

Editor Canada Lumberman. As you are aware, the lumbering industry in Algoma is one of its most important industries, and being desirous of seeing this industry prosper and become as beneficial to Algoma as possible, I would be pleased to receive your opinion upon the probable effects of free trade between this country and the United States in all lumber believing you to be intelligently informed on this and all matters touching this particular industry. At present our millmen are encouraged to sell the logs, instead of cutting them into lumber, to the Americans, owing no doubt to the difference between the American import duty on lumber and the Dominion export duty on logs. I believe some ninety million feet of logs have been already exported to the United States mills to be sawn. Supposing there was free trade between the two countries in lumber and logs, or, in other words, the American import and Canadian export duties were removed, do you think it would encourage American mill men to move their mills nearer the limits and ship the lumber by vessels, or would it have the effect of sending more logs to the American mills to cut there? Would it be cheaper for the American lumbermen to tow their logs over there or cut the logs up here and send the sawn lumber over there in vessels?

Hoping to hear from you soon and trusting I am not intruding too much on your valuable space.

Thessalon, August 25, 1891.

ALGOMIAN.

BLACK TEAK IN AFRICA.

VARIOUS writers who have visited Africa attest the enormous wealth of the forests of the country, which seem to abound in valuable hardwoods. Among other woods a recent writer mentions the African black teak. To quote his language: "The black teak is an entirely new wood. It has the full appearance of teak in tree, leaf and bark, grain or growth. But it is nearly a dull black color, and splits just about the same as the yellow teak. What I have seen of it has been in small trees, but I am told that there are large forests of it up the Kasiah river, mostly trees in size of from 12 to 20 inches over the stumps, ranging from 20 to 60 feet to first limbs. This is the timber chosen by the natives for bows and arrows, spear handles, paddles and anything where a good tough piece is needed. I consider it a better timber for spokes, felloes, handles, etc., than the best American hickory or oak, or white ash, as it is very hard when green, dries still harder, and is not much of a timber to warp. I have used it on axe handles and other places for over a year, and it has proven far better than the best imported split axe and shovel handles. It is very spring, and that is why it is used for bows and spear handles."

An engineer has reversed the method of cleaning out boiler tubes. Instead of pushing the soot with a scraper, or blowing it into the back connection, a device with a tapered nose fits snugly into the tube at the front, which draws the soot from the tube and forces it along to the stack. The device is shaped something like a steam jet with a circular opening, steam blowing through the device and inducing a strong draft through the particular tube being operated upon. In this draft the tubes are cleaned of all loose deposits. The draft is strong enough, it is said, to pick up pea coal and eject it fifty feet."

COMPETENT Sawyer required to handle lever on circular. Address, giving experience and references. THE RATHBUN CO., Deseronto, Ont.

GANG Saw Filer wanted—must be good. Address, giving experience and wages, THE RATHBUN CO., Deseronto, Ont.

THE NEWS.

ONTARIO.

—Lumbering is brisk at Petawawa.

—Rankin's mill at Brunel is running over time.

—D. W. Hawkins, saw mill, Grey Eagle, has sold out.

—The tug Shawanago is towing logs from Spanish River.

—Bush fires are plentiful in the vicinity of Maidstone, Essex Co.

—The last drive of logs for the season, on the Petawawa, is down.

—The saw mill at Edgar, which had been closed for a time, is in full operation.

—The mill at Thessalon is running short of logs and may have to close down.

—Messrs. Perley & Pattee, of Ottawa, have a full gang working in their mill.

—The B. S. L. Co's saw mill at Parry Sound, has shut down for want of logs.

—C. Young of Young's point is cutting lumber for the Edison Works, Peterboro.

—The Utterson Lumber Co., of Utterson, have sold their store to a Mr. Brock, of Toronto.

—A shingle machine in Thompson's mill, Orillia, has made a record of 218,000 cut in one week.

—The demand for lumber in the Algoma section is reported on the increase and prices on the rise.

—The Crossfield mill at Sturgeon Bay, is running again after having been shut down for repairs.

—A Warton dealer has the contract to supply a London firm with 100 carloads of cedar for paving.

—It is estimated that the cut of lumber at the Chaudiere this year will not be one-half of last year's output.

—Seaman & Newman, of Warton, are supplying 1,250,000 feet of square timber for use on the "Soo" canal.

—It is said that about 90,000,000 feet of lumber will be taken out at the back of Spanish River next winter.

—W. S. Greensides, formerly of Mitchell, has removed to Mount Forest, where he will erect a land saw mill.

—Buel, Orr, Hurdman & Co., of Ottawa, have thousands of logs, which cannot be brought down until next spring.

—The Saginaw Lumber Co. have started work in the vicinity of Whitefish, giving employment to a good force of men.

—Buel, Orr, Hurdman & Co.'s new mill on the Chaudiere, which has been idle all summer has commenced work again.

—On the 10th ult. Mr. Chas. O'Neil left Ottawa for the Kippewa, in charge of thirty men engaged for Perley & Pattee.

—Two saw mill proprietors of Nelson have been fined \$20 each for depositing saw dust and mill refuse into Kootenay lake.

—The new shingle mill erected on the site of the one burned down some time ago at Sturgeon Bay is now in active operation.

—Wm. Peter, lumberman of Bay City, Mich., has a representative in Canada just now looking for "good bargains" in Canadian lumber.

—James Johnston, who lost his mill at Utterson by fire in the early spring, has bought a mill site at Rat Portage and is building a shingle mill.

—D. Bellegem, furniture manufacturer, of Peterborough, has purchased the season's cut of elm lumber of C. Young, of Young's Point.

—A boom of logs belonging to McLachlan Bros., of Pembroke, was broken by a wind storm a week ago and sent dashing down the Chats Rapids.

—A large raft of extra fine square timber, the property of Thistle, Catswell & Francis, has created more than ordinary interest at the Ottawa docks.

—E. B. Eddy's big mill, Ottawa, is being altered beyond recognition. A portion of the machinery for the new paper mill has arrived from Vermont.

—The Rathbun Co., of Deseronto, have bought 1,875 acres of timber and mineral lands in the township of L'Anson, on the Kingston and Pembroke railway, for \$8,000.

—"Bald Monroe," the able bodied shantyman, of the Upper Ottawa, has completed the work of getting out the drives under his management. He reports the work heavy.

—C. Young, of Young's Point, has sold his season's cut of basswood to Rathbun & Co., of Deseronto. The season's cut of shingles amounting to nearly 700,000 he has sold to a Montreal firm.

—D. H. Cameron & Co., of Ottawa, have secured a site at Liverpool, Eng., and will shortly commence the erection of a large saw-mill to work for both local and export trade.

—Hurdman & Co., of Ottawa, have dispatched a gang of forty-five men to their limits on Laville Creek, up the Kippewa river. The rate of wages being paid is from \$16 to \$22 a month.

—About seven hundred cars of lumber, posts, ties, etc., are handled every month by the yard department of the Rathbun Co., of Deseronto. This excludes all such material moved by vessels.

—Rumor saith that a big American lumber concern of Maine, will remove their entire lumber business to Owen Sound in consideration of a certain grant of land from the municipality.

—Recent rains have helped the drives in the Rainy River section. All drives have now been able to get through, and the drives of Saunders, on Little Forks, of six or seven millions, hung up since the spring, are coming down.

—The Penetanguishene *Herald* states that from July, 1890, to July, 1891, over 16,000,000 feet of lumber have been shipped from that port to the United States. This does not include shingles or lath, of which large quantities have been sent to the same market.

—The schooner *Niagara*, laden with lumber for Burton Bros., Barrie, and bound for Owen Sound, which went ashore about a month ago during a heavy gale, is a complete wreck, all efforts to release her proving futile. The vessel was owned by Robt. Baird, Kincardine.

—Following is the estimated cut of the Lake of the Woods mills for the present season in feet:—

Keewatin Lumber Company.....	12,000,000
Minnesota & Ontario Company.....	12,000,000
Cameron & Kennedy.....	10,000,000
Dick, Banning & Co.....	10,000,000
Western Lumber Company.....	8,000,000
Ross, Hall & Brown.....	8,000,000

These are given as close figures, and may be exceeded before the season is over. The mills are all running briskly, and the demand is large. Cameron & Kennedy operate the Bulmer mill, in addition to their own, the cut in the two mills being included in the figures for this firm. This accounts for the total seven mills on the lake.

—A despatch from Peterborough says:—For several years past there has been dissatisfaction amongst the saw mill owners on the Otonabee and Indian rivers with the water supply. A few years ago a new high dam was built at Young's Point which held the water back in Stony lake, and the Otonabee men claim that since that time a large share of the natural flow into the Otonabee has gone into the Indian river, while the latter interests claim that they are not receiving their former supply, but have had to shut down their mills from lack of water. Superintendent R. B. Rogers got about twenty of the mill owners together the other day, but after discussing the question no conclusion was arrived at. Well-informed persons say that the only way to make the supply of water last is to make reservoirs of the upper lakes which empty into Stony lake. The Government will soon have to deal with the matter.

—In the action of the Parry Sound Lumber Co. against the Victoria Harbor Lumber Co., a motion for an injunction was to have been argued before Mr. Justice Meredith, at Osgoode Hall, but the action having been settled by the parties an order was made in the terms of the settlement. The dispute arose in regard to floating logs down the Seguin River, which flows from Mill Lake to Parry Sound Harbor. The plaintiffs had some 2000 logs to take down the river and the defendants about 38,000. The river is narrow and only one drive can go down at a time, and all logs in the river go with it and are assorted at the Harbor. The plaintiffs' mill is situated near the mouth of the river and when the drive, being brought down by the defendants, came to the plaintiffs' mill they wanted their logs sorted out and left there. The river at this point is only 100 feet wide, and the defendants refused to comply with the request on the ground of inconvenience and expense and proceeded to take the drive into the harbor. Some 10,000 logs had been got down when the local judge issued an injunction restraining the defendants from proceeding with the work. By the settlement all logs are to be taken down to the harbor and then the plaintiffs' logs by means of a jack-ladder are, at the defendants' expense, to be turned to the plaintiffs' dam.

—The following is believed to be the basis of settlement between the Ontario Government and the Keewatin Lumbering and Manufacturing Company, generally spoken of as the Mather islands claim. Tunnel Island, situated between the east and west falls became the property of the company, but they are required to expend within three years one hundred

and fifty thousand dollars in improving the water power and on demand of the Government, though not necessarily within the three years, a further sum of one hundred thousand dollars. In addition to Tunnel island twenty acres on the main land north of the track and immediately west of the rapids near Norman is given to the company. Part of the proposed improvement of the water power will be the building of a dam at the west of Norman rapids about fifteen hundred feet below the railway bridge. One very important condition, and in one sense the most important one, in the agreement is that the Ontario Government is to have direct control of the rates that may be levied for the water power, thus preventing any dog in the manger policy in the matter of encouraging any proposed manufacturing establishments. As regards Coney Island the Mathers will be granted one acre each for certain of the summer cabins erected by them but this will under no circumstances cover those put up this season and it is believed that the number covered by this agreement will not exceed six or seven. They do not get Sandy Beach. Mr. Wm. McCarthy who claims Coney Island, interviewed the Minister and received satisfactory assurances from him that his claim would have special consideration, and it is believed he will get the greater portion of what he claims. Captain Brereton will also be granted his claim to the point at present occupied by him.

BRITISH COLUMBIA.

—C. M. Beecher of New Westminster, becomes manager of the Hastings mill at Vancouver.

—Martin Bros. contemplate moving their saw mill from Harrison River to Hope Slough shortly.

—The Canadian Pacific Lumber Co., New Westminster, have sold out to Ewen, McCormick & Scott.

—Large gangs of loggers have gone north, as far as Port Neville, to commence operations at the various camps.

