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The only Newspaper devoted to the Lumber and Timber Industries published in Canada

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VOL. 5.

PETERBOROUGH, ONT., MAY 15, 1885.

NO. 10.

INSPECTION OF LUMBER.

To the Editor of the Canada Lumberman.

SIR,—Considering the importance of the subject it is somewhat surprising that no communications have appeared in your journal regarding the inspection of lumber.

That this is not at all satisfactory, either to buyer or seller, is well known in the trade. Nor has any attempt, so far as the writer is aware, been made to reduce the inspection to something approaching uniformity, both as to the names of the qualities and the grade of lumber constituting these qualities.

As to nomenclature, we certainly do possess names, but it is well known that to one inspector a certain name will imply a grade of lumber differing materially from that which another understands by the same term.

Which one of your readers which has occasion to attend court in a suit but has noticed the widely different definitions given as to what constitutes a mill cull or a pick? The writer has a distinct recollection of the difficulty he had in endeavoring to reconcile the almost diametrically opposite descriptions of what a second in oak consisted, or rather what defects made a piece pass for second.

Is the inspection of lumber based upon the question of supply and demand? Do our inspectors reject lumber when the demand is limited and supply plentiful, which, in a different state of the market, would probably be accepted? Is our inspection regulated by the market to which we are about to ship? If, for home consumption, a light inspection; if, for a foreign market, a close one.

Is our conception of what constitutes any one quality determined by the use to which it is to be put?

Is the culling of lumber regulated by an understanding between the buyer and seller?

Is not the inspection of lumber left to be determined by unforeseen circumstances, such as the rise and fall of the markets, the amount of stock on hand and the probable cut, the failure of the dealer to dispose of a stock bargained for early in the season, or the acceptance of a higher price by seller for his lumber already sold?

In fact, is not the inspection of lumber governed by anything, save by following a standard agreed upon by both manufacturers and dealers?

Who regulates our inspection such as it is? Is it the manufacturer? No. In contracting with the dealer for the disposal of his stock, the manufacturer agrees to leave the culling to the buyer or his inspector.

Does the inspector accept or reject as he pleases, thereby determining the respective qualities? No. He has his instructions from his employer. Then it must be the dealer who regulates the inspection. No. It is the consumer.

Competition, by no means healthy, is at the root of the evil. There are far too many engaged in the trade, many of them not having anything to do, run round and sell on commission. Lumber of a certain quality is sold at a low figure, the next man coming along offers the same quality at a still lower rate, and the dealer instructs his inspector to meet the price by a correspondingly lower grade. The name remains the same, but the quality is either good or bad according to the price.

It is time that both the manufacturer and dealer with capital invested, who have to stand the losses incurred by too zealous commission men, combined and regulated the inspection of lumber as well as other matters belonging to the trade.

Or, if that cannot be done, then let our inspectors (and none are so well qualified as they), form an association, and, so far as the inspection of all kinds of lumber is concerned, both hard and soft woods, determine what shall constitute the numerous qualities. Let his standard, after examination, be agreed upon by both manufacturer and dealer, and be a set of rules to which any dispute can be referred for settlement, so far as such can be done.

LUMBER.

Toronto, May 4th, 1885.

PROVINCIAL FORESTRY ASSOCIATION.

The following letter appeared in the Montreal Gazette:

SIR,—I have read with interest the account of the proceedings of the Forestry Association at Quebec, also your editorial on the proposition made there by Mr. S. C. Stevenson, and much as I agree with the objects said to be aimed at by the association—viz., the preservation of our forests and the planting of new ones on taking a view of the matter I am inclined to think the association is not going to work in the most practical way to secure the desired end. I notice that much stress is laid on the observance of Arbor Day and the planting of a few trees by way of ornament by cities and schools. This, of course, cannot go on for ever, nor is it calculated to renew our denuded forests, nor do I conceive it can teach children at school what is required in the way of planting forests, as the trees planted on Arbor Day are always large ones, and even were they procurable, would be too expensive for large plantations, nor would they be desirable. What is required is to get nurserymen to sow large quantities of seed of the best kinds suitable for timber and to transplant them in their nurseries at least once before they are sold for planting, they would then be about 12 or 16 inches high and easily handled. If I remember right the association, when they met in Montreal, proposed to offer some reward to the persons who had planted the largest number of trees on Arbor Day.

What we want is wholesale planting such as is done in the old country, and if any reward is to be held out, let it be to the party who has successfully planted the largest number of acres in any one season. What better place could be had for this than some districts of the eastern townships where the country has been completely bared of trees? If a good wide belt were planted between some of the farms it would improve the country and afford shelter to the farm building and stock of which they are at present destitute. I merely mention this district, for if my suggestion were carried out it would let farmers see what could be done and what a benefit it would be to farmers. But there is no scarcity of land which wants planting. The trouble seems to be to get people to make it their business to do so, and plantations, after all, if properly attended to, do not take so very long before they begin to yield a return for the cost.

The idea of giving children a taste for arboriculture is very good in its way, but if we want to see our forests renewed on a large scale it should be commenced at once, as every year is of importance considering the great demand, which is now making on our standing forests and the difficulty and time required to replace them. We should all take to ourselves the advice which the Laird of Dumbiedikes gave to his son:

"Aye, be stickin' in a tree; it's growin' when ye're sleepin'."

Yours, &c.,

THOMAS McNAB.

Montreal, 15th April, 1885.

A NEW INDUSTRY

There is now in process of construction in Bullman City a plant for the manufacture of what is called terra cotta lumber, although why the word lumber is used in this connection is not plain, neither the fact that it is capable of being cut with a saw nor the fact that sawdust is an agent in its construction entitling it to such a classification.

By one of those happy ideas which seem more the result of accident than design it occurred to the inventor that common brick clay might be rendered light, porous, elastic to a certain extent, and capable of being worked with cutting tools by mixing wet clay with an equal bulk of sawdust, molding it into certain forms after the manner practiced in the manufacture of brick and afterwards subjecting the mixture to a sufficiently high temperature to entirely consume the sawdust. The final step in the process, that of baking the clay for the purpose of hardening it and at the same time consuming the sawdust, causes a curious change in the conditions of the original substance. The gaseous products of combustion evolved from the burning sawdust produces an effect on the clay very similar to that produced in dough by

the effect of yeast, the gases expand the clay around each particle of sawdust and finally force their way out of it, leaving it in porous condition resembling more than anything else well raised and baked bread, excepting that the pores or cells in the clay are more regular in size, the size of these pores depending upon the size of the particles of sawdust. By varying the proportions of sawdust in the clay a substance of any degree of porosity or solidity may be obtained from a substance almost as dense as common brick to one as light as wood.

As originally made the mixture of clay and sawdust was molded into long blocks or logs and afterwards sawed and cut into the shapes desired, which was probably the reason for its being called lumber, but this crude method soon gave place to the better one of molding the mixture at once into the desired form thus avoiding an unnecessary amount of work.

The porous brick slab or tile, which results from this process, has desirable qualities as a material for building purposes. As ordinarily made its weight, compared with a common brick, is 8 to 20. It is a non-conductor of heat. Nails can be driven through it without cracking it, and it resists all changes of temperature without disintegration. In addition to these advantages its porous surface and cellular structure enables plaster cement to adhere to its surface with great tenacity without cracking; a manifest advantage for either outside or inside work.

By the use of this material the interior of dwellings may be rendered absolutely fire proof at very little additional cost over the ordinary method of construction. Slabs or planks of the material can be nailed to the sides and ceiling of a room, furnishing an even surface for the after application of plaster, and the floor may if desired be covered with a coat of asphalt on which, while hot, ornamental wood flooring may be placed, making one of the best possible floors.

The low cost of manufacture enables this substance to compete successfully with common brick as a material for house building, and it seems capable of adapting itself to a great variety of purposes not here enumerated.

The clay which is used in the manufacture of this porous terra cotta has heretofore been a refuse material not available either for the manufacture of fire or common bricks and is exceedingly abundant in many localities, and the other material or agent (sawdust) used in the manufacture is also a waste substance; there is no reason, therefore, why it cannot be produced so cheaply as to bring it into general use and thus form the basis for a large industry. We are glad to note that it furnishes a means of utilizing a waste product of the lumber business which has been a nuisance to the mill owner.—Northwestern Lumberman.

IS TRADE AS BAD IT IS REPUTED?

The *Timber Trades Journal* of April 25th says:—We have been so much accustomed to speak of bad trade during the last year or two, and to find everybody acquiescing in the sentiment and ready to pass it on to the next inquirer, that disbelief in it has come to be almost accounted a heresy, which few are bold enough to lend their names to. In fact, without troubling ourselves with statistics, a sort of general impression has established itself in the public mind that the great trading supremacy of the United Kingdom has gone by. And that the spirit of enterprise that shone so brightly in the days of Drake and Frobenius, and was by them handed down to successive ages of great navigators to the times of Anson and Cook, in the reign of George III., has dwindled and almost evaporated in modern times. Or is so bound up with steam and other contrivances of science for making the tour of the world in crowds, that men themselves have lost their individuality as if they were turned out by machinery, all to one pattern, like ninpins, and that trade itself was becoming engineered like everything else, till it was almost reduced to a mathematical theorem.

But if anybody believes that England is behind the rest of the world, either in its industry, assiduity, or power, let him peruse the Blue Book issued on Tuesday last, containing the annual statement of the navigation and shipping of these realms during the not very flourishing year of 1884, and the contents must appear to him an extraordinary revelation. From this we learn that 347,441 vessels, registering 74,823,763 tons, entered the ports of the United Kingdom last year—not quite so many as we employed the year before, when the numbers were 361,164 vessels, with a tonnage of 75,340,597, the difference being less than 1 per cent. So many did not go out again as the number that came in. The clearances outward in 1884 were only 302,303, and tonnage went no higher than 69,176,612. But even here the ratio was comparatively well kept up, as the numbers the year before were no more than 314,364 outward, with tonnage of 69,452,860.

Here also the difference was very striking. If our trade over sea was declining, it was almost imperceptible in the great volume of business still doing; and it was analyze these figures we find in them a good deal to reassure us, and to satisfy us that if we are, as some persist in predicating, on the road to run—and going by steam too—it will take us a long time at this pace to reach that unfortunate goal. Of the 347,441 vessels that entered our ports 186,783 were sailing vessels and 160,658 steamers. But what must be considered of more importance is the great preponderance of those under our own flag. 321,179 were British vessels, and only 26,266 were foreign. Things are great and small only by comparison. To be told that 26,266 foreign ships brought cargoes into the United Kingdom last year, as an expression taken by itself, might have the effect of creating a belief that foreigners were monopolizing our ocean-carrying trade; but when, on the other hand, we are told that for every foreigner a dozen British ships were employed in our carrying trade, the idea vanishes, and the competition is held to be of almost no account. It is to steam that we are indebted for this access of British tonnage. The shipping interest does not admit of being under any obligation to the Board of Trade for it, and doubtless, had Mr. Chamberlain's Shipping Bill been passed last year, these figures would have been materially modified. This point, however, was escaped, and our shipping still dominates the ocean traffic of the world, as it is without question the best in the world, and arguments to the contrary notwithstanding.

Of the 302,303 ships clearing outwards from British ports 101,000 were sailing vessels and 191,311 steamships. Steam is already numerically, and as to employment, treading closely on the heels of sailing ships. 250,241 of these ships were British and 52,062 foreigners. The difference in favor of British against foreign ships last year was only 11 to 1. An unusually large number of British vessels, chiefly steamers, were "on strike" against the low freights ruling, but they are not unlikely to find employment this year, as far as can be judged from present

appearances, and let us hope they will be able to pay their way handsomely.

The number of vessels trading between foreign countries and British possessions—meaning entered British ports—was 60,603, with a tonnage of 31,688,621, cleared outwards 61,936, of tonnage 32,584,001.

In the coasting trade 286,836, with a tonnage of 43,135,242, entered inwards, and 247,867 cleared outwards, with tonnage 36,592,611, an amount of traffic around our coasts, which appear almost incredible when we hear immediately about us, and have done for the last twelve months, little else than lamentations over the dulness of trade. The total number of British registered vessels engaged in the home and foreign trade was stated as 18,754, with a tonnage of 7,083,944, employing 199,634 men and boys. The number of British vessels registered was 24,149, tonnage 7,363,707. During last year 1,001 new vessels were built in the United Kingdom, with a total tonnage of 497,442, not including those launched in fulfillment of foreign orders and to be sailed under foreign flags.

From these statistics we gather that, large as our trade appears to be it is scarcely adequate to our capabilities. The one unfavorable deduction from its otherwise imposing array is to be found in the last figures, from which we learn that out of our 24,149 merchant ships only 18,744 found employment last year, and therefore that 5,398 vessels remained without employment, with a tonnage of about 300,000, which signifies so much trade out of gear and the forced idleness of 10,000 or 12,000 men and ships' officers.

