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NO. 14.

**FOREST FIRES AND THEIR EFFECTS ON TRADE.**

We learn from the American lumber papers that forest fires have been more than usually prevalent and destructive this spring. Following closely on the heels of the late destructive fire at Chicago, and the enormous amount of prepared timber actually turned into smoke and ashes and returned in that shape to the land and the atmosphere, have been the widespread visits of the fire fiend to the raw material where it grows. In the month of May forest fires were raging along the line of the Mackinal and Marquette railroad, settlement visited, timber and logs destroyed, and people driven from their homes. Fire had also been devastating along the Harrison branch of the F. & A. P. M. railroad, and besides the destruction of standing timber 400,000 feet of Norway logs, on skids, were burned, also 800,000 feet of 15 per cent. white pine logs, on skids, were totally destroyed. In fact, the fires seem very impartial, and to visit most of the northern States indiscriminately, Pennsylvania, Maine and New Jersey having also suffered seriously from them. Nor has Canada been exempt, and even the remote region of British Columbia has suffered a heavy visitation. The town of Farwell was stated to be totally destroyed, railway property burned up, and other extensive damage done. It seems as if fires were an epidemic that breaks out uncontrollably, and at unexpectedly odd times and seasons, and it is said that the year 1885 will be noted for its forest fires and great destruction, even before the snow was fairly off the ground or had disappeared from the woods.

It is remarkable, too, that town fires seem to rage in sympathy with the forests, for it is not easy to understand why the buildings and timber stocks in a settlement or city should be destroyed because the forest next to the locality happens to be on fire, with broad lands cleared and cultivated between. One would not imagine a saw mill to be without a considerable space of ground, well cleared of its timber around it; yet we are told that the water-power, saw-mill, boarding house, etc., on the estate of Paul Carmine at Old Stronach (Michigan) was totally destroyed to the value of \$20,000, and that "the fire originated from forest fires, which have been very destructive in that vicinity. Lakeside, near Muskegon, was also visited. The fire originated in G. E. Wood's lumber yard. Mill saved, but 5,000,000 feet of lumber licked up." Surely the forest fire must be held guiltless of these disasters? Yet somehow they occur, so simultaneously that there appears to be some latent connection between them, which is allowed as a reasonable excuse for them if the forest, miles away or just within sight, were on fire. On this subject, a moralist in a recent number of the *New York Record and Guide* makes the

following sensible remarks, not unworthy of Touchstone, or even of the "Melancholy Jacques" himself:—

"Our philosophy and knowledge of the occult forces of nature are not deep enough to explain the laws that govern casualties and crimes. One railway train jumps the track, and directly following a half dozen similar accidents are reported from different sections of the country. A steamship is blown up, burned, or foundered, and on several widely separated seas the casualty is repeated in various modified forms. Boston followed Chicago in an attempt to imitate or initiate the general conflagration with the Second Adventists predict, and murder and suicide are confessedly epidemic. Who can explain this mystery? A despatch to one of the morning papers, dated Hornellsville, May 17th, gave an account of 12 suicides in a single week in that town and vicinity. We mention the fact but attempt no explanation. Probably this frightful record of self-immolation would be thought no mystery by the people of some of the adjacent towns, rivals to Hornellsville. They would call it only a natural expression of the disgust which all people whose experience of life is limited to Hornellsville must feel. But this would be only ill-natured and furnish no clue to the philosophy of which we are in search."

The conclusion arrived at from these frequent fires is that the price of timber must harden at the fountain head, but in the meantime the lumbermen's labor is not interrupted. For instance, it is stated that a gentleman from the Lake Superior lumber region reports as follows:—

"The cut on Bad and White rivers has been greatly in excess of what was intended, but the lumbermen are hopeful, and fear their log supply will not be adequate to fill the demand. Shipments by lake as well as by rail are steadily on the increase, and orders accumulating as the season moves on." Thus it appears that, while fires are destroying the woods wholesale, enough remains to keep the lumbermen as fully employed as if there had been no fires at all.

The trade reports from America like those at home, speak unfavorably of the actual state of trade, though always hopeful. The opinion of the paper just quoted is that "the business of the country is depressed. Enterprise of all kinds is discouraged. Speculation is dead, and hence railroad business in the aggregate is not profitable, more from the cutting of rates than the decrease of tonnage carried. The one hopeful sign is that the railroads do more business than ever before, but at unremunerative rates."

But in describing decay of trade in vast commercial communities like those of Great Britain and America such statements must not be taken too literally, and they are often accompanied by information, incidentally brought forward, which is directly opposed to this doctrine. As for instance the *New Orleans*

*Times Democrat* tells us that the *Baltimore Manufacturers' Record*, in its review of new enterprises reported for the week, tends strongly to show that there is a great deal of activity and not a little progress in nearly all the States. Alabama has a new land and improvement company, with a capital of \$100,000, and which, it is said, will have charge of the Mobile and Ohio lands. Florida is alive with new sugar and saw mills. Georgia reports a new street railway in Rome, and saw mills, planing mills, and many small industries are being started. Kentucky appears with a new flour mill, a large saw mill, and the large distillery at Owenboro, lately burned is being rebuilt. In Louisiana, New Orleans people are starting a company to manufacture textile fabrics. The capital, \$375,000 is reported as subscribed. Monroe is to have enlarged shops of the Vicksburg, Shreveport, and Pacific Railway, and street cars and improvements are under way in many parts of the state. A new oil and fertilizer manufacturing company has been organized in Mississippi, at Aberdeen. North Carolina comes to the front with a tobacco factory chemical works, saw mills, and planing mills. Tennessee is credited with a new coal and coke company, a tobacco factory, and many new enterprises before reported or not yet ready. Texas is heard from through a paper mill, a flour mill, saw mills, an iron foundry, and so on. Virginia has a new steam flour mill company, development plants for coal and gold mines, a carriage factory going up and several minor matters. West Virginia has Bessemer steel works, now building at Wheeling, with capacity of 300 tons of steel daily. A new coal mine has been opened near Mt. Carbon. Charleston is a new foundry ahead, and the state is generally doing her duty in the matter of progress. It is very pleasing to encounter these constant evidences that the section is awake to the necessities and opportunities of the hour. The Exposition has been availed of to interest both "home folk" and strangers in many industrial chances, and the results are beginning to be apparent in all portions of the south. As the financial situation of the country improves these evidences will be largely multiplied, and especially as to the leading industries, such as iron, coal and timber.

In like manner, while we are lamenting over the depression of trade and the absence of speculation in our own country, in common with our contemporaries, other parts of our paper, for example our columns of "Building Notes," and our "Building Supplement," bear testimony to what an immense deal of good business is still doing in spite of every drawback.

These forest fires, of course, do mighty mischief, but they burn up a great deal of rubbish that would never have been exported. Some effect they may have on prices, but the

quantity to come forward to this country will hardly be diminished by them. Our American correspondent's letter published on 6th June, takes this view, as he calculates the excess of this year's cut in the States will greatly exceed that of last year, and the lumbermen of Canada are not likely to be behindhand. Conventions may meet and propose to raise prices by combination, but after they separate each individual is apt to look out for himself, and, perhaps, to forget the conditions to which he has formally assented. At all events, some do; and even one dissentient breaks up the good faith of the understanding, and prices relapse into their old irregularity.

At present it looks as though there would be plenty of timber in the British market from all the shipping countries, and the best hope is that there may be plenty of home trade to render it welcome.

The unexpected they say is the likeliest to happen, and a good demand may spring up when we have almost abandoned the hope of it. There is plenty of trade still, but its profits are too much subdivided. There are so many in the race that not a few must be out of the running. — *Timber Trades Journal*.

**THE CANADIAN LOAN.**

LONDON, June 29.—The tenders for the Canadian loan of four million pounds sterling were opened to day, and it was found the loan was subscribed for three times over. The minimum fixed was ninety-nine, and the bonds were for fifty years with the option reserved by the Government of Canada to redeem them at the end of twenty five years. No sinking fund is attached to this loan. The first coupons will be due the 1st January next. The whole four millions have been tendered for at rates which bring up the rate per \$100 to £1 17s. 8d. premium. The three and a half per cent. loan obtained in June, 1884, was equal to 102 for fours with sinking fund attached. The sinking fund in former loans is one half of one per cent. The loan just effected without sinking fund is, therefore, three-eighths of one per cent. better than the three and a half per cent. loan of last year with its one half per cent. sinking fund, without calculating the gain made in consequence of the change in the plan of allotment and in time of first payment of interest coupons. The allowance in the loan of to day is about one half per cent. In 1878 Sir Leonard Tilley's four per cent. loan netted ninety-five and a half and in 1874 Sir Richard Cartwright's loan netted eighty-seven and a half. Both these loans had sinking funds attached. The success of this new loan shows the desire of British capitalists to invest in Canadian securities.

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## LUMBERING IN POLAND.

It may be of interest to those who are engaged in the lumbering business in the United States, to hear an account, once in a while of how these operations are performed in other countries, and thus be enabled to make comparisons. Mr Quinn, the Commissioner of Crown Lands in Quebec, gives the following description of the lumbering business in the valleys of Eastern Prussia and Poland:—All parties to whom I was introduced seemed earnestly inclined to afford me all the information possible relative to the trade of Danzig. They are straightforward, open and candid men, and did not appear to have anything to conceal of a general character with respect to the business. They all complain that the standing timber is fast disappearing, that it is rising in price at each and every succeeding sale, and that the distance they have to haul is constantly increasing. Mr Grade, of the firm of Messrs. Albrecht & Co., of Danzig, said timber not requiring to be hauled more than 12 to 15 English miles is considered handy river. To have to haul six to eight German miles (30 to 40 English) is by no means unusual. Afterwards it has to be driven a great distance by a tortuous, tedious and expensive route. A great proportion of the lumber brought to the market is made a long way to the south and southeast of Warsaw, and much of it is brought from Galicia, in Austrian Poland. The general custom of selling the standing timber is as follows: A certain limit or circuit is sold, which is supposed to contain a specified number of trees, suitable to be made into timber, for a round sum or for so much per tree. The number of trees is generally overrated, but such is the competition among purchasers that they submit to this. The purchaser is bound to take off the quantity within a given time, if to be found; but in no case is any deduction made. He is not allowed to take more than the number stipulated for, should they even be there, without paying additionally for them. Every tree which is cut down counts, whether rotten or otherwise. I went with Mr Albrecht and looked over all the lumber in the river, down to the harbor. There are but little remaining after the spring shipments, and none of the new timber had then arrived. It was expected in a few days. The timber is separated into three classes—1st, 2nd, 3rd. Mr Albrecht told me that to get any considerable quantity of first quality is very difficult and expensive, and scarcely any of it is to be had without having to be hauled 30 or 40 English miles. The value of first quality redwood here at present is 55s per load, free on board; 2nd, 45s; 3rd class about 41s per load. The freights just then were very low, not more than 15s per load to the east coast of England. Large quantities of redwood are now being sawn up by the different establishments here into deck plank for the English and French Governments. The prices paid by the French Government are for 1st, quality 21s sterling for 40 feet long, 3 inches thick, and 9 inches broad; and two-thirds that amount for 2nd quality. There must not be any pith in those planks, and they must show heartwood the whole length, of at least seven inches wide. I find that the production of last winter does not exceed that of the previous year. A considerable quantity of redwood is also being prepared here, intended for the defences at Southampton, England. The pieces are all to be 35 feet long, 12 inches square, and to show a certain amount of heartwood on all sides. The price to be paid is 65s per load, free on board—a price with which the sellers seem well satisfied. The timber purchased from the Prussian Government in almost all cases is cut down and squared at their expense. A portion of the timber is also got out round the full length of the trees. It is then sold by public auction—the square timber by the foot, the round timber by the piece. The latter timber is brought down without being squared, and part of it shipped as spars. The remainder is sawn and manufactured into different descriptions of scantling.

As to the forests of the Baltic provinces, strictly speaking they are now nearly all cut down, at least the larger sized trees are, and those now obtained have in many cases to be transported a distance of some 20 or 30 versts (14 or 20 miles), on axle or sledge. In general

the latter mode of conveyance is preferred, as it is the cheaper of the two. From this it will be seen that a good deal depends on the kind of winter we have, as good sled roads are desirable for the transport of timber to the edge of the water, by which it is floated down in spring at the breaking up of the ice. This department of the trade, I may mention, is almost entirely in the hands of the Israelites. To give you some idea of the extent of timber trade in Riga I may mention that there are annually exported about 2,600,000 of railway sleepers, and about 300,000 logs of square timber, which are hewn in the forests, all the chips and branches of which remain there to rot, and make manure for the next forest that grows in their place. There is no attempt made to clean out such refuse, in fact there is no fostering care whatever employed in such things, it is entirely left to nature. Anything can be made here, such as squared timber, railway sleepers, etc., and it is a very rare thing indeed to replace any of the forests that have been so wrought out, by planting young trees in their stead, nature is allowed to do that herself, and of course will accomplish it in a series of years. There are still a few forests in these provinces held by the crown, the first cost of which is so high that at present prices it almost precludes merchants from working them to advantage.

The most of the timber exported from Riga at the present time comes from the provinces of Smolensk and Vitopsk, along the banks of the river Dwina and its tributaries, but owing to the great distances at which some of the woods are situated from water communication with the river there is a good deal of extra expense incurred for the transport, and this is increasing yearly, consequently the price of timber is getting much higher to work out this one problem. In addition to the above exports there is another large demand which must make a big hole in the woods yearly, viz. There are 1,500,000 of fir logs, averaging 24 feet in length, rafted down from the above mentioned provinces annually, and cut up into 3 inch planks and boards, and exported to England, France, Belgium, Holland and Germany. Notwithstanding the great quantities, I am told that the increasing demands can be met for a great many years to come, subject to an increase in price owing to the extra transport to water communication, which is indispensable to the trade. As to the titles of official reports or documents issued by the Government, there is no one here can enlighten me on the subject, all saying they never heard of any such things. There are no wholesale joinery establishments here at present, but formerly there was one in connection with a large saw mill which was burned down about 18 months ago, and that part was not rebuilt, as it was considered by the proprietors to be a bad speculation.

## GOOD ADVICE.

It has been noticed, says a contemporary, that boiler explosions are especially frequent in the morning. Take, for example, an engine which works during the day with steam at six atmospheres. The workmen leave the factory at 7 P. M.; about six o'clock the fireman reduces his fires and leaves the boiler with the gauge at four atmospheres. On returning the next morning, at 5.30, he generally finds the gauge at 1.5 or two atmospheres, with a fine water level. He profits by the reserved heat, which represents a certain expenditure of fuel, as an economist he utilizes it and drives his fires, to be ready for the return of the workmen, without suspecting the dangers concealed in the water which has been boiling all night. He does not feed his boilers, because they are at a good level. In other words, he prepares, unconsciously, the conditions which are most favorable to superheating and a consequent sudden and terrible explosion, which will be attributed to some mysterious and unknown cause. Treves recommends that, before starting the fires in the morning, the fireman should restore to the water the air which it needs, by injecting it, with the aid of pumps and suitable tubes, into the lower portions of the boiler. As the gauge of the pump indicates a pressure which is superior to that of the remaining steam, all danger is removed; the fires can be driven, ebullition goes on nominally, and explosions become naturally impossible.

## STEAM ENGINEERING.

Have just finished five years of "tramping." In that time have come in contact with thousands of stationary engineers. A few of them are capable of filling far better positions than they have. Some, if they could have had the advantages of education, would have engraved their names on the portals of engineering fame. As it is, they are ornaments to their profession. The majority of the men who have charge of the immense steam power of this country, who are sorry to say, are mere machines, laborers, hewers of wood and drawers of water; men who cannot calculate the safe pressure of boilers, or correctly adjust a safety valve,—one of them once told us that a safety valve raised two inches from its seat—they know nothing of the laws of combustion, expansion of steam, in fact nothing regarding their business; they scoff at an engineer who reads, stigmatizing him as a "book engineer," "theorist" and "parlor engineer." With such, it is like casting pearls before swine to argue, but with the "book engineer" it is pleasure; he knows something besides "what he learned in a shop." We often wonder if those "practical engineers" carry into other walks of life their hatred of men who read and call them "book lawyers," "book doctors," "book druggists," "book ministers," etc. We contend that if reading, and by reading we mean earnest research, will prepare the lawyer, the doctor, the druggist or the minister for their respective callings, then it will the engineer, for in our opinion he is called to meet graver responsibilities than they. The lawyer may neglect his client, the doctor his patient, the druggist make a mistake in a prescription, the minister neglect the proper word at the proper time, and what is the result? In none of these cases can more than one suffer, one life be lost. How is it with the engineer? He ought to realize his position; he must never neglect, never forget, never mistake; if he does, death and destruction comes not only to himself, but to hundreds of his fellow men. He is his brother's keeper, and he ought to prepare himself by all honorable means to perfect the knowledge of steam, its use and abuse. Let him never be ashamed to ask for information, or have a work on engineering be seen sticking out of his pocket; for the time will come among engineers when education will triumph over ignorance, when the stoppers and starters will be placed where they belong, and the man who knows will take the reins. We could fill whole papers of incidents and conversations with these so called "engineers" that many of your readers would be inclined to doubt. If manufacturers of engines would insist that competent men be engaged to handle their wares, half the battle would be won, their goods would give better satisfaction, and all be benefited.—Tramp.