—The Chilean barque *Hinoitan* is on her eighth trip to South America. She is loaded with lumber from Moodyville.

—Elmer Ward of the recently established shingle mills on the North Arm is building a tugboat to run in connection with his mill.

—The owners of the Mission City townsite are offering inducements to parties to erect and operate a saw and planing mill at that point.

—Cassidy & Co. of Vancouver have received a shipment of about 25,000 feet of redwood from California. It is to be used for mouldings.

—There is some talk of the establishment of an extensive saw mill at Esquimalt, under the auspices of certain Moodyville and other capitalists.

—Galbraith & Sons, new sash and door factory at New Westminster is about completed and work will be started with a number of good orders already booked.

—The Revelstoke Lumber Co. mills are busy in getting material out for the northwest, an order for 15 carloads has been received and numerous smaller orders are being filled.

—A. J. Jamieson, from Ontario, is looking over timber limits here with a view of locating a saw or planing mill at Mission City, with a capacity of 50,000 feet per day.

—The sawmill on the Southern side of LuLu Island is doing a considerable business. This mill will shortly be supplanted by a large mill, preparations for which have already commenced.

—The prospectus of the British Columbia Paper Co. (Ltd.) just issued, states that the proposed capital is to be \$50,000. A site for the mills has been selected on first rapids of the Somas River.

—Though some of the mills on the coast are closed down the Hastings mill is still in operation and announce that they will continue running. They have a large order in from Yokohama, Japan, for shipments by next boat.

—Mr. F. M. York, of the Puget Sound and B. C. Stevedoring Company, who has been the company's manager at Victoria for some time, has been transferred to Vancouver, where he will replace Mr. Betts, who goes to Tacoma.

—The barque *Lenor*, which has been loading lumber at the McLaren-Ross mills for several weeks has finally completed her cargo and will leave immediately for Melbourne, Australia. She carries 628,000 feet of assorted lumber.

—The British Ship *Leading Wind*, sailed from Moodyville 5th ult for Melbourne, Australia with the following cargo: 763,443 feet of rough lumber; 2,500 bds laths; 8,679 bds pickets—valued at \$7,326. Deck load consisted of 76,879 feet.

—It is stated that another Stevedoring Company will enter the field to compete for British Columbia work. The head quarters of the company is Port Townsend, but they will contract for the discharging of all vessels in all Puget Sound and British Columbia ports.

—A tax of fifty cents per 1,000 feet of lumber got out from this province has always been charged as "stumpage tax," but in accordance with an order-in-council, dated the 27th of November, 1888, a rebate of 25 cents was allowed on every 1,000 feet exported from the Province. A notice is now inserted in the British Columbia Gazette stating that the rebate on the royalty received from lumber exported will be discontinued, the new regulations coming into effect on the 31st ult.

—Mr. L. Woods has returned to New Westminster after an absence of three months with a survey party in the vicinity of Fort Rupert. Mr. W. E. Deveraux, of Victoria, was in charge of the party, which consisted of sixteen men, with Mr. Woods as head chainman. They were absent three months and experienced a rough time. The same party leave Victoria again in about a week's time for the west coast of Vancouver Island, and will be absent about nine months on the same mission.

—The nominal rates for lumber charters are quoted as follows: From Burrard Inlet or Puget Sound to Sydney, 50s; Melbourne, Adelaide or Port Pirie, 60s to 62s 6d; Shanghai, 62s 6d; West Coast of South America, 50s to 55s. For coal freights, presents quotations are: Nanaimo or Departure Bay to San Francisco, \$2.50; to San Diego and San Pedro, \$2.50 to \$2.75. Grain freights are quoted from Puget Sound to U. K., 42s 6d, to 45s; from Portland, 50s, and from San Francisco 40s. to 42. 6d.

—Two old fir log water pipes were unearthed in Victoria by the men engaged in the sewer work. They were found about four feet below the surface, near the corner of Bastion and Government streets. The two pipes were remarkably well preserved. They were laid 37 years ago and were made at Hope mill, a few miles from Yale. They are fir logs, bored out with a diameter of about four inches. The old-fashioned water pipes have served well their purpose and now will be carefully treasured as relics of an early day in Victoria's history.

MANITOBA.

—A lumber yard has been started at Rosenfield.

—Slater & Anderson, of Napinka are doing a good trade in lumber. A Mr. Kose of Rat Portage, it is said, will open another yard here this fall.

—The royalty upon lumber manufactured from burnt timber on licensed lands in Manitoba and the Northwest has reduced from 5 to 2½ per cent.

—A despatch of 10th ult from Seikirk says, that the steamer Red River, just arrived there, experienced rough weather on Lake Winnipeg and lost a barge of 155,000 feet of lumber belonging to Brown & Rutheford. Three Indians on the barge were rescued with great difficulty.

—One of the pioneer firms of Winnipeg, is Dick, Banning & Co., manufacturers of lumber, shingles, and lath, which was established in 1872. Their mills are located at Keewatin, covering an area of 30 acres, and is one of the best equipped in the country. The plant consists of the saw mill, planing mill, lath mill, and dry kiln, the latter being the only one in the country, and has a capacity of 90,000 feet of lumber. They own 100 square miles of timber lands, located on the tributaries of the Lake of the Woods and Rainy river, and operate two steam boats which tow the logs from the camps to the mill. Employment is given to about 100 men at the mills, while a like number find employment in the various camps. The mill has a capacity of 10,000,000 feet of lumber per annum, and the product which consists of rough and dressed lumber, shingles, lath and mouldings, is shipped all over Manitoba and the northwest territories as far west as Regina.

NEW BRUNSWICK.

—John C. Risteen, of Hartford, Conn., has been here in the interests of the American bobbin, spool and shuttle company. He has been looking up birch lands with a view of ascertaining whether it will pay to erect mills to cut spool wood.

—E. D. Jewitt & Co., lumber operators and mill owners, St. John are in financial difficulties, occasioned by the embarrassment of the Boston Branch of the firm conducted under the name of Glendon company, which handled and manufactured their New Brunswick output. Jewitt & Co. cut most of their logs on the tributaries of the Upper St. John and operated a mill at Millidgeville.

—A new industry has been started at York Mills by A. W. Little. Finding a poor supply of lumber for his mill, he has begun the manufacture of excelsior. Poplar wood of which there is a large growth near his mill, is used in the manufacture of this material, which is packed and shipped from Prince William station. The business is paying well and it is likely to be continued for some time.

The saw mill of Robert K. Jewett, of Kesinck, N. B., was destroyed by fire a few weeks ago.



—Over 100,000 trees in forest reserves in South Australia have lately been destroyed by grasshoppers.

—Dynamite is being resorted to in breaking up log jams in many United States' streams, and with it is said, good results.

—Mr. Gladstone is not the only famous woodman. It is reported that the Czar of Russia is very fond of woodchopping.

—The Wilkin Manufacturing Company, makers of saw mills and general milling machinery at Millwaukee, has assigned. The assignee's bond has been fixed at \$400,000.

—A Pacific coast timber and lumber dealer who located a mill in a South American state vows that brush will grow there a height of six feet in one day succeeding a night's rain.

—According to the *Graschdanin* the new law permitting Russians to acquire property in Finland is causing a considerable export to the latter country of wooden buildings in Russian style.

—Under the reciprocity treaty with Spain covering trade with Cuba and Porto Rico, United States' lumber which has heretofore paid a duty of from \$4.60 to \$5 a thousand is admitted free.

—It is said that every month adds from one to three dozen new mills to the number already established in the Pacific northwest, and of these nearly two-thirds are built in Western Washington.

—At Fleming's mill, San Bernardino, Cal., recently was cut a pine log from which 18,334 feet of lumber was cut. The average price of this lumber in San Bernardino is \$20 per thousand feet.

—Enormous fires have been raging in the forests in the vicinity of Toulon, France, and a great quantity of valuable timber has been destroyed. Three thousand acres are already reported as consumed by the flames.

—Padouk, a hardwood from the East Indies, is being used in London, England, as a substitute for mahogany. It is only half the price of mahogany, and some claim that in color, figure, and other qualities it is superior to mahogany.

—Negotiations are going on which may result in the sale of the Mississippi River Logging Company's two saw mills and real estate at Eau Claire river to the Northwestern Lumber Company. The deal would cover property for which the Mississippi Logging Company paid the Eau Claire Lumber Company about 1,000,000 three or four years ago.

—A World's Fair big tree committee has been scouring the woods of Puget Sound region of Washington for monstrous growths, the Northern Pacific having offered to haul to Chicago the largest stick of timber that can be found in the State. The committee, has measured a good many firs; some standing in a bunch were 10, 11 and 14½ feet in diameter, six feet from the ground, and 100 feet to the first limb. Those of another group were not over nine feet in diameter, but 350 to 400 feet high. A single tree of similar diameter, is said to be 200 feet to the first limb. On the north fork of the Nooksack, is a perfect spruce, said to measure 14 feet in diameter, and on the south fork there is a cedar tree, blackened by fire, that is 21 feet in diameter. The same journal furnishes its readers with an illustration of a pine stump 10 feet high and 25 feet diameter, on which are standing and seated 78 persons.

—A measure has just passed through the French legislature which enacts that on and after March, 1892, import duties shall be paid on all wood goods brought into the republic. On timber in the round, 60 centimeters and upward in circumference, measured at the butt, the duties will range from 75 centimes to 1 franc per 100 kilos. On planks and boards, or hewn and sawn timber of a greater thickness than 35 millimeters, the dues range from 1 franc 75 cent. to 1 franc 25 cent. Sawn wood of smaller dimensions will have to pay from 3 to 2 francs. Between now and the imposition of the dues, there should be a brisk demand from France for all descriptions of wood goods, as the duties saved will represent a very handsome profit. According to returns furnished by the British Board of Trade, the imports of wood goods into Great Britain from the United States during the past half year have amounted to 355,946 loads, valued at £826,999, against 248,368 loads, of a declared value of £851,534, for the corresponding period of last year.

A steady decrease is to be noted, during the past eight years, in shipments of lumber from Saginaw. The total shipments of forest products by water from the Saginaw valley during the last month are as follows: Lumber, 57,394,000 feet; shingles, 14,350,000 pieces, and lath, 3,230,000 pieces. The total shipments thus far this year to August 1 foot as follows; Lumber, 199,325,000 feet; shingles, 38,550,000 pieces, and lath 7,948,000 pieces. Following is the amount of lumber, shingles and lath shipped by water from the valley during the months of July in recent years:

LUMBER.		Feet.
1884	.....	178,638,000
1885	.....	85,387,000
1886	.....	75,623,000
1887	.....	68,849,000
1888	.....	70,082,000
1889	.....	53,862,000
1890	.....	50,554,000
1891	.....	57,394,000

SHINGLES.		PIECES.
1884	.....	27,735,000
1886	.....	11,490,000
1888	.....	11,650,000
1890	.....	8,200,000
1891	.....	14,350,000

LATH.		PIECES.
1884	.....	9,042,000
1886	.....	4,860,000
1888	.....	3,190,000
1890	.....	5,091,000
1891	.....	3,230,000

FIRES.

New Westminster, B. C., has bush fires in close proximity to the town.

Bush fires to a considerable extent are raging in different parts of British Columbia.

For the third time the shingle mill of Abraham Van, Orillia, Ont., has been destroyed by fire.

T. McElwan's saw mill at Bannockburn, Ont., was burned recently. Loss \$2,000. No insurance.

A portable shingle mill, belonging to Mr. Fox, of Millbridge, Ont., was recently destroyed by fire.

Bush fires are raging in South Colchester, Ont. Large quantities of cordwood have been destroyed.

Smith, Malcolm & Gibson's planing mill, Seaforth, Ont., was partially destroyed by fire during the past month.