Thus, while we are still doing an immense trade, our whole people are not well employed, and though not 1 per cent. fell off last year in the number of our vessels in active occupation a great many among us are unable to participate in the general welfare because their special calling is not immediately in requisition. In 1874 the total mercantile tonnage of the United Kingdom, steam and sailing, amounted to 20,872 vessels of a total tonnage of 5,864,588, exclusive of those hailing from British possessions. The number has continued to decrease since then, out the call for a larger class of ship, and especially steamers, has prevailed ever since, and while the home list now contains only about 19,000 ships, their tonnage is ten times greater than that of the greater number in 1874.

During the nine years, 1875 to 1883 inclusive a Parliamentary paper, issued last week, informs us 10,318 British ships, including those of our colonies, were lost, their united tonnage being 2,816,072. The average, therefore, would be about 1,149 ships per annum, and in tons 312,097. The tonnage of the vessels lost during the nine years would only average 273.

The gap to be filled up in the natural course will, therefore, every year, taking one with another, be about 313,000 tons of shipping to be built, without taking into account the natural expansion of trade, which, indeed, just now is a phrase of which the markets take small account. Incidentally we may mention that with all these losses, the death rate at sea did not exceed one in 48, while on shore the death rate is reckoned to average one in 50 per annum for males.

That shipping has been a little overdone—that is more vessels built than were absolutely wanted—is now pretty generally allowed, and much of our trade depression is probably attributable to that cause, but our losses at sea are so great that the building yards still are able to employ a large staff of men, and the latest information from the great building districts of Glasgow and the Tyne is that the trade is again improving. The Government having given out its orders for the Admiralty, a start has been imparted to the trade, and the private business coming in at the top of it seems to have caused many of the superfluous shipwrights to be put on again at fair wages, and things are no longer in the bad state they were a while ago.

The timber trade is also looking up, and we learn from the other side the Atlantic that there is the uprising of a good demand visible in all directions, both in Canada and over the border. Everybody seems sanguine of more

trade to be done this summer, and the lumberers are said to be pursuing their occupation without reference to the state of the outside market. Their business is to get forward as much timber as they can from the forests of the interior, and they mean to do it, not doubting but they will be recompensed for their labor by a return of better trade.

The Government shipping report which we have briefly analyzed, is hardly in accordance with the large decline in the trade of the country which was indicated by the Board of Trade returns to which we referred in our last number. We have been as busy at sea within 1 per cent. as we were last year, yet our export trade, which goes hand in hand with shipping, the deficiency is about 5 per cent., and in our import trade much more.

From this it seems to be proved that the difference arises chiefly from the smaller valuation of our exports. There is as much trade doing, or nearly so, but at such a depreciation that the value cannot be put down at such good figures as before. Whether the 11,000,000 extra which the Government have just notified Parliament that they want will go to promote trade or not remains to be seen. But we may pretty well rely that the rumoured 3d. additional to the income tax will by and by come upon us. Nor will the trading community begrudge it if a commensurate revival of business takes place before it is absolutely demanded, and they see the money usefully applied in securing the safety and the vast trade of the empire.

OLEFT WOOD.

In many of the old mansions the beauty of the split wood wainscoting has been much admired. The art of rending wood is not lost, but it is curious that there is no machine that can divide a piece of wood into any number of parts by following the grain from one end of the stock to the other in all the curves and crooks that are found in rending. For straight grained stock the saw answers every purpose with a great saving in lumber, time and labor, but there are places and requirements where the stock is to be rived out, that every part of the work may be of equal strength and of like tenacity throughout. This rending process, or the trade of the rail splitter, is one that requires the extremest skill on the part of the render. The lath splitter will seize a log of wood, however straight or crooked, and divide it in halves through its central line, guiding the crack and keeping the rend in the centre of the stock by the manner of applying the splitting force of the wedge. The instant the split leaves the central line, or one half of the log, or the other is weakened, the deflection is the greatest in the weakest place, and the result would be that if the render were to continue the splitting would cleave to one side, and the halves be unequally divided; but the render is on the lookout for this, and can tell in an instant when the split leaves its central division, however winding the log may be, and assists the weakening side by slightly bending the other till the divided work has been thickened and the rend continues on the centre. The halves are divided in like manner until the stock is divided into eights by radial divisions, when the circular wedge shape section is ready to be divided cross ways following the annular grains or fibre-ring that forms about the heart of the wood, and again the radial division applied, till the log has been rived into the fineness required. The curve or bending flexure of the divisions by which the line of cleavage is directed is a principal that is brought about by the skill in handling the wedge, or whatever tool is used in splitting. If the knife is forced around to bring the spreading force with a larger leverage on one side than on the other, the strength of the shorter half will be better prepared to resist the action of bending than the other, and the work will have a tendency to cleave to the thickened side if the rend has not departed too far from its central course, if so, the work will need assistance in the way of springing the stock into the position that will allow the split to rectify itself. It is skill and practice in the correct principles of rending wood that brings the division of stock with the grain into equal parts to a success, and not chance cracks or good luck in splitting, or the placing the divid-

ing wedge or frow into the exact centre of cleavage. Why this splitting should be affected, or the course of the rend be changed in the slightest degree from the effect of bending, the stock behind the work where the action is to be expected is a principle that must make use of the extension and distortion of the material it meets with in being deflected. If a beam is loaded at each end while it is supported in the middle, the upper layers will be extended while the lower fibres will be compressed; the tendency between every dividing line will be for one surface to slip upon the other, as may be observed in a built up beam of thin boards before gluing, a tendency to "crawl" will be noticed from the support in the centre to places where the load is applied. This tendency to creep is sufficient to break the cohesion between the grains of wood. A piece of stock split for a few inches deep in two or more places sufficient to divide the stock in three or more equal parts, will, on being deflected, bring the shearing strain on every fibre in the stock; and since they have been weakened in the line of cleavage that has been made, and the rend must continue at those places long before the remaining stock has been injured in the division of the grains, so by breaking the stock over a support, so as to cause the material to assume a sharp bend first to one side and then to the other, the line of division is conducted and forced through the stock and left in equal parts with the grain.—*Timber*.

THE BRITISH TRADE.

Recent advices from Great Britain indicate a somewhat unsettled state of the timber market, with an upward tendency or at least a stiffening of prices. The uncertainty, however, has the effect of making both buyers and sellers cautious.

The *Timber Trades Journal* of April 18th says.—"Buyers here do not care to purchase now at any serious advance made on the supposition that war will result, and afterwards find themselves in a position of great disadvantage with others who had bought earlier in the year." Again, after mentioning a circular from a London firm notifying a withdrawal of all quotations, it says.—"We know for some time past one or two of the dealers have put up their prices, but this the first printed announcement of the kind we have come across."

The reports of our contemporary from the ports, which are the chief points of interest to the Canadian trade, are to the same effect. Its Liverpool correspondent, after mentioning the busier aspect of the wharves, and the greater freedom in executing orders, says of Norway flooring:—"Prices of the latter goods have advanced during the week, and with the imminence of war a further increase is more than probable; in fact some shippers are for the moment indifferent sellers, unless at a substantial increase, or have withdrawn from the market for the present. In other goods there is no change in quotations."

The same account comes from the Clyde. The Glasgow correspondent remarks.—"The timber market here has slightly improved during the past week, as indicated at the auction sales that have taken place, and this was to be expected in the present position of the trade in the face of small stocks on hand the probability of a war which would, at any rate, affect prices of deals."

Since those reports the prospects of war seem to be less imminent, though not altogether removed. Therefore there is still the same element of uncertainty. Some assume that a peaceful solution would necessarily be followed by some decline in prices, but this is by no means certain. There is not only to be taken into consideration the fact of "small stocks on hand," but also the still more important fact that the visible supplies of timber are exceptionally low at present. Neither would the higher war prices in Great Britain necessarily mean all gain to the Canadian manufacturer, for there would be increased freights and war risks to be taken into account.

The situation is one of uncertainty, but appearances are not unfavorable to those who hold stock.

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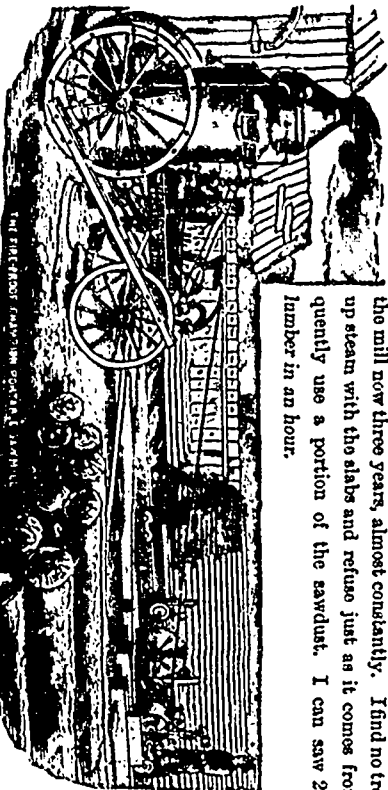
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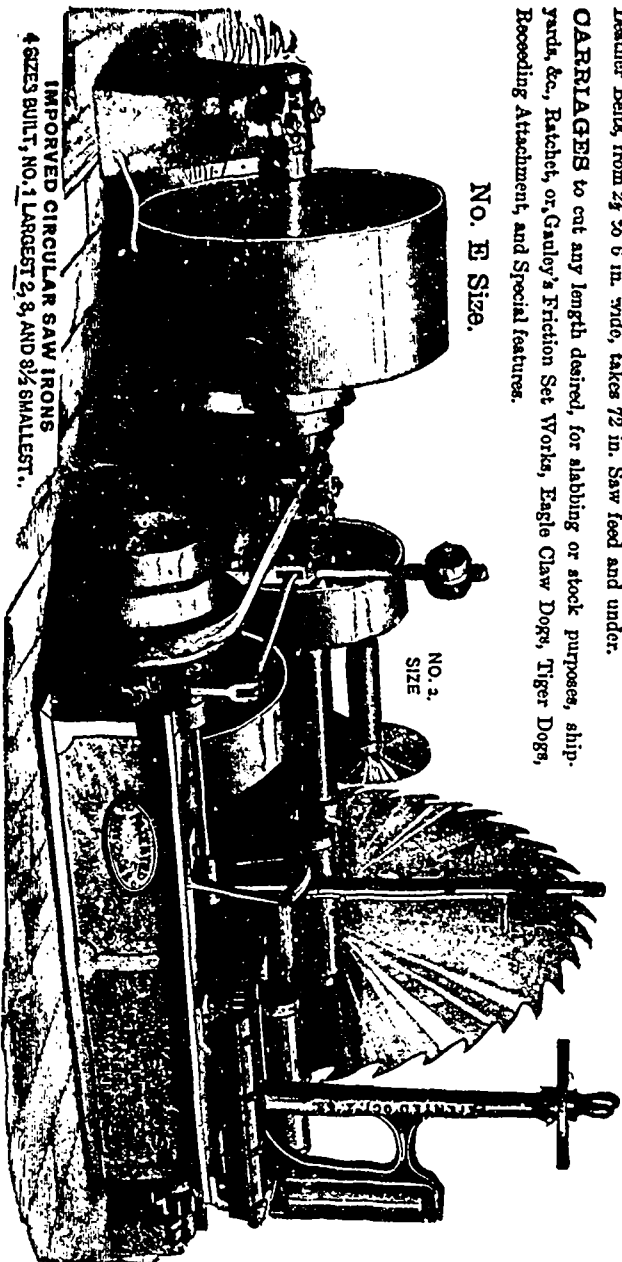
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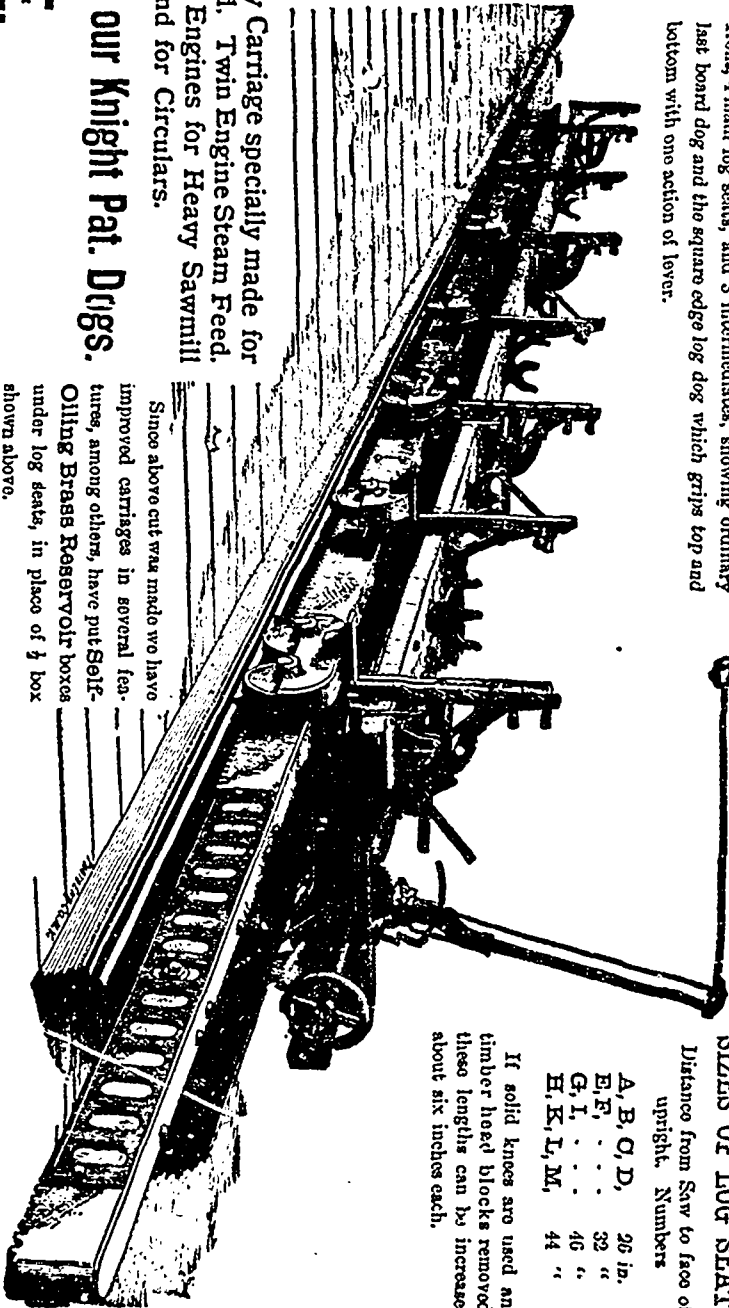
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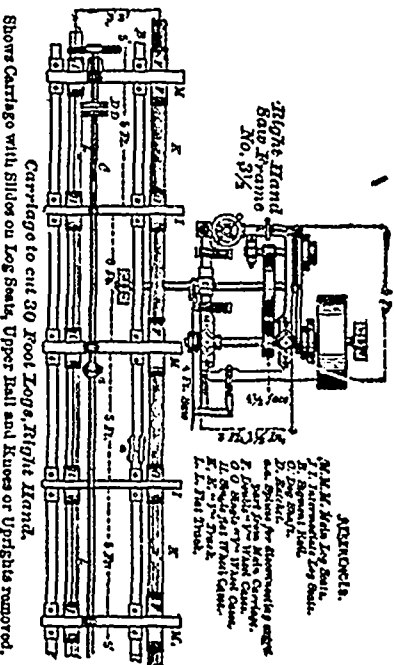
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E, F,	32 "
G, I,	46 "
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If solid knees are used and timber head blocks removed, these lengths can be increased about six inches each.