## HOW TREES ARE DESTROYED.

The lumberman's axe and the settler's fire, it appears, says the *Lumberman's Gazette*, are not the only agencies in the denudation of land against which precautionary measures must be taken. Browsing cattle are reported as destructive to California forests as fire is elsewhere. A current item states that herds of sheep and cattle are driven up to the mountains every year to graze, and they devour every green thing from the foothills to the meadows on the summit of the ranges. When the grass falls the young seedling trees are eaten off, or the bark peeled so that the undergrowth is entirely destroyed. In Michigan the annual fires of the Indians used to keep the woods clear of saplings and undergrowth and there is no doubt that the forests are denser now than when the Indians occupied the land. The browsing cattle of California seems to be doing for the forests of that state what the Indian's fires formerly did for the Michigan woods.

## Water with Lead in it.

Paralysis, colic, gout, rheumatism, kidney disease, blindness and insanity may all come, it seems, from drinking water with lead in it. Under these circumstances, a simple test for discovering the presence of lead in water may well be useful. It consists of adding a little tincture of cochineal, which, if there be the least trace of lead in the water, will color it blue instead of rose.

## ATMOSPHERIC INFLUENCE ON ADHESION.

The adhesion of belts to pulleys is frequently attributed to the pressure of the atmosphere, and in order to show how much the air influences bolts in this particular, the following simple experiment is presented: Take a circular disc of leather, say three or four inches in diameter, with knotted string secured in its centre, and when well water soaked, press it upon any level wetted surface. The "boys" call this apparatus a "sucker," and it well illustrates the phenomenon of atmospheric pressure, or "suction," as it is usually called. If an effort to draw it away from this surface by the string, it will be found resisting very forcibly, but the gentlest pressure will slide it on the wetted surface; it does not offer the slightest opposition to motion in the direction of its face, nor will it resist removal if raised first at the edge and then peeled off. The atmosphere does not press two bodies together when it can get between them; it is only when excluded by a tight joint that the development of its pressure is possible, and it becomes sensible only when an effort is made to separate them by a force acting at right angles to the plane of their faces.

Another simple experiment shows that when two level, smooth, and clean surfaces come together by a motion like the closing of a book—which is similar to that of a belt coming in contact with its pulley—there will be retained between the two a thin film of air, and, while this remains, the contact of the two is imperfect and the sliding of one over the other is easily performed. Take two iron "surface plates" which have been scraped down to a practically perfect plane, and lay one of these on the other like a belt goes to a pulley, they will be found not to be in contact at all, but as if floating one on the other, and the top one will slide off by its own weight at the least inclination of the lower one. Much of this interposed film of air can be displaced by a sliding of one plate on the other starting say at one corner, with the plates in close contact, and carefully pushing one over the other, holding it the while close to, as if to keep the air out. Then indeed, an obstinate resistance to sliding will be felt, and the friction of nearer contact will be made thoroughly sensible. But this way of bringing surfaces into contact has nothing to do with belt action, except to prove the need of a plastic surface on belt and pulley which will enable them to adhere, while in contact with sufficient force to prevent sliding, and at the same time be uninfluenced by the intermedium of air. And lastly, in order to put the matter to actual test, an apparatus was constructed, such that a leather belt was made to slide on the face of a smooth iron pulley, and also to drive the same iron pulley up to slipping of the belt. In both cases the adhesion or driving power of the belt was held by a spring balance, so that the work of the belt could be observed. Experiments were tried with this mechanism placed in a bell-glass jar on an air pump plate, with and without air in the jar, and if any difference was observed in the adhesion of the belt to the pulley, it had more in vacuum than when the atmosphere was present.—Cooper on Belting.

## INGENIOUS WOOD CARVERS.

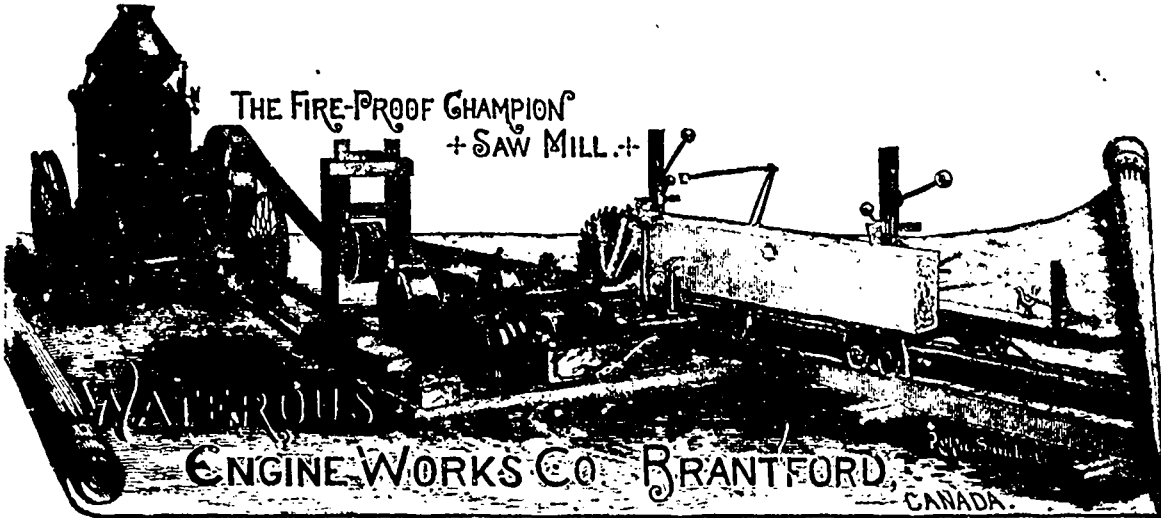
Over the doorway of a building on the west side of New York city is a sign which reads "Artistic Bric-a-brac." In a small square room up one flight of stairs were several tables laden with many curious and interesting productions of German and Swiss artists. "The Swiss peasantry are the greatest wood carvers in the world," the proprietor said. "Carving seems to be as natural with them as eating. They carve out of wood with wonderful ingenuity, anything from a simple paper knife to an elaborate piece of architecture in miniature. Aside from wood carving and some other mechanical occupations they are not good for anything, being very simple, ignorant people but they have a genius for carving, and have a natural skill for copying from nature. Their floral pieces are regarded as masterpieces, and serve as models for young sculptors. It is only necessary to furnish them with a photographic design of what is wanted. Most dealers who import Swiss carvings do this, although the Swiss peasantry produce numberless things

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themselves without the aid of any suggestions. They carve out of wood almost every kind of fancy articles, such as nutcrackers, inkstands, jewelry cases, cuckoo clocks, ladies' work boxes, and a large number of other things too numerous to mention. The tools they use are very simple, the carving being done by hand. The articles they carve are ingeniously ornamented with leaves and flowers, and some of their designs are extremely odd; they are always artistic. Here is a piece of carving in the shape of a nutcracker. It is a lifelike representation of a bear on its haunches. Of course it is made more for ornament than use, but its artistic merit is worthy of careful study. The Swiss have a knack of turning the most simple article into a real work of art. Take this book rack, for instance," and the dealer produced a very simple form of book holder for the library table, having two side pieces on a sliding base, "see how artistically the side pieces are carved, showing in bold relief a double rose surrounded with a mass of leaves and vines.

"One advantage the Swiss have is the wood which they use. This is remarkably fine, and free from knots, and a tool cuts it as easily across as with the grain. The kind mostly used is known to the trade as peach wood, which it closely resembles in every respect. Another kind of wood which is largely used is called satin wood. This has a pure white color, and, like the other variety, is entirely free from knots, and peculiarly even in respect to hard-ness.

"The art of the Swiss in carving wood first attracted attention about fifty years ago. It was not, however, until years afterwards that it was turned to account in a commercial point of view, and even then the sale of Swiss carvings were restricted to tourists in the summer season, who made their purchases through the intermediary of hotel porters. Hence the trade was for a long time very small and unremunerative. But in the course of time local capitalists took the matter in hand, opened workshops and

began an export trade. The business of wood carving now finds employment for several hundred persons. In fact, in one establishment three hundred persons of both sexes are employed. The women have great delicacy of touch, and their work in certain branches are preferred to that of men. Each artisan employed in the workshops has his or her specialty, the choice of which is left to individual taste. Some have an aptitude for and excel in the modeling of groups of animals; others refer to carve various fancy articles with floral patterns, and some build miniature chalets. The latter is one of the most popular articles of Swiss handiwork. As usually made, it is composed of different colored woods. The thatches with the ropes and stones to hold them on, and the deep roof are prominent features. The lower storey shows a stable, while the upper storeys are made to indicate the family dwelling. The surroundings, including the fence, courtyard, pump and spring are also given. The roof is so constructed that it can be raised like a lid, and the part which represents the upper stories is lined with plush, and is intended as the receptacle for jewels. A movable partition divides this also from the first storey, which contains a music box, which is set going by lifting the top cover. The price of these articles range from \$10 to \$35.

"Few people make a specialty of Swiss carvings, for the reason that the production is very limited, owing to inability to turn out the goods fast enough by hand. Besides, all the rare bits of carving are made by the peasants at their homes in the Alps, who work only during the winter season. In the summer they are occupied in tilling the soil and tending their herds of goats on the hillsides, a pursuit which they love so much that no amount of money could entice them from it."

A REBELLION is said to have broken out in Venezuela.

LORD Rothschild took his seat in the House of Lords on Friday.

### FURNITURE WOOD.

Noticing the changes in the styles of furniture the Boston Commercial Bulletin thus refers to the wood used:

In chamber sets also the change towards a better class of goods is seen in the increased demand for ash finished with oil and shellac in natural colors. The principal woods used for furniture are walnut, cherry and mahogany. Walnut has been and may be still regarded as the most popular wood, though in the last two or three years the demand for cherry has increased very rapidly, and fully as much of it is now used as walnut. It is stained and finished up in imitation of mahogany, its natural color being a dull, light shade. The supply of cherry in the country is small as compared with that of other woods. The demand for it during the last few years has caused firm and advancing prices, its cost being now about the same as walnut.

Mahogany is becoming more popular every year also. It is a beautiful wood, but costs from one third to one half more than walnut and only about one third as much of it is used. The three principal varieties are the Mexican, Cuban and San Domingan. The Mexican logs are the larger but the San Domingan has the better grain. Most of the mahogany used in this market is Mexican. Ash is sometimes manufactured up into chamber sets and is finished in natural colors. Ash, maple and beech are sometimes stained and finished to imitate mahogany and are used more generally for this purpose in the west than in this section. Should the price of cherry advance, owing to the increasing demand, it is very probable that the use of these woods as imitation mahogany would be largely increased. In the east, ash, maple and beech are obtained in New Hampshire, Vermont and Canada. In the west they are obtained in Michigan, Indiana, Kentucky, Tennessee and the Virginias. Cherry and walnut come from the last mentioned states. Michigan, however, furnishes very little.

### THE QUEBEC TRADE

QUEBEC, July 3. The following transactions have transpired during the week in the export of freights from Quebec: The Clyde, 16s. 6d.; Fleetwood, timber, 20s; Liverpool, timber, \$21; Cardiff, timber, 20s, deals \$2s 6d. The timber market is dull. Some drams of waney of about 20 inches have been placed 35 to 35c. with timber a year older at 33c. for about 19 inch. Third class deals, all regulars have been sold, ex barge, at \$46.50, and with 25 per cent. oddments at \$32. There are no transactions in spruce deals reported.

The recent heavy rains have done much damage to the dams and booms on the rivers around Quebec which will retard the sawing considerably, besides which a large number of logs have been lost. These summer floods are the most serious within memory.

Since the opening of navigation 273 seagoing vessels have entered and 103 cleared at this port.

### Boiler Explosion at East Boston.

A boiler used for a hoisting engine was blown into the air at the wharf of the national Dock and Warehouse Company, East Boston, Tuesday. The boiler was close by the ship Agenor, where it had been placed to unload a lot of sugar consigned to E. Williams, of State street. The engineer said after the explosion that he had only 120 pounds of steam pressure at the time of the explosion, which was twenty pounds less than the boiler usually carried. When the explosion occurred, the boiler was seen shooting into the main rigging of the Agenor, and then striking the main rigging on the port side, it fell on the wharf again about four feet from the edge and twenty feet from its original position. When the boiler exploded it sent large pieces of iron flying in all directions. Several persons were injured.

THE number of books registered in the Toronto Free Library is 34,704.

THE compact between the Tories and Parnellites is said to be weakening.

## NEW WOOD PRESERVATIVES.

Immorsing the lower ends of fence posts in hot coal tar will preserve the outside for years, but it very frequently happens that in using small trees from four to eight inches in diameter the heart wood is the first to decay. This often occurs with chestnut posts that are set before they are thoroughly seasoned. To prevent this decay at the centre, as well as of all that part of the post placed below ground, by the using of wood preserving solutions, my friend and neighbor, J. J. Suckert, Ph. D., suggests a system which strikes me as being not only novel, but exceedingly valuable as well. It is to have a hole in the centre of the post, from the bottom upward, to a point that shall be above the ground when the post is in position. Then bore another hole in the side of the post with a slight inclination downward, making an opening in the centre hole, which will allow free passage. A wooden plug, two or three inches long, should be driven snugly into the hole at the bottom of the post, in order to prevent the escape of any liquid that may be used in the operation. Now when the posts are set in an upright position, a preservative solution may be introduced into the hole in the side and the centre one filled with it, after which a cork or plug of some kind should be inserted in the side hole to prevent evaporation, as well as to keep out dust and insects. The solution thus introduced will gradually be absorbed by the surrounding wood, until all parts along the entire length of the central cavity must become completely saturated. When the solutions used have been taken up by the surrounding wood, it will only be necessary to withdraw the cork, or plug, and apply more, if it is thought desirable. A common watering pot with a slender spout will be a handy vessel to use in distributing the solutions.

Petroleum, creosote, corrosive sublimate, or any other of the well known wood preservatives may be used in this way. Telegraph posts might be prepared in the same way, and if the central reservoir were kept filled with petroleum, they would last one hundred years or more. Where a large number of posts and poles are to be prepared, it would be cheaper to have the holes bored by steam or horse power than by hand. With very open and porous wood it is quite probable that a hole bored in the side of the post and above the ground, and deep enough to hold a pint or more of creosote or some similar solution, would answer, but I think a central cavity reaching to the bottom would be best.—*American Agriculturist.*

## HOW FAST?

"It is easy enough to run a locomotive a mile a minute," said a railway superintendent of motive power to the *Herald* reporter. "An accommodation train on our road, scheduled at about thirty miles an hour, frequently runs at the rate of 60 for short distances between stations. It's the stops that break up speed, and that is one reason why they can make such speed over in England. Their crossings there are rarely at grade. The new road must get over or under the old one. The result is they have very few stops to make. Now, take the Lake Shore limited between here and New York. It is scheduled to run through—970 miles in twenty-five hours. That is almost thirty nine miles an hour. Fifty-five minutes are lost at Albany, Syracuse, Rochester, Buffalo, Erie, Cleveland, Toledo and Elkhart. Besides these division stations, where engines are changed, some time is lost in getting through all cities, and over some bridges, like the long trestle at Sandusky. But this is not all. There are twenty-two grade crossings between New York and Chicago, and for every one of them must come to a standstill. Engineers agree that no stop can be made without losing at least four minutes. On the run we are speaking of that means about ninety minutes lost by grade crossings. Taking out all delays and stops the actual running time is about 22 hours, or at the rate of 40 miles an hour. The engineers tell me that not an hour passes that they do not run one or more miles faster than a mile a minute. But for the grade crossings and the law requiring all trains to come to a full stop before them the run from New York to Chicago in 25 hours would be just as easy as

anything. Did you ever hear where that law started? Well, it was right here in Chicago. April 25th, 1852—I remember the day well—a train on the Michigan Southern collided with a Michigan Central train at what was then called Grand Junction, near Grand Crossing. Twenty-five people were killed and forty or fifty injured. An indignant meeting was called here in Chicago and resolutions were adopted demanding a law requiring all trains to come to a stop before such crossings, and compelling the employment of a targetman. That was the first suggestion of the idea, and to-day there are not less than 5,000 grade crossings in this country, at each of which one man, and at many of them two men are employed.