A small quantity of lumber, the property of the planing mill at Chilliwack, B. C., was destroyed by fire on 18th ult.

The steamer *Alderson*, owned by the Georgian Bay Transportation Co., was burned to the water's edge. Insurance \$6,000.

R. Olmsted, of Walters Falls, Ont., has suffered a severe loss by the destruction of his saw mill by fire. No insurance. Mr. Olmsted will rebuild.

The large saw and planing mill owned by John Smith, of Tilsenburg, Ont., was totally destroyed by fire on the 19th ult. Loss \$7,000. Insurance \$2,000.

On the morning of 20th ult., a fire broke out in the planing factory of Galt, Henderson & Co., this city, and consumed almost the entire building before gotten under control.

PERSONAL.

Mr. J. H. Hart, of Sadler, Dundas & Co., Lindsay, Ont., is on a trip to the Pacific coast and San Francisco.

The LUMBERMAN had the pleasure of a call during the month from Mr. J. L. Eaton, of Orillia, Ont.

Miss Annie A. McLean, daughter of M. G. McLean, manager at Vancouver, B. C. for the Pt. Moody Lumber Co., has been united in marriage to A. C. Stirrett, Esq., of New Westminster.

Mayor Eddy, of Hull, Que., has been ill for several weeks from blood poisoning which occurred in a very simple way. A small pimple appeared on his neck and coming in contact with a patent shirt button, which had accumulated a small quantity of verdigris, blood-poisoning set in. His face and neck were badly swollen.

Hon. A. S. Hardy, Commissioner of Crown Lands, Hon. J. M. Gibson, Provincial Secretary, Aubrey White, Esq., Assistant Commissioner, and A. Blue, Esq., Mining Director, have been on a tour of investigation in the Rainy River District. While at Bracebridge, on 7th ult., Mr. White rescued from drowning two children aged five and fifteen, who had fallen into deep water in the lake. Seeing their danger, he, at considerable risk to his own life, at once jumped into the water and brought them safely to land.

TRADE REVIEW.

Office of CANADA LUMBERMAN, }
Aug. 31, 1891. }

THE GENERAL SURVEY.

IT IS a long day since a brighter future loomed up before the people of Canada than meets them at this time, as they stand on the threshold of a new season's trade. Viewing the landscape o'er from every point of vantage, they can with hopefulness sing 'the long looked for has come at last'.

During the month that is just closed unmolested quietude was the vogue. This can easily be accounted for in the city, for August is the holiday month of all the summer months, whilst in the country everyone has been so busy in the fields that they have had no time to come to town.

Locally trade has been quiet and it is not expected that there will be more than a fair trade done in the city this side of spring. A local firm, carrying on a rather heavy contract business is in deep water.

Perhaps at the close of no season have the yards at all main points been so cleared of lumber. In some cases it is difficult to meet present calls. This fact's influencing our lumbermen to prepare for an active winter in the woods.

No element of noticeable activity marks the lumber trade in the Maritime provinces. The strike of last month is off, and the mills are again running. This much gain has been made during the month.

Business in British Columbia, at the present time, is suffering not alone from the loss of trade in South America, caused by the Argentine trouble, but a depression exists just now in Australia which has a tendency to further circumscribe export trade.

Quotations are as follows for cargo lots for foreign shipment, being the prices of the Pacific Pine Lumber Association. Rough merchantable, ordinary sizes, in lengths to 40 feet, inclusive \$9 per M feet; rough deck plank, average length 35 feet, \$19; dressed flooring, \$17; pickets, \$9; laths, 4 feet, \$2.

UNITED STATES.

Reports for this month from leading United States lumber centres indicate some improvement in trade—though not anything, so far as actual present trade is concerned, to make much noise over.

letter that gives emphasis to this. In Boston and New York lumber would appear to possess the sulks. The condition of the crops has inspired hope, of course, that had no existence at all hitherto, but before lumber circles anywhere will feel a strong impetus from the money coming in this way, farmers and store-keepers will have many old scores to liquidate and get out of the road.

FOREIGN.

The English Board of Trade returns for July, which are just published show a drop back of two millions sterling in export in a single month. The figures relating to sawn goods are particularly worthy of attention, the import for July of the present year having been 683,487 lds., as against 834,605 lds. for the same month last year.

Toronto, Ont.

TORONTO, Aug 31, 1891.

CAR OR CARGO LOTS

Table with 2 columns: Description of lumber types (e.g., 1 & 1 1/2 in. Cut up and better) and prices in dollars and cents.

YARD QUOTATIONS.

Table with 2 columns: Description of lumber types (e.g., Mill-cull boards & scantling) and prices in dollars and cents.

Ottawa, Ont.

OTTAWA, AUG. 31, 1891.

Table with 2 columns: Description of lumber types (e.g., Pine, 1st qual., 2nd) and prices in dollars and cents.

St. John, N. B.

St. JOHN, Aug. 31, 1891.

Table with 2 columns: Description of lumber types (e.g., Spruce deals, Pine) and prices in dollars and cents.

Shingles.

Table with 2 columns: Description of shingle types (e.g., Spruce, extra) and prices in dollars and cents.

Clapboards.

Table with 2 columns: Description of clapboard types (e.g., Pine, extra) and prices in dollars and cents.

Flooring, Dressed.

Table with 2 columns: Description of flooring types (e.g., 6 in., No. 1) and prices in dollars and cents.

Miscellaneous.

Table with 2 columns: Description of miscellaneous lumber types (e.g., Staves, Heading) and prices in dollars and cents.

Montreal, Que.

MONTREAL, Aug. 31, 1891.

Table with 2 columns: Description of lumber types (e.g., Pine, 1st qual., 2nd) and prices in dollars and cents.

New York City

NEW YORK, Aug. 31.—Business is dull, dull—really dull. A comparison with ordinary seasons makes us feel bad. Nothing is lacking in supplies, and the cost is low. An oasis of encouragement is found in a slightly improved trade with country points; and with a large grain crop, and a hopeful leaning to good prices, we take this circumstance as a precursor of better days ahead.

White Pine—Western Grades

Table with 2 columns: Description of white pine grades (e.g., Uppers 1 in., 1 1/2 & 2 in.) and prices in dollars and cents.

Albany, N. Y.

ALBANY, N. Y., Aug. 31.—Some large shipments, covering many million feet of lumber, made from this market to New York and vicinity, during the month, have given fresh heart to the trade here.

White Pine.

Table with 2 columns: Description of white pine grades (e.g., 1 to 2 in. good) and prices in dollars and cents.

Thirteen Foot Stock Boards and Plank.

Table with 2 columns: Description of stock boards and plank types (e.g., 1x10 in. up dressing) and prices in dollars and cents.

Shingles, shaved pine	6 50	Shingles, cedar mixed	2 75	3 00
2d quality	5 00	Lath, pine	2 00	2 10
Sawed, extra	4 50	Spruce		2 15
Sawed, clear butts	3 00	Hemlock		1 80
Cedar, XXX	4 00			

Saginaw, Mich.

SAGINAW, MICH., Aug. 31.—Present trade is conducted on a limited scale. Sorting up orders are in order, but nothing more can be said of the lumber trade in Eastern Michigan—as regards the present. The few fires, that in view of previous experiences, have given us some concern, have been extinguished by recent rains. At this end of the river our lumbermen have been fortunate in being caught by few of the numerous lumber failures that struck the trade in other parts. In the Saginaw Valley a fair trade has been done during the month. Several million feet have changed hands at the running prices of the season. As reported last month the demand for better grades of lumber is quite satisfactory, and millmen, whose operations have been chiefly confined to these stocks, are satisfied, all things considered, with the business done. The percentage of the cut of the season, however, is of coarse grades; it is estimated that the season's cut will figure up probably 700,000,000 feet, and possibly rather better. The extra cut of coarse grades, is accounted for in a good degree, by the quantities of Canadian logs, that have been towed over here this season. Prices are holding somewhat firmly in anticipation of a better trade this fall, when the large crop is marketed, and money has begun to circulate more freely.

Finishing Lumber—Rough.

Uppers, 1 1/4 and 1 1/2 in.	85 00	Fine common, 1 in.	83 00
2 in.	45 00	1 1/2 and 1 3/4 in.	36 00
Selects, 1 in.	36 00	2 in.	33 00
1 1/2 and 1 3/4	37 00	C. 7, 8 & 9 in	34 00
2 in.	39 00		

Siding.

Clear, 1/2 in.	27 00	3/4 in.	27 00
1/2 in.	26 00	3/4 in.	30 00
Select, 1/2 in.	20 00	No. 1, 1/2 in.	12 00
3/4 in.	39 00	1/2 in.	20 00

Timber, Lath and Scantling.

2x4 to 10x10, 12, 14 and 16 ft	\$10 00	20 ft.	12 00
18 ft.	11 00	22 & 24 ft.	13 00
For each additional 2 ft. add 1 1/2 12 in. plank and timber \$1 extra; extra for sizes above 12 in.			

Shingles.

XXX 18 in. Climax	3 50	18 in X (cull)	50
XXX Saginaw	3 40	XXX shorts.	2 00
XX Climax	2 00	XX	1 25
18 in 4 in c. b.	80		

Lath.

Lath, No. 1 white pine	2 00	Lath No. 2 W. pine Norway	1 50
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Buffalo and Tonawanda, N. Y.

TONAWANDA, N. Y., Aug. 31.—The predictions in this column last month of a 'fairly lively trade' for August have been verified. A decided improvement has been experienced in lumber around Buffalo and Tonawanda. Sales are quicker, larger and with less quibbling. These are healthy trade signs. Thick lumber of the better grades is scarce; "inquiry" says one correspondent, "for 5,000 feet of 2 1/2 in selects revealed the fact that in seven of the leading yards in Buffalo there was not that amount." Selects and uppers are held firm and that seems a probability of an advance. Conditions in hardwood are improving. An oak raft from Canada reached here during the month.

White Pine.

Uppers, 1 1/4, 1 1/2 & 2 in	\$45 00	Shelving, No. 1 13 in	33 00
1 1/2 and 3 in	35 00	and up, 1 in.	26 00
4 in	38 00	Dressing, 1 1/2 in.	27 00
Selects, 1 in.	39 00	1 3/4, 1 1/2 & 1 1/4	25 00
1 1/2 to 2 in	46 00	2 in.	27 50
2 1/2 and 3 in	49 00	2 in.	32 00
4 in	50 00	Mold st'ps 12 to 2 in	21 00
Fine common, 1 in.	33 00	Barn, No. 1, 10 & 12 in	20 00
1 1/4 and 1 1/2 in	34 00	6 & 8 in	20 00
2 in.	35 00	No. 1, 10 & 12 in.	17 00
2 1/2 and 3 in	42 00	6 & 8 in.	16 50
4 in.	45 00	No. 1, 10 & 12 in.	14 00
Cut'g up, No. 1, 1 in	28 00	6 & 8 in.	14 00
1 1/2 to 2 in	33 00	Common	16 00
No. 2, 1 in.	18 00	1 1/4 & 1 1/2 in.	17 00
No. 2, 1 1/2 to 2 in.	21 00	2 in.	19 00
No. 3, 1 1/2 to 2 in.	17 00		

Box.

2x10 & 2 in (No. 3 out)	15 00	1 1/2 in	13 00
1x6 & 5 in (No. 3 out)	12 50	1 1/2 in	13 50
1x13 & wider	14 50	1 1/2 in	14 00
Narrow	12 00		

Shingles.

18 in XXX, clear	4 00	16 in, *A extra	2 00
18 in XX, 6 in clear	2 75	16 in, clear butts	2 10

Lath.

No. 1	2 25
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Boston, Mass.