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THE WATERSHED OF EASTERN ONTARIO.

The following is from Mr. R. W. Phippe's annual forestry report, published by the Ontario Government:—

There is no part of the science of forestry more beneficial than that which teaches to keep covered with forests the principal heights of land. These, especially those which are termed watersheds, when covered with extensive woods, from reservoirs which supply the sources of numerous rivers, give moisture to the numerous small lakes and watercourses which intersperse the slopes below them, and preserve throughout the whole country a fertility, invariably much impaired when the forests above are destroyed.

The chief watershed in Ontario extends in the shape of a crescent, the centre trending to the north, the ends touching respectively, near Kingston and Lake Nipissing. From and through this, many watercourses run to the east towards the Ottawa, and many more in a westward direction towards Lake Ontario. On this elevated section of country, therefore, the forest should, above all other places in Ontario, be preserved.

It happens luckily for this purpose that much of this territory is of an inferior character, not adapted for agricultural purposes, while it contains much valuable pine and other timber which it would be extremely desirable to preserve, both that this height of land may remain wooded, and to answer as a reserve of timber.

In order to examine this matter thoroughly by personal observation, I have, this summer, travelled from Ottawa to Lake Nipissing, and from thence back to Kingston, thus passing around and through much of the district in question, observing what progress had been made therein, and obtaining from lumbermen engaged in its forests, opinions as to the best method of preserving them.

A few words may well be said here concerning Ottawa. To this point logs are floated from most of eastern Ontario, and from all that portion of Quebec which the Ottawa drains. Here, every day, all summer through, comes the stream of timber floating down the turbid current, after its journey of hundreds of miles down the Ottawa—the "Utawa's tide" immortalized by Moore—passing by many a dense forest and many a fire-wasted shore, or, before that, down the dark and winding Mattawan, the Petowawa, home of many a rapid, the far stretching Coulonge, or even, now that steam has overcome the obstacle of the intervening neck of land, from distant Nipissing and many streams that terminate therein. There are numerous mills in the back country, and what they cut passes on by rail. But the great mass comes in log and is sawn up at Ottawa—that city of two great industries—the home of legislation and of saw mills.

Where Ottawa stand, the river pours its dark waters over a ridge of rock which, at that point crosses the country. The ridge does not span the river in a straight line. Its centre is bitten out by the tooth of time, and into this central gap the river, flowing till then broad and level above, pours all its waters suddenly from three sides at once. The result is marvellously beautiful—the whole immense acre broad cauldron boils in milk white mountains of half water, half vapor. This is the Chaudiere—the boiling pot. This vast mass of falling water is turned to the uses of science—clusters of great saw mills occupy all along its edge, using everywhere the overplus of the stream, and are even built out over one side of the cauldron itself. Here they are ever at work, their great chains drawing up a constant succession of logs from the river; you see a dozen soaking monsters at once on the floor opposite, each being carried hither and thither to the great saws that evermore go up and down—a log passes you, losing two outside slabs as it goes, it comes back through a gang of saws that cut it into twelve boards, it passes away on wheels; it is succeeded by others and again by others—a treadle line of timber day and night is passing in as logs and out as lumber. Down the river perpetually come logs by the thousand, divided off above the mills by booms, each coming to the mill of its owner, directed upon the toothed

chain by the pike pole, and drawn by it to the saws. Here, too, continually small portions of rafts—a score of pine logs with, it may be, four heavy beams pinned above—each with its crew and their little wooden shelter from the rain, pass down through long narrow artificial waterways planned to round the cataract, by gentle successive falls, to be united in a larger raft below. All the scene—the numerous mills, the centres of enormous piles of bright now boards—the ever coming and going lumber—the rattle of the different machines from all quarters, the all-pervading sound of a hundred great saws forcing their way through wet pine wood—the crowding thousands of men, horses, and carts everywhere, swarming in the mills or maneuvering in the roadways around, give a picture not to be surpassed except, perhaps, by itself at night, when the electric lights color with silver all the scene, and show in vivid glow the dark waters of the Ottawa, and the freight of logs ever pouring towards the open jaws of the mills. You might imagine the workers the swarm of demoniac Genii forced to build, on pain of Eblis, Aladdin's palace in a night.

A great part of the city of Ottawa is a city without residents—a city of lumber. Here are piles of lumber—square piles—quadruple piles, diagonal piles, built tier on tier high in the air above—lumber for all intents and purposes—acres of inch boards—mountains unending of joists, beams, sheeting—every sort and kind of lumber which our forests give; streets of lumber, blocks of lumber—miles on miles of lumber—and when past it, it is lumber still, for here are numerous large houses crammed from earth to rafters with short lengths for pails, for boxes, for purposes beyond count. Fast as the great mills build the city up, so fast great railway trains and multitudes of immense barges pull it down and carry it away. The air is redolent with the smell of lumber; you breathe pine and resin at every step. From here again this great mass of wood, coming but by one channel, leaves by many, and spreads itself by a hundred railways over all the Northern States, and by river to Quebec, to England, and to the Continent.

At Ottawa, the headquarters of many leading lumbermen, some valuable opinions were obtained from Messrs. Pattee, Bronson, W. Mackay, J. Gordon, and others well acquainted with the Ottawa woods.

Leaving Ottawa, there is nothing to chronicle in the interests of forestry until Pembroke is reached, where many gentlemen experienced in lumbering and forest operations are seen and their views obtained.

After Pembroke, the next stopping place is Bisett's Creek, where—

Mr. McCormack, the manager of Young's estate, attends to extensive lumbering operations, and proposes to take me to the nearest scene of action, twelve miles over the hills, which here are seen in all their autumn beauty. A lumber wagon is equipped by filling its box with clover hay. Mr. C. sits in the rear, I and the driver in the high spring seat in front. "Get along," he cries. The whip is cracked, two sturdy horses are doing their best, and we are rolling, jostling and tumbling over the roughest road in the universe—up great ranges of hills, down them, over rough corduroy logways in the gullies, over rocks on the level, over great stones everywhere. The wagon rattles down a hill, and rushes across a hundred boulders—you are thrown violently against your companion—you are thrown to the other side—you fly a foot upward by the action of the springs you fall a foot downward by the action of gravity. Holding to the seat till your arms are numb, you ask what is to be the length of the journey. "Four hours," replies the imperturbable Mr. C. from the rear. Rattle! smash! bang! You wonder what four hours in purgatory are like—or whether the German stone roller trough of torture was worse than this; and at last, seeing your companions not at all affected, you begin to get used to it. The prospect from the wagon is but one of many—it is a *brule*. Sixteen and fourteen years ago—one great fire meeting the dead edge of the other—a tract here seventy miles by ten or fifteen, almost without exception a forest of noble pines, was burned into desolation. Pine went there which would have brought many millions now—a

forest was destroyed which, continuing a forest, would have brought large sums yearly. Far as the eye can see, closely standing, are the dead trunks of great pines, below them a youthful forest of poplar bright with yellow, and birch still in its greener hue—below again a dense dark red carpet of ferns—of blue berry—of wild peppermint. From noon till night we toil along through a scene of such wilderness where the partridges are

"So unacquainted with man." that they walk like barn door fowls beside the wagon. At last a ruddy glow, not from door or window, but from the roof of a large, low log house, and half a dozen "Bon jours" from choppers lounging outside, show that we have reached the shanty.

"It is a lodge of ample size
Though strange of structure and device
Of such materials as around
The woodman's hand had readiest found.
Lopped of their boughs—their huge trunks bared
And by the hatchet rudely squared
To give the walls their destined height—
The sturdy oak and ash unite."

But not exactly so—all here is pine. The shanty is forty feet by thirty inside, a great square opening in the roof lets out the smoke from a fire in the middle of the floor below—earthen there—pine all around. Rows of bunks, two stories high, formed of logs and slabs and filled with hemlock boughs of pleasant odour, covered with thick grey blankets, form the beds. A line of flattened logs form benches around the room. The ubiquitous cook is balancing on an immense crane vast pots over the fire, and soon all are busy with tin pans of bread, pork, beans and strong tea. It is an interesting and animated scene—the great bright fire lighting up the sturdy forms and bronzed visages around—the sober dress of Ontario—the bright colors and gay sashes of Quebec—the chatter in French and English—the pipes inevitable and numerous after supper, adding to the smoke clouds "rolling dun" through the roof, while a fiddler, always found in such an assemblage, plies his cheerful instrument for hours. At last, however, drowsiness prevails, and every axeman finds his bunk, pulls his blanket over him, and a chorus of snoring fills the air.

Next morning we view the forest. It is a vast pine limit, extending—here dense with far-stretching succession of multitudinous pines, there lightening with a grove of maple or of birch, here again opening into a beaver meadow, its rank grass an island of herbage in the forest sea—for many miles, from the near Bissett to the far Petowawa. The foreman, Mr. Hall, accompanies us to the places where trees have been lately cut down for saw logs, great piles of which are already placed on roll-ways ready to be taken by the winter sleighs to the river, here four miles off. All around are spread in confusion the *débris*—numerous balsams cut to clear the way, piled in heaps around or scattered, "Anywhere, anywhere out of the road," rejected butts of logs, great tops of trees, a ready fire road indeed should sparks in summer drought light on their inflammable surface.

"Yes," said Mr. Hall, "no doubt they are dangerous. There would be but one way, if we were to clean up after ourselves—that is to carry them all into piles in as open spaces as possible, leave them till next year, and burn them then; they would not burn well when fresh. I do not know what it would cost; that would be found by experiment—but no doubt it would leave the forest in a less dangerous condition."

Everywhere here, the whole week long, resounds the crash of falling pines. Two athletic young fellows, clad in the strong homospun of the settlements, if they are lucky enough to have those who will weave it, if not in the less durable store goods, yellow leather moccasins, bright sashes around their waists, the great rolling muscles standing out and working visibly on arm, back and shoulder, stationed at the foot of a tree, swing with easy grace their long handled axes against the trunk, great chips flying right and left like hail. The tall tree totters at its base, and falls, the sound reverberating for miles. The choppers climb on the log, trim the branches as far as they need; one, two, three or more lengths are cut from the trunk, and it lies till the horses and sledges can draw it to the river.

All through this great extent of pine and lesser hardwood—in densely wooded slope or opening of lake and beaver meadow—valley dark and deep as that of Hinnom, where the great pine tops, broad and green, scarce reach the level—mountain tops where they wave dark defiance to the elements—everywhere lie the trains of great chips—the abandoned tree top—the smaller trees cut to clear the way, now obstructing it—all around. It has been lumbered over for years, and with care might be forever. "No fires just here of late," says the foreman, "but there have been many in the country."