"A locomotive can easily travel at the rate of a mile a minute on a straight, level track if not overloaded and if a good steamer. I myself have driven an engine as fast as 67 miles an hour for five or ten minutes, and there is a well authenticated case of a locomotive moving at the rate of 73 miles an hour for a short time, the fastest record ever made with a locomotive. That was 3,185 feet a minute, or 460 revolutions a minute for a five and a half foot driver. That is faster than you can count and faster than any steam engine of that type should run. The English are ahead of us on fast locomotives. They build their engines with but one driver on a side, and thus avoid the danger of the parallel rods connecting geared drivers. Set a locomotive going as fast as she can hum and there is great danger of accident—that the parallel rods will break. Think of those four wheels on two axles, all geared tight, and moving at that pace. A slight jump, a spring or a tilt to one side is likely to alter the adjustment, bring on an unequal strain and snap one of the rods as if they were pipe-stems.

"Do I believe locomotives will be built to run 60 miles an hour, schedule? I certainly do. What is there to hinder? It is simply a question of power and economy. Build a two driver locomotive with ten foot wheels and sufficient steam capacity for the loads she is intended to draw, and there is no reason why she should not run three miles in two minutes. On a first class track there is no more danger of derailment at 60 miles an hour than at 30. Cost a small fortune to build a locomotive? No, indeed, not now. A few years ago a good engine was worth from £14,000 to \$17,000, but now they can be built for \$7,000 to \$9,000. Some switch engines do not cost more than \$4,000. The usual type of locomotive has about 200 separate parts, and the life of the machine is put at ten years, though there are engines in Chicago to day that have run ten years without overhauling, and are good for several years more. The flues of locomotive boilers need constant attention. The first locomotive that was ever seen in Chicago is still on her legs and able to work, though no work is done with it. She stands in a shed out at the Northwestern shops."—*Chicago Herald.*

## DEFECTIVE SAFETY-VALVES.

Having seen many defective safety-valves and had some experience with them, I have thought it worth while to give my ideas regarding them. Some time ago, when I was but fourteen years old, and know no more about an engine and boiler than the workmen did about me, it so happened that I was given charge of a portable threshing engine which had a very defective safety-valve. It was of the old ball and lever type, too well known to need any description. The valve had to be keyed down when moving from place to place, and the ball had to be taken off or it would shake off; and when the engine was at work, the motion would shake the ball so that there was a continual waste of steam, which was quite annoying to me, as I very often make steam enough to run the machine; so I used to key the valve down tight, so as to hold what steam I had, and when the engine had to be stopped, and the fire was strong, I would look sharp, and open the fire door and, perhaps, throw cold water in on the fire, taking good care to get out of the way of the steam which came rushing out of the door. I ran that engine for two threshing seasons without any accident, which was owing probably more to good luck than good management. I then ran another portable engine of another

make, with about the same kind of safety-valve, but instead of the objectionable weight the lever was held down by a spring, which I think was also very objectionable, because when steam should have been blowing off freely, the spring was so far out on the lever that a very slight lift of valve would increase the tension of the spring, and as this increase of tension was not provided for in the valve, of course steam would not blow off much till it had raised some ten or fifteen pounds beyond point of blow-off, and as the valve was liable to stick fast at any time it was not only very dangerous, but a perfect nuisance.

I had so much trouble with this valve leaking and sticking that I persuaded my father, who owned the engine, to let me get a spring pop valve, which I used for four years, and never but once had any trouble with it. That was when a small chip of iron got in the way when the valve was shutting down, and the chip got fastened, so that raising the valve would not let it out, and I was obliged to let steam down and take the valve apart. This valve would relieve the boiler under all circumstances, and I never knew it to leak or stick.

The next boiler that I took charge of was a saw-mill boiler of the locomotive type, and in looked as if it might have been older than myself. It had just about such a safety-valve as I have described above, and I soon replaced it with one of Crosby's spring pop-valves, and since then I have used no other, though I think there are others as good as the Crosby.

It seems to me that engine-boiler makers are much too careless about providing their boilers with good safety-valves.

Two years ago I was occasionally at a new bone-mill in which were an engine and boiler from one of the most prominent engine-building companies. The boiler was of about 100 H.P., fitted with one of the old style safety-valves, which I thought was of very little account.

One time in particular, when I happened to be in this mill, one of the main driving belts gave out, and so the engine had to be stopped. They generally carried steam at about 80 pounds, with the valve set to blow off at 90 pounds, which I think it seldom did. This time steam was close to 110 pounds and the valve still close to its seat. The engineer got a piece of board and went up a ladder at the side of the boiler wall and pried the lever up when the steam came out with a terrible noise and still kept on blowing after the engine had been started and steam was down to 80 pounds. The engineer then went up the ladder again and shut it down. I think such a valve not only very dangerous, but a continual nuisance. It should be replaced by one that will relieve the boiler under all circumstances without the help of the engineer, and close promptly when the pressure has been lowered sufficiently.

I could mention many other circumstances regarding defective safety-valves; but my article is already too long, I am afraid, so in conclusion I will simply say that owners of boilers cannot be too careful in avoiding the old-style lever valve, in which the lever comes so handy to hang old wrenches and such things on, so as to stop the valve from leaking so much steam.—*W.T.S., in Saw Mill Gazette.*

## Fatal Boiler Explosion.

BRADTOWN, Ky., June 26.—The boiler at the distillery of Matingly & Moore exploded this morning. Three of the work hands, Chas. McAtee, Chas Spaulding, and Mason Baird were killed instantly, and Bemis Allen was fatally bruised and burned. All were coloured. The scene at the distillery was horrible. Matingly & Moore's loss is great, as the building is wrecked and the machinery ruined.

CHARLES H. Nuite lately returned to Cheboygan, Mich., from an exploration of the Spanish river, Ont., region, in quest of timber, as an agent of Canada parties. He reports a large amount of pine and timber woods in the territory investigated, and that the streams are fine for running logs. The Sable river is a fine driving stream emptying into the Spanish. It is as large as the Cheboygan river for 100 miles, and has a rapid current. A jam of logs was run 100 miles on the Sable in four days.

## MODIFYING THE PROPORTIONS OF A ROOM.

To make a room appear higher, the plane surface of the ceiling should be increased by the mouldings of the cornice by panels, or, in the absence of these, by bands of color performing the same office. A vertical system of line should be adopted in mural decoration, and the mantel should be lower.

To make a room appear lower, exactly the opposite treatment should be adopted; that is to increase the plane ceiling, adopt a horizontal system of mural decoration, with a dado and a high mantel.

To make a room appear wider is accomplished to a certain extent by making it appear lower; but where this is undesirable, or where it is insufficient, the effect can be reached by adopting a mural decoration on a graduated scale of form, decreasing upward, so that two or more pattern at the top like those at the foot are found to occupy the same space as one at the foot, and this effect can be much increased by a gradation of color upward from dark to light.

To make a room appear narrower is accomplished to a certain extent by making it appear higher; but where this is undesirable or insufficient, it can be obtained by adopting a strongly-drawn large pattern in strong color for mural decoration.

To make a room appear longer is to an extent accomplished by making it appear lower and narrower; but where this is undesirable and inefficient the effect may be obtained by decreasing the scale and strength of color of the mural decoration adopted at the ends.

To make a room appear shorter is accomplished to an extent, by making it appear wider and higher; but the effect can be achieved by increasing the scale and strength of color of the mural decoration adopted at the ends.

Any of these effects can be modified or increased by the treatment of the floor surface; whither by the carpets, the rugs or painted boards, or by parquet flooring; lines running across a room, or rugs laid down at intervals, having the effect of shortening, and consequently, to an extent, of heightening and widening a room. Lines running in the length increase this dimension, and to an extent reduce the height and width. A polished floor increases the apparent height of an apartment by reflecting all vertical lines and prolonging them.—*Harper's Magazine.*

## LEAKY BOILER TUBES.

Tube ends, according to the *Locomotive*, are a source of annoyance in some types of boilers that give rise to much trouble. This is especially apt to be the case with boilers of the vertical type. The upper ends are exposed to the action of the heated gases, and there being no water to prevent overheating, they are soon loosened and set to leaking badly. This gives rise to corrosion of the ends of the tubes and the upper head, which in many cases goes on with great rapidity. It is no unusual thing to find the upper tube sheet of upright boilers eaten half way through and nearly all the tubes leaking badly. This leakage is not so apparent from steam pressure as it is from water pressure. To the unpractical boiler attendant everything may appear to be all right, but when the boiler is filled to the top with water, and pressure applied, there is generally some fun. The lower ends of tubes are also very apt to give more or less trouble, especially where upright boilers are used for heating purposes and the blow-off does not quite drain the boiler. This is generally the way the uprights of the pot hung type are arranged, and during the summer months, when the boiler is standing idle, the interior of the shell and the tubes, just at the surface of the water left in the boiler, is subjected to severe pitting. Sometimes the tubes of this class of boilers are completely riddled in a very few seasons, whereas, if properly cared for, they should last many years.

"Fools Rush In, Where Angels fear to tread." So impetuous youth is often given to folly and indiscretions; and, as a result, nervous, mental and organic disability follow, memory is impaired, self-confidence is lacking; at night bad dreams occur, premature old age seems setting in, rills in the track. In confidence, you can, and should write to Dr. R. V. Pierce, of Buffalo, N.Y., the author of a treatise for the benefit of that class of patients, and describe your symptoms and sufferings. He can cure you at your home and will send you full particulars by mail.

**THE MEASUREMENT OF ROUND TIMBER.**

This is a subject of endless controversy, and we are entering upon it with misgivings that we shall not be able to clear up the deep mystery that has so long surrounded it.

Old Hoppus of timber measuring fame says:—  
"1. With a rule measure the length of the piece in feet (and quarters of a foot if necessary) and set it down in your memorandum book: then reduce it to square timber thus:

"2. With a chalk line, or pack thread, gird the piece (if parallel) in any place, then double the line twice, and you have one fourth of the girth for the side of the square, which you must exactly measure upon your rule, and set down in inches and quarters of an inch, &c."

This, it will be seen, is simply laying down the string measure quarter girth pure and simple, as the only mode of cubing round timber. It has long been known to practical measures that this common and accepted form of a quarter girth is an error of considerable magnitude; but this belief is hard to imbibe by those who have seen their fathers work upon it, who have seen it accepted as the measure for freightage of ship and sloop, and for railway carriage.

Outside the radius of practical measures the belief is deeply rooted in the minds of timber merchants that the quarter-girth string is the only true system of measuring round timber, and it is very doubtful whether we, who are not of this belief, can convert any members of the timber trade to our views.

We propose in a short and concise way to prove by demonstration that the Hoppus system is in error, and to what extent it is so.

To do this we must be set up a correct form of measurement, a rule by which the circle can be squared, and compare the Hoppus measurement with this correct data.

For illustration we will take a tree 20 ft. long and 16 in. diameter. Now if we make a section of this tree on thin cardboard, and divide the line of the circumference into 3 in. or 4 in. spaces, and draw lines from each point to the centre, we shall have a series of wedge like segments. When this is done, take a pair of scissors and cut them all out; next place them all side by side, alternating the broad and pointed ends. This being done we shall find the length equal to half the original circumference of the tree, and the breadth equal to half the diameter, and this to be the true sectional contents of the tree.

A tree 16 in. diameter would girth 50 in. (3 times the diameter and 4 per cent). Now as half the girth and half the diameters is the correct section, this gives 25 in. x 8 in. = 200 in., contents 27 in. 9 1/2 x 12 cubic feet.

Now let us see what Hoppus makes of it: girth 50 in. = 12 1/2 x 12 in., say 13 in. x 12 in. = 156 in., contents 21 8-12 in.

The actual measure is thus 26 1/2 per cent. more than Hoppus's quarter-girth string gives the buyer fully one-fourth of the wood for nothing.

That the principle we here lay down is the true mode of measure of round timber can be proved by a moment's reflection. Viewing the section of the tree the centre is a fixed point here the circumference is nothing. Away on the outside the circumference is 50 in., half (the mean between the centre and the outside) is 25 in., the true circumference, and the width of this circular belt of wood is 8 in. To straighten out this belt of wood you might cut wedge pieces out of the outside 4 in., and insert them in the inside 4 in., when you would have a parallelogram of 25 in. x 8 in. The real truth is that the mean circumference is a fixed datum, and the wood wanted on the inner side of the circle, to make it a straight line, is the equivalent of the superfluous of wood on the outer side of the circle.

This principle can be worked upon in alternative ways:—

- 1st. The circumference multiplied by one-fourth of the diameter.
- 2nd. Half the circumference multiplied by half the diameter.
- 3rd. One-fourth the circumference multiplied by the diameter, i. e., the quarter girth multiplied by the diameter.

All the above three modes give the same result, the exact sectional area of the tree.

You can put it another way, which would be

4 per cent. above the correct measure, viz., the quarter-girth multiplied by one-third the girth, and work it out by Hoppus's tables of unequal-sided timber, or you can add the quarter-girth and the one third girth together, and divide them for the square of the tree, and work it out by Hoppus's tables of solid measure.

Another system is to multiply the diameter by the diameter, and divide by 183. This system brings out an over measure of 27 per cent. upon string measure quarter girth, which is within half per cent. of the actual result we obtain above, but this principle does not find favor, as the general members of the trade can not grasp a mode or system by which it can be proved.

One of the most popular modes of testing the string measure quarter girth is that of water. Take two tin vessels, each 12 in. deep and 48 in. girth, the one round and the other square. It will be found that the round one holds fully one fourth more water than the square one, and that the water in the square tin will only fill a round tin 42 5-100 in. in girth.—*Timber Trades Journal.*

**A LEOPARD STORY.**

The following is an amusing report from the cashier of the South Indian railway to the chief auditor, re a leopard on the line:

"Most Honored Sir: In continuation of my telegram of the 13th instant I beg leave to bring to your notice that I had a narrow escape from the attack of a leopard by your favor, and by the grace of the Almighty. A certain leopard—I think a stray one—appeared all on a sudden to our heartrending fear while payment was being made in the 93.9 mile on the line. Mr. Bonjour, the P. W. inspector, was also with me at the time. The coolies numbered about 400. All of us were engaged. Where from and how the above said leopard managed to lie down in a fearful posture within the fencing, at a distance of only ten yards from us. The coolies, one after another, crying 'Tiger! tiger!' took to their heels, while I found picotta standing near a ditch and got up to the top of it to save my life at any risk. Fortunately for me Mr. Lloyd, the assistant engineer, on hearing this, came to the spot with three constables, armed with guns, ready loaded. The constables fired, one after another. In the meantime as a Godsend, a light engine happened to run there. The engineer, detaining the engine, got into the engine and began to shoot therefrom. Aims several times failing the leopard sprang up. Some of the coolies and constables wounded them by purring them as often. In this state of things my body shook with fear as I was witnessing the trials as well as the fierce action of the leopard. Mr. Lloyd, with the assistance of the constables, had the presence of mind to shoot at it undaunted with a gun brought by them till it was killed. Nearly 300 lives were saved, I being one of them. Now I took heart and came down to commence payment. I herewith send one claw and one whisker of the leopard for inspection. Being to be excused, I beg to remain, most honored sir, your most obedient servant,—S. Soondrawier, Cashier.—*London Truth.*

**HUNTING GRIZZLY BEELFOOT.**

A Portland, Ore., correspondent writes:—Four years since a monster grizzly bear commenced depredating the stock ranches, twenty miles south of Ashland. He would descend from the fastnesses of the Rogue River mountains whenever his appetite might prompt him to do so, and perpetrate wholesale slaughter on the horses, sheep and hogs of the ranchmen. During these years the ranchmen have planted half a dozen Winchester balls in his carcass, but still he refused to succumb.

About a year since, the grizzly walked off, leaving a good piece of his foot in a huge trap, cautiously prepared for him in a thicket. Since then he has had a gait peculiarly his own, and the wary hunters who have occasionally caught sight of him but could not bring him down, have given him the name of Grizzly Reelfoot.

Last week he ambled down to Howard's station on the Oregon, Idaho and California stage line, and, breaking the back of a 2 year old steer, sat upon him and ate him for lunch.

This exasperated more than ever the ranchmen who had on divers occasions been forced to beat hasty retreats when coming unexpectedly upon him. They raised a purse of \$150 for the Nimrod who would bring in the grizzly's scalp. Some noted bear hunters, including Jim Wilson, Harry Woodburn, Charley Taylor, and others, with trained dogs, are now in search of him in his mountain resorts. His tracks measure 14 inches each, and when he descends the hills through the underbrush he is said to thrash the ground like a cyclone. His bulk is gigantic. Many aver that he does not weigh an ounce less than a thousand pounds. He is an ugly, vicious brute, and unless the hunters get him, the chances are even that he will get them.

There are logs to the amount of 450,000,000 feet, available, in Menominee river at the present time.

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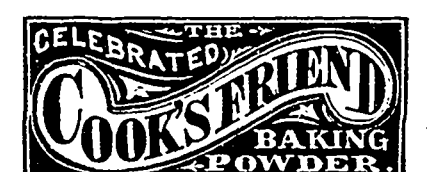
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Advertisements intended for insertion in any particular issue should reach the office of publication at least four clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to THE PETERBOROUGH REVIEW PRINTING AND PUBLISHING COMPANY (LIMITED), Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Office of MR. JAMES SAMUEL DEACON & Co., 164 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., JULY 16, 1885.