BOSTON, MASS., Aug. 31.—Hardly a hopeful word can be written of trade here. It has been one long siege of dullness all summer through; the dullness continues, with seemingly no outlet before the late fall, if then. The bottom is about out of the Spruce trade, several mills being actually shut down for want of orders and it cannot be said that any are at all busy. Prices on Spruce are easy, beyond doubt. There is a fair call for Cypress with little offering. Western pine sells very slowly, and prices are decidedly easy. In hardwoods, quartered Oak is abundant and in only moderate request. Good Cherry is scarce and hard to

get. The demand is not large, yet a lack of stock to meet moderate needs. Walnut is seldom asked for.

Western Pine—by car load.

Uppers, 1 in	45 00	50 00	Fine com. 3 & 4 in	42 00	46 00
1 1/4 & 1 1/2 in	48 00	50 00	No. 2, 1 in. Fine com.	25 00	30 00
1 3/4 & 2 in	55 00	60 00	1 1/4, 1 1/2 & 2 in	29 00	31 00
Selects, 1 in	42 00	45 00	No. 1 strips, 4 to 6 in	40 00	43 00
1 1/4, 1 1/2 & 2 in	43 00	45 00	No. 2	35 00	37 00
3 & 4 in	45 00	50 00	No. 3	24 00	25 00
Moulding boards, 7 to			Cut ups, 1 to 2 in.	24 00	30 00
11 inch clear	36 00	38 00	Coffin boards	16 00	22 00
60 per cent clear	34 00	36 00	Common all widths	22 00	26 00
Fine common 1 inch	36 00	38 00	Shipping culls 1 in	15 00	15 50
1 1/4, 1 1/2 & 2 inch	38 00	40 00	do 1 1/2 in	15 50	16 50

Eastern Pine—Cargo or Car Load.

Nos. 1, 2 & 3	40 00	43 00	Clapboards, 4 ft., sap	40 00	45 00
4	28 00	30 00	clear	33 00	35 00
	23 00	26 00	Sap, 2nd clear	50 00	55 00
Ship'g bds & coarse	16 00	16 50	Heart extra	45 00	50 00
Refuse	12 00	13 50	Heart clear	23 00	24 00
West r pine clapbds	45 00	50 00	Bevel siding bin, clear		
4 ft. sap extra					

Spruce—by Cargo.

Scantling and plank,	14 00	15 00	Coarse, rough	12 00	12 00
random cargoes			Hemlock bds rough	12 00	13 00
Yard orders, ordin-	15 00	16 00	dressed	12 00	14 00
ary sizes			Clapbds., extra, 4 ft.	34 00	36 00
Yard orders, extra	16 00	18 00	Clear, 4 ft.	30 00	32 00
sizes			Second clear	25 00	25 00
Clear floor boards	19 00	20 00	No. 1	10 00	14 00
No. 2	16 00	17 00			

Lath.

Spruce by cargo	2 10	2 20
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Spruce	1 25	50	Cedar, sawed, extra	3 35	3 50
Pine, 18 in extra	4 00	4 25	Clear	3 00	3 00
Pine, No. 1	3 00	3 15	Extra, No. 1	2 50	2 50
			Cypress, No. 1, 18 in.	5 00	5 00

Oswego, N. Y.

OSWEGO, N. Y., Aug. 31.—There is absolutely nothing new to note from this point. Prices show no change during the month, and the same is to be said of trade. We have had "hope" for both breakfast and supper long enough to make a change desirable. As some one has said, 'hope does very well for breakfast, but it makes a poor supper.'

White Pine.

Three uppers, 1 1/4, 1 1/2 & 2 inch	84 00	85 00
Pickings, 1 1/4, 1 1/2 & 2 in.	30 00	35 00
No. 1 cutting up, 1 1/4, 1 1/2 & 2 in.	31 00	32 00
No. 2 cutting up, 1 1/4, 1 1/2 & 2 in	20 00	21 00
In strips, 4 to 8 wide, selected for moulding strips, 14 to 16 ft.	31 00	33 00

1 in siding, cutting up	35 00	39 00
1 in siding, selected	35 00	40 00
picks & uppers	30 00	39 00
1 in dressing	19 00	21 00
1 in No. 1 culls	14 00	16 00
1 in No. 2 culls	13 00	14 00
1 in No. 3 culls	9 50	10 00

12 & 16 ft. mill run	20 00	23 00
10 & 16 ft. No. 1 & 2 barn boards	18 00	19 00
12 & 16 ft. dressing and better.	26 00	30 00
12 & 16 ft. No. 2 culls		15 00

12 & 13 ft. mill run, mill culls out	19 00	20 00
12 & 13 ft dressing and better	25 00	27 00
12x10 14 to 16 barn boards		17 00
12 & 13 ft. No. 1 culls	16 00	17 00
12 & 13 ft. No. 2 culls	14 00	15 00
14 to 16 ft mill run mill culls out	20 00	22 00
14 to 16 ft. dressing and better	25 00	27 00
14 to 16 ft. No. 1 culls	16 00	17 00
14 to 16 ft. No. 2 culls	14 00	15 00
14 to 16 ft. No. 3 culls	9 50	10 00

1x12 Inch.

Mill run, mill culls out	20 00	23 00	No. 1 culls	16 00	17 00
Dressing and better	25 00	27 00	No. 2 culls	14 00	15 00
17 00	19 00	20 00	No. 1 culls	13 00	14 00
Dressing and better	23 00	27 00	No. 2 culls	11 00	12 00
6/7 or 8, mill run, mill	19 00	21 00	6/7 or 8, No. 1 culls	15 00	16 00
culls out	19 00	21 00	6/7 or 8, No. 2 culls	13 00	14 00
6/7 or 8, drsg & better	24 00	25 00			

Shingles.

XXX, 18 in pine	3 60	3 80	XXX, 18 in cedar	3 50	3 75
Clear butts, pine, 18 in	2 60	2 80	Clear butt, 18 in cedar	2 50	2 75
XXX, 16 in pine	3 10	3 20	XXX, 18 in cedar	2 10	2 20
Stocks cedars, 5 or 6 in.	5 00				

Lath.

No. 1, 1/2	2 10	No. 2, 1 1/4	1 90
No. 1, 1	1 60		

IMPORTANT TO SHIPPERS.

THE Grand Trunk Railway Company has issued the following circular through district General Freight Agent Mr. A. White: "Our car supply officers say that they are frequently taken at a disadvantage through not being advised of my contracts, or of shippers intention of shipping heavily. I want you in future to be good enough to advise me from time to time when you intend to make large shipments; and to what points; and if going on a foreign road, by what route. Then if you do not get cars supplied within a reasonable time, I should also like to be advised by telegraph. Every one is anticipating a heavy fall trade, and we want if possible, by proper organization and co-operation on the part of shippers and our officers, to move the same with as little hindrance to the mercantile interests of the country as possible; and hope your keeping in line with me as suggested above will help matters."

During a high wind on the morning of the 28th ult., a shingle mill situated on Muskoka Bay and owned by A. L. King, was burned to the ground. Cause of fire unknown. Insured for \$2,000.

LUMBERING CASUALTIES.

Peter Swanson, Watterville, Ont., lost two fingers by a circular saw.

A youth named Beauvillie has had one of his legs badly cut in the mill of Perley & Patten, Ottawa, Ont.

Geo. Skelton an employee of Orr's planing mill, Stratford, Ont., had two fingers of his right hand cut off on 6th ult

Charles Gray an employee in Lloyd & O'Connor's planing mill, Ottawa, had the top of a finger taken off by a buzz planer.

Two weeks ago William Wright, of Cardinal, Ont., fell from a pile of lumber 25 feet high breaking his neck and causing instant death

Caleb George Cliff, contractor for lumber piling at Burton Bros. Mills, Byng Inlet, Ont., was accidentally drowned by falling off a lumber pile.

Joseph Courville, watchman, for the F. B. Eddy Co., Hull, Que, was knocked down by a horse and rig a few days ago, receiving severe injuries.

Moses Wilkinson of Lutterworth, Ont. was badly cut in the arm and side at his saw mill and eighteen hours after receiving the wound breathed his last.

Deseronto, Ont., counts her share of accidents. Alexander Green had his hand badly crushed by the fall of a log. Archie Smith lost the top of a finger.

James Hamilton an employee of the Union factory, Wing ham, Ont., received a severe wound in the hand a fortnight ago while working with a rip saw.

Instantaneous death came to Walter Moore of Morton Bros. saw mill, Clover Valley, B. C. by falling on the large saw belt. He was at once carried around the drum and dropped to the floor a corpse.

There are now twelve men working in Thackray's mill on Sparks street, Ottawa, Ont., who at one time or other have had some of their fingers cut off while at work. The latest victim was on Wednesday.

A young man named Charlebois, an employee in the Georgian Bay Co's saw mill at the mouth of the Severn near Midland, Ont. upset in a canoe in four feet of water, and must have been seized with cramps immediately as he lost his life.

What is likely to prove a fatal accident occurred to Dunn Mitchell who was working a capstan at Whitefish, Ont., moving a boom of logs belonging to Howry & Co. A bar slipped, and flying round with considerable force struck him fair across the stomach, shutting him up like a jack knife.

Joseph Gray works the slabber in the Victoria Harbor Lumber Company's mill at Garden Hill, Ont., and was standing in his place on the 28th ult., when one of the other men threw an apple towards him. Not having seen it coming in time to catch it he dodged back and stepped into the hole beside the saw used as a t...mer. As he fell he threw his arm on the saw, the teeth of which cut into the flesh and quite a way into the bone. Amputation may be necessary.

A frightful boiler explosion occurred at Spencer's saw mill, one mile from Walsingham Centre, Ont., on 22nd ult. There was no one in the boiler room at the time except the engineer Clark Branson, and he was thrown 100 feet out into the yard. His death was instantaneous. The men in the mill escaped uninjured, but how they got of with their lives is a marvel, because the mill was completely demolished. The heavy boiler was torn from its bed and thrown, together with many saw about 25 yards.

NEW PUBLICATIONS.

We have received from Mr. H. R. A. Baughman, the author, a copy of his valuable little work, "Baughman's Buyer and Seller." It is gotten up in pocket shape, being well and tastefully bound in full leather. Undoubted labor has been given to the preparation of the valuable lumber tables which the book contains, which show 4,000 different sizes and lengths by which the number of feet in any number of pieces of lumber can be shown at a glance. It likewise contains diagrams and rules for cutting rafters, rules for finding number of lath required for any room, weights of lumber, and estimated freight and other tables of untold utility to the lumberman. The book can be had for \$1, from the author, at Necedah, Wis.

A neatly gotten up edition of the Rules and Regulations for the inspection of pine and hardwood lumber as adopted by the lumber section of the Toronto Board of Trade, has been published by the CANADA LUMBERMAN. To every lumberman, really it is a pocket vade mecum, and a copy will be sent to any of our subscribers on receipt of a three cent stamp.

USEFUL INFORMATION

Always have your boiler covered with non-conducting material, no matter how cheap your fuel may be.

A few accidents about machinery happen from seemingly unfavorable causes, but a great many are the direct result of carelessness.

In the use of oil, uniformity of distribution is as important as the regularity of the supply. A dry spot on a bearing will at once cause heating, and, if allowed to continue, cutting will be the result.

An insurance man of long experience declares that milk is the best obtainable extinguisher for petroleum fire. If milk is not at hand flour will answer nearly as well for putting out the flames.

The same rule which applies to constant feed with pumps holds good where injectors are used; there should always be a stream of water going into the boiler so long as there is a current of steam going out of it.

It is surprising how careless steam pipes will be hung. The majority of cases make no proper allowance for the movement of the pipe by expansion, and as a consequence joints are strained and leak, flanges are broken off and in many cases hangers are pulled out.

Here is another recipe for a mixture for uniting belts: Dissolve gutta percha in bisulphide of carbon to the consistency of molasses, slice down and thin the ends to be united, warm the parts, apply the cement and submit the parts to heavy pressure at least four hours.