After our journey back to the depot, from a high plateau, we observe one of the many magnificent views obtainable here. For thirty miles you look down the great valley of the Ottawa—the distance closed by high mountain ranges—the sides bounded by them twenty miles apart. Along the valley, broad, tranquil, its gently moving waves shimmering at hand—placid in the far distance—the great Ottawa rolls its sinuous length. Half way along, rounding it way beside a large island, which, covered with undulating poplar, bars its course, the Bissett joins the greater stream. Here lies before you at this season an amphitheatre so immense, of colors so varied and gorgeous, as scarcely eye has seen elsewhere. All these circling mountain sides are clothed in the richest colours. Here the waving poplar covers them with the brightest yellow, there, where only undergrowth flourished they are dark red brown; farther again a forest of young pines, gleaming bright green in the sun, ascends from river to summit, and everywhere interspersing, wearing the gayest hue of all, are great stretches of soft maple, crimsoning all the landscape, and adding greater beauty to what, even without it, were most beautiful. But to view it in perfection, you must approach it in early morning, when the dense mist, rising from the low grounds render all else invisible. Presently this will rise, gather itself in great billowy columns across the sky, move in rolling masses to the far distance, and out of sight. Then the curtain of nature has risen, the vast panorama is spread out before you, mountain and valley, forest and herbage glistening with dew; bright with the morning sun, and the great river below all, an immense serpent of molten silver, winding his devious way to the distant sea.

The next stopping place is Mattawa; where further statements from Crown Land Agents, storekeepers, settlers, etc., are had.

(To be Continued.)

GAS ENGINES AS MOTORS FOR WOOD MACHINERY.

Gas engines, even in the eyes of those who are favorably disposed towards, or interested in, steam engines, have certain advantages, which, in common fairness, must be admitted. As applied to a saw mill they can be placed in a cellar or upper room. They require but little space, and are altogether unassociated with steam boilers, mill chimneys, and smoke nuisance. They save the site and cost of the boiler and chimney, the coal and the site of the coal store, the wear and tear of the boiler, boiler insurance, and a great slice of fire insurance. They save the cost of a stoker and nearly all the water charge, the fuel and time in getting up steam every morning, and the fuel consumed during meal times, and they save the consumption of fuel when the engine is not at work.

In making the statement it may appear strange, but it is nevertheless one of the principal advantages of the gas engine, that when out of work it is not consuming fuel of any kind. With an owner of machinery who can guarantee regular and constant motion this is no consideration, but with an owner who has only occasional use for his machinery it is a consideration of the first order.

Sir Frederick J. Bramwell, speaking of the gas engine, says:—

"In 1866 the 'Hugon' gas engine consumed 7½ cubic feet of gas per indicated horse-power, a consumption that has been brought down to 20 to 23 cubic feet. With the low price of gas commonly prevalent in England, this con-

sumption does not cost more than some seven-eighths of a penny per horse-power per hour.

It is admitted that non-condensing steam engines may be worked with five lb. coal per indicated horse-power per hour, at a cost of one half penny; still there are other savings to the credit of gas engines, which would balance the difference of cost.

Engines are now being made to develop 50 horse-power, and when used on a large scale, so that it would pay to have an attendant devoting his whole time, there is no need to work them with illuminating gas from the street main, they can be driven by home-made gas, on the Davison system, and when worked in this way 1 1/2 lbs. of 'culm' will give one horse-power, and one lad is sufficient to manage a gas-producing apparatus adequate to provide for engines of 300 indicated horse-power."

At the head of their disadvantages stands their first cost, which is more than double that of steam engines; indeed, it may be taken that their cost is about equal to a steam engine, boiler, and chimney combined. This arises in a great measure from the intricate and elaborate character of their mechanism and to the royalty of patent rights over their various parts.

A further detail under this head is the unsteady or irregular character of the power evolved. They are supplied with ample fly-wheel power, and very sensitive governors for regulating the supply of gas; but, notwithstanding, they are wanting in regularity when compared with the steam engine, a detail that arises out of the intermittent character of the force employed. There are some makers of engines who claim to obtain power by a vacuum following the explosion, but is not claimed that it is of equal force with the explosion itself, although it is claimed that its action causes nearly as much power to be obtained as if the ignition took place every stroke, instead of, as is generally the case, every second stroke.

Gas engines are objected to on the score of the cost of the gas they consume. This is so marked an objection, where continuous power for 10 or 12 hours a day is required, that no one will venture upon a gas motor where steam can be by any possibility be used. This is so intensified where large engines are required that in practice the motor is nearly wholly used on small powers. As we write we notice the circular of one maker, who says, "any size of engine from 1 1/2-horse up to 16 horse can be supplied." This make draws his limit at 16-horse; but in practice the engines he turns out are nearly all small powers. Users of motive-power on the large scale, unless some special object exists, pin their faith upon steam.

There is an objection to gas engines arising out of their difficulty of starting, and their liability to revolve the wrong way round, from which considerable damage may arise. Improvements have been made in the ignitors and the valve arrangements, by which immunity from this evil is claimed.

Another objection arises from the number and size of the slides, and their liability to get out of order and allow the gas to escape. To keep this insidious vapor intact, the working parts are highly saturated with oil, which combining with the carbon or residue of combustion sets up a wearing action practically unknown to the steam engine.

The attention of inventors is closely turned upon this point or detail, and those who maintain that the engine of the immediate future will be constructed without slides, and only one valve to take in air and gas to let out combusting.

A further objection arises from the hard and fast character of their computation of power. Gas engines give out very little more than their nominal reputed power, whilst a well-designed or made steam engine will indicate three times its reputed or nominal power.

As we write we are reminded of a case where a 3 1/2 horse power gas engine was put down 9 or 10 months ago. It is said to be doing the work of a 6-horse engine, but the owner is trying to effect a sale at two-thirds its original cost. He states, on the one hand, that he requires more power, and, on the other, that he wants steam power, for heating purposes; but there can be little doubt that the hard and fast character of its

nominal reputed power is the main cause of the wished for change.

As we write the position of the gas engine, so light or occasional power is required, is well secured, and having won this position, and being admittedly in its infancy, there is great future before it. It is an undoubted fact that by compressing the compound from which the motion is obtained, and associating therewith the power of the vacuum, a motor of no mean order is obtained. As with all new machinery, there is a wide field for improvement, one to which many practical engineers are devoting their best attention, and hence we must not be surprised if in a few years it is improved up to the level of the steam engine, and is successfully applied to the large powers as well as to the small powers. It is an old saying that "the world was not built in a day;" but it is a fact that the progress made by the gas engine as a motor during the last twelve years is without parallel in this century of mechanical invention. —*Timber Trades Journal.*

The Inventors' Exhibition.

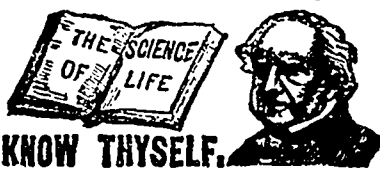
LONDON, May 4. - The Inventors' Exhibition has been put in as fair a state of completeness as possible for the inspection of the Royal party. The most extensive exhibits seem to be in implements of war, of which there is a remarkable display. The show of appliances of electricity is excellent. The Court assigned to America is not more than a third applied for, and is compelled to be filled by English exhibitors. Much disappointment on this account is expressed, but this is largely explained by the fact that America's inventions are seen in all parts of the exhibition. The Russian Court, adjoining, contains nothing but scores of unpacked cases. The buildings were crowded at the opening. The Prince of Wales was received without cheers though much enthusiasm was expected after his return from Ireland. The Princess of Wales the Duke of Edinburgh, and Duke of Cambridge Lord Granville and Sir William Vernon Harcourt were amongst the distinguished persons present. The audience was very large.

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There is no member of society to whom this book will not be useful, whether youth, parent, guardian, instructor or clergyman. —*Argonaut.*
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Yours truly, R. E. HALIBURTON.

PETERBOROUGH, October 15, 1883

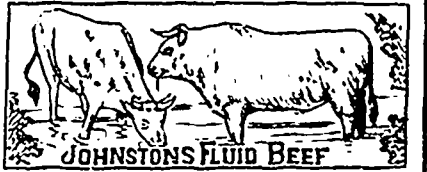
A. NORMAN.—Dear Sir,—Soon after I commenced to use your Electric Appliances, they opened my bowels, cured my cough and cold, relieved my head and considerably relieved my catarrh in consequence. The discharge from my head and chest are now easy, and I feel altogether better. My digestion has improved, my stomach less sour and windy, and I am less troubled with lascivious and vivid dreams. I had previously tried almost all the advertised patent medicines without deriving any good.

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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. S. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., MAY 15, 1885.

A PORTION of the northern part of Langdale, and four townships of Lincoln county, Wis., have been set apart as Forest county.

UPRIGHT, EMORY & Co., during the past winter, got out 120,000 ties and 4,000 cords of wood at Charlevoix, Mich., and in that vicinity.

THE freight traffic on the Chicago & West Michigan railroad is reported heavy this spring, mainly on account of unusually large lumber shipments.

It will require from 800 to 1,000 men to get the 98,000,000 feet of Penobscot river, Me., logs into the booms. Wages range from \$1.25 to \$2.50 a day.

CALVIN & SONS started their first raft of 50 drams of oak timber from Kingston to Quebec on the 4th inst. is tow of the tug, John A. McDonald.

J. H. HULL has purchased from the Brent Wood Lumber Company, of Penetanguishine, Ont., their shingle mill and timber limits in the township of Muskoka and Ryde, Muskoka district.

THE spring opens with favorable prospects for the lumber trade; and when this industry is in a good state it is a great help towards a healthy and active condition of business generally.—*Monetary Times.*

A DESPATCH from Oshkosh, May 4th, stated that C. M. Charnley, of this city, had bought of Choate & Bray, of Oshkosh, 18,000,000 feet of standing pine, in Langlade county, Wis., for which \$40,000 was paid, or \$2.22 a thousand.

FOREST fires, on May 3rd, were prevailing in the Shenandoah valley, south of Harper's Ferry, Va., and in the Blue mountains. The great Cacapon mountains, in Berkshire county, were also ablaze, and much valuable timber was being destroyed. Fires were also raging in Raleigh, Tucker and Wyoming counties.

THE Big Mill commenced work on Monday, April 27th, and the hum of its machinery is now pleasant music to all residents of Deser onto. Last year this great establishment made a good record for work.

THERE will be about 25 million feet of hemlock and spruce cut this year at Nicolet, Que., by Messrs. Geo. Ball, McCaffrey and O'Shaughnessy's mills, and about three million feet, in logs, were carried away with the ice a few days ago.

TEN inches of snow fell in Leelanaw county, Mich., April 29th, and E. L. Miller improved it at Millar's Hill, by finishing up his winter job of hardwood logging. Sledding logs so near May 1st as that is worthy of record, even in northern Michigan.

A TELEGRAM to the insurance offices at St. John, N. B., April 29th, reports the loss of the bark Bittern on Browze Island, Australia. She was on a coasting voyage between Hamilton and Port Darwin, with a cargo of timber. The vessel and cargo were insured for about \$20,000. The crew escaped from the wreck, which was abandoned.

A FIRE at Steven's Point, Wis., May 3rd, destroyed 5,000,000 feet of lumber, belonging to Herren & Wadleigh, and 500,000 feet owned by Robert Main. The lumber was mainly high grade. The loss was placed in the despatches at \$70,000, with insurance not stated, except in the case of Main's loss, on which there was an insurance of \$3,500.

DO NOT LOSE ANOTHER SPRING.

To the Editor of the Canada Lumberman.

SIR,—Nothing impresses the traveller through Ontario with so deep a sense of wasted time and lost opportunities, as to observe, here and there perhaps even ten miles from each other, some few farms well sheltered from the north and west winds by the beautiful and impervious evergreen windbreaks, which are so easily and quickly grown in this country when properly set about. And then to pass, mile after mile, by farms from which the trees have been taken till what might have been a handsome farm and residence is but a number of squares of earth with some buildings in one corner. A place from which the summer wind will dry the moisture before it has half benefited the crops, and where the snow, the protector of the winter field, cannot be evenly, but will be blown by the wind into drifts, which will permit no good wheat yield. The stranger passes by and thinks truly, "Now, a little work a few years ago and all these farms would have been as well protected as the one or two I have observed in my way."

Why not use this spring? In the Province there are many places where thousands of evergreens are growing up in clusters; if transplanted early in June—without allowing the roots to dry in the sun even one minute—they will be just what is wanted. Or, if none are near, nurserymen can supply them, and there is no better investment. Plant a thousand along the north side this spring and in ten years the farm will be value for much more money, and give better crops for all time thereafter. Plant them; give a little care for a season or two in mulching or stirring the earth near them—either will do—and every recurring year the planter will be more glad that he did the work.

Yours, &c.,

R. W. PHIPPS.

Toronto, May 7th, 1885.

SHIPPING INDUSTRY.