JOHN RIPPER, employed on Gilmour drive, was drowned in Crow River, at Marmora, Hastings Country, on June 27th.

SPRUCE continues to meet with a good demand in New York, and prices have ruled firm although receipts have shown considerable increase.

THE exports of lumber from the port of New York for the week ending June 27th was 1,232, 714 feet and of staves 120,286.

In the suit of John Edward et al. against the Wausau Boom company, tried at Waupaca, Wis., recently, a verdict for plaintiffs of \$15,973 was rendered. The suit was brought to recover damages resulting from the retention of logs in the Wausau boom.

THE Lewiston (Me.) Journal notes that all the logs which were hung up in the Penobscot have been started by the rains and consequent rise in the river. The drives will all come down safely.

J. BABCOCK & Co's saw mill at Mamstee, Mich., was totally destroyed by fire on the night of July 1. The loss is stated at \$45,000; insurance \$30,000. The fire caught in the boiler house. The enterprising proprietors have already commenced the work of rebuilding.

JAS. CONNOR has purchased the mills and lumber business of Thomas Marks, at Fort William. It is rumored that he is also about to secure the mill of the Algoma Lumber Co. situated on the Kaministiquia.

Black birch wood is prized in Europe for fine cabinet work. It seems, however, that there is a strong prejudice against black birch among architects in this country, although it is cheap, beautiful and pretty durable. Carpenters find a difficulty in introducing it in finishing of houses. Soon, however, like many other of our long despised though valuable native woods, it will win its way to a very high place in popular estimation.

WM. BALL, employed in Mr. Garnett's mill at Midland, was struck on the head by a heavy piece of plank on July 8th, and rather severely cut.

THE Collinsby Rafting Company despatched their 4th raft from Kingston to Quebec on July 9th in tow of Calvin's steamer Chieftain.

CALVIN & SON's eighth raft reached Quebec on July 9th, making the run from Kingston in seven days and a few hours. This is excellent time.

THE Minister of Marine and Fisheries has decided to establish six new life saving stations, the life saving corps at each place to consist of a captain and six men. The stations will be located at Cobourg, Toronto, Port Stanley, Quinto Pelle, Goderich and Collingwood.

THAT pegged shoes and boots are still quite extensively used might be inferred from the fact that a peg manufacturing company at Bartlett, New Hampshire, is turning out the little wooden articles at the rate of eighteen hundred bushels per day, and has orders on hand that will require several months to fill.

EXPERIENCED lumbermen, says an exchange, have always held that lumber cut in the spring was not durable for building purposes. Recent scientific investigations sustain this belief. It is shown that the richer the wood is in phosphoric acid and potassium the more likely it is to rot and mold; wood cut in the spring contains eight times as much of the former and five times as much of the latter as cut in the winter.

THE timber drives on St. John, N. B. waters, says a maritime exchange, are all down with the exception of those on the Aroostook river branch. About 12,000,000 feet of logs are hopelessly hung up on this river, of which 6,000,000, the cut of Mr. Robert Connors, have not yet left Machias stream where they were cut. Besides Mr. Connors' drive there are two other whole drives included in the remaining 6,000,000.

A REPORT of the Department of Agriculture, says the *Lumber World*, tells us that 26,600 square miles of forests are at present required to furnish the cross ties for the railroads of America. If other branches of the lumbering industry were itemized in a similar manner, as representing a certain number of square miles of forest annually, it would be an exceedingly interesting and perhaps perplexing problem to compute from such figures the actual forest area of the United States and the time necessary before the last tree would be cut down. Perhaps it would be discovered in this way that all the forests had been destroyed long ago.

"THE lumber trade," according to the *Chicago Times*, "has proven singularly disappointing this season to all concerned in it, and vessel men, lumber manufacturers and yard dealers claim unanimously that they have made no money. The receipts for the season so far are enormously behind last year, and the shipments from here are unsatisfactory, the diminished outward movement being partly due to an increasing tendency to ship direct from the mills to the country yards. It appears, however, that lumbermen do not lose all faith in the future, and liberal investments in standing lumber are now and then made public."

WE have received a descriptive circular of the saw mill machinery manufactured by the Lane Manufacturing Company, of Montpelier, Vt. It gives a detailed description, illustrated by clear engravings, of the patent lever set, circular saw mills and saw mill set works made by them, showing the advantages of their patents, for which they have received numerous medals at exhibitions. They also manufacture planing machines, matching, shingle and lath machines, water wheels, and all kinds of wood-working machinery and appliances needed in saw mills. A descriptive circular and price list will be furnished on application being made to the firm.

THE Bay City *Lumberman's Gazette* publishes a letter written by Mr. R. W. Phipps to the CANADA LUMBERMAN, and prefaces it with the following remarks regarding the writer:—"R. W. Phipps, of Toronto, Ont., is one of the most persistent workers on the continent in the interest of forestry. In fact our neighbors over the border are especially favored in this direction. Mr. Phipps is to the fore 'in season and out of season,' and never fails to suggest something more than ordinarily sensible when he gives utterance to his ideas."

AT Pembroke recently the foreman of a timber drive on the Petewawa river, was convicted under the Ontario Act for the preservation of the forests from fire, Cap 23, 41, Vic. 1878, with having neglected to provide himself with a copy of the Act, and regularly read and explain it to his men. The provision is to regulate the necessary habit of starting fires for cooking and warming purposes along the rivers and in forests. His neglect cost him \$20 and costs. The cook on the same drive was also fined \$16 and costs for having failed to properly extinguish the cooking fire when leaving. The heaviest penalty for violation of this act is \$50; lumbermen will therefore see the importance of properly posting themselves and their men as to its requirements.—*Montreal Times*.

WOOD WORKING PATENTS.

The following list of patents relating to the wood working interests, granted by the United States patent office, June 30th, 1885, is especially reported by Franklin H. Hough, Solicitor of American and Foreign Patents, 925 Fifth street, N. W., Washington, D. C.

- 321,336.—Lumber drier—W. B. Beard, Jackson, Mich.
- 321,348.—Lumber piler—C. E. Dunshoe, Chicago, Ill.
- 321,377.—Planing and matching machine—J. B. Mahaffey, Baltimore, Md.
- 320,979.—Saw guide—D. Parkhurst, St. Louis, Mo.
- 321,194.—Saw mill, band—S. Cook, Indianapolis, Ind.
- 321,195.—Saw mill dog—L. Johnson, Milwaukee, Wis.
- 321,282.—Saw mill set works—A. Delaney & J. M. Bond, Richmond, Va.
- 321,376.—Saw awaging and jointing machine—W. Lyon, Burlington, Iowa.
- 321,192.—Sawing machine, circular—J. Connell, Rochester, N. Y.

PROMISING OUTLOOK.

"We are going to have an excellent fall trade," said a prominent lumberman a few days since to the writer. "Buyers must come to us during July and August, as soon as the real situation becomes known. The mills will necessarily shut down early, at least a large proportion of them, and the heavy curtailment of the lumber output will have a very important bearing on the demand, which must be more urgent as the season advances; I am entirely satisfied with the outlook, and if manufacturers are true to their own interests, the fall trade will be highly remunerative." A careful review of the situation confirms us in the belief that the opinions expressed as above, by the gentleman alluded to, are fully warranted. The curtailment of the lumber output on the Saginaw river will amount to at least 300,000,000 feet, which cannot fail to very materially affect the urgency of the demand as well as to enhance the firmness in price, if it does not result in an advance on the coarser grades. It is anticipated that the Tittabawassee Boom company will have finished operations by the middle days of August, and when this avenue of the log supply is closed, reductions will also have ceased at very many of the mills, especially that portion of them which are dependent on others than the owners for their source of supply. When these conditions are reached, and the real situation becomes fully understood, it is believed by practical, shrewd men, with business foresight, that the antcipations as experienced above will be fully realized. In fact very recent developments seem to warrant the confidence in the near future as indicated.—*Lumberman's Gazette*.

DEALS.

The following appears in *Quebec Chronicle* of July 3.—Agents from English ports and any others interested in the Lumber trade of Quebec may be glad of an opportunity of seeing one of the finest consignments of Pine Deals that has come to this port for many years.

There is now discharging at New London Cove part of a special purchase of deals by Messrs. McArthur Bros. from the New mill of Messrs. Flatt & Bradley, at Casselman, on the South Nation River, which for quality, dimension, finish and culling cannot be surpassed.

These deals are the first cut of a virgin limit owned by the late Mr. G. Casselman, and in his possession, both land and timber, for the last fifty years.

Messrs. Flatt & Bradley became the purchasers of this property, covered by a dense growth of the finest pine, about a year and a half ago, for upwards of \$100,000. They immediately began to erect a first class mill, and this, their first season, they expect to output 12,000,000 feet of lumber.

This lumber, as we learn, is being culled through the Supervisor's Office, by Mr. Thomas Malone, jr., and furnished fully 25 per cent of first-class. Mr. Malone is well known both in and outside of Quebec as a careful, painstaking, and clever culler, and it is a matter of surprise to many conversant with the trade that any cut of Pine either in the Dominion or Michigan can be found to average so much of first-class and of such dimensions. Any parties interested in seeing an exceptionally fine lot of Pine Deals might well pay a visit to New London Cove.—*Com.*

TRADE NOTES.

In its notes on the English timber trade the *Timber Trades Journal* of June 27th says:—Business on the coast is quiet, and few sale cargoes are reported, the activity being chiefly confined to the arrivals, in which the week has been very prolific. In London there is an apparent disposition to secure stock at some reduction on quotations, but this shippers' agents are not able to accept.

There are very few ready goods now offering in the market, the quotations being mostly for August shipment. It is not often we have seen a duller summer for trade than the present, and the quietness in the building trade is something remarkable. The demand runs on the better class wood, which is due in some measure to the tendency just now to build a superior description of dwellings to those now in use.

Freights remain practically unaltered; plenty of vessels are offering, and the demand is excessively quiet in whatever quarter we look. The present quotations are:—Archangel to London, 40s.; Yarmouth, 40s.; Onega to London, Hull and Grimsby, 50s.; Montreal to Barrow or Fleetwood, 47s. 6d. to 50s.; Sundswall to London, 32s. to 33s. for firewood, which seems a very low quotation. Another is Riga to the Mersey 9s. for sleepers.

The spring fleet from Quebec is putting in an appearance rather sooner than we expected. Although the bulk of what may be called the first open water fleet will not be here till well on into July, an instalment or two in the shape of the early loaded ships are already coming to port, and we have to record four fully laden vessels from Quebec, now in the docks. Of these two are steamers, viz., the *Glennorven* and the *Suffolk*, with cargoes for Messrs. Bryant, Powis & Bryant, the former bringing 1st, 2nd and 3rd bright, with a few red pine, the latter cargo being made up of 1st and 3rd bright. The other two are the *Rota* and our old friend the *Hovding*, for Messrs. Brownings Castle & Co., both these latter bringing complete cargoes of 3rd quality bright pine of the regular sizes 12 ft. 3x11, and which, we understand, are 1883 cut deals, in prime condition. The *Hovding* entered the river on the 23rd, having made a very quick passage, as did also the *Rota*, being somewhere about 23 days from land to land. In addition to these, we have to report the arrival of a vessel from the spruce ports, the *Regina*, from St. John, with a cargo of the usual unsorted quality.

The Quebec arrivals are early considering the immense quantities of ice and the unprecedentedly severe winter experienced in Canada.

# ST. CATHARINES SAW WORKS!

R. H. SMITH & CO.,

MANUFACTURERS OF EVERY DESCRIPTION OF

ST. CATHARINES, ONTARIO.

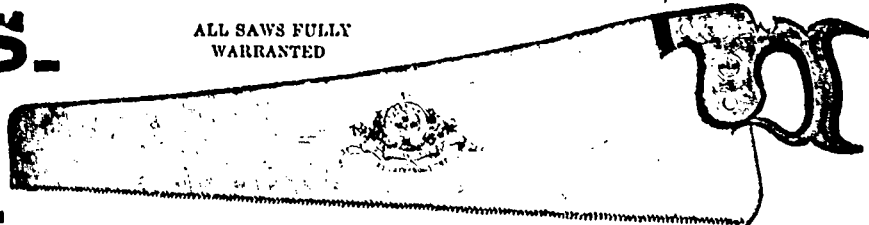
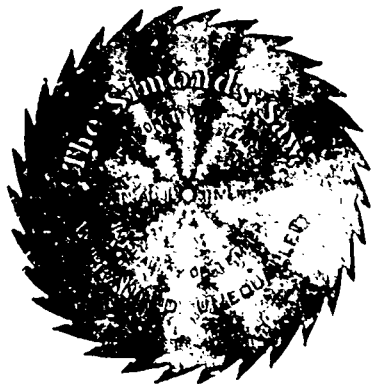
## SAWS.

ALL SAWS FULLY WARRANTED

Sole Manufacturers for the Dominion of Canada of the

### "SIMONDS" SAWS.

All Our SAWS are now made under the "SIMONDS" PATENT PROCESS.



Some years ago, when the winter in Quebec was unusually mild, a vessel loaded in April arrived in the docks here early in June, but the beginning of July is about the average time of the pine arrivals.

The cargoes alluded to come at a very opportune time, the present London stocks of yellow pine being lower than ever known. The dock stocks at present consist of first and a few of fourth quality, but at the mills we understand, there is a considerable quantity of 3rds, as well as some of the next lower descriptions. The dock charges are said to be the reason that the lower qualities of pine are held at the mills instead of at the Surroy side of the river. With regard to the high priced goods it is not so material, as these latter can better bear the additional expenso entailed by being stored at the docks.

#### Leather Belt Cement.

An ordinary cement for this purpose a wheat flour boiled in oil of turpentine; but the ends must be secured by rivets or it is not reliable. A better cement is made by soaking six ounces best glue in one pint of ale, then boil, add one and a half ounces of boiled linseed oil and stir well. Another prescription is to take dissolved glue in the form as the cabinetmakers use it, and add tannic acid till creamy and ropy. Make the leather surfaces to be united rough, apply the cement hot, let it cool and dry under pressure, and it will not need riveting. For rubber belting take pure rubber in thin slices, two ounces, dissolve in one pound of bisulphide of carbon. This is a good cement, but if kept thickens very soon. In order to prevent this add a solution of pure rubber, resin, and turpentine.

#### HOW TO RECOGNIZE GOOD TIMBER.

It may be interesting to your readers, says D. G. Loudon, to the *Journal of Progress*, to know that the microscope is of great value in testing the qualities of wood. It is stated that if the microscope condemns the sample further down in testing is not necessary. The larger the specimens to be tested the greater will be the gain the microscope will effect in avoiding the cost of further proof. Samples and microphotographs of bridge timbers which have proved faulty, but which a preliminary examination with the microscope would have thrown out, have been exhibited in America. The timber from which these specimens was taken was a fragment from a railway bridge wrecked in 1879. The timber was so excessively poor, that on mounting a specimen on the plate of the microscope, its weak and porous nature was at once apparent. The annual rings appeared about three times as far apart as they would be in good wood of a similar kind. The medullary rays were few in number and short in length, whilst in good wood they are of considerable length, and so numerous that tangential sections present the appearance of a series of tubes seen endwise on a number of parallel chains. After one seeing and comparing samples of good and bad wood, it is easy to recognize the difference with a pocket magnifying glass. The trunks and limbs of exogenous trees, as it is well known, are built up of concentric rings or layers of woody fibre which are held together by radial plates acting like tree-

## TIMBER LIMITS WANTED

On the North Shore of Lake Superior or Georgian Bay.

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A PRACTICAL MAN to manage a Sash, Door, and Blind Manufactory, which has a Planing Mill and Box Department connected. In all giving employment to 100 men, located at Syracuse, New York, U. S. A. Persons applying must be conversant with all details and thoroughly capable. For further information address,

CRANE, BELDEN & CO.  
Syracuse, New York.

2414

nails on a boats side. The rings, representing successive years' growth, are composed of tubes, the interstices of which are filled with cellulose. The slower the growth of the tree, the thinner these yearly rings and the denser and harder the wood, other things being equal. Not only is the closeness of texture and indication of the hardness and strength of the timber, but the size, frequency, and distribution of the radial plates which bind the annual layers together may be taken as a very close illustration or sign of the character of the wood and its ability to resist strains, especially a breaking stress. The micro photographs of good and bad timber show that in the strong kinds the concentric layers are close in texture, narrow in width and the radial plates numerous, wide, long, and stout, while in poor stuff the opposite characteristics prevail. The practical application consists in having such enlarged photographic sections longitudinal and transverse of standard pieces of timber bearing a certain known maximum or minimum strain, and rejecting any piece which the assisted eye detects to have fewer rings per inch of diameter, fewer fibres, or fewer radial plates per square inch of section, or to use such pieces with a greater factor of safety. The advantage of the method is that it allows allows all timber for important positions to be tested before being used.

#### Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea, regulates the stomach and bowels, cures wind, colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the prescription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

"That Miss Jones is a nice-looking girl, isn't she?"