A pretty good rubber cement for cementing leather belts can be made by dissolving guttapercha in bisulphide of carbon. It is safe to say that if belts possessed the sense of smell they would never stand a cement of this kind; as the odor is so loud it would, as the old saying goes, "drive a dog out of a tan yard."

An essential requirement for the successful working of an injector is the suction, the same as with any pump, for if not properly attached it causes a great deal of trouble, and more especially when the water is far away or on a lift of twenty-five feet, for then the slightest leak of air will effect the quantity of water. If not wholly destroy the vacuum. The injector will lift water at 100 degrees temperature on a lift of twenty-five feet, or 140 degrees temperature on three or four feet lift. Water of a high temperature will not condense the steam; therefore injector will not feed it to the boiler with certainty, but with a small jet of cold water from street pressure, applied close to the injector, hotter water can be lifted, even to 212 degrees, but not delivered any hotter than it would be taken at 140 degrees, as the jet would be used to temper down to that point.

A Mr. Elliott of London, Eng. proposes to solve the smoke problem by condensing the smoke in water and recovering the by-products. To this end he has a tank of water in which are revolving stirrers driven by a small engine or by spare power. By means of a fan he draws the smoke from the chimney and forces it into the water at a point near the bottom of the tank. The smoke and products of combustion are then churned up together in the tank, the solid particles of the smoke and the sulphurous vapors and noxious fumes being arrested in the water. In time the heat of combustion warms up the water and the steam is allowed to escape through a chimney into the air. When the water has become fully charged with the condensed smoke and other matters, it is drawn off and the tank is refilled with water. The charged liquor is to be afterward treated and the by-products due to the combustion of coal are to be recovered. By this means, it is claimed that not only will the smoke nuisance be abated but that a profit will be derived from the operation.

The horse power of steam boilers is a subject upon which something may always be said. It is pretty well understood that the capacity of a boiler is determined by its ability to evaporate water; and the amount of evaporation necessary for a horse power is fairly well agreed upon. But while this furnishes a standard for ultimate resort, it can only be applied to the recorded performance of a boiler in actual use, and the practitioner will still have frequent occasion to approximate the capacity of a boiler whose evaporative efficiency can not be determined by actual test. The amount of heat absorbing surface which a boiler contains is the most effective factor in determining its evaporation. Of course, the value of each square foot of heating surface varies with the amount of heat which is supplied to it from the furnace, which will depend upon its position with relation to the furnace, ordinary rates of combustion and fair grades of coal, the number of feet of heating surface necessary to produce a horse power in a boiler of ordinary construction ought to be approximately determinable, and the power of the boiler determined for ordinary conditions the effect of extraordinary conditions could be estimated.

CHIPS AND BARK.

Be firm! one constant element in luck
Is genuine, solid, old Teuonic pluck;
See yon tall shaft; it felt the earthquake's thrill,
Clung to its base, and greets the sunrise still.

Many good sawlogs have knots on them.

People like to travel in cheerful company.

A man is apt to run down when his affairs are wound up.

Cover a nail with soap and it will drive in hard wood easier.

A northern clime—an Arctic bear skinning up the North Pole.

Men seldom conceal their virtues, nor do their faults conceal them.

Creaking boots may be prevented by driving a peg into the sole.

Not to be out of fashion, the lawns now wear their summer hose.

The man that never committed a folly never appreciated wisdom.

The roots of a tree are of more consequence than its highest branches.

A busy baker may not be an idler, but it must be admitted that he is a loafer.

The only people who are discontented are those who are not doing their whole duty.

"Two heads are better than one." This was written before three-story bonnets came in fashion.

"Bring up the child in the way he should go," and then follow him and keep out of bad company.

The fact that there are two hemispheres goes to demonstrate that the shape of the earth is spherical.

"Did you put flowers on the old soldier's grave?"
"No; I did better. I sent a barrel of flour to his poor widow."

Tom—"Have you asked Bessie yet?" Jack—"Yes."
Tom—"What did she say?" Jack—"That she would take vanilla."

Teacher—"In the sentence, 'The sick boy loves his medicine,' what part of speech is loves?" Johnny—"It's a lie, mum."

"Only a belt manufacturer and worth over a million?"
How did he ever make it? "By attending strictly to his zone business."

How nice it is to hear the raftsmen shouting in the early morning and the cook's grumbling in dulcet tones because the pots are black.

The horseshoe crab chews its food with its legs, which is a very curious thing even for a crab to do, while the oyster feeds with his beard.

The saw-mill proprietor desirous of an appropriate coat of arms should paint on the panels of his carriage the latin motto, "Vidi," which by interpretation is "I saw."

Granpa—Yes, it's a good thing for a boy to travel, Freddy; it develops him. If he has anything in him, travel will bring it out.

Freddy (who is precocious)—Yes I discovered that when I was crossing the Atlantic.

"Hello!" said the Pine Log to the Hickory Log.
"How have you been?"

"Pretty well, thanks. What has become of your brother?"

"Oh, he has gone into a large importing house in New York. Where is yours?"

"Doing picket duty on a back yard fence."

The more the girls pine for some young man, the more spruce they become—*Timberman*. Yes, and did yew ever notice how lovers slabber over each other's dimensions, and how re-joist they are when cypressing each other's hands, and how soon life becomes a chestnut to them if they carry the y-o-a-k so far as to get spliced? By gum, it's all queerious, every way, is life from a lumbering point of view!—*Exchange*

The small boy's view of it: "Papa," inquired the editor's only son, "what do you call your office?" "Well," was the reply, "the world calls an editor's office the sanctum sanctorum, but I don't." "Then, I guess," and the boy, was thoughtful for a moment, "that mamma's office is a spanktum spanktorum, isn't it?"

THEY LIKED JAM.

Citizens of St Paul and Minneapolis were treated a few nights ago to a novel sight to them. A jam of twenty million feet of logs was formed at Taylor's Falls on the St Croix River, having been carried into the narrows by a sudden rise of the water. The railroad companies, leamed of the attraction and advertised it. Excursions were formed which took the curious to the scene of the log pile for the small sum of \$1.75.

THINGS QUEER AND CURIOUS.

The \$10,000 painting of Christopher Columbus, executed by the famous Moro in 1540, and purchased in London by Charles F. Gunther, will be displayed at the World's Columbian Exhibition, Chicago.

A million men standing close together, each not occupying more than four square feet, could be placed on a patch but little more than a third of a mile square. A square mill will accommodate 7,965,000 men.

Thunder was never heard more than fourteen miles from the flash of lightning. The report of artillery has reached much greater distances. The cannonading of the battle of Waterloo was heard at the town of Creil, in the north of France, about 115 miles from the field.

The period of a generation has been lengthened; it used to be thirty years and later increased to thirty four; now a scientist says, the average term of human life has increased to forty-two years, and the improvement has all been made during the last half century.

Very few people have any idea of the cost of some of the rare metals. For instance, vanadium cost about \$11,265 per lb.; zirconium, \$7,080 per lb.; and lithium, which is the lightest of metals, about \$6,880 per lb. Rhodium, which is extremely hard and brittle and is only fusible at a very high temperature, brings about \$2,260 per lb.; and irridium, the heaviest substance hitherto discovered, costs about \$1,070 per lb. It will therefor be seen that gold and silver are far from being the most precious metals as far as their market value is concerned.

The oak grows very slowly. It has been known at 100 years old to be only one foot in diameter. Until the age of 40 years it grows pretty fast, but after that its increase becomes less and less sensible. At 200 or 300 years old these trees are at their best. Vancouver, from observations on the growth of timber in Hampshire, arrived at the conclusion that the relative growth of wood in that country, taking the trees at 10 years' growth, and the oak as a standard is: oak 10, elm 16, ash 18, beech 20, white popular 30. That is to say, in any given time, if the growth of oak be 1, the growth of white popular will be 3.

One of the oldest wooden stairways that exist is the flight which leads up to the gallery of the Sainte Chapelle, in Paris, on the north side of the shrine, its companion on the southern side being a restoration. It was built during the first half of the thirteenth century, when Saint Louis erected the chapel, to contain the Crown of Thorns, now preserved at Notre Dame. It is very delicately carved, and is regarded as a masterpiece of the finest period of Gothic art. The stairs wind about a central newel and are supported on the outside by uprights which form an open work sage.

Every one may not know that the Bank of England notes are made from new white linen cuttings—never from anything that has been worn. So carefully is the paper prepared, that even the number of dips into the pulp made by each workman is registered on a dial by machinery, and the sheets are counted and booked to each person whose hands they pass. They are made at Laverstroke on the River Whit, in Hampshire, by a family named Portal, descending from a French Huguenot refugee, and have been made by the same family for more than 150 years. They are printed with, in the building, there being an elaborate arrangement for making them so that each note of the same denomination shall differ in some particular from the other.

STARTING A NEW SAWMILL.

Says a writer in the *Sawmill Gazette*: "In starting a new sawmill, there are a number of things to be reckoned on. Are we limited in power? Then we shall have to bend all our other parts to fit our power. Are we limited as to the amount to be sawed? Then it will be useless to put up a larger mill than is needed. In any event, to have the mill go we must have a harmony of all the parts which may be named thus: the power, the speed, the feed, the number of teeth, the size and thickness of the saw, the kind of wood to be sawed, the number of men to run the mill, and the amount of logs."

OTTAWA LETTER.

Other Things Beside Scandals—The Biggest Saw Mill in the World—The Future of Lumber. Heavy American Shipments.

[Regular Correspondence CANADA LUMBERMAN.]
The average reader, I fancy, cannot think of the capital of the Dominion except as the very hot-bed of scandals and peculations. These things in truth smell "highertohaven," than, to use Senator Snowball's words, "the saw dust dump, right under Parliament House." Well we are certainly getting our share of the pestiferous things, and the worst of it is the end is not yet. But less even readers of THE LUMBERMAN should be carried off in the swim, and think of Ottawa only from this untoward side, let us hold up the other side of the shield and assure them that this is a community known for other and better things than political corruption.

THE BIGGEST IN THE WORLD.

We can claim to have almost ready for operation the biggest saw mill, not only in the Dominion, but in America, and it is said, in the world. I refer of course to J. R. Booth's big mill, with its 13 hand saws, which is now about ready for complete operation. With a capacity for 900,000 feet daily, or for a season of seven months 153,000,000 feet, visitors to the capital will find it a place worth visiting, a monument to hard, honest work by one of our best citizens. And they need not stop here. Ottawa is creditably known as the centre of lumbering operations for the Dominion. A visit to any of our larger mills—Bronson & Weston's; Buell, Orr, Hurdman & Co's., the Gilmour's, Perley & Pattee's and others will well repay the time and trouble.

THE LUMBER OUTLOOK.

Our lumbermen are feeling hopeful of the future. General activity prevails around the Chaudiere, and the expectation is that an unusually large quantity will be cut in the bush for sawing here next summer. Preparations in this direction have commenced, several leading firms having already sent men up to their limits to cut roads and otherwise pave the way for extensive winter operations. Wages are not high, because of the season's trade having been slack, but they will improve as the season advances. While there will be little or no square timber taken out, the number of men who will be given employment logging will be twenty-five per cent in excess of those of last year. Three trains a day leave the Chaudiere yards present, each train carrying upwards of 400,000 feet of lumber for various American points. The principal shippers in this case are Messrs. Booth, and Bronson & Weston. Some of the firms here cannot fill orders for want of dry stuff. Nearly all the immense quantities of dry stuff that were on the piling

grounds have been shipped. The demand for the coarser grades is only fair, but the best grades are constantly in demand.

Ottawa, Ont. Aug. 28th, 1891.

BRITISH COLUMBIA LETTER.

Depression in the Lumber Trade—Mills Closed Down—Opinions of a Michigan Lumber King on Pacific Coast Trade—Visits of Wisconsin Lumbermen—News Notes.