THE Ottawa Free Press of May 2nd says:—The prospects this spring of the lumber transportation and shipping in general exceeds that of any previous year since 1880. The extensive preparations which have been made by the promoters of the shipping industry in Ottawa for the past two months, is sufficient to substantiate the glowing prospect. Messrs. Murphy and McRea, one of the most extensive shipping firms in this city, have already engaged about three hundred men who will be employed on their boats and barges in importing and exporting freight of various materials. Mr.

W. K. Easton, who has several scows, and a steamer anchored at the foot of the locks since last fall, has expended hundreds of dollars in improving the machinery and extending the floating capacity of these vessels during the past month. Mr. Harris is having his steam tug repainted and caulked. Several of these firms export timber and boards to the chief American markets, Chicago and New York being the two great centres of distribution of grain, live stock and lumber. In 1883 there were 1,909,910,000 feet of sawn lumber delivered in the Chicago timber market, a large portion of which grow on the Upper Ottawa and the remainder was cut in the lumbering districts of Michigan. Messrs. Bronson and Weston have chartered the steamer Allan Gilmour, and will use her with several barges in filling a contract for a large quantity of lumber, to be delivered at Burlington, Vt., and will commence operations in a few days. Across the Ottawa, on the Hull side, are a large force of men, principally mechanics, painters, machinists and carpenters, all employed in preparing for the spring trade. The steam ferry called the Thousand Island Rambler, the tug E. B. Eddy and barges will be ready for their native element in a few days, and are owned by Mr. Blanchard, who will conduct a large shipping and transport trade this season, notwithstanding that there is a fraction of a reduction under last year's percentage in the shipping tariff. Several government barges and dredges are also ready to be launched. A few days ago the C. P. R. was compelled to engage three hundred cars of foreign lines to supply the shipping demand of freight. Messrs. Pattee and Purley have shipped by rail over the C. P. R. an average of 25 carloads per day.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, April 28, 1885, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 925 F. St., N. W., Washington, D. C. :—
316,912.—Chuck, lathe—W. M. Preston, Schoharie, N. Y.
316,768.—Hoop planing machine—G. S. Foster, Concord, N. H.
316,835.—Lathes for turning irregular forms—C. Schoenleber, Rochester, N. Y.
316,713.—Lathe tool—L. E. Whiton, West Stafford, Conn.
316,753.—Saw clamp—A. F. Delafield, Noroton, Conn.
316,570.—Saw gumming and sharpening machine—J. Richardson, San Francisco, Cal.
316,532.—Saw mill head blocks, attachment for—L. W. Forbes, Wilkinson, Ind.
316,568.—Saw sharpening machine—E. & A. Pratt, Grenoble, France.
316,659.—Saws, equalizing the tension in—W. H. Presser, East Saginaw, Mich.
316,752.—Sawing machine—P. G. DeBlanc, New Iberia, La.
316,634.—Sawing machine—W. Merrill, East Saginaw, Mich.

PATENTS ISSUED MAY 5.

317,187.—Bit stock—J. T. Pedersen, Brooklyn, N. Y.
316,931.—Chuck, lathe—E. B. Bailey, Windsor Locks, Conn.
317,209.—Lathe—L. C. Rodier, Detroit, Mich.
317,449.—Lathe feed mechanism—J. Flather, Nashua, N. H.
317,092.—Plane—G. A. Clifford, Peabody, Mass.
317,379.—Planing machines, attachment for—D. Lane, Montpelier, Vt.
317,221.—Saw mill set works—B. E. Sergeant, Greensborough, N. C.
317,256.—Saw mill set works—T. S. Wilkin, Milwaukee, Wis.
317,442.—Saw joining, etc., device—V. T. Cummings, Groveton, Tex.
317,221.—Saw mill set works—D. Lang, Montpelier, Vt.

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SELECTING TIMBER.

Although the beneficial results anticipated to be derived from the knowledge that a school of forestry may diffuse among foresters and those interested in the cultivation of trees, may not be materially felt by the present generation, still a study of the subject by those engaged in the timber trade may cause them to acquire some useful information in the way of enabling them to find out what are the conditions and situations in which the growth of the best qualities of the different varieties of timber may be expected. Without such information, unprofitable bargains, which are frequent from this cause, are liable to be made. Mere external examination of the tree is thought to be sufficient, and although in many instances this may be relied on and thoroughly satisfactory in its results, yet there are cases in which just the reverse happens.

To one who labors under the impression that this is all that will be required of him, viz., to be able to judge of the quality of a tree from its external appearance, a falsification of his anticipations is perfectly unaccountable, and he accordingly blames his ill-luck or chance, not thinking that it is to be explained by his own neglect in not studying the conditions and situations under which the tree has been cultivated. There is no doubt that one who is accustomed to the inspection of timber becomes in a short period familiar with the qualities of timber that may be expected to be found growing in his own immediate neighborhood. But in recent years it has become, and continues more to become, a necessity to secure supplies from a distance and from strange districts, where his local knowledge will be of very little use to him.

In these articles we propose to indicate, in a general way, what kind of timber a tree may be expected to yield from its external appearance and surroundings, and taking up each variety separately, we shall give the result of our personal experience and observation. The tree we should naturally treat on first from its importance is the oak, a variety which is also pretty general throughout the country, and which, perhaps, more than any other is found to differ in quality according to the soil and situations in which it is grown. Although this tree gives as many external indications of what may be expected of it when opened up as will be found in other trees, the defects which are usually discovered in this timber are shakes, rot, a superabundance of sapwood, peg knots, or twisted grain.

The subject of shakes has much vexed timber merchants, as next to rot they constitute a defect that not only deteriorates the value of the wood, but renders it for any industrial purpose of little or no use. Many theories have been set up as to their cause, so very frequent is their occurrence is this particular kind of timber. What is mostly supposed to be the cause is a diseased parent producing a diseased offspring, so that generally shaly trees are produced from the seed of a shaly tree. It is unquestionable that in many instances this is the reason, although shaly trees have also been produced from the seed of sound trees, but have become defective in their growth from causes which might have been prevented by judicious management on the part of those responsible for their cultivation, such as having them planted in situations where the conditions necessary to healthy growth are absent. This defect of shakes in the oak, fortunately for the timber merchant, almost invariably shows itself in the exterior of the tree in some way or another, and as a rule is a point that may be conclusively decided on.—*Timber Trades Journal.*

A MRS. KEGON, Mich., paper last week said: "Cody & Moore's logging railroad terminates at Muskrat lake, a little below Lake City. To get their logs into the lake they run out on a trestle work over the water and roll them off. Last winter they wanted to run another track out, so they laid logs on the ice, put stringers on these and their track. It worked all right till the other day, when they made their last trip. The ice having become weak it gave way and now their logging engine lies at the bottom of the lake in 42 feet of water and about 150 feet from shore, and the problem is how to get it out."

SASH, DOOR AND BLIND MANUFACTURERS.

It must be a strong compulsion which will insure at each monthly meeting of an association, the membership of which is so widely scattered as that of this organization, an attendance nearly equal to the whole number of firms belonging to it. The meeting on Tuesday of this week was no exception, but, in fact, was one of the most interesting and profitable of any that have been held. After the adjournment the gentlemen present remarked that it was the best meeting they had ever attended.

The monthly meetings thus far have shown a steady advance towards unanimity of sentiment and action. Vexatious questions have been met and settled, until at this last meeting there was scarcely any conflict of opinion. The association prospers in adversity, but with improved trade might not stand so well together. However, as its chief use is to prevent disastrous losses in dull times it may be considered to be approaching success.

After the formal opening of the meeting a communication from the Mississippi river branch association was read, requesting, first, that action be taken towards a revival of the price list; second, that members be unrestricted in sales to each other, and that the secretary might be made the medium of communication in such transaction; and, third, that a slight advance be ordered in the price of glazed sash. A request from the Minneapolis branch was read, that a slight advance in glazed sash be made, provided that the production be restricted to one-half capacity upon stock work.

Pending direct action on these requests expressions of opinion as to the condition of trade, stocks on hand, and prices, were called for. With the exception of the Minneapolis representatives, all expressed the opinion that the movement of stocks out of warehouses had been less for the last thirty days than immediately previous. Stocks in general had been kept down by a restricted output, but glazed sash was accumulating to some extent in excess of other lines. This, however, was not due to any lack of real demand, but was only in comparison with doors, for which a speculative demand had arisen. Prices on glazed sash were reported to be firmer than on any other line, notwithstanding the heavy stocks. Prices were stated to have been firmly maintained, and no one claimed to have confirmation of any reported cuts. The fact that prices have been so well sustained was thought by some to be the reason for the temporary slackening of demand, as the jobbers were largely supplying the consumptive trade with goods bought at lower prices than those now ruling, and were now out of the market for the time being, in the hope that the manufacturers might be forced to weaken. One member expressed the opinion that the present situation was an out and out fight between the jobbers and the manufacturers for the mastery. Some stated that the jobbers with light stocks were borrowing from each other in order to postpone purchases at first hands. All agreed on one point, that the key to the situation was in a reduction of the output.

The March meeting fixed the output at not to exceed two-thirds of the capacity in stock work, but that action was based on the anticipation of an increased movement for April, which hope was not realized. Now all were in favor of a reduction to one half, which expression led one member to remark, "I told you so."

The phrase "on stock work" was subjected to some criticism, as that restriction enabled some concerns who make a specialty of the eastern trade to overrule their allowed product. This objection took shape in the resolution subsequently adopted.

Some objection was raised to the f.o.b. at factory clause on small lots, claiming that it helped part of the manufacturers at the expense of others, but all finally acceded to it. All questions under discussion were referred to a committee to report at the afternoon session.

In the afternoon the committee handed in its report, which, after a discussion that was in the same line as that above outlined, was adopted substantially as follows:
The production of the factories is to be

reduced to one-half their capacity on stock work; stock work to include all such pine doors, sash and blinds as have special sized stiles and rails, and are sold to dealers. The restriction to be in force 60 days, beginning with May 1. This extended time was apparently to shut off the possibility of members taking contracts for a month ahead, which would compel them to run full. The members were required to each keep a stock book for the inspection of the inspection of the secretary, whose duty it is to see that the curtailing agreement is observed.

The members were authorized to make sales to each other at such prices as they might see fit, that no surplus stocks, or poorly balanced stocks, might be disposed of without affecting the general market.

The only change in prices recommended was an advance in the price of glazed sash. The new discount on this line is 55 and 5 per cent. off, instead of 55 and 10. The meeting, having arrived at this satisfactory conclusion, adjourned to May 27th, at the Tremont House, Chicago. *Northwestern Lumbermen.*

FIRE IN CHICAGO.

CHICAGO, May 8.—Shortly after noon to day a spark from a locomotive set a fire in the heart of the great pine lumber yard district lying along both sides of the south branch of the Chicago river, near the southwestern city limits, in the vicinity of the wooden built section known as Bridgeport, and close to the stock yards with acres of wooden sheds and pens filled with cattle, hogs and sheep. A fierce wind was blowing and the flames spread rapidly. The entire fire department was called out, but had little or no effect on the burning pine and shingles. The news of the fire spread rapidly to the business centre of the city, and created alarm lest the fire should assume the proportions of the great conflagration of 1871, which came from the same direction. Great brands were carried forward by the wind, setting fire to new piles, and several fire steamers and the men running them had narrow escapes. Starting upon the west of the river, the flames consumed all the lumber between 35th and 38th streets, an area of about 400 by 2,000 feet. It set fire to a canal boats, which floated across the river and set fire to lumber on the east bank, which covered an equal area, and this with one or two planing mills was consumed. Brands were carried eastward and set fire to several small frame houses occupied by employes in the lumber district. The fire department, however, made a stand at this point and succeeded in preventing the spread of the flames into the residence district. The fight continued through out the afternoon, and it was nearly seven o'clock before the conflagration was brought under control, having practically burned itself out. A heavy rain during most of the afternoon was of material assistance. The entire area burned over is 870 by 2,300 feet. Forty-five million feet of lumber, of the value of \$900,000 was burned.

The principal sufferers are the Chicago Lumber Company, \$400,000; Bigelow Bros., \$175,000; Adams, Hastings & Co., \$85,000; J. W. Hinckley, planing mill, \$26,000.

FOREST FIRE IN SCOTLAND.

We hear of forest fires commonly in America when hot and dry weather sets in, but we are not accustomed to expect them at home, and especially in Scotland, where Dr. Johnson, a little over a century ago, despaired of recovering his lost walking stick because he thought such a piece of timber must be valuable in a country so bare of trees. But a great change has taken place in the arboriculture of Great Britain since his day, and it was stated that by a fire which broke out recently in Clacknadarroch Forest, Inverness-shire, the property of the Duke of Richmond, five miles of young trees have been destroyed. Two acres of wood and 1,500 acres of heather were also burned recently on Castle Forbes Estate, Aberdeenshire, belonging to Lord Forbes. Two hundred acres of heather were also burned on the estate of Mr. Grant Drummond, also in Aberdeenshire. Yet it is hardly a month since Scotland was buried in snow.—*Timber Trades Journal.*

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UNDER proclamation of Governor Martin Kansas observed April 2nd as a holiday in the business places and in schools for the purpose of tree planting, a custom which has given to that once barren state in a few years twenty millions of fruit trees and two hundred thousand of fruit trees. Eight states observe this tasteful and beneficial custom.