"Yes, and she'd be the belle of the town if it wasn't for one thing."

"What's that?"

"She has catarrh so bad that it is unpleasant to be near her. She has tried a dozen things and nothing helps her. I am sorry for I like her, but that doesn't make it any less disagreeable for one to be around her."

Now if she had used Dr. Sage's Catarrh Remedy, there would have been nothing of the kind said, for it will cure catarrh every time.

A FULL LINE of all Sizes Single and Double Belting constantly in stock.

All ORDERS Filled same day as received.



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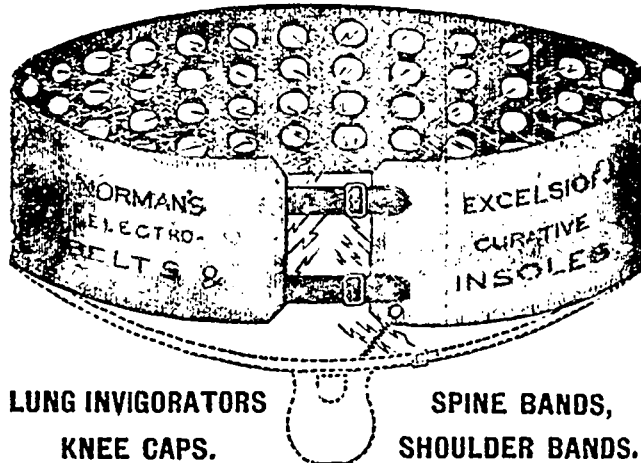
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## Norman's Electro-Curative Belt!

4 QUEEN ST., EAST, TORONTO.



This Belt is the last improvement and the best yet developed Curative Appliance in the world for

INDIGESTION, NERVOUS DEBILITY, RHEUMATISM,

and all diseases of men, and is a grand remedy for Female Complaints also. Circular and consultation free.

LUNG INVIGORATORS  
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SPINE BANDS,  
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## A. NORMAN, Medical Electrician

4 QUEEN STREET EAST, TORONTO.

N. B.—Mr. Norman has had long experience in the Treatment of Diseases by Electricity, and will give his personal attention to every case, by letter or examination.



### THE DESTRUCTION OF FORESTS.

We clip from the *American*, of Nashville, the following article on the destruction of our forests and the climatic changes sure to result therefrom:—

"The rapid destruction of forests in the United States is a fruitful source of disquietude to the far seeing statesman, as well as to the man of science. That forests exert a controlling influence on climate is a fact too well known to admit of controversy, and it is quite possible that many of the countries of the old world that were once the theatres of busy life have been rendered almost uninhabitable by the destruction of the forests.

"Historians tell us that the land of Canaan, in the reign of David, supported probably a population of 5,000,000. Now we know that the extent of territory comprised in Palestine never exceeded at any one time more than 12,000 square miles, so that it must have supported a population of more than 400 to the square mile, which is twice as great as the most densely populated state in America. Nothing can give us a better idea of the original fertility of soil than the fact that this numerous population derived its support almost exclusively from agriculture. Ships were occasionally sent to Ophir and to Tyre on trading expeditions, but there was no commerce in the modern sense of the term, and no manufactures. A few plain artisans plying their vocations for a pittance a day, and a few sailors were almost the sum total abstracted from agricultural industry. The population of that country, once so great, does not exceed at this time 300,000, or not one-tenth, what it was in ancient times. Now, the severity and injustice of the government, together with the many disastrous wars through which the people have passed, doubtless has done much to reduce the population from what it was in the glorious days of the poet king to what it is to-day.

"But there is a more potent cause. The climatic changes induced by the almost total destruction of the forests have rendered all the hill country unproductive. There are no forests now in Palestine. Nothing but shrubs and fruit trees are to be seen. Even the far famed cedars of Lebanon have almost disappeared. Only a few here and there may be observed standing as monuments of their former glory. The hills of Judea, that once wore a perennial verdure, are now masses of barren rock, and the brooks, famous in scripture and in song, are now nothing more than wet-weather branches. The source of all fertility has been destroyed by annihilating all the agencies for cooling and condensing the vapor which ascends from the ocean. Droughts are now the general rule, not the exception. When rains have once begun, however, they continue. The same causes which produce dry weather operate to prolong the rains when they once begin. Had the slopes and hills been kept in forests the population would never have been reduced from 5,000,000 to 300,000. Bayard Taylor, in one of his works, speaks of large regions on the Nile that once supported a dense population that are now entirely barren, and throughout the wide expanse scarcely a tree can be seen.

"The people of the United States may be repeating the history of the ancient Egyptians, and drifting on the same road to destruction. In 1850 there were 25,708 lumbering establishments in the country, employing \$181,000,000 capital and 146,000 hands, distributing \$31,845,000 a year in wages, using \$146,000,000 worth of material, and turning out an annual product of \$233,000,000. Add to this enormous amount of timber cut the millions of acres destroyed by fire, and it will give some idea of the immensity of our forests, and the rapidity with which they are disappearing. There are but few great resources of timber left while the demand for it is increasing yearly. Congress passed an act in 1817 for the preservation of live oak and cedar for naval purposes on all the public lands. The Supreme Court, in the case of *United States vs. Briggs*, S. Howard, construed the statute as authorizing the protection of timber on all public lands. More recently laws have been passed by many of the Western States encouraging the planting and raising of forests and the general government has offered bounties in the way of land for planting trees. The

arbor days are generally observed, and millions of trees are annually set out, but all this falls short of repairing the enormous waste now going on. It is estimated that 10,000,000 acres of forest are annually destroyed, while it would be difficult to show that one-tenth of that area is yearly planted in trees. In England, where the laws of primogeniture are in force, the protection of trees on an estate is considered a filial duty. The landed estates, held for the most part by the nobility, are prized more than any other species of property, and the destruction of forests is less necessary on account of the cheapness of coal. The Duke of Norfolk has a park that is 15 miles in circuit, and the Marquis of Bradalbane can ride a hundred miles in a straight line through his park and arable lands. Tenants often live to an old age on these estates without ever having seen a tree felled. More timber is destroyed in the United States in one year than in England in a century.

"For Tennessee some provision should be made to protect our timber, or at least some encouragement given to plant trees. Our old fields that lie grim and fallow, like samples of a ruined world, could be reclaimed by planting them in trees, and if no other good should be accomplished the landscape would be beautified, the broom grass exterminated and the gullies checked.—*South-western Lumberman.*"

### ABOLISHING THE ALPHABET.

A reporter of the *Pittsburg Times* tells of an interview he had with a young man now engaged in making a living by selling liquid blue, as follows:

"By trade," he said, "I am a type setter, and I have been working about eight years on a system of shorthand type that I have about perfected. It is designed to take the place entirely of Roman letters now in use in writing and printing. By its use matters can be put in about one fourth the space it now occupies. Signs representing sounds, you understand, will take the place of letters."

"That a big scheme." "Yes; but perfectly feasible—quite as feasible as the present system of letters and spelling was with its inventor. By this system every language can be written with the same signs—a universal written language. I have some 350 signs, all very simple and not one as complicated as the present lower case 'g.' As printed every type forms two signs—by being reversed—some our, and in type above pica in size they will form eight and sixteen, as they can be made octagon in shape in the body, and, according as they are set in the form, represent different sounds. I studied three different systems of shorthand in search of one that would answer my purpose, but none did so fully. Scovel's came nearer than the others, but I had to supply a great many of the signs by my own invention to hit the peculiar purpose.

"There are five sounds in the German language that differ from the English. I am familiar with German, French and Spanish and know some little of Polish, and I think the same symbols as used in the English will supply written signs for them all, though that is really unimportant, as it will not be above a century before the English will be the universal language. The Chinese is now, in point of territory covered, the most prevalent language, the Spanish next, and English third, but the progress of the last hundred years has been marked in favor of the latter."

"You have scarcely the place here to carry on scientific studies," said the *Times* man with a glance about the room.

"A little crowded" said the inventor, "but when a man has it in his head his surroundings don't much matter. I haven't the money to buy the books I would like to have, but I wrote the Y. M. C. A. library and I have friends to loan me what they have. I have received much encouragement from several gentlemen to whom I have explained my ideas, and think I can secure all the financial assistance I may need."

"Is there no balm of Gilead?" "Is there no physician there?" Thanks to Dr. Pierce, there is a balm in his "Golden Medical Discovery"—a "balm for every wound" to health, from colds, coughs, consumption, bronchitis, and all chronic, blood, lung and liver affections. Of druggists.

### HOW BRUIN HUGGED A BUSY SAW.

"Talking about funny things," said a big, bronzed bearded man in the reading room of an uptown hotel last night, "the funniest thing I ever heard of happened in my saw mill out in Michigan. We used a heavy upright saw for sawing heavy timber. One day not long ago the men had all gone to dinner, leaving the saw which ran by water power, going at full speed. While were away a big black bear came into the mill and went nosing around. The saw caught his fur and twitched him a little. Bruin didn't like this for a cent, so he turned around and fetched the saw a lick with his paw. Result a badly cut paw. A blow with the other paw followed, and it was also cut. The bear was by this time aroused to perfect fury, and rushing at the saw, caught it in his grasp and gave a tremendous hug. It was his last hug, and we lived on bear steak for a week. When we came up from dinner there was half a bear on each side of the saw, which was going ahead as nicely as though it had never seen a bear. This is a fact, so help me Bob," and the big lumberman bit off a fresh chew of tobacco.—*N. Y. Tribune.*

### CANADIAN PACIFIC.

The political and commercial value of the Canadian Pacific railway, when completed, will be incalculable. Among its more perceptible political results will be the strengthening and hastening of the operations of the army and auxiliary forces in Canada, Australia, India and the eastern colonies, and of the navy on the Pacific, Australian, Indian and China stations. It will also facilitate the quelling of disturbances in the vast Dominion through which the line passes. The length of the railway is 2,870 miles. It runs through British territory, and will be in communication with the eastern provincial railway system of Canada. Ninety-five days were required to move the men from Toronto to Winnipeg, about the centre of the Dominion, in 1870, to suppress the Red River rebellion. In the spring 1886 the "Canadian Pacific Express" will run from Montreal to Vancouver or Burrard Inlet in ninety hours, and passengers and mails from England will be able to reach the Pacific by this route in thirteen or fourteen days. Troops, stores, boats and crews can also be conveyed from Halifax to that ocean in five days, without proceeding through foreign possessions. British Columbia and Vancouver Island, which have hitherto been in a very defenceless condition, will now have the advantage of speedy and material reinforcements for their protection, and in order to enable the navy to work on the Pacific station, the company contemplate a line to some port of Nova Scotia or of Cape Breton, whereby the passage between England and Vancouver will be reduced to about eleven days, except for troops and warlike stores, which will take a day more, on account of the circuitous line of the Intercolonial railway. Every facility will be granted for the carriage of troops, crews and war stores. These men will be provided with emigrant carriages, wherein comfortable seat beds will be available. The company propose to run steamers between Port Moody, the Pacific terminus of their railway, and Japan and China, and another branch between that port and New Zealand and Australia. Passengers will be able to arrive in Japan in thirty days and Hong Kong in thirty-six days. If reinforcements are urgently required by India, they will reach Calcutta or Madras more quickly from Halifax than from this country, if they could not proceed by the Suez canal. Again, as Halifax is much nearer England than New York, even if the steamers of the Canada Pacific Railway Company do not go at a greater speed than those of the Pacific Mail Steamship Company, passengers to New Zealand and Australia from United Kingdom ports will be able to reach the Antipodes, via Port Moody, sooner than by the San Francisco route. In many other respects this line will be of immeasurable advantage in war with a maritime nation, especially for the supply of provisions to the home population, and will greatly enhance the prosperity of the Dominion.—*Army and Navy Gazette.*

Subscribe for the CANADA LUMBERMAN.

### THE BEST FOUNDATION FOR WOOD PAVING.

Sir Robert Rawlinson, C. B., writes to a temporary.—"Your remarks on the rough surface state of the wood pavement in Regent Street deserve special notice. I alter slightly a paragraph in your short notice of the uneven wear of the blocks into a question which I venture to answer. Is there no better system than this for the preservation of a firm and homogeneous bed for the wood blocks?" My reply is, "Yes, there is." The prime necessity for any form of road is an absolute sound foundation, fully drained. For streets the best material for the foundation will be a layer of lias-lime or Portland cement concrete, not less than 6 in. in thickness in ordinary streets, 9 in. in such as Regent Street; this concrete to be 1 to 5, and, after being laid, to have no less than one week allowed to set. Portland cement concrete should be well sprinkled over with water each day. Portland cement sets better wet than dry. Concrete blocks may even be sunk in still water with advantage to the setting property of the best cement. The surface of the concrete must have the true contour of the street, and must be absolutely true and smooth, finished with a thin coat of lime or cement mortar, 1 to 2 of clean sharp sand. On a foundation so prepared the blocks should be laid not more than  $\frac{1}{2}$  in. apart, to be run full of hot asphalt. Anson's patent, or bottom layer of thick felt and jointing with similar felt, makes one of the best wood pavements, adding about 2s. per square yard to the cost. An example of the wood pavement laid on a sound Portland cement concrete asphalt jointed may be seen in Parliament Street, Westminster and at Whitehall. The failures in wood pavements in London streets—and there have been and are now many such—are a result of defective foundations. There have either been too weak or improperly made foundations, hence their quick destruction. Street surfaces and substances are subjected much more to ramming than to wear by friction. All quick traffic results in the wheels, being rammers, jumping—and this in proportion to the roughness of the surface and the velocity of the waggon, omnibus, car, or carriage. A light quick traffic punishes any road more than a slow and a heavy traffic; but a quick heavy spring van traffic punishes any road or street most. A sound foundation is the true road; the blocks of wood are surface veneering, to be renewed when fairly worn."

### PERILS OF RAFTING.

A mishap, which very nearly resulted in a drowning accident, occurred to a raft of timber this morning while making the descent of the Lachine Rapids. About nine o'clock twelve large cribs of oak and pine, which comprised a raft belonging to Messrs. D. D. Calvin & Son, of Garden Island, were proceeding down the Rapids when, owing to the sudden veering of the wind, they were thrown close upon one another. Five of the cribs broke up in the Rapids and two more struck on pier No. 12 of the Victoria Bridge, loosening their fastenings.

On one of the latter cribs an Indian, whose name could not be ascertained, was thrown into the water, and for some minutes was in a perilous position. There was no piece of timber within twenty or thirty feet of him, and the nearest pieces were drifting faster than he could swim. After buffeting the water, which was very rough, for a considerable period, he was picked up by Messrs. Joseph Vincent and James McGurk, who had put off from shore in a small sail boat, on witnessing the accident.

There were twenty three men on the cribs, and some of the escapes were marvellous. None of the men got in the water in the Rapids break up. This is the first of the season's rafting casualties, and was due largely to a sudden change of wind which veered in a few minutes from the south to a strong north easterly gale.—*Montreal Witness, June 22.*

The Oconto company is daily piling about 350,000 feet of lumber cut at its two mills at Oconto and Nahma, Wis. This includes 60,000 feet of deal daily for the English market. The firm has sold 3,000,000 feet of deal for future delivery at Quebec.

**Chips.**

H. STEVENS & Co., Fairfield, Me., lost 100,000 feet of timber last week, by the broaking of a boom.

AN insect, known as the elm tree beetle, is causing widespread destruction to the elm trees in the eastern states.

THE saw mills of Louis Goudreau, located at St. George's, Beauce, Que., was totally destroyed by fire June 18.

SEVEN men were drowned while endeavoring to remove a key log which had caused a jam in a drive on the Mattawa river.

IT is stated that \$6,000,000 was represented at the late meeting of the Menominee River Manufacturing (boom) Company.

EXTENSIVE forest fires have been raging near Big Lake, not far from Calais, Me. A large force turned out to fight the flames, and at last reports had them under control.

A PARTY of Chicago capitalists were lately at East Jordan, Mich., looking up hardwood land. They propose to buy a large tract, erect mills and build nine miles of logging railroad.

THE lumber inspectors of Ludington, Mich., report the quantity measured to date, to be less than half that of the corresponding time last year.

THERE is a black walnut tree on D. Olmsteads place in Shabbona Grove, De Kall county, Ill., which measures 16 feet in circumference, and is without a limb to the height of 60 feet.

IN a recent trial, a cedar log 20 feet long was taken to California match factory and in 30 minutes was sawed, split, glued, dipped in sulphur, labeled and the matches boxed ready for shipment.

A CURRENT item states that the redwood posts of a fence erected in Napa, Cal., 32 years ago were recently removed and found in as good condition as when first put into the ground.

ON June 30th fire wiped out 800,000 feet of lumber belonging to Thompson Smith's Sons, Duncan City, near Cheboygan. It was valued at about \$10,000, covered by insurance.

FOREST fires have lately burned over several thousands of acres in the southern part of Wilson, and the northern part of Ossineke townships, Alpena county, Mich. in some cases clearing the land bare of timber, so that it is said that two men can clear an acre a day.