[Regular correspondence CANADA LUMBERMAN.]
SINCE my last letter several mills have closed down for from 3 to 6 months on account of the depression in trade. This is principally caused by the Chilian troubles, but the Australian market has experienced a sudden drop in prices. The demand has decreased; the MacLaren-Ross Lumber Co. was the first to close down. They only cut the two cargoes *Jonisa Matta* and *Leonor*. This is a great disappointment to many, as this concern would have employed a great many hands in its works.

The province has been favored with a party of tourists from Minnesota and Iowa, among the number being several of the best-known lumbermen in the Mississippi valley. When in Vancouver they visited a number of sawmills. In an interview Mr. Win Carson of Eau Claire, one of the number, said, that he had been much pleased with a visit to the Hastings saw mill where he had seen larger logs than he had ever seen before. There was no doubt in his opinion western lumber would become more common on the eastern markets. It was estimated that the timber supply of the Mississippi valley would be exhausted in about eight years and he thought the Pacific coast timber would hardly compete with the white pine of Wisconsin and Iowa for fine work, but he admitted that he had not had much experience with the cedar of British Columbia or Puget Sound. There was no doubt but that the lumbermen of the east were turning their attention to the west and some of them would no doubt engage in the business in the west.

Mr. N. L. Slaght, one of Michigan's lumber kings, who last year came to British Columbia and invested extensively in timber claims, arrived in Vancouver a few days ago. His company had intended to erect extensive saw mills in this Province some time this year, but the dullness in the lumber market caused him to advise the suspension of building operations until 1892. He would go into the exporting of lumber from the beginning of operations. Mr. Slaght has been engaged in lumbering since a boy, and that is quite a long time ago, and consequently is conversant with the business in all its details. He holds some opinions on the lumber question which are slightly different from the practice of the mills of this coast. He would prefer to have all the

lumber, or the greater part of it, exported from the Province, cut up into small stuff and dressed before shipping. He argues that in this form it could be more conveniently stowed aboard ship, would sell more readily when it reaches the foreign market, and would yield a profit upon the extra labor done in this Province which now goes to the purchaser, who has the deals and fitches, after he receives them, sawn into smaller pieces and dressed before retailing. He would also advocate having the saw mill men engaged in exporting to unite, so that a system of grading could be adopted and joint action on certain matters affecting all. The lumber business of Michigan was not reduced to a solid paying basis till this was done. With such an association a salesman could be sent to each of the leading foreign markets, who would handle the produce of all the mills, thereby turning the profits of the middle men into the pockets of the producers. Mr. Slaght is accompanied by his daughter, who comes west on a pleasure trip.

J. Galbraith & Sons new sash and door factory in this city is ready for the machinery which is daily expected.

Bush fires have been raging for two weeks in several parts of this district, but very little merchantable timber has been touched.

The frame for the Canadian Pacific Lumber Co's. mill is well advanced. The Portable mill is still sawing for this and other buildings.

The Burnett Saw-Mill Co. and others will send an exhibit to Toronto Exhibition this fall, which will certainly attract considerable attention.

Mr. C. M. Beecher of B. C. Mills T. & T. Co. has removed to Vancouver to take charge of Hastings saw mill, which also belongs to this Co. and Mr. John Hendry returns here from Vancouver, where he was living while managing the Hastings mill.

The *Lanarkshire* arrived last week and has discharged her rails for the tramway between here and Vancouver last night and will come here to discharge the pipes for our Water Works system. The demand for shipment of lumber to the northwest continues.

H. G. R.

New Westminster, B. C. August 22, 1891.

FOR SALE - A RARE CHANCE.

A VERY desirable mill property in the town of Essex, Ont., known as the Hanlan Mills, for the manufacture of staves and lumber. The daily capacity of 20,000 feet of lumber and 34,000 staves. Twelve acres of land for mill yard, on which is located 4 charcoal kilns, boarding house, two tenant houses, barns, sheds and other outbuildings, with an unlimited supply of pure well water; with or without horses, trucks, waggons, etc. Also six million feet of standing timber, one-half elm, balance oak, cotton-wood, ash, maple and sycamore: from one to three miles from the mill, and other timber in easy reach can be bought. The mills are on the line of Michigan Central Railway, with two spurs running into the mill yard, and within fifteen miles from Detroit. Terms liberal. Good reasons given for selling. Write or call on the proprietor, T. H. DRCEW, Essex, Ont.

WANTED AND FOR SALE.

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

TO LUMBERMEN—For Sale—400 acres well timbered land, of which 350 acres never culled, being lots 23 and 24, concession to Sombra, County Lambton, 4 1/2 miles from Sydenham River, navigable for logs; log house and stable. Address, WILLIAM SPAVEN, Hagersville, Ont.

WANTED AT ONCE—delivered at Toronto Junction, from \$1,000 to \$10,000 worth of lumber for building and manufacturing purposes for fully paid up stock in a flourishing manufacturing business, well established; a continuous supply of over 2,000,000 feet required annually. The Gurd Brandon Woodware Co., Limited, Toronto Junction, Ont.

PARTNERSHIP WANTED in Sawmill, Sash and Door or Furniture Factory, or any other class of good wood-working establishment. Advertiser will invest \$5,000 cash. Address, "PARTNER" care of CANADA LUMBERMAN.

SAW AND SHINGLE MILL
FOR SALE—on the Manitoulin, near Little Current. A bargain. Address, W. L. H., CANADA LUMBERMAN.

HARDWOOD lumber, bought, sold or received on consignment; TUCKER DAVID, Lumber commission merchant; 202 Eleventh Ave., N.Y.

RAILS AND CARS FOR SALE.
Light Steel Rails for Tramways; good order. Cars for lumber, cheap.
JOHN T. GARTSHORE,
49 Front St. West, Toronto.

WANTED—TO BUY.

GOOD Canadian Timber Limits and Georgian Bay saw logs. Address, BEN BIRDSALL, Whittey Building, Detroit, Mich.

MORTGAGE SALE of Desirable Sawmill Property and Timber Limits in the Township of Limerick, County of Hastings.

Under and by virtue of the power of sale contained in a certain mortgage, which will be produced at the time of sale, there will be offered for sale by Public Auction at the premises in the village of St. Ola, County of Hastings, on Tuesday September 8th, 1891, at 2 o'clock in the afternoon, the following sawmill property and timber limits in three parcels, namely:
FIRST—All those parcels of land consisting of lots 6 and 7 on Edgar Avenue, in the village of St. Ola in the Township of Limerick, County of Hastings, according to C. F. Aylesworth's registered plan of part of St. Ola, and being subdivision of parts of lots 9 and 10 in the 1st Con. of Limerick.

SECOND—All the timber on about 500 acres of land being lots 4, 5, 6, 8 and others in the 7th Concession of Limerick aforesaid, consisting of ash, birch, bass, cedar, maple, hemlock, &c.

THIRD—1 complete saw rig, 1 circular saw and belting, 1 large driving belt.

The improvements on parcel 1 consist of frame sawmill, engine and boiler, and the property is on Beaver Creek and has a good mill pond for logs and is about 2 miles from Central Ont. Ry.

Ten per cent. of the purchase money to be paid down at time of sale and balance in one month thereafter for parcels 1 and 2 and cash for parcel 3.

For further particulars and conditions of sale apply to Messrs. R. M. Mowat & Co., Trenton; P. F. Clark, Esq., St. O'la, or to

S. J. YOUNG,
Vendors, Solicitor,
Trenton, Ont.
Aug. 3th, 1891.

PLANING MILL FOR SALE.

A Planing Mill and Sash and Door Factory in running order and fully stocked with best machines. Land freehold. **GOOD LOCATION IN TORONTO WILL BE SOLD AT A BARGAIN ON EASY TERMS.**

Apply to "Planing Mill"
Canada Lumberman.

Peter Gerlach & Co.

Manufacturers of

ALLIGATOR CHISEL-BIT SAWS

The Champion Stave, Heading and Shingle Machines.

Ice Tools and Mill Supplies.

CLEVELAND, OHIO.

GOOD BUSINESS CHANGE

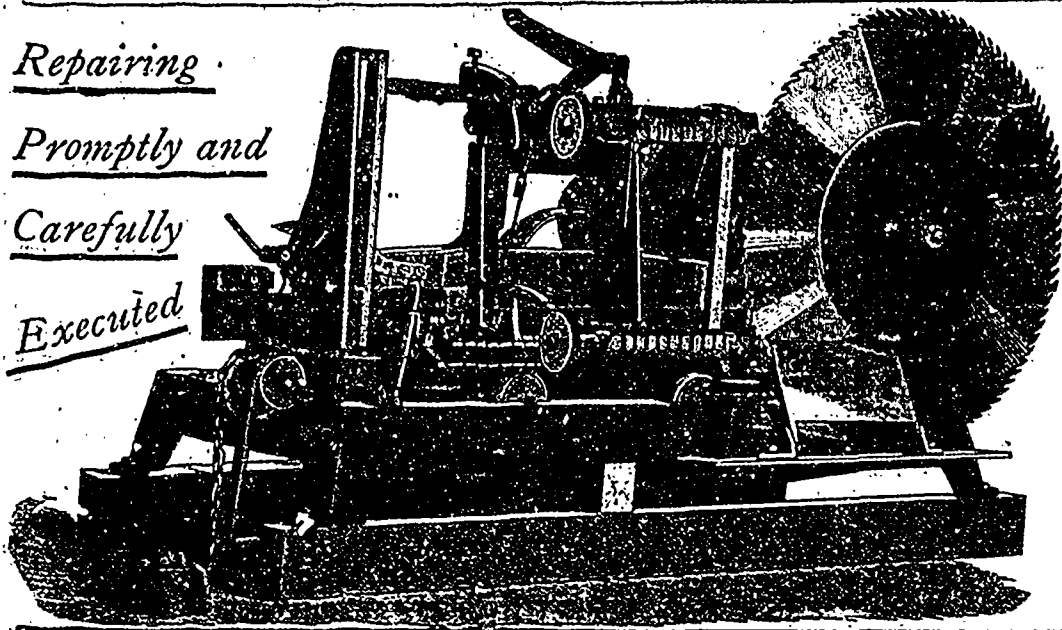
A party having the disposal of about 50,000,000 feet of good standing White Pine under Government license, besides a vast quantity of standing Hemlock, Spruce, Birch, &c., in a most convenient part of the District of Muskoka, together with a good Mill, nearly new, containing the very best machinery, is anxious to meet with a purchaser or parties willing to form a joint stock company. The whole property will be put in at an extra good bargain, and employment arranged for practical men. Full particulars as to Limits, Mill and prices, map, &c., can be seen at the office of the "Canada Lumberman."

E. F. Ames & Co.

Lumber Commission. Correspondence solicited from Canadian manufacturers.

Room 3, Lumber Exchange, Chicago, Ill.