"Say, why is everything either at sixes or at sevens?"
Probably, my dear nervous sister, because you are suffering from some of the diseases peculiar to your sex. You have a "dragging-down" feeling, the back-ache, you are debilitated, you have pains of various kinds. Take Dr. F. V. Pierce's "Favorite Prescription" and be cured. Price reduced to one dollar. By druggists.

We take pleasure in noticing the enterprise of Mr. Thos. Best, of Mount Pleasant, who has recently built a grist mill, and is now engaged in erecting a saw mill alongside of it.

It Astonished the Public
to hear of the resignation of Dr. Pierce as a Congressman to devote himself solely to his labors as a physician. It was because his true constitution was sore and afflicted very where. They will find Dr. Pierce's "Golden Medical Discoveries," a beneficial use of his scientific knowledge to their behalf. Consumption, bronchitis, cough, heart disease, liver and kidney ailments, intermittent fever, dropsy, neuralgia, gonorrhea, thick neck, and all diseases of the blood, are cured by this world-renowned medicine. Its properties are wonderful, its action magical. By druggists.

EMERY WHEELS v.s. GRINDSTONES FOR WOODWORKING TOOLS.

In speaking of the emery wheel, says a writer in the *Builder and Wood Worker*, comparing it with the common grindstone I know I shall make a counter-current to the opinion of a great many who advocate its use to the exclusion of our old tried and trusty helpers, the staid and always reliable grindstone. I can not, nor can any one, honestly deny but that the emery wheel has created an entire revolution in the old method of grinding, and for small tools used in the manufacture of sewing machines, guns, pistols and such like work, it would seem that when we came to know their true value it would be almost if not quite impossible to get along without them. And we can not, when we come to take convenience and economy into account.

We can not use a grindstone an inch or less in diameter, as we often have to use emery wheels or plugs in grinding mills and small tools in gun making. Here is where the emery and corundum wheels come in, and there is no competition with the grindstone, and they are a long way in advance of any at present known method of grinding.

Here is where I concede to the value of emery and corundum, but when we come to grinding wood-cutting tools, I must take exceptions and stand up for the grindstone. To those who have both it seems to me that there needs but little argument to convince all that the edge of a tool when ground on an emery wheel is hard and brittle, and not as likely to stand right up to good, hard work as when ground on a grindstone. My attention was first called to this fact when a few years ago I had the job of assembling ten thousand Remington locks. The screw drivers had to be ground very nicely, and very often they would break and have to be reground. Emery wheels were very convenient and it was much less trouble to grind on them than it was to go to the grindstone. But we always found that would not stand near as much when ground on the emery wheel, and so well were we satisfied of the fact that we always used the grindstone for this purpose. This fact led me to observe the effect of emery grinding on other tools, and especially on wood cutting tools, as I was then, and have been ever since, interested in woodworking machinery. Anybody that knows, or has had experience in grinding chisels and plane irons on an emery wheel, knows how almost impossible it is to bring any thin-edged tool right up to an edge without making blue spots on them, showing that the temper has been started in these blue spots, which take a great deal from the value of a plane iron or chisel, especially for nice work.

I know there is great deal in getting used to an emery wheel, and when we have, so to speak, got "trade learned," we can take more liberties than when we first begin to use them. When I first began to use one I had work that I ground on the face of an upright one 2 1/2 inches in diameter, and I used to grind the ends of my fingers every little while, but when I got the hang of the thing, or got the "trade learned," there was no trouble about grinding off the ends of my fingers (so much for illustration). The introduction of emery wheels for sharpening saws was a long stride in advance of the common method of sharpening saws with a file so far as economy is concerned, but there has been hundreds of saws ruined by inexperienced persons grinding them.

But a few days since I know of a 60 inch circular saw that was sent back to the makers because the owners could do nothing with it. The makers found that nearly every tooth was cracked down in the throat and were obliged to cut it down the whole length of the tooth before they could get rid of the cracks. The filer instead of milling out the throats, had worked them down with an emery wheel, and they say that is what made the saw crack as it did.

Here, too, is where the grindstone and emery wheel do not come in competition, although I have seen large circular saws ground very nicely on a common grindstone, and I do not see why a saw may not be sharpened on a grindstone as well as on an emery wheel, if the proper

arrangements are made to get the saw to the stone.

Had there been as much of an effort made to make the arrangements for grinding planer knives on a grindstone as there has been to bring the emery wheel into use, I have no doubt that the work would be just as well and perhaps a little better done. There never has, to my knowledge, been any such machinery made to grind planer knives with. And if we except the common knife grinder made by most makers of wood working machines and which is worked by hand, nothing has been done to bring out what might be done on a common grindstone.

There may be objections to using water as we do on them, but with the arrangements that could be made, there is no reason why work and men could not be kept as clean on a grindstone as on an emery wheel. I know that one objection to the grindstone is that unless the person buying knows what he is about, he is just as likely to get a poor quality as a good one. The usual way of ordering is to get the size wanted of either kind of stone and that ends it. The stone comes and is hung, and if it is good all right, and if poor the help call it bad names until worn out and replaced by another one not a whit better.

The emery wheel has this advantage, that you can order and get a uniform grade without trouble, and also they never are injured by being left with one side in the water to soften, so that when we come to use them one side wears faster than the other. But for all those adverse conditions I must say that if properly selected, used, and cared for, there is nothing superior to the grindstone for all wood-cutting tools. We do not know the possibilities of a thing until we bring it to the test. We do not know what an animal will do until it passes through a long course of training, and has its good qualities developed. So we hardly know what we can do with our grinding stone till we put our brains to the work, and bring out devices and apply good machinery to it, and then we shall find out this old friend of ours shall stand the test and do all and more than some other material. My idea is that it is especially adapted to grinding knives and cutters of all wood-working machines.

It leaves whatever is ground on them in a much better condition after grinding than either emery or corundum, and this partly, if not altogether, comes from the fact that the work ground is always kept cool and never burns the edge to make it brittle. I think a great trouble in selecting stones for common grinding in planing mills is that they get too thick ones. A stone four or four and one half inches thick is far better than one seven or eight inches thick.

Now if some good genius would get up the same machine to grind knives on a grinding stone that has been gotten up to use with the emery wheel, I think he will meet with great success. Each, of course, has its special field where it must necessarily succeed best, some of which I have already noticed, but I must yet hold to the belief that the common grindstone is far the best for grinding all manner of wood-cutting tools.

TREE PLANTING ON SCHOOL GROUNDS.

Some years ago I found several young oaks growing up among a hedge of rose trees in our garden. As there were no oaks in the immediate vicinity it was rather a subject of astonishment to me, until I found out that my children had picked up some acorns in the woods and had sown them there. Nothing could be more simple and trivial, I admit; nevertheless it set me a thinking, and I have not done thinking yet. The children were so young then that I would not have credited them with sufficient reason to go through the process of looking for seeds in the woods, sowing them with the purpose of producing trees, and watching in the following spring for the realization of that purpose.

It struck me then that the growing of trees would be a valuable help towards the education of children. We try to teach them to observe, to think, to discover, and we have done a great deal when we can make them see clearly for

themselves that success is the direct result of labor, and when they have learned to associate the two in their minds. Among all the mental exercises resorted to in our schools, I can scarcely see one that will secure the same results more easily and more effectively than the culture of trees.

There are not so many schools—there ought to be none—with so little ground as not to allow room for at least a seed bed and a nursery for young trees. Get the children, first of all, to work the ground until it is well drained and sufficiently deepened and mellowed for the purpose. There you combine physical and mental work, and an important lesson for the future; for it is a matter of vital importance that the attention of the growing generation should be turned seriously in the direction agricultural pursuits; we cannot begin too soon to impress the youthful mind with the idea that conscientious care in the preparation of the soil will be bountifully repaid.

We have been skimming over the surface of this continent of ours, as if it were limitless; we shall, sooner than we expect, be induced to wish, like Alexander the Great, for other worlds to conquer. We must remember that this is the ground upon which the children of over sixty millions of people will have to find food for themselves and their increasing families, and millions of people on the other side of the Atlantic, and will make room for the surplus population of the Old World. It is time to find out what our soil is worth, and learn how to get as much as possible out of it; and the best way to reach the people is to teach the children. But this is a digression; let us return to our subject.

When they have prepared their ground carefully, take the children to the woods to collect the seed, in its season, or buy it if you are too far from the woods. Teach them to discriminate between good seed and bad, and make them sow it properly.

Make them study the form and appearance of the young trees as they first come up out of the ground, so that they will not mistake them for weeds. Make them keep the ground free from all weeds, mellow it, and follow up, step by step, the growth of the seedlings, until they remove them to the nursery beds, where they will require new care and attention, till ready for final transplanting.

Their attention will be fixed, not only for days, but for seasons and years, on their young trees, thereby insuring a continuity of action. Prizes ought to be awarded from time to time, to those whose trees are in the best condition. When there is no more room on the school grounds, for transplanting those trees, the children, on Arbor Day, will have the privilege of ornamenting the streets, squares, and walks of their towns and villages with trees raised and grown with their own hands.

It will be, all through, a healthy recreation, and, at the same time, it will call into play every quality of mind which is indispensable for success in life. More than that, the best feeling of the human heart will be nurtured and grow along with those young trees; the love of nature, deep reverence for the power of God, in watching the growth of the tree from its seed, in noticing the development of its life. The child's heart will be enlarged as the range of his sympathies widens; he will see his everywhere—all around him. He will take pleasure in beautifying his school grounds, and by and by, his father's homestead; he will get attached to it, and, as he grows older, every tree planted by his hands will become a friend to him; and when the thought enters his mind that he may not live to reap any benefit from his work in growing those trees, he will, at least, learn the greatest of all lessons, that we have not been created by God to work only for ourselves.—*Hon. H. G. Joly, Quebec, in Educational Weekly.*

It is no secret that Dr. Pierce's Compound Extract of Smart-Weed is composed of best genuine French Brandy, distilled Extract of Smart-Weed and Jamaica Ginger Root, with Camphor Essence, and constitutes, therefore, the best remedy yet known for colic or cramps, cholera morbus, diarrhoea, dysentery, or bloody-flux, or to break up colds, fevers and inflammatory attacks. 60 cents. By druggists.

THE TIMBER TRADE AND WAR WITH RUSSIA.

How would war with Russia affect the lumber trade? is a question which has been asked frequently since the probability of war between England and Russia began to be entertained. We find the subject discussed in the *London Timber Trades Journal*, published in London, as follows:

"It has been asked, supposing the present crisis culminates in a war between this country and Russia, what will be the effect on the Atlantic trade? There are many things bearing on this question, though, perhaps, not immediately connected with it, that have to be considered before forming any decided opinion. There can be no doubt but that Russia, should war happen, intends making, or endeavoring to make, a formidable attack on the commerce of Great Britain, through the means of privateers specially fitted out for that purpose, and it is the likelihood of success that will attend their efforts that we have to consider in endeavoring to sum up its effects on the Canadian timber trade.

"The pitch pine trade, of course, could not be interfered with, the cargo as well as the ship being in all probability neutral property. Where a cargo of spruce or pine was a neutral vessel, but bound from a Colonial to an English port, it would be a moot point whether a Russian warship could lawfully intercept it. Some laugh at the idea of Russia privateering, and maintain that a fleet of such vessels could not possibly be kept at sea through the difficulty attending their coaling and refitting, Russia having no possessions presenting a seaboard on the Atlantic or Pacific to which such craft could resort for that purpose, and neutral harbors would, of course, be closed to them. But supposing that such privateers did scour the ocean in search of prey, it is unlikely that they would care to waste their time over a wood laden ship, the cargo being of no use to them, and, if a sailing ship, the vessel either. Perhaps they might seize a steamer, if they could catch her, and throw her cargo overboard, retaining the ship for subsequent use; in fact, it would be more than likely that wood laden steamers would be interfered with, as the privateers might, in the ordinary course, be expected to refill their bunkers from those of such traders as they could overtake, and, robbed of her coal, the trading steamer would hardly be able to continue her voyage, fully laden, even if permitted to do so. The swarm of steamers that now cover the surface of the globe, flying the British flag, would thus be the special aim of the privateer, who by their capture would be able to provision and coal at one and the same time.

"The sailing ship in the timber trade, on the other hand, would present no attractions for the rover of the seas, who might, perchance, if she were English, board her and take all the grog and provisions out of her, and with a parting shot as a remembrance, possibly carry away a spar or two, let her continue her voyage. Hence, in the event of war, there would be considerable danger in loading deals in steam bottoms, and we anticipate war risks on such cargoes would be very high. Sailing ships, as mentioned, might be interrupted, and perhaps roughly handled, but that they would be sunk we can hardly believe, their destruction answering no purpose, and would betray a state of wilful barbarism that we certainly do not believe the Russians capable of.