A CHICAGO despatch says: The Grand Trunk railway is perfecting arrangements for the construction of a tunnel under the St. Clair river between Port Huron and Sarnia, to connect the Chicago and Grand Trunk with the Great Western division. This will give the Grand Trunk an all rail line from Chicago to Niagara Falls and Buffalo.

**THE CONDITION OF THE SPRUCE BUSINESS.**

The spruce manufacturers in the eastern states are from all accounts on the tip toe of expectation. For several years there has been a surplus of logs, and with the demand in all the markets steadily declining, the result has been to gradually increase the supply of manufactured lumber, and the buyers have had it very much their own way in the making of prices. But just now the tables seem to have been turned, and the manufacturers evidently intend to improve the opportunity, and regain, as much as possible, the opportunities which have been lost. Nature seems to have come to the rescue, and by withholding the usual spring rains the streams have not risen sufficiently to float the logs, and many mills now find themselves without a stock of timber to keep the saws going. In the various eastern markets there is a steady demand for spruce dimension stock, and with the present outlook it is impossible for the supply to meet this demand through the season. Already there are mills shut down for want of logs, and others are refusing to sell their lumber, unless special inducements are offered. Values are firm and it would seem must show an advance in the near future.

The position of the spruce manufacturer is what might be termed governing: that is, by force of circumstances, they are in a position to govern the sale and value of the manufactured

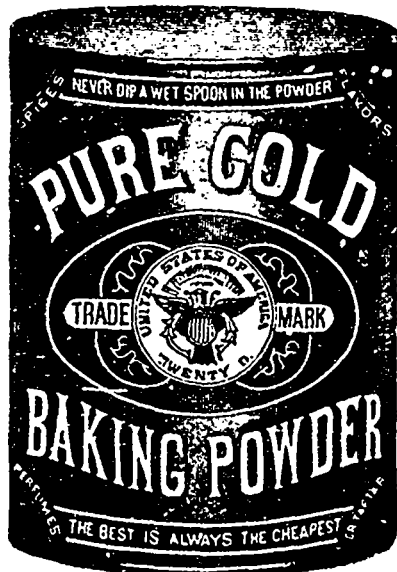
lumber. The demand is good and the supply seems to be in doubt, at least sufficiently so to cause the market to react in their favor. It remains to be seen if the manufacturers will in the future, profit by the lesson of the present season, or whether they will, as in many previous seasons, pay no attention whatever to the prospective demand, but allow their gangs to cut all the logs possible regardless of consequences.

The spruce manufacturers association in the East has heretofore taken much pains in an attempt to regulate prices, but the effort was unsuccessful, as has generally been the case with other combinations. The trouble all arose from the fact that regulating always began at the wrong end, and if the members of the association had from the outset bound themselves not to cut over and above a certain amount of logs the product would have been on a level with the demand, and prices would in a manner have regulated themselves. But under the past method the manufacturers have found themselves largely overstocked, and have made desperate efforts to dispose of certain amounts in the distributing markets, and the result of such efforts has brought about a state of trade the evil effects of which can be overcome in no other way than by an actual shortage in the supply. This much has been accomplished, and the spruce manufacturer is at present on the high side to success, with everything in his favor provided he does not again adopt the methods of the past and place the business in position where it will be at the mercy of the consumer. —Northwestern Lumberman.

**Catarrah—A New Treatment.**

Perhaps the most extraordinary success that has been achieved in modern science has been attained by the Dixon treatment for Catarrah. Out of 2,000 patients treated during the past six months, fully ninety per cent. have been cured of this stubborn malady. This is none the less startling when it is remembered that not five per cent. of the patients presenting themselves to the regular practitioner are benefited, while the patent medicines and other advertised cures never record a cure at all. Startling with the claim now generally believed by the most scientific men that the disease is due to the presence of living parasites in the tissues, Mr Dixon at once adapted his cure to their extermination; this accomplished the Catarrah is practically cured, and the permanency is unquestioned, as cures effected by him four years ago are cures still. No one else has ever attempted to cure Catarrah in this manner, and no other treatment has ever cured Catarrah. The application of the remedy is simple and can be done at home, and the present season of the year is the most favorable for a speedy and permanent cure, the majority of cases being cured at one treatment. Sufferers should correspond with Messrs. A. H. DIXON & SON, 305 King street west, Toronto, Canada, and enclose a stamp for their treatise on Catarrah.—Montreal Star. 1712L

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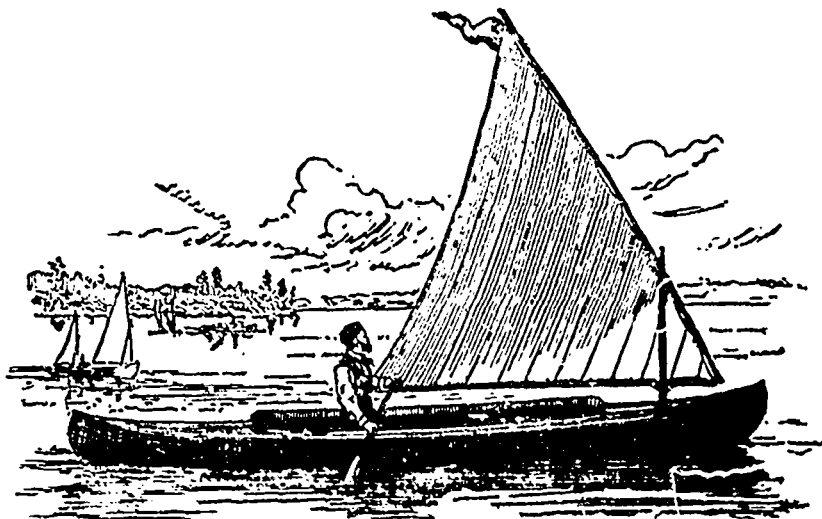
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Patent Cedar Rib Canoes, Patent Longitudinal Rib Canoes, Basswood Canoes, Folding Canoes, Paddles, Oars, Tents, and all Canoe Fittings.



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Market Reports.

TORONTO.

From Our Own Correspondent.

JULY 9.—Business is completely flattened out here by reason of the strike mentioned in my last letter. Masters and men seem equally determined not to give in. The course taken by the brick layers in siding with the laborers is strongly condemned by most people. Certain it is the effects of the strike are most disastrous to nearly all branches of trade. Carpenters by the score are walking the streets looking for work, and buildings partially built are entirely deserted, and retail lumber dealers with men and horses standing idle. Such a state of things is most deplorable, just in the midst of what promised to be a prosperous season. Wholesale dealers are bringing but little lumber to market, and most of that arriving has to be piled off by the side of the track, and nothing worth mentioning going over the docks, so that as a whole the present outlook is a dark one. In any event the season's work will be shortened and many contracts kept back entirely for this year. We can, however, only await the course of events and make the best we can out of our present surroundings.

Table listing lumber prices in Toronto, including Mill cull boards and scantling, Shipping cull boards, and various sizes of lumber like 1 1/2-inch flooring, dressed, and 2-inch beaded sheeting.

MONTREAL.

From Our Own Correspondent.

JULY 8.—This being the season when trade is very dull we have nothing to report which calls for any change in prices. The distribution is fair for the season, but there is no appearance of much activity till the autumn demand sets in. We still quote ex yard as follows.

Table listing lumber prices in Montreal, including Pine, 1st quality, Spruce, 2nd, and various other types of wood.

SHIPPING.

There is a better supply of vessels at present in port than for some time past, but most of them have been already taken up at rates which have prevailed for some time. Shipments have not been heavy as will be seen from the following list, viz. Par BK Kate Harding, for Buenos Ayres, 505,647 feet lumber and 21,499 pickets. SS Brooklyn, for Liverpool, 8,571 boards and 6,283 deals, SS Niagara, for Liverpool, 2,055 deals and 1,000 boards, SS Finaburg, for London, 30,000 deals and 1,000 ends, SS Cathedra, for Glasgow, 4,720 deals, SS Parman, for Liverpool, 9,424 deals, BK Peacemaker, for Buenos Ayres, 604,703 feet lumber; SS Quebec for Liverpool, 17,513 pcs. deals and 6,221 boards; SS Lake Huron, for Liverpool, 4,805 deals, Brighton Echo, for Gloucester, 10,743 deals and 1,000 ends, SS Titania, for Glasgow, 4,319 deals and 1,700 ends, SS Fuyvesian, for Liverpool, 3,182 deals and 82 packages of shingles, BK Hamingia, for Buenos Ayres,

432,278 feet lumber; SS Sarnia, for Liverpool, 13,456 deals and 19,936 boards, SS Ontario, for Liverpool, 2,405 deals; SS Lake Winnipeg, for Liverpool, 4,024 deals and 551 ends; BK Ostrooc, for Buenos Ayres, 416,931 feet lumber; BK Royal Arab, for Rosario, 284,186 feet lumber.

CORDWOOD.

There is very little demand and stocks are heavy. We hear that there is likely to be a break in prices, and sales rather under our figures for maple have been made. The prospects are for a downward tendency in the market. Prices for good long wood ex cartage at the wharves are as follows.—

Table listing cordwood prices: Long Maple, Long Birch, Long Beech, Tamarack.

OSWEGO, N.Y.

From Our Own Correspondent.

No particular change in prices. The stocks here are very large and assortments good, but the market is very dull, and trade does not improve as much as was anticipated.

Table listing lumber prices in Oswego, N.Y., including Three upper, Picking, Cutting up, Pine Common, Common, Culls, Mill run lots, Siding, selected, 1 in., 1 1/2 in., Mill run, 1x10, 13 to 16 ft., Selected, Shippers, Mill run, 1 1/2 x 10, Selected, Shippers, Mill run, 1 & 1 1/2 in. str., Selected, Culls, 1x7 selected for capboards, Shingles, XXX, 2 in. pine, Cedar, Lath, No 1, No 2.

ALBANY.

Quotations at the yards are as follows:—

Table listing lumber prices in Albany, including Pine, clear, Pine, fourths, Pine, selects, Pine, common box, Pine, 10-in. plank, each, Pine, 10-in. plank, culls, each, Pine boards, 10-in., Pine, 10-in. boards, culls, Pine, 10-in. boards, 10 ft., Pine, 12-in. boards, 16 ft., Pine, 12-in. boards, 13 ft., Pine, 1 1/2 in. siding, select, Pine, 1 1/2 in. siding, common, Pine, 1-in. siding, select, Pine, 1-in. siding, common, Spruce, boards, each, Spruce, plank, 1 1/2 in., each, Spruce, wall strips, each, Hemlock, boards, each, Hemlock, joint, 4x8, each, Hemlock, joint, 2x4, each, Hemlock, wall strips, 2x4, each, Black walnut, good, Pine, Black walnut, 3/4 inch, Black walnut, 1/2 inch, Scavmore, 1 inch, Scavmore, 3/4 inch, White wood, 1 inch and thicker, White wood, 3/4 inch, Ash, good, Ash, second quality, Cherry, good, Cherry, common, Oak, good, Oak, second quality, Basswood, Hickory, Maple, Canada, Maple, American, per M, Chestnut, Shingles, shaved, pine, 2nd quality, extra, wood, pine, clear, cedar, mixed, cedar, XXX, hemlock, Lath, hemlock, Lath, spruce.

BUFFALO.

Table listing lumber prices in Buffalo, including Typers, Common, Culls.

TONAWANDA.

Table listing lumber prices in Tonawanda, including Three upper, Common, Culls.

BOCTON.

CANADA PINE.

Table listing lumber prices in Boston, including Selects, dressed, Shaving Pressed, 1st, Ends, Dressed Shippers, Dressed Box, Sheathing, 1st quality, 2nd.

QUEBEC.

The Chronicle says:—This market is not very brisk, but holders are firm, especially those owning choice White Pine Stocks in port and to come forward being extremely moderate, both as regards square and Wanyoy. Some drafts of Wanyoy of about 20 inch have been placed at 35 to 36 cents, with timber a year older at 33 1/2 cent for about 19 inch. Other sales are reported but without reliable quotations.

OAK is a fair demand.

DEALS—Third Pine Deals, all regulars, have been sold ex barge at \$46.00, and with 25 per cent of oddments, at \$42.00 ex barge here.

SPRUCE DEALS.—No sales since last report. The recent rains have done considerable damage to the dams and booms on the rivers around Quebec, which will retard the sawing considerably, besides which a large number of logs have been lost. The damage is no quite over yet. The summer floods have been the most serious within memory.

TYNE.

The Timber Trades Journal of July 27th says: The list of imports of the past seven days has been the smallest we have had to chronicle for some time, consisting as it does of only eight cargoes, two of which are only parts of steamer cargoes, and none of them appear to call for any special comment. One cargo of staves is reported from Bjorneborg to add to the already lengthy list of stave cargoes this season, the great bulk of which appear still to be held in stock. Trade matters remain generally in much the same quiet condition; the demand for all goods is very feeble, and stocks are very much higher than at any earlier period of the year. Prices may be said to be stationary; the little fillip given by the war scare having been dissipated, they are back again to old limits.

Some sensation is being caused in circles affected by the trade to the Midlands, through the action of Messrs. Wilson & Son and the Railway Commissioners with regard to Hull rates. A very powerful opposition is being organized, but generally it will not materially affect many timber merchants on the Tyne. Most of the merchants whose businesses in the Midland district have recently diverted their importation from Tyne and Wear to West Hartlepool, and it is from that port, therefore, that so far as the timber trade is concerned, the greatest opposition will be manifested.

LIVERPOOL.

The Timber Trades Journal of June 27th says:—The arrivals of vessels with cargoes of wood goods have more numerous during the past few days, and the dock quays are beginning to be fairly well occupied.

The St. John, N. B., cargoes of spruce are already disposed of, being importations already sold on contract, and which will, doubtless, go direct into the hands of consumers or dealers in the country. Hewn pitch pine timber, however, comes forward in quantities far beyond the wants of the trade, and has either to be sacrificed at sales by public auction or go into store to swell an already excessive stock.

Importers are, however, unwilling to resort to the latter course in the face of the heavy stock on hand, and appear to think it prudent to sell at best possible prices rather than store, as being the better of two evils.

A requisition for 28,000 cubic feet of this timber has been issued by the brokers for the Mersey Docks and Harbour Board, and no doubt there will be keen competition for the various sections of it. In going in for this order, at present there is little room for doubt that the board are acting wisely, as they have the pick of a full market at prices unprecedentedly low. Under ordinary circumstances this would give the market a lift upwards, but in its present condition its effects will not be visible either as influencing the stock or advancing prices, though it will be productive of some keen competition, and will in all probability be taken at low prices.

LIVERPOOL TIMBER SALES.

On Wednesday the 24th inst., Messrs. Price & Pierce, offered by auction the cargo of hewn pitch pine timber now landing ex Amanda, from Pensacola, and though the cargo was of large size, being an average of 120 feet per log

by 18 in. average square, only four lots found buyers. These realized.—

Table listing timber sales results: 16 logs 24 to 53 ft. long 21 to 23 in. deep 16 1/2 d., 17 " 30 " 50 " 20 " 21 " 15 1/2 d., 16 " 26 " 59 " 20 " " 14 1/2 d., 23 " 32 " 49 " 19 " 20 " 14 1/2 d.

Although there were some offers for various other lots, they did not come to the broker's limits, and consequently the remainder of the cargo was withdrawn.

Considerable importations of oak waggon scantling from the United States still continue to be a marked feature in the trade, and are selling at very low prices when compared with the cost of manufacturing them from the log. This should assist the railway and waggon companies greatly in the cost of restoration or reconstruction of their rolling stock.

In regard to the Manchester Ship Canal Bill, an arrangement has been come to by both sides to shorten the evidence. On Thursday afternoon the chairman of the committee, Mr. Forster, announced that they would have to lose one of their members, Mr. Dalrymple, who had accepted office under the Crown as member of Lord Salisbury's Government. Proceedings had been looked into, and the conclusion was they would ask leave of the House to sit with three members. The leaders on both sides concurring, Mr. Forster accordingly asked the Government for its sanction to the arrangement, which has been given.

LONDON.

The Timber Trades Journal of June 27th says:—At Messrs. Churchill & Sims's sale on Wednesday the heavy parcel of timber put on the market had a rather depressing influence on prices, and values were badly sustained. The timber was much of it undersized, or else short lengths, in addition to being not generally the most saleable sizes; nevertheless the figures obtained for a great deal of it reads ridiculously low.

There was a thin muster of buyers for the timber lots offered, and though bidding was brisk it failed to carry prices up and these latter fell very flat. Good middling timber of full average, however, went from 60s. to 65s., which was not so badly done by, but there were not many lots fetched these prices. The crown Danzig offered was mostly undersized, and these went under 50s. A few of the longer lengths went up to 62s. 6d., but the bulk went between 50s. and 55s.