Repairing
Promptly and
Carefully
Executed



B. R. MOWRY & SON

MANUFACTURERS OF

**Saw Mill
and Shingle Mill
Machinery.**

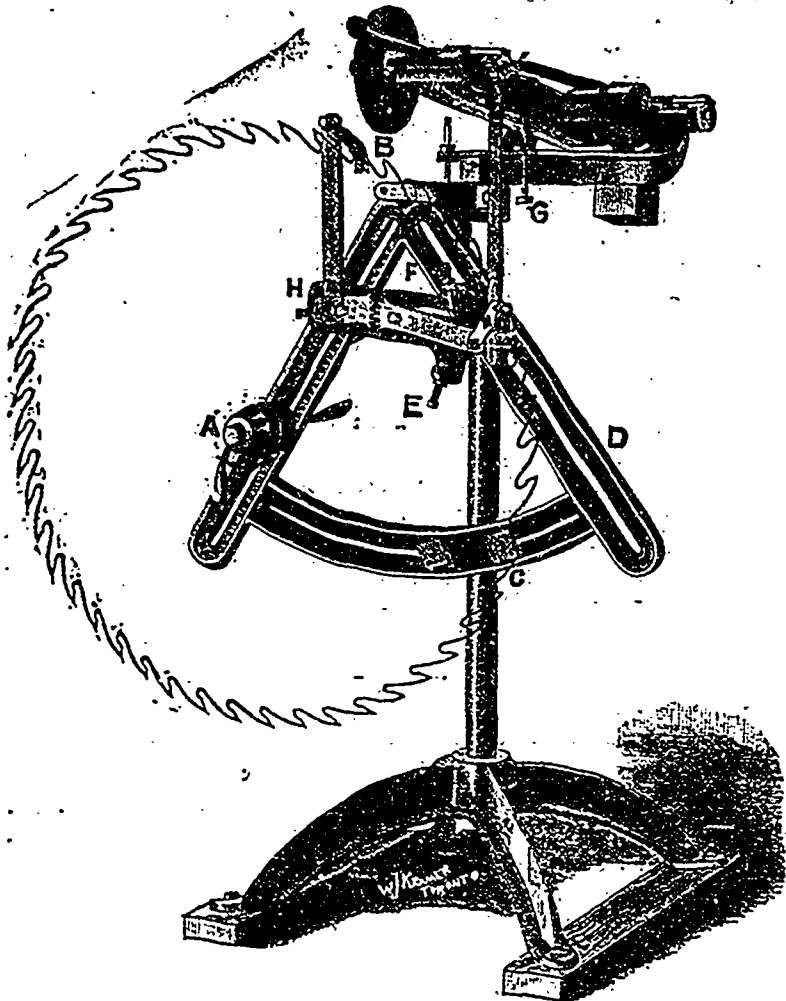
Shingle Machinery a Specialty.

The "BOSS" SHINGLE MACHINE

Manufactured by us is acknowledged by practical men to be the best machine in the market

GRAVENHURST, ONT.

The *XXX* Saw *Gummer* and *Sharpener



HAS NO RIVAL

For Variety, Capacity or Quality of Work.

OR FOR

Simplicity,

Durability

Cheapness.

Will take saws from 6 inches to 6 feet diameter, sets the saw forward one tooth at a time automatically. Sharpens any saw (rip or cross-cut) perfectly. Giving the teeth any desired pitch or bevel, and making all the teeth exactly alike. Will sharpen 20 teeth in ordinary mill saw in One Minute, or 100 teeth in shingle saw in four or five minutes. The cut shows outline of mill saw 54 inch dia. Patent applied for.

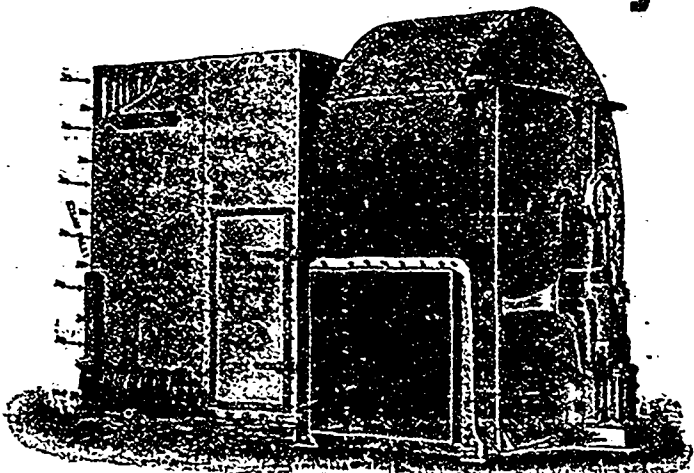
MANUFACTURED ONLY BY

F. J. DRAKE

Belleville, Ontario.

The Sturtevant System of Heating AND Ventilating

Applicable to all classes of Buildings.



The Sturtevant Steam Heating and Drying Appartus.

PROGRESSIVE LUMBER DRY-KILNS.

Steel Plate PLANING MILL Exhausters

SEND FOR CATALOGUE.

B. F. STURTEVANT CO., BOSTON, MASS., U.S.

BRANCHES:

91 Liberty St., New York; 16 S. Canal St., Chicago 185 N. Third St., Philadelphia.

A. R. WILLIAMS, Soho Machine Works, Toronto, General Agent for the Dominion.



EXHIBITION



MY WAREROOMS

Will be thrown open to the Public from September 7th to 19th, when the following lists of

Machines, Engines and Boilers

WILL BE ON VIEW.

H. W. PETRIE, 141-145 FRONT ST. W., TORONTO. TELEPHONE 2590.

Wood-Working Machinery.

ONE new eclipse planer and matcher, Galt make.
CHAMPION planer, matcher and moulder, McGregor, Gourley & Co. builders; nearly new.
 NO. 6 planer and matcher, Cowan & Co's build.
LITTLE giant planer, matcher and moulder Price, \$200.
NEW pony planers and matchers, only \$175.
FOUR 20-inch pony planers; Harper, Cant Bros., Waterous, and Ross make.
 24-inch pony planer, Frank & Co's make.
NO. 4 pony planer, McKechnie & Bertram's build.
 24-inch pony planer, Ross' make, Buffalo.
 24-inch wood-frame planer, Kennedy & Son's make.
 24-inch wood-frame surface planer. Cheap.
 24-inch surface planer, Rogers' make, Norwich, Conn.
 21-inch wood-frame planer, Kennedy & Sons' build.
 22-inch surface planer—McKechnie & Bertram.
 12-inch diagonal buzz planer, new; Galt make.
DANIEL'S planer, R. Ball & Co's make.
BEADING and moulding attachment for planer, Ross make, Buffalo.
NO. 0 four-side moulder, McGregor, Gourley, builders.
 8-inch four-side moulder, Dundas build.
NO. 1 1/2 three-side moulder, McGregor, Gourley builders.
NO. 2 three-sided moulding machine, Galt make.
THREE-SIDE moulder, Rogers' make, Connecticut.
ONE-SIDE moulder, Dundas build.
NO. 0 shaper, McGregor, Gourley, builders.
SHAPERS No. 1 and 2, Galt make.
NEW power morticer, Galt make, also several second hand.
8 BORING machines—by different makers.
RESAWING machines—I have two band resaws, one circular resaw, all Galt make.
TENONING machine—one each, Galdie & McCulloch, McKechnie & Bertram, Ross & Cant Bros. make.
TWO broom handle lathes, with cutters and countershafts.
ONE axe-handle and spoke lathe.
WOOD turning lathes, several sizes, new and second hand.
IMPROVED power rod feed machine, McGregor, Gourley, Galt, builders.
AND papers and knife grinders, several of each.
IMPROVED saw arbors, all sizes, Galt make, large stock.
ONE improved iron frame swing saw, new, Buffalo make.
NEW 30-inch, also 36-inch, band saws, Galt make.
NEW 25-inch band saw, Cant Bros. make, Galt.
II SCROLL and jig saws, at various prices.
NO. 1 universal saw bench, H. B. Smith, build.
COMBINATION saw bench, Haggis, builder, Uxbridge.
WOOD frame saw benches at very low prices.
THREE blind slat tenoners, all Galt make.
DODGE wood split pulleys at manufacturer's price. Quick delivery.
FOOT and hand lettering machines, latest designs.
FOOT and hand wiring machine, Galt make.
ONE set cheese box machines.

Miscellaneous Machinery.

TWO sets match machines. Also set clothes' pin machinery.
2 DRY KILN outfits, also several fans by different makers.
FULL particulars of any machine in above list on application.
TWO sets cracker or biscuit machines with full assortment of dies.
RUGER & CO., builders.
ONE leather rolling machine.
ONE corn husker, Sell's make.
SEVERAL buhr stone chopping mills.
ONE ditching machine.
ONE clover huller and thresher.
ONE bobbin winder, Georgetown make.
ONE laundry hand shirt ironer.
ONE power and two hand paint mills.
SEVERAL wrought and cast iron tanks and kettles.
BONE mill for green bones. Capacity 1/2 lb. per minute.
ONE lot canning factory tools, presses, solder moulds, etc., etc.
ONE galvanic battery, (McIntosh) Chicago, Ill. make.
HAND and power meat choppers, also sausage stuffers.
100 PRESS plates for cotton or woolen mill use.
ONE soda water fountain.
4 GREEN corn cutting machines.
2 SETS fulling mill crank shafts with bearings and wheels.
PORTABLE forges; genuine Buffalo make.
ONE Eureka smut machine and one purifier.
NO. 2 Calligraph writing machine, also a World typewriter.
ONE Ronald steam fire engine.
TWO village hand fire engines.
ONE Silsbysteam fire engine.
TWO Diamond mill stone dressers.
SEVERAL large iron band wheels, turned and balanced.
ONE 62 gallon Gasoline tank, Buffalo make.
ONE sugar cane mill, Cincinnati build.
ONE stump machine screw, also three cloth press screws complete.
NEW hand corn shellers, only \$4 each.
CENTRIFUGAL pumps, all sizes.
COMPLETE steam heating plant for public or private building; a bargain.
ONE clay crusher, Galt make.
ONE shooting gallery tube.
BOILER tube expanders and brushes; all sizes.
ONE new 60-foot steam pleasure yacht at a bargain.
HYDRAULIC rams, several sizes, Seneca Falls build.
TWO set plate bending rolls for boiler shop use.
ONE derrick hay press, good order.
ONE lot new bolting cloths, Goldie & McCulloch make.
ONE lot woolen machinery, cards, pickers, etc.
BRICK and tile machines, one of each.
TWO fire proof safes, both good as new.

Engines.

225 HORSE power pair of engines, Northy & Co., builders.
75 HORSE power horizontal engines, Gartschore build.
50 HORSE power horizontal engine, Goldie & McCulloch builders.
45 HORSE power horizontal engine, White-law, builder.
35 HORSE power horizontal engine, Northy make.
30 HORSE power horizontal engine, Northy & Co., builders.
25 HORSE power horizontal engine, American make.
25 HORSE power horizontal engine, Water-our Engine Company build.
25 HORSE power horizontal engine, McRae build.
20 HORSE power pair of twin engines, Mout-treal build.
20 HORSE power horizontal engines, F. G. Beckett & Co., build.
20 HORSE power, rotary steam engine, Erie Iron Works make.
20 HORSE power horizontal engine, Kiley, builder.
18 HORSE power horizontal engine, George White builder.
16 HORSE power horizontal engine, American make.
16 HORSE power horizontal engine, Beckett make.
16 HORSE power horizontal engine, Tiff & Sou, builders.
15 HORSE power horizontal engine, F. G. Beckett, builder.
15 HORSE power horizontal engine, Mount Forest make.
12 HORSE power horizontal engine in good order.
12 HORSE power horizontal engine, American make.
12 HORSE power horizontal engine, Kelley, maker, Hamilton.
10 HORSE power horizontal engine, F. G. Beckett builder.
10 HORSE power vertical engine, Swainscott Machine Co., make.
8 HORSE power vertical engine in good order.
6 TO 8 h rse power twin engines, marine; American build.
6 TO 8 horse power new double cylinder engine; marine.
6 HORSE power automatic vertical engine; Berlin make.
6 HORSE power new champion engine, Water-ous make.
6 HORSE power oscillating engine, Beckett build.
5 HORSE power upright engine, Cline make, Alliance, Ohio.
6 HORSE power horizontal engine, Reid & Barr, builders.
4 HORSE power horizontal engine; good order.
3 HORSE power horizontal boat engine, Meakins make.
3 HORSE power vertical marine engine, good as new.
3 HORSE power vertical yacht engine; new.
2 1/2 HORSE power rotary engine; new.
2 HORSE power horizontal engine; refitted.
1 1/2 HORSE power yacht engine, vertical; American build.
1 1/2 HORSE power horizontal engines three in stock.
1 1/4 HORSE power horizontal engine, Yankoo make.
TWO rotary engines, Josiah Ross patent and make; good for cut.
IRON and brass castings for model steam engines.
ENGINE governors, all sizes and by different makers.
FULL particulars regarding any of above engines on application. I also have a large stock of portable and semi-portable engines and boilers.