"Confined to sailing ships, we believe that little or no interruption would be experienced in the timber trade between Great Britain and her Canadian Colonies. If needful these latter might sail under convoy as in old times.

"The effect on prices, leaving privateers out of the question, of a conflict with the great north of Europe power could not be otherwise than upward; freights would be high, and the shutting out of the market of such a large competitor in the whitewood trade as Riga alone could hardly fail to stimulate the demand for spruce, though possibly that would not be any serious advance in yellow pine at the loading ports. Still the enhanced freight would add to the cost here, of which stock holders on this side would not be slow to take advantage of.

"The same may be said of Southern pine, mahogany, etc., which also in the case of war would become of additional value over here, consequent on the difficulties attending its shipment."

Chips.

The Canadian Pacific Railway are carrying a large quantity of timber from Ottawa to Quebec.

The Rathbun Company have cut 450,000 pine logs this year. In addition to these they have also got out large quantities of cedar and other stuff for posts, railway ties, etc.

The saw mill owners of the Ottawa district are making arrangements to commence operations immediately. Several have already commenced running.

On Sunday, April 28th, a drive of thirty or forty thousand logs belonging to Mr. Boyd broke loose at Bobcaygeon. Two men who were breaking a jam were carried over the slide, but being experienced river men they came out all right. A steamer was used in collecting the logs.

The present is the time for most of the Ottawa sawmills to begin cutting. They are all getting ready and some have already started. E. B. Eddy was perhaps the first to begin. Bronson & Weston's mill opened April 30th; Perley & Pette, and Booth's on May 4th. Young's mill opened up on April 29th. Mr. Eddy is as yet working only one saw. His others will start by the close of May.

SERIOUS damage has been occasioned at La Prairie, Three Rivers, and other places in the lower St. Lawrence, by the water rising. At Three Rivers on April 27th, the water was seven inches higher than last year. The boom in Nicolet River broke on Saturday, and about 20,000 logs belonging to Messrs Hall Bros. & Co., of Quebec, Francis M. Caffrey, Nicolet, and others, were lost. At 8 a. m. the Lake St. Peter ice commenced to pass down. It was three feet in thickness. A house on the opposite side of the river was carried away.

THE New Brunswick saw mills are, according to the St. John Globe of April 25th, undecided when to begin sawing, because the arrival of logs is uncertain. Matters look just now favorable for stream driving, and the operators are securing the services of large crews of men. A small quantity of logs remaining from last season has enabled some of the mills to make an early start. The mill of Millar & Woodman, at Mosquito Cove, has been sawing about five weeks. About two weeks ago the mill of Messrs. S. T. King & Son resumed work. That of George Barnhill, at Union Point, ran for a short time, but having used up what stock there was on hand is again idle. Cushing's mill, at Union Point, has been running all winter and is sawing yet. The mill of Messrs. Hayford & Stetson, in Carleton, has been working during the winter. The mills of Messrs. Hilyard Bros., Randolph & Baker, Charles Hamilton, W. H. Murray, Warner & Purves, the old Rankine mills, Kirk & Daniel, Robt. Gregory, and the ... ton mills at Millidgeville and South Bay, are waiting to start.

THE Chignecto Post has a list of persons who have got out logs in Westmorland county, N.B. this season. It contains sixteen persons of firms representing 16,500 logs. In Cumberland county 27,750 logs were got out by some fifteen parties, besides which, says the Post, Kelley Bros. have got out 2,000,000 feet, Proscott, Gillespie & Co., at Shulee, 3,000,000 ft., White of Apple River, 4,000,000 ft., M. L. Tucker at Southampton 750,000 ft., Fillmore, at River Herbert, 1,500,000 ft., B. Young & Son at same place 3,000,000 ft. At Ramshead River, Cumberland, 2,000,000 feet of logs have been got out by Messrs. Farnworth & Jardine. Mr. Alex. Gibson is the shipper. E. I. White, of Sand River, got out about 4,000,000 feet of logs, piling, spars, &c., and expects to saw 1,500 feet lumber. At West Brook mills, Mr. Ben. Young has 2,000,000 feet of logs one, and at Newville 3,000,000 feet. The Killam mill has about 2,000,000 feet. A. Laudels and the Christies will saw a million or more of deals and boards.

"The leprous distillment, whose effect holds such an enmity with blood of man, that, swift as quicksilver, it courses through the nature gates and alleys of the body," and causes the skin to become "barked about," most loathsome, with vile and loathsome crusts. Such are the effects of diseased and morbid but the only antidote for which is to cleanse and regulate the liver—an office admirably performed by Dr. Pierre's "Golden Medical Discovery."

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. Starting 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. 1y122.

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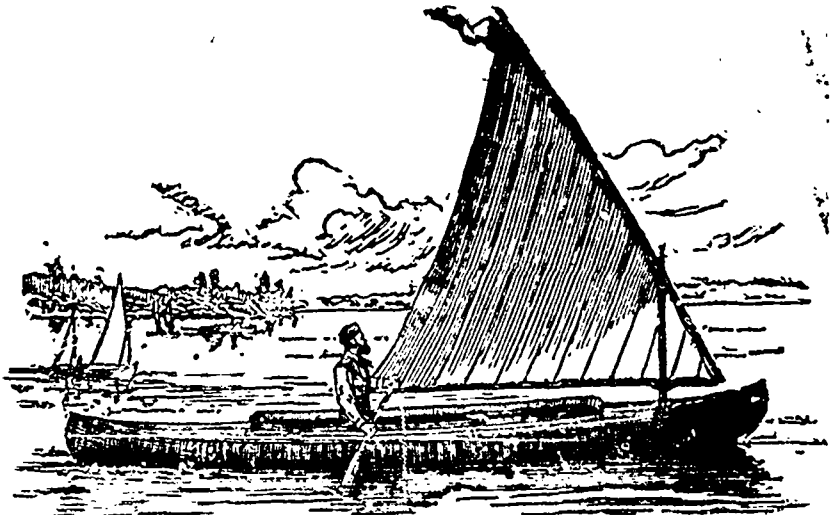
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Market Reports.

TORONTO.

From Our Own Correspondent.

MAY 9.—Shipments to Oswego from our docks here are now fairly active. The principal shippers at present are Mossa, Christie, Kerr & Co., of this city and Rathun & Son, of Deseronto. The writer noticed some splendid lumber being loaded on vessels by the latter firm, all clear and picks. The agent employed by this firm is a thorough inspector of lumber, some say, who have sold to him, slightly too much so, at all events he holds nearly all the good lumber held over here during the winter and spring months.

The lumber now being placed on the local market is far from being dry, so that in order to have lumber fit for immediate use, consumers will have to resort to the use of their dry kilns, of which most of the factories here have one or more in connection with their establishments.

Dealers have been much harassed by the R. R. companies lately, in the matter of weighing lumber, and contentment will not come until the companies adopt the system of carrying by the thousand feet. The G. T. R. Company have tried rather a novel plan latterly. Their agent at Midland requires the shipper to give him the quantity on the car, and then estimates the load at 2,700 pounds per 1,000 ft. of lumber, so that some shippers are enabled to get down half dry lumber as cheaply as the man whose lumber is thoroughly dry. To take a fair view of the whole question, I think that there should not be any complaints as to carrying by weight, providing the tariff is a fair and equitable one, and that the entire load be carried at the same rate. This the G. T. and C. P. roads carry out in all cases, but the N. & N. W. tries to take undue advantage of their customers by not furnishing any means to weigh the load at point of shipment, and then charging 4th class rates for all the excess over 24,000 pounds weight, which method of computation means more than double freight on the excess portion of the load. Of course all do not pay this charge, not being quite green enough in the business to accede to such demands, but, doubtless, there are many who grumble first and pay afterwards, not being thoroughly up to the laws and regulations made and provided in such cases.

The retail yards in the most westerly portion of our city complain of dull times, others, in the centre and easterly portions, say they are full, although complaints of the scarcity of money are general. Car load lots pass off readily, more especially if comprised of 1 in. dressing and 1 1/2 in. cut up. 2x4 scantling and joisting 18 to 22 feet long, are also in good demand. It is rarely a car load of the latter has to be piled off for want of a purchaser. Figures for short bill stuff are not firm at more than \$11.00 per M, by car load.

Mill call boards and scantling.....\$10 00
Shipping call boards, miscellaneous widths..... 12 00
Stocks..... 14 00
Scantling and joist, up to 16 ft..... 13 50
" " " 18 ft..... 14 50
" " " 20 ft..... 15 50
" " " 22 ft..... 16 50
" " " 24 ft..... 17 00
" " " 26 ft..... 18 00
" " " 28 ft..... 19 00
" " " 30 ft..... 20 00
" " " 32 ft..... 21 00
" " " 34 ft..... 22 50
" " " 36 ft..... 24 00
" " " 38 ft..... 25 00
" " " 40 to 44 ft..... 30 00
Cutting up planks to dry boards..... 20 00
Good dressing stocks..... 19 00
Picks Am. inspection..... 23 00
Three upper, Am. inspection..... 35 00

1 1/2 in. flooring, dressed..... 30 00
" " " rough..... 16 00
" " " dressed..... 25 00
" " " undressed..... 15 00
" " " dressed..... 22 00
" " " undressed..... 16 00
Beaded Sheeting, dressed..... 22 50
Clapboarding, dressed..... 14 00
XXX sawn shingles, M..... 2 00
Sawn lath..... 2 75

MONTREAL.

From Our Own Correspondent.

MAY 9.—We have no change of any importance to note in this market which is still dull although a good deal inquiry exists, which makes dealers very hopeful for the future. All

desirable goods maintain their value, and stocks of all descriptions are pretty full, but now that navigation is completely open it is expected that a good deal will be moved. Our quotations are unchanged with the exception of laths which are now quoted at \$1.60. The following are now the prices ex yard:

Table listing lumber prices for various types like Pine, Spruce, Hemlock, Oak, etc., with prices per 1000 ft.

SHIPPING.

Navigation is now fairly open from the sea to the lakes and yesterday two ocean steamers arrived in port. Barges are passing up the canal and some are loading for this port at Ottawa, so that in about another week things will be livelier. We hear of no change in the rates of freight given in our last.

CORDWOOD.

There has been little demand except in a retail way and the market is overstocked for wholesale dealers, while the opening of navigation is likely to help to make it more so. We quote wholesale prices ex cartage at the wharves unchanged as under:

Table listing cordwood prices for Long Maple, Long Birch, Long Beech, and Tamarack.

WINNIPEG.

The Commercial of May 6th says:—As the season advances disappointments become more numerous in the lumber trade, and it is very probable, that many contracts contemplated early in the season will not be carried out this summer, and some will not be touched until the whole western troubles are settled. The business now being done is of a scattered character, and promises to be anything but a prosperous one this season.

CHICAGO.

THE CARGO MARKET.

The Northwestern Lumberman of May 9th says:—During the week ending on Wednesday, 94 cargoes of lumber and shingles arrived at this port. Last year during the week that ended May 7th, 198 cargoes arrived, or 104 more than put in an appearance within the week just ended. The smallness of the number of cargoes arriving now, as compared to a corresponding time last year, is worthy of note. Of the lumber coming, only a few cargoes stop on the market, the majority having been purchased over the lake, or of commission men to arrive. Such lumber goes to the yards of the heavier shippers who are obliged to keep up their stocks, and is partly dry stock from the piles carried over the winter at the mills.

On Monday there was a fleet of 12 to 15 vessels, and on Wednesday morning there was a considerable fleet. Most of the stuff offered has been green piece stuff. It is evident that the dry lumber over the lake, of which we have heard so much, is being taken care of by the larger yards, whose stocks were broken up seriously by the March and April trade.

The green piece stuff sold on the market, where sales have been reported, has changed hand at \$8.50 a thousand. One house reports sales of four cargoes at that price. A load of half dry stuff was sold by another house at \$9, a large proportion being Norway. Dry, all soft dimension is held over the lake at \$10 a thousand delivered here, but does not come forward liberally at that price. The half dry stuff at the mills is selling at \$8.50 to \$9.00, according to quality, size, and proportion of Norway in it. The statement has been current for some time that the stock of piece stuff held over by the Ford River Lumber Company was all sold to arrive at \$10 a thousand; one lot of soft pine is reported as held at Ludington at \$10.25.

Last year at this time short, green dimension was selling at \$9 to \$9.50, and No. 2 boards and strips at \$11 to \$13. It will be seen that prices this spring are 50 cents to \$1 a thousand

lower than they were last year at a corresponding time.

Not enough inch lumber has yet been offered on the market to really establish prices. One cargo medium stock was held on Wednesday at \$13.50, which was said to be green. Another dock load remained unsold because the holder and the party offering to buy differed in their views.

Few shingles have arrived, the condition in this respect being the reverse of what it was last spring. A load of Muskegon standards sold at \$2. Sales of Boyd & Akeloy stock, to arrive, have been made at \$2.50 a thousand, and Muskegon brands have been sold at \$1.95. The market price of standard shingles here ranges from \$1.90 to \$2.05.