What timber is required is mostly long lengths; hence we must expect to see prices for other sorts low by comparison. At all times sluggish for wood of this description, the demand was quite unable to bear the strain put upon it by such a heavy unreserved sale as that of Wednesday. The little parcel of 2nd Memel ex Calypso, regular sized timber, went decidedly cheap at 47s. 6d., and the pitch pine ex Nordons Dronning, from Mobile, at 52s. 6d. to 55s., was also a great bargain to the purchaser. There was a small parcel of red pine timber ex Vendome, the selling value of which was fully illustrative of the feeble demand there is for wood of this description.

The Quebec yellow pine timber ex Ast ex at 62s. 6d. was cheap, and another instance of sacrificing the first cost was some wanyoy board timber, which was allowed to go at 47s. 6d.

Prices on Thursday at the "Baltic" were a reflection of those of the day before, and bargains appeared to be the order of the day. The proceedings were very slow and it was at best a tedious process trying to get bidders to advance on their first offers. There was a large muster of small buyers present, the great variety of the little odd parcels submitted being the chief attraction to dealers of this class. Much of these clearing lots were old stuff amongst which it would have been difficult to find a really sound deal, hence the prices obtained for such descriptions we consider were capital ones and fully represented their value.

The bright pine 12 to 14 in. ex Escalona, from Quebec, at £23 15s. and £25 10s. reads low, but the dullness of trade is such that the market cannot afford the big figures of a month or two ago, at least, those who buy speculatively are not inclined to do so at top figures, and as the major portion of the bidding at the sales latter

ly has partaken of this character prices must be expected to show a corresponding weakening as long as goods are pressed.

The pine goods ex Dracona, from Quebec, were mostly Michigan, which do not find such a ready market here as those from the Canadian side, but still the prices realized seemed low. The few lots of regulars at £27 went better. The Wyborg cargo, ex Jernbarden, went very cheap at £3 15s., the f.o.b. value of similar goods at the port named being something like £8; hence a serious loss must fall on somebody. The regular battons went from £7 10s. to £7 15s. These prices show a great fall as compared with previous sales of Wyborg goods.

GLASGOW.

The *Timber Trades Journal* of June 27th says:—A public sale of Quebec timber, &c., was held at Greenock on 18th inst., results as appended.

There have been further arrivals of Quebec deals, pine and spruce, during the past week, these imports per steam liners now assuming an important appearance. Deliveries of deals from the yards at Yorkhill are, however, going on less actively than is usual at this season.

The constant supply at Glasgow per steam liners from the States of parcels of wood, hewn and sawn, is now fairly established, especially wood sawn for special purposes, oak, &c., and in a great measure does away with the old system of timber merchant trading and dealing, the ample supply of steam tonnage contributing greatly in expanding the trade and bringing about these alterations.

More activity is now noticeable at the Fairfield Shipbuilding Yard (J. Elder & Co.'s) than has been the case for many years past. Large squads of men are engaged laying the keel blocks for the boat which Mr. Pearce is constructing on his own account and for the three 5,500 ton vessels which the firm have secured.

AUCTION SALE.

On 18th inst., at Greenock, Messrs. Edmiston & Mitchell brokers:—

Quebec waxy boardwood—	Per c. ft.
70 c. ft. avg. per log	2s. 4d.
Quebec square boardwood—	
36 c. ft. avg. per log	1s. 7d.
Quebec yellow pine—	
30 logs 25 cub. ft. avg. per log	1s. 1 1/2d.
120 " 30 " "	1s. 2 1/2d.
Quebec yellow pine building timber—	
60 logs 50 c. ft. avg. per log	1s. 2d. & 1s. 1 1/2d.
Quebec red pine—	
20 logs 35 c. ft. avg. per log	1s. 2 1/2d.
2 figured logs	1s. 6 1/2d.
Hewn pitch pine—	
2 figured logs	1s. 4d.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to date:—

	1883.	1884.	1885.
Waxy White Pine...	739,302	614,299	393,028
White Pine.....	433,048	373,225	531,564
Red Pine.....	43,393	27,190	12,065
Oak.....	431,133	329,641	691,650
Elm.....	83,018	220,120	264,317
Ash.....	43,986	95,253	86,770
Basswood.....	1,170	205	.....
Butternut.....	374	511	1,094
Tamarac.....	991	1,935	30
Birch & Maple.....	134,450	178,495	261,979
Masts & Bowsprits... — pcs	— pcs	— pcs	— pcs
Spars..... — pcs	— pcs	32 pcs	— pcs
Std. Staves.....	144,811	10,622	39,032
N 1 Staves.....	79,537	69,813	64,217
Dr. Staves.....	21,434	0,613	43,022

JAMES PATTON,

Quebec, July 3. Supervisor of Cullers.

Polishing Steel

The finer the polish which is imparted to the surface in case-hardening the better will be the results. The art is a very useful one and should be thoroughly understood by every smith and worker in metal. The process is very simple. The articles are placed in some air tight receptacle, generally an iron box, but often a pipe, which can be turned, and therefore admits of the more uniform application of heat. The receptacle is filled with coarse charcoal powdered and exposed to a cherry red heat for twenty four hours if a hard surface one-eighth of an inch is desired, but from four to five hours will be long enough to make a good surface of steel.

FROM BAY CITY TO LIVERPOOL.

A raft of timber left Bay City last week of which there is no official record at the custom house. The law relative to the reporting and clearing of vessels is a little lame in this regard, as it is not obligatory on the part of the captain of the tug towing such raft to state in his clearance papers that he has raft in tow. In the case in question, the tug Wm. A. Moore, cleared from the custom house light for Port Colborne. The ordinary reader would infer from such a clearance that the Moore had nothing in tow, while the fact was she towed a large raft of pine, Norway and oak timber. It was one to which more than ordinary interest was attached. It was made into three cribs and contained 90,000 cubic feet of oak, and 68,000 cubic feet of Norway and pine a number of spars being among the latter. The timber was some of the very best ever grown on Michigan soil and by the time it reaches its destination it will have attained a value that here in Bay City would be considered fabulous. Every piece of timber in the raft is to be taken to Liverpool, England. It seems strange that Michigan forests should contribute timber to a country our thousand miles away.

Each section of the raft drew over six feet of water. The pine and Norway were used for making cribs into which the oak was piled and then secured by heavy chains. Besides serving for the above named purpose the pine and Norway were useful for floating the heavy oak, which, when water soaked, will sink to the bottom unless supported. The raft was made up near the American chemical works, on the west side of the river. The tug Moore drew 16 feet of water and remained outside at the anchorage until a harbor tug delivered the raft to it. At Port Colborne the raft will be received by a Canadian tug and taken through Welland canal one crib at a time. From Port Dalhousie it will be taken down Lake Ontario to the St. Lawrence, down the rapids and thence to Quebec. At this port the cribs are received in a kind of a floating dry dock, the chains removed and each piece of timber thoroughly washed and cleaned, preparatory to being placed in the hold of an Atlantic vessel for the long ride across the salty sea. Probably a month will be consumed in the shipment from Bay City to Liverpool, if not longer. Every move almost, is an expense and when the timber reaches its destination, it is necessarily very valuable. Only the best stock is considered worth shipping and consequently that which is taken is the best. This raft of 90,000 cubic feet oak and 58,000 cubic feet pine and Norway—a total of 148,000 cubic feet—would be equal to from eight to ten cargoes if taken by vessels. Last week four vessels departed from Bay City carrying 68,000 cubic feet, or an average 17,000 cubic feet per cargo. It is much cheaper to transport timber by raft as it can be taken through Welland canal without trouble, while boats carrying it must take off their deck loads in order to lessen the draft of the vessel and allow her to pass through the cut. The dock load is placed on scows and reloaded to the vessel when Lake Ontario is reached. This naturally increases the cost of transportation.

The oak timber of the tug Moore's raft came to Bay City by rail from the Saginaw Bay and Northwestern railroad, the Norway from near Harrison on the F. & P. M. railroad and the spar timber from near west branch on the Mackinaw division of the Michigan Central. It was the property of the McArthur Brothers, the extensive timber dealers of Canada. Upon arrival at Liverpool it will be taken to the shipbuilding points and from there it travels the mighty deep in the shape of an English merchantman. *Lumberman's Gazette.*

..... Nervous debility, premature decline of power in either sex, speedily and permanently cured. Large book, three letter stamps. Consultation free. World's Dispensary Medical Association, Buffalo, N. Y.

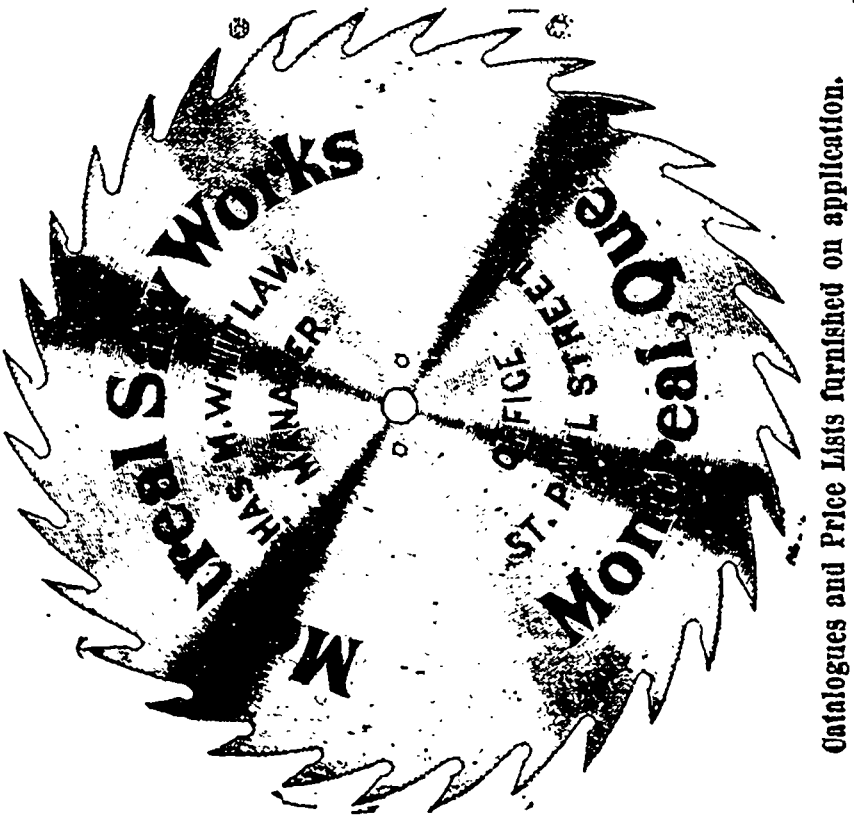
Bartholdi's Statue of "Liberty Enlightened in the World"

will be reminder of personal liberty for ages to come. On just as sure a foundation has Dr. Pierce's "Golden Medical Discovery" been placed, and it will stand through the cycles of time as a monument to the physical emancipation of thousands, who by its use have been relieved from consumption, consumptive night sweats, bronchitis, coughs, spitting of blood, weak lungs, and other throat and lung affections,

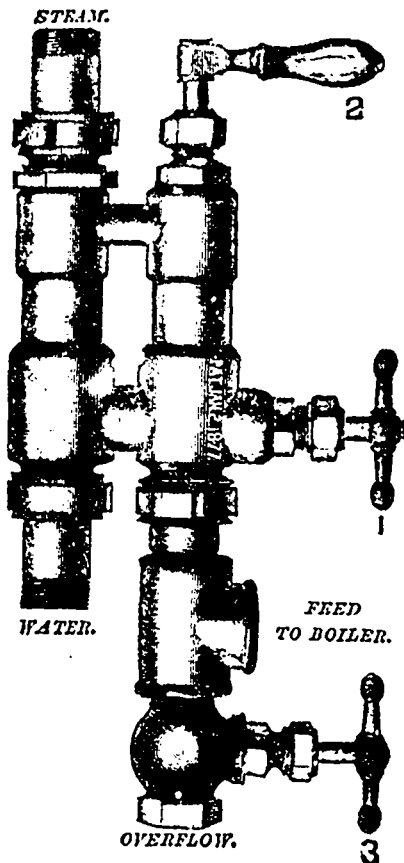
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CHAS. M. WHITLAW, *Manager.* MONTREAL, P. O. Box, 1167.

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**CIRCULAR, GANG, SHINGLE, CONCAVE GROOVING,  
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 WHEELS, GUMMERS AND CUTTERS FILES,  
 RUBBER & LEATHER BELTING, SWAGES, SAW SETS.**



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Best Feeder known for Stationary, Marine or Locomotive Boilers.

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All sizes lift water 25 feet. No adjustment required for varying Steam Pressures.

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MONTREAL, P.Q. - - CANADA  
Manufacturers of Inspirators, Ejectors,  
and General Jet Apparatus. 1741

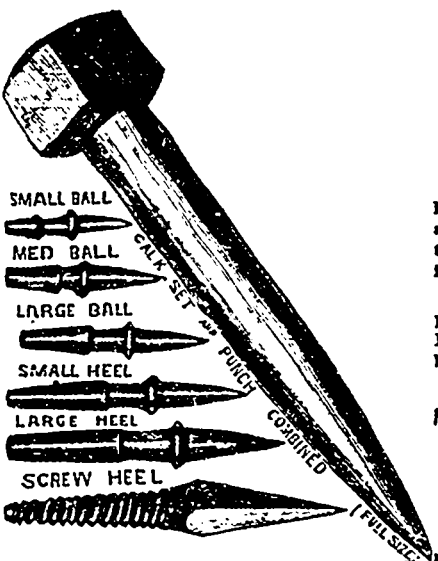
## LUMBER DRIVERS' CALKS

Our CALKS are made with small trip hammers from the best quality of steel and tempered in oil. The quality and temper can be tested by driving them into a bar of wrought iron.

These calks are now used by all the principal Drivers in Maine and New Brunswick. Kept by dealers in Lumberman's Supplies.

**T. McAVITY & SONS,**  
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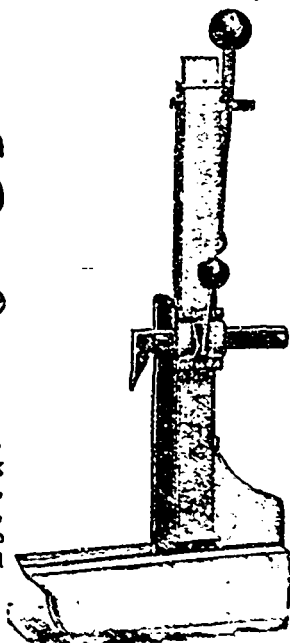
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# SAW MILL DOGS

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For Holding Logs upon a Saw Mill Carriage while being Sawn into Lumber.

These Milldogs I guarantee to give satisfaction in every case. They will hold a frozen log as well as a soft one, for cutting Scantling, Square Timber, &c. These Dogs cannot be excelled, I sell them all on their own merits, give ten or fifteen days trial, and then, if not satisfactory, return them to my order, as I have no agents on the road this year, I will sell them at a reduced price. Send for Circular and price list.

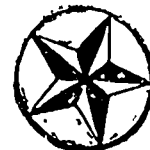


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Manufacturers of  
Patent Lap-Joint Star Rivet



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Do not buy any Belting unless with DIXON'S PATENT LAP JOINT. It will last longer and do more service than any other. Please note the address, 70 KING ST. EAST, and send for Circulars and Latest Discounts.

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# LUMBERMANS' TOOLS!

Which took every honor awarded at the Centennial Exhibition.

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## Lightning Cant Dog.

PETER ROBERTSON, Chaudiere, Ottawa.

ESTABLISHED 1856

# OAK TANNED BELTING

Acknowledged by all to be the

Best Belt ever offered  
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EVERY BELT GUARANTEED

The Best Mills in the Country use it.

QUALITY is what I aim at, the result being the Generous Support of all Manufacturers.