Boilers

BOILER 16 foot x 48 inch, 50 tubes 3 inch.
BOILER 1 1/2 foot x 52 inch, 76 tubes 2 1/2 inch.
TWO boilers 15 ft x 60 in., 84 tubes 3 inch.
BOILER 13 ft. x 51 in., 63 tubes 3 inch.
BOILER 14 ft. x 49 in., 52 tubes 3 inch.
BOILER 14 ft. x 36 in.; 23 tubes 3 inch.
BOILER 13 1/2 ft. by 36 in., 33 tubes 3 inch.
BOILER 12 ft. 9 in. x 36 in., 33 tubes 3 inch.
BOILER 11 1/2 ft. x 3 ft., 30 tubes 3 inch.
BOILER 11 ft. 6 in. x 30 in., 33 tubes 2 1/2 inch.
BOILER 11 ft. x 49 in., 55 tubes 3 inch.
BOILER 11 ft. x 40 in., 31 tubes 3 inch.
BOILER 10 1/2 ft. x 40 in., 33 tubes 3 inch.
PAIR of boilers each 10 ft. 4 in. x 26 in., 11 tubes 3 inch in each.
BOILER 10 ft. x 44 in., 54 tubes 3 inch.
BOILER 8 ft. 10 in. x 30 in., 31 tubes 2 inch.
BOILER 8 ft. 3 in. x 25 in., 16 tubes 3 inch.
BOILER 8 ft. x 35 in., 23 tubes 3 inch.
BOILER 7 ft. x 25 in., 16 tubes 2 1/2 inch.
BOILER 6 ft. x 30 in., 20 tubes 3 inch.
BOILER 6 ft. x 22 in., 9 tubes 3 inch.
BOILER 57 in. x 30 in., 17 tubes 2 1/2 inch.
UPRIGHT boiler 7 ft. 4 in. x 36 in., 84 tubes.
UPRIGHT boiler 45 in. x 24 in., 21 tubes 3 inch.
UPRIGHT boiler 4 ft. 10 in. x 30 in., 40 tubes, 2 inch.
UPRIGHT boiler 42 in. x 30 in., 37 tubes 2 inch.
UPRIGHT boiler 33 in. x 12 in., 4 tubes 3 inch.
UPRIGHT boiler 30 in. x 13 in., 19 tubes 1 1/2 inch.
PORTABLE fire box boiler 16 1/2 ft. x 54 in., 55 tubes 3 1/2 and 4 inch.
PORTABLE fire box boiler 12 ft. x 3 ft., 29 tubes 3 inch.
PORTABLE fire box boiler 11 ft. x 45 in., 28 tubes 3 inch.
PORTABLE fire box boiler 10 1/2 ft. x 25 in., 19 tubes 3 inch.
PORTABLE fire box boiler 10 ft. x 3 ft., 35 tubes 3 inch.
PORTABLE fire box boiler 8 1/2 ft. x 30 in., 36 tubes 3 inch.
FOR full particulars and prices of the above boilers, apply to H. W. Petrie, 141 and 145 Front Street West.

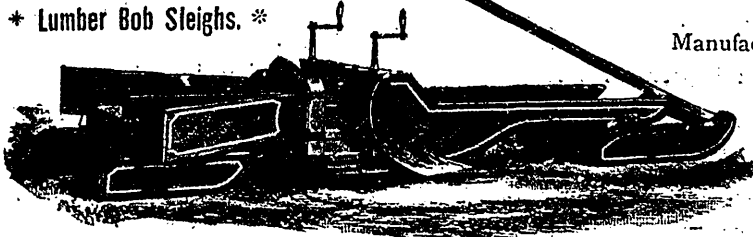
Remember The Address,

H. W. Petrie

TORONTO, ONT.

Two Minutes Walk From Union Station.

Cant Dogs, Peavies,
Skidding Tongs,
Pike Poles, Coldshuts,
* Lumber Bob Sleighs. *



J. Muckleston & Co.

Kingston, Ont.

Manufacturers of RED TOP LINE

LUMBERMEN'S * TOOLS.

And Sole Licences for the Manufacture in the Dominion of

BRAZEL'S PAT. SNOW AND SIDEWALK

PLOWS.

DODGE PATENT

Wood * Split * Pulleys.

We guarantee 30 to 60 per cent. more Power with same belt.



Every Pulley guaranteed strong enough for Heaviest Mill Work.

All Sizes in Stock. Send for Catalogue.

DODGE WOOD SPLIT PULLEY CO.

83 King St. West, Toronto.

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.

A. T. ANDERSON & CO.,

FACTORS FOR

ELECTRICAL AND GENERAL MACHINERY.

Complete installations of team and Hydraulic Power, Electric Light and Power Plants, Wiring and Construction for Arc and Incandescent Light. Agents for the celebrated "C. & O." Electric Motors.

75 Adelaide Street East, Toronto, Ont., Canada.

Estimates furnished and every information cheerfully given to intending purchasers. N. B.—Only first-class work on which a full guarantee will be given.

Investment Bonds.

THE DOMINION SAFE DEPOSIT WAREHOUSING & LOAN CO., LTD.

Head Office—The Canadian Bank of Commerce Building, King St. W., Toronto.

CAPITAL, ONE MILLION DOLLARS.

DIRECTORS.

W. D. Matthews, Esq., President.	Henry W. Darling, Esq., Vice-Pres.
John J. Davidson, Esq.	S. F. McKinnon, Esq.
H. W. Nelson, Esq.	J. P. Clark, Esq.
M. C. Cameron, Esq.	Robert Kilgour, Esq.
Thomas McCracken, Esq.	Robert Davies, Esq.
	Aaron Ross, Esq.
	G. B. Smith, Esq. M.P.P.
	J. H. Starr, Esq.
	Alexander Nairn, Esq.
	Eugene O'Keefe, Esq.

This Company is now issuing \$100, \$500, \$1000 and \$500 investments in bonds, payable in five, ten and fifteen years from date of issue, with participation in profits, affording all the advantages of compound interest accumulations on small sums of money. These bonds are the obligations of this Company and are specially protected by a sinking fund, invested in first-class real estate mortgages. They are plain definite contracts, subject to no contingencies whatsoever, are non-forfeitable after one annual payment, with values definitely stated thereon. For a small outlay, they secure a fixed and generous return.

To bondholders who complete their contracts the Company guarantees compound interest at the rate of Four Per Cent. Per Annum. The Company is prepared to receive applications from reliable agents at all points where it is not already represented.

The Safe Deposit Vaults of the company cannot be surpassed for absolute security. Call and examine or write for circular. **WM. KERR, Manager**

WILLIAM FOSTER

Lumber & Commission Merchant

Receiver and forwarder of

LUMBER, LATH & SHINGLES

Correspondence Solicited.

OWEN SOUND, ONT.

Muskoka and Georgian Bay

Navigation Company.

Muskoka Division.

For all ports upon Lake Muskoka, Rosseau and Joseph, close connections are made daily at Muskoka Wharf with mail and express trains of G.T.R. from Toronto and Hamilton as under.

On Mondays, Wednesdays and Fridays at 7.15 a.m. the Muskoka leaves for Rosseau and intermediate places, and at 1.45 p.m. the "Nipissing" and "Kenosha" leave for all points on the three lakes.

On Tuesdays, Thursdays and Saturdays the "Muskoka" leaves at 7.15 a.m. for Port Cockburn and intermediate places, and at 2.45 p.m. the "Nipissing" and "Kenosha" leave for all points on the three lakes.

Georgian Bay Division.

The Str. "Manitou" leaves Parry Sound daily at 7 a.m., calling at Midland on Tuesdays and Fridays and at Penetanguishene, on Mondays, Wednesdays, Thursdays and Saturdays. Returning she leaves Midland for Parry Sound on arrival of mail train at 1.42 p.m. on Tuesdays and Fridays, and Penetanguishene for Parry Sound on arrival of mail train at 1.45 p.m. on Mondays, Wednesdays, Thursdays and Saturdays.

The "Manitou" is the only daily boat to Parry Sound and the only boat running the famous South Channel among the islands where the best of fishing is to be had.

Magnetawan Division.

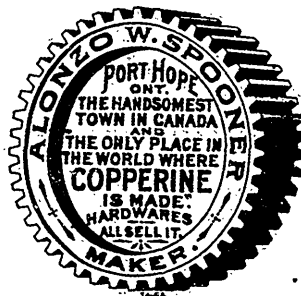
The "Wenonah" leaves Burk's Falls daily at 7 a.m. for Magnetawan, Ahmic Harbor and intermediate ports, returning arrives at Burk's Falls at about 5 p.m.

Good Fishing—Safe Boating and Bathing.

Full information from any G.T.R. agent. Send for folders with map and full information as to rates, &c.

J. S. Playfair, A. P. Cockburn, President, Toronto. Gen. Mgr. Gravenhurst. J. A. Link, Loc. Trass., Gravenhurst.

For information respecting the Georgian Bay Division apply to J. Wilkinson, 100 "Manitou" Penetanguishene P.O.



J. D. SHIER,

Manufacturer of

Lumber, Lath and Shingles.

BRACEBRIDGE, ONT.

ELECTRIC LIGHT PLANTS

THE THOMSON-HOUSTON AND THOMSON SYSTEMS.

FOR MILLS AND FACTORIES.

THE ROYAL ELECTRIC CO. ADDRESS: 56 WELLINGTON ST. MONTREAL, QUE.

A. M. DODGE & CO.
MANUFACTURERS of and Wholesale dealers in all kinds of Lumber, Lath and Shingles. Tonawanda, N. Y.

COWPER & GREGORY.
RECEIVERS and Forwarders of Lumber, Lath, Shingles, &c. Unexcelled facilities for shipping by canal or rail. Tonawanda, N. Y.

CHEESMAN DODGE
TIMBER and Lumber Merchants. Ship and Boat stock, Railroad Ties, &c. Office, 16 West Seneca Street, Buffalo.

EMMET FLEMING
INSPECTOR and Commission dealer in Lumber. Office, 251 Louisiana Street, Buffalo, N. Y.

LAYCOCK LUMBER CO.
MANUFACTURERS of Pine, Hemlock and Oak Timber up to 35 feet in length. Saw Mills. Ackley, Pa., Black Rock, N. Y., Gravenhurst, Ont. Office, corner Main and Seneca Sts., Buffalo, N. Y.

J. & T. CHARLTON
WHOLESALE dealers in Masts and Spars. Canada Round Pine, &c. Tonawanda, N. Y.

WILLARD W. BROWN.
 202 Main Street, Buffalo, handles all kinds of Hard Woods.

A. P. & W. E. KELLEY CO.
WHOLESALE Lumber dealers. Yards at Tonawanda and Chicago. Correspondence invited.

C. P. HAZARD.
WHOLESALE dealer in Lumber, Shingles, Lath and Fence Posts. Correspondence invited from the Canadian trade. No 92 River Street, Buffalo, N. Y.

L. A. KELSEY LUMBER CO., (Ltd.)
MANUFACTURERS and dealers in Hardwood Lumber of all kinds. Describe stock and write for prices. Office Tonawanda, N. Y.

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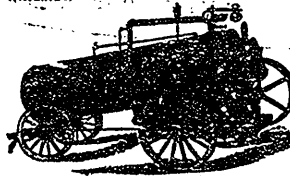
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