The commission men say that the yard dealers and the manufacturers in Michigan are apart in views as to prices. The yard merchants are indifferent to buying lumber, and the mill men are determined to hold the bottom in the market if they have to hold all their lumber for a time to do it. On account of this difference of view and purpose the commission men do not expect a very active market immediately. The present dull state of trade at the yards is tending to a slow cargo market.

Lake freights sympathize with the market. Charters are made from Muskegon and Grand Haven, by steam, at \$1.25 at thousand; from White Lake, at \$1.23 by steam, and \$1.37 1/2 by sail; from Ludington, at \$1.50; from Manistee, at \$1.62, and Menominee \$1.50 for dry lumber.

AT THE YARDS.

A degree of quietude has settled upon the yard trade since May 1. One can now endorse the statement of the dealers that trade is exceedingly dull. The trains being daily pulled out are unusually few and light, and but little waggon traffic is prevailing. The planing mills are not crowded with work, and there is an absence of loaded waggons standing in front of them. The telephone calls are less frequent than they were in April. In fact there seems to have been a sudden halt in the demand, which must be accounted for in some way.

A canvass of the price list, that has stood unaltered since February, among the yards, develops no heavy average cut below the figures named in the list, excepting in the higher grades, several items of which are seriously mangled. The cutting on dimension and common lumber is mainly on special lots that happen to be in oversupply in certain yards, or in stocks that are being forced off for removal or closing up of business. This latter cause for cutting is now about over. While that was going on all attempts towards steady values would have been futile.

Receipts of lumber, shingles, etc., from Jan. 1 to May 7th as reported from the Lumberman's Exchange:—

Table showing receipts of lumber and shingles for 1885 and 1884, including stock on hand.

Table showing receipts of lumber and shingles for 1885 and 1884, including stock on hand.

Table showing lake receipts from Jan. 1 to May 7, listing items like Lumber, Shingles, Lath, etc.

Table showing freight rates to eastern points for various locations like New York, Albany, Boston, etc.

BOSTON.

The Journal of Commerce of May 9th says. Business is moving rather quietly as a general rule. Spruce, however, is in active demand at firmer prices, with large orders being placed. Pine is quiet and about the same as of late. Southern pine about holds its own. Choice walnut and cherry find a good call at firm prices. Ash remains very quiet.

CANADA PINE.

Table listing prices for Canada Pine products like select, dressed, shelling, etc.

OSWEGO, N.Y.

From Our Own Correspondent

Navigation both lake and canal is now fairly open. Boats are clearing to day for Albany and New York. Lake rates from Port Hope and Trenton, 80 to 85 cents; canal freight rates to Albany, \$1.65, to New York \$2.15. Quotations remain about the same, though there is a better demand for dry stock, and sales have increased since our last. Shingle are dull and lower.

Table listing prices for Oswego lumber products like three uppers, picking, cutting up, etc.

ALBANY.

Quotations at the yards are as follows:—

Large table listing prices for Albany lumber products like pine, clear, fourths, select, etc.

BUFFALO.

We quote cargo lots:—
Uppers.....\$15 00
Common..... 17 00
Culls..... 12 50

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.
Three uppers..... \$15 00
Common..... 15 00
Culls..... 12 00

LONDON.

The Timber Trades Journal of May 2nd says. Messrs. Churchill & Sim's sale was marked by an unusual degree of animation, and it was evident from the disposition of those

present to buy at anything like a current price that values had a decidedly upward tendency.

It is not often that we have seen so large a proportion of reserved goods realizing their limit, which was, of course, entirely due to the expectation that war would advance prices generally. About three pence a square was put down as the advance on flooring since the last sale, but this, we should say, is well within the mark. Cheap bargains are still to be had, and there are yet many in the trade, both buyers and sellers, who are strong believers in the present crisis terminating with a peaceful result, and buyers of this way of thinking will of course have nothing to do with an unsettled market.

There is no getting away from the fact that prices are still moderate, when taken in connection with the knowledge that values would be raised £2 to £3 a standard directly war was declared. Stocks, though full ones in London, are not abnormally so, and as far as the shipping ports are concerned we have no reason to suppose that stocks there are likely to be at all oppressive, even should the political question resolve itself into one of peace between this country and Russia.

We noticed there was some Columbian bright pine in the sale, which, we believe, was shipped as a sample; and judging by the price obtained for them, the experiment is likely to be repeated. £28 15s. for broads and £25 for regulars seem moderate enough if they class anything like Quebec, but their merits are not yet sufficiently known to regulate the price. After all it resolves itself into a question of f.o.b. cost and freight. The price to be paid, in the first instance, is the great thing that rules the value here.

Quebec pine was represented in Thursday's sale by several parcels of quality; one little lot of 3x7 to 13 feet changed hands at £24 which we consider well sold. Little broken parcels of this character form no reliable test of the market, and may go £2 or £3 either below or above the current rates without having any influence one way or the other.

The room was crowded throughout the proceedings, but bidding was not always brisk—for instance a lot of 1st bright Quebec boards started at £6, hung fire for some time at £8, though eventually knocked down at £16 15s. It was apparent that there was no general feeling of security amongst purchasers, that the rise in prices would be permanent, and they considered it was just as well to have kept within the mark, and let others take the chance of a further advance.

LIVERPOOL.

The *Timber Trades Journal* of May 2nd says:—The more seasonable weather we have enjoyed during the past week or two seems to have stimulated trade to some extent, for there are evidently more orders in the market than has been the case for some time past. The carriers' wharves and railway depots show increased signs of liveliness, whilst with building operations in full swing the local consumption seems more prominent. At the same time prices do not advance here at the same rate they are doing at various outports, where, owing to the increase in the rate of freights now demanded, a corresponding price has been secured for spruce deals and pitch pine timber.

At the same time the market here is exhibiting a slightly firmer tone for these articles, as is shown by the results of the recent auction sales, yet still they are below paying rates, even with the recent low rates of freight.

Up to the present time the market has not been affected by the critical condition of political affairs, though no doubt those who have made contracts for the season's supply of Russian goods from the White Sea will have an uneasy time until they get their goods safely away from the ports of shipment.

We have not heard of any war risks having been taken on timber laden vessels, most of the vessels engaged being, in the event of war breaking out, registered in probably neutral bottoms.

The work of fitting out the armed cruisers is being proceeded with, and in addition to the recent purchase of several powerful twin screw steam tugs from this port it is said two others

have been inspected during the week with a view either to purchase or employment by the Government.

The import during the last week has been larger and more diversified than usual, a cargo of East Indian teak and one of greenheart being most prominent amongst the new arrivals. The other cargoes consist principally of pitch pine and Norwegian flooring.

GLASGOW.

The *Timber Trades Journal* of May 2nd says:—The Clyde shipbuilding returns for the past month show that there have been thirty-one vessels launched, aggregate tonnage 21,101 tons; for the corresponding month last year the launches were 25 vessels, 23,982 tons. Orders booked during the past month, including the Government contracts, are stated to amount to between 14,000 and 15,000 tons.

A cargo of Mexican mahogany and cedar, is advertised by Messrs. William Connal & Co., to be exposed at Queen's Dock, Glasgow, on 5th inst.

Arrivals to note during the past week have been important, comprising six cargoes of pitch pine at Greenock (about 5,000 loads), and the imports at Grangemouth have been five cargoes, one from Pensacola and four from Baltic ports (about 2,600 loads).

A public sale took place here on the 29th ult. The chief attraction was a large crop of California redwood. A fair proportion changed hands, most of the lots disposed of being 3 in wood. The greater part of the cargo, however, was withdrawn, the bidding not coming up to what the brokers deemed a satisfactory figure. Of the rest of the catalogue, which comprised a varied assortment of yellow and red pine deals and spruce deals, the lots sold were principally the Dalhousie yellow pine deals, the bulk of the other goods being withdrawn, as offers did not meet the expositors' views. There was a large company, but the bidding was sluggish.

The Sawdust Nuisance.

A case of great importance to all interested in the navigation of the Ottawa river and also the Chaudiere lumber merchants came up before the Court of Chancery yesterday, Vice-Chancellor Proudfoot presiding. Mr. Ratte, boat builder of the Queen's wharf, entered an action for compensation for damages against Messrs. Perley & Pattee, J. R. Booth, Bronson & Weston, and the Young estate. The amount of compensation is placed at \$10,000. Plaintiff claims that he has sustained serious damage from sawdust deposited in the river at the mills owned by defendants. The latter state that for twenty they have enjoyed the privilege of so disposing of their sawdust; they therefore make a general denial and plea of prescription. The case is still unfinished.

A FUNNY MAN'S FINAL JOKE.

A retired humorist ventured one day into a mill, and while in an unguarded moment he was perpetrating some of his old and shopworn jokes upon an innocent operative he was drawn into some of the ponderous gearing and dreadfully crushed. They combed him out of the machinery after a spell and spread the effects on the floor.

"Who is it? Who is it?" was the anxious inquiry as the crowd gathered around. Nobody knew.

Then the humorist slowly opened his eyes and moved his lips. A sympathizing bystander bent down his ear.

"There is a good reason why nobody recognizes me," the humorist whispered painfully.

"Why is it?" the sympathizing bystander asked.

"Because," the humorist explained, as he saw a chance to steal home, "because I have been travelling in cog."

And then a smile like a summer cloud played for an instant over his features and he was gone. He never spoke again.—*Boston Journal*.

It is reported that Sir Robert Hart, at present holding the position of Inspector General of Chinese Imperial Maritime Customs, has been offered the post of British Minister to China, recently made vacant by the death of Sir Harry Parkes.

MONTREAL SAW WORKS

CHAS. M. WHITLAW, *Manager*, MONTREAL, QUEBEC.

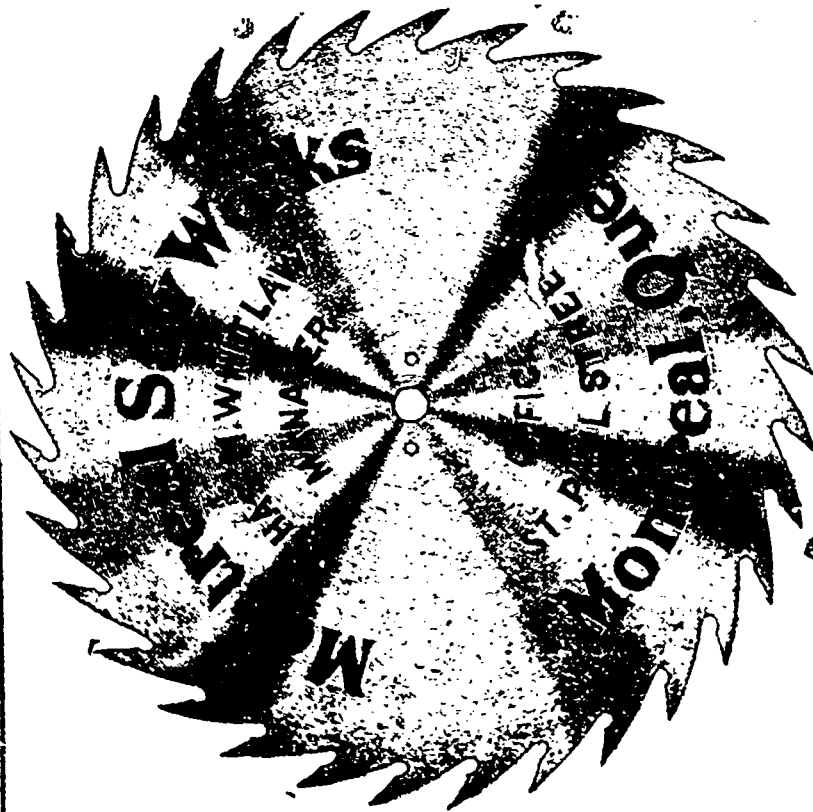
OFFICE: 452 St. Paul Street. P. O. Box, 1167.

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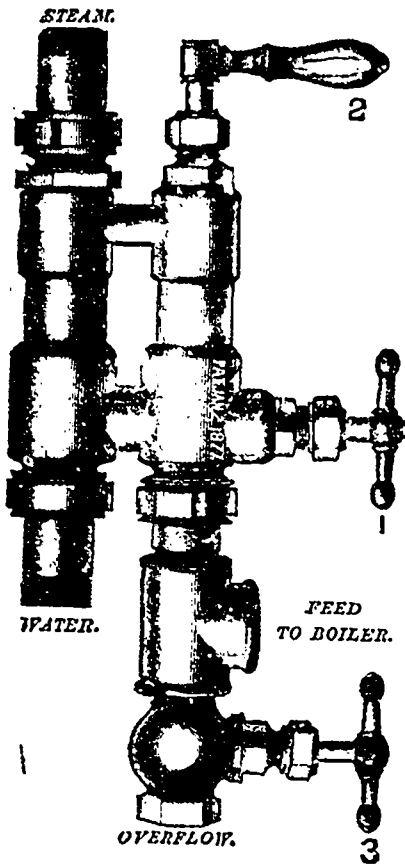
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