For Discounts and Terms, Address

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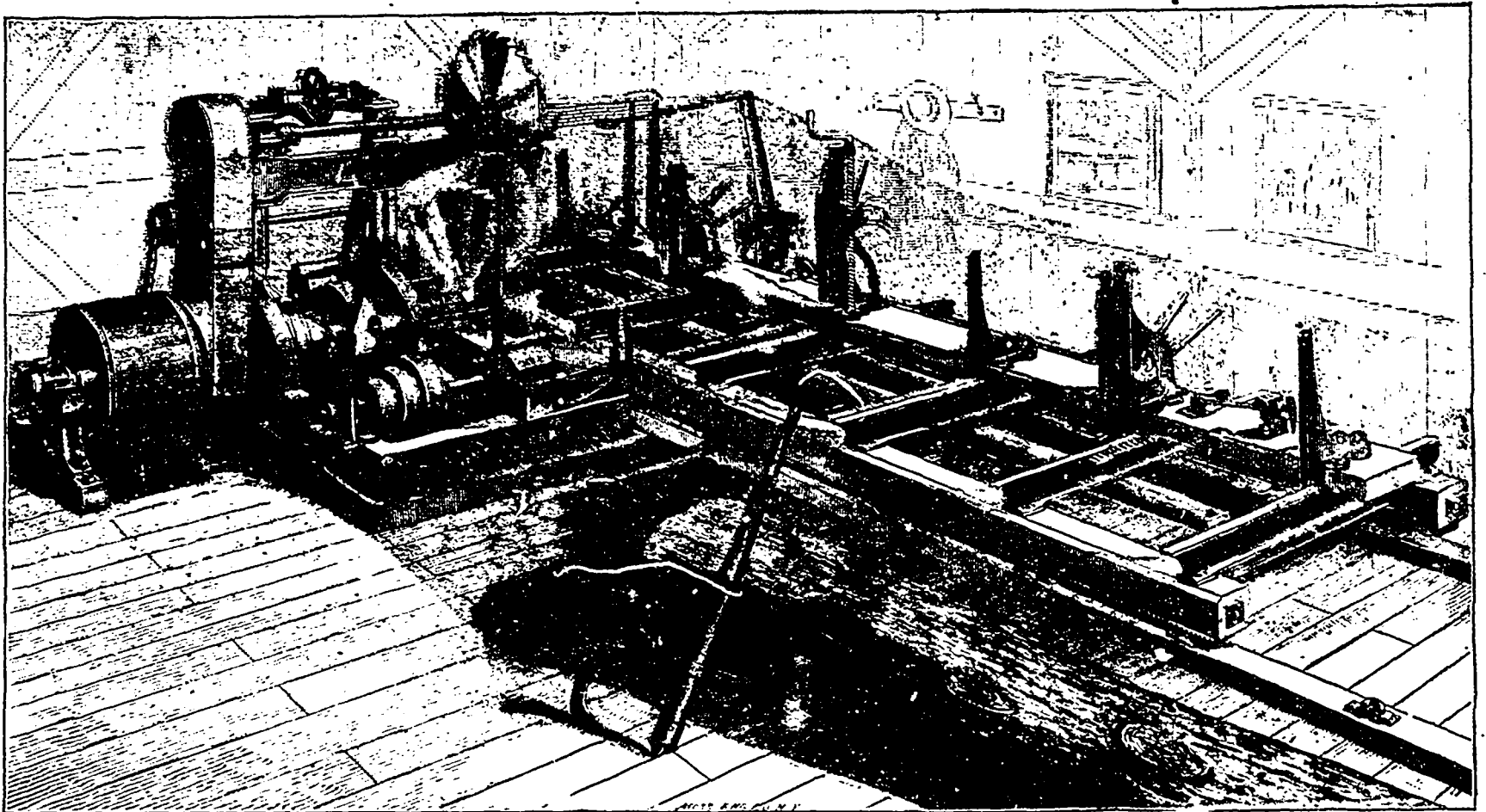
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## CIRCULAR - SAW - MILLS



Circular Saw Mills,  
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Drag Saw Rigs,

Shingle Machines,  
Lath Machines,  
Double and Single Power Feed  
Edgers,  
Mill Supplies, Etc., Etc.

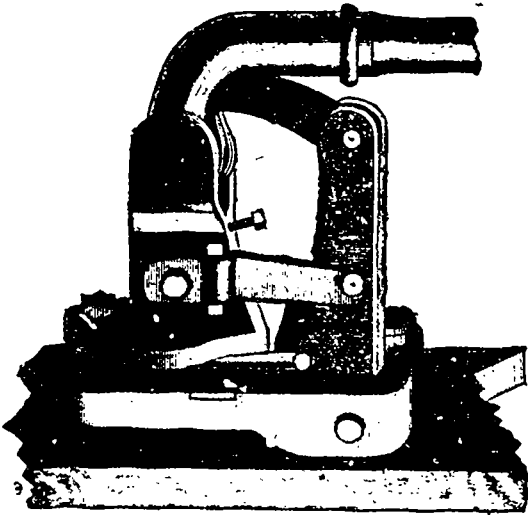
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# THE WM. HAMILTON MANUFACTURING CO'Y LIMITED.

## Peterborough, - Ontario

### Manufacturers of Saw Mill and General Machinery.



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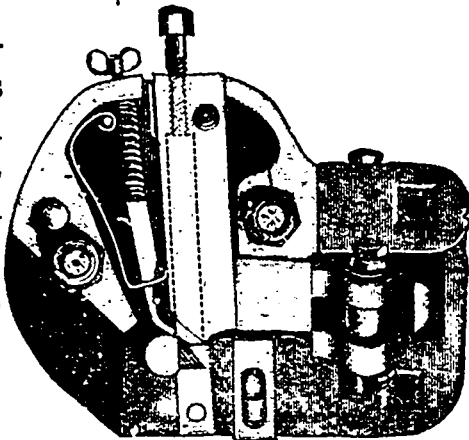
### IMPROVED PRESSURE SWAGE

This SWAGE has been constructed to fill any conceivable wish of those who are favourable to, and think it the only

kind that can be successfully used. There is no Swage of the kind on the market that will do as perfect and satisfactory work as this, and in so saying, I know what I am talking about.

**TRY IT!**

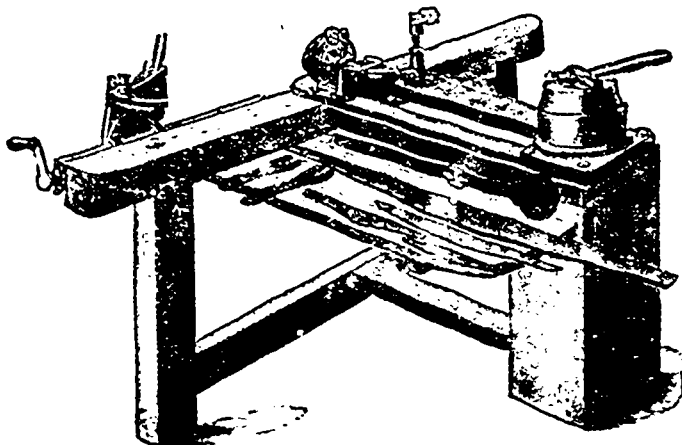
Price \$100, Cash 30 days.



(INTERIOR VIEW)

### Covel's Improved Saw Bench

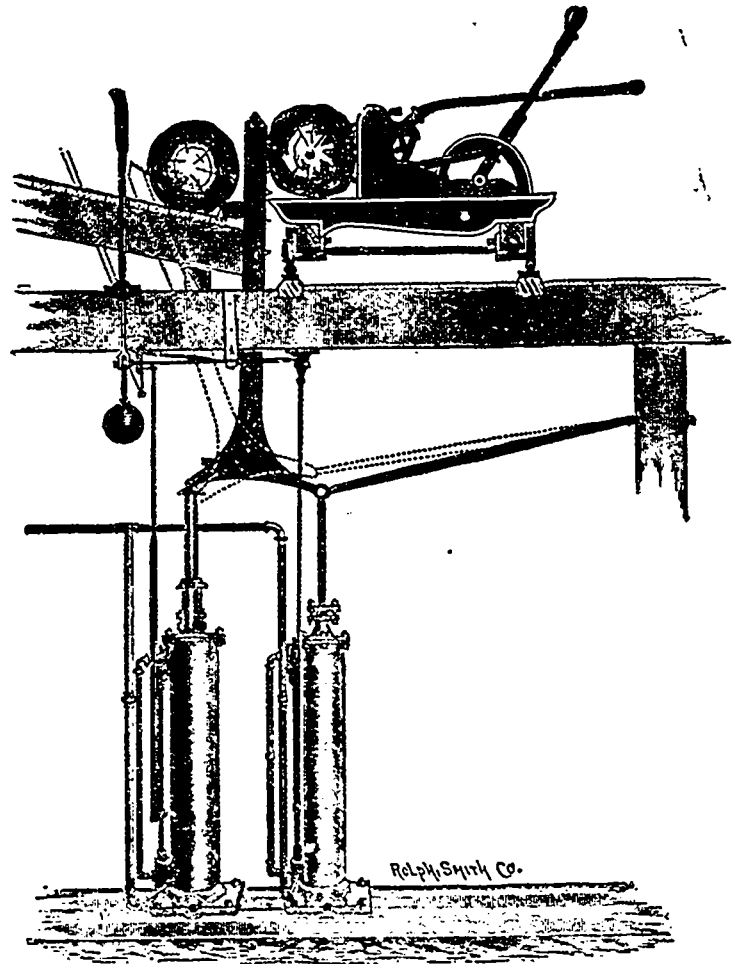
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Price \$50, Cash 30 Days.

This is without doubt, from my knowledge of what is wanted in every mill, together with the many testimonials I have received from those using them, the best outfit for hammering and the general care of Saws, that has ever been introduced, and accompanying each Bench is my "Handy Guide" book, giving all necessary instructions how to remedy any and all defects in the Saw. I have added improvements to it since I got the cuts out represented in the "Handy Guide" and done away with some parts there represented, leaving the Bench a model acquisition for the File Room.

### THE KALAMAZOO STEAM "NIGGER"



Ralph Smith Co.

It is four machines in one—Log Loader, Log Turner, Hand Spiking Machine, and Machine for Springing Timber Straight on Sawmill Carriages. It saves time, which is money. Is durable, being made entirely of iron, steel and brass. It is very quickly and easily controlled, the machine being worked by direct steam, is elastic in its movements (thereby obviating its liability to breakage) which is a very desirable point in a machine. By using this machine your circular mill will saw from five to seven thousand feet more per each eleven hours, according to cutting capacity of mill. We guarantee this machine to be first-class in workmanship, durability and utility. It has given entire satisfaction to every one using it. They are very cheaply set up in mill requiring only a base for the cylinders on lower floor, and no bridge-trees shafting, boxes, pulleys, belts or chains. Both cylinders are supplied with steam by a one and a half inch steam pipe. It requires less steam to work it than it takes to overcome the friction on the old style friction turners. It works only while turning or loading logs—balance of time it is entirely idle. Another important use to which we direct your notice, is in springing and straightening long timbers. We would be pleased to receive your order for one or more of the above Machines, feeling confident that it will give you entire satisfaction.

**We Guarantee each Machine in every Particular.**

# NORTHEY & CO'S STEAM PUMPS, TORONTO, ONT.

*Pumps for Fire Protection a Specialty.*

## SAVE INSURANCE.

*Our Combined Boiler Feed and Fire Pumps are a NECESSITY IN EVERY WELL ORDERED STEAM MILL or FACTORY.*

### Cheap.

*Cheaper than any Pump built.*

*Our Independent AIR PUMPS and Condensers will effect a saving of 30 to 50 per cent. when applied to high pressure Engines.*

### Simple.

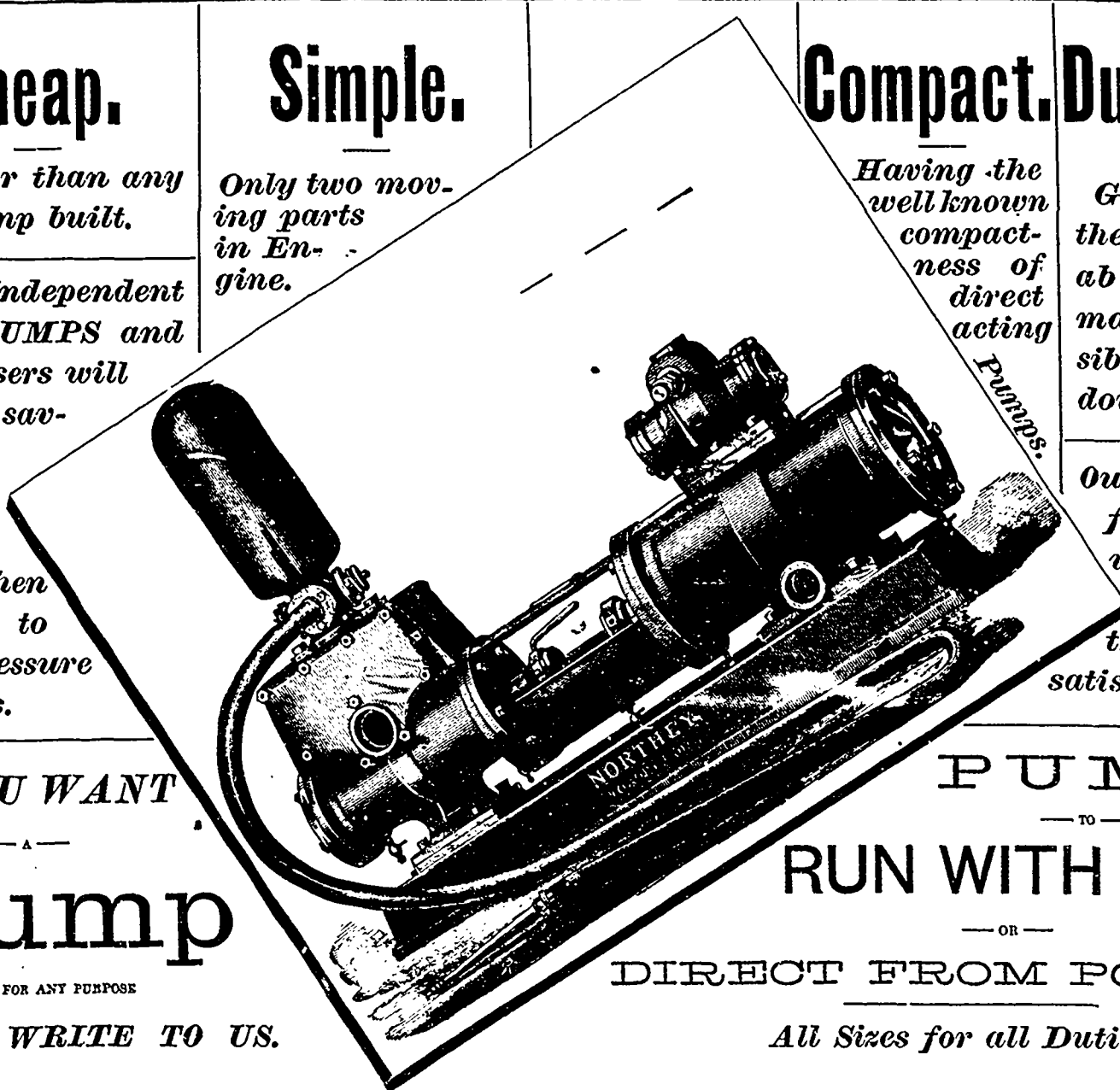
*Only two moving parts in Engine.*

### Compact. Durable.

*Having the well known compactness of direct acting Pumps.*

*Guaranteed the most durable Pump made; impossible to break down.*

*Our PUMPS for general water supply give the greatest satisfaction.*



IF YOU WANT

## Pump

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PUMPS

— TO —

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All Sizes for all Duties.

*Our make of Pump is specially adapted to Mills in out of the way places, as they can be absolutely relied on, and occasion no vexatious stoppages for repairs.*

WE INVITE CORRESPONDENCE ON ANY POINT CONNECTED WITH PUMPS.

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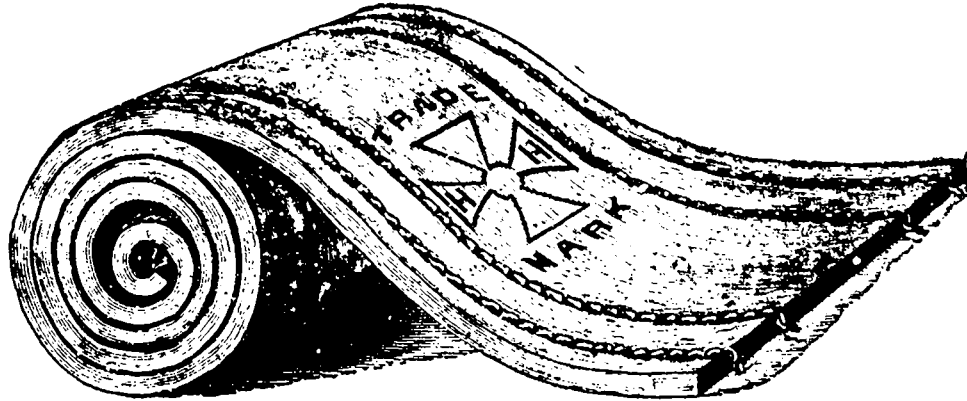
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Yours respectfully,  
 W. MARSHALL,  
 Foreman City Flour Mills.



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 PACT, BENNY & Co, CASAL HORSE SHOE AND  
 NAIL WORKS, MONTREAL, 15th Nov. 1894.

Dear Mr. Harris, Heenan & Co, Montreal.  
 I have pleasure in recommending the belting manufactured by Messrs. Harris, Heenan, & Co, of this city. After thoroughly testing it, I find it greatly superior to any belting that has come under my notice and fully equal to all they claim for it, and certainly without an equal for cross or double belting.

CHAS R ELLIACOTT,  
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*The Best, therefore the Cheapest, Belt in the market.  
 Replaces, when used, all others.  
 More Pliable and Durable, especially at the splices.*

*Stretches but little, always retains its original width.  
 Superior for Cross or Double Belts.  
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 Single equals medium double.*

25 per cent Stronger, 33½ More Lasting, and 12½ Heavier, than any other Leather Belt.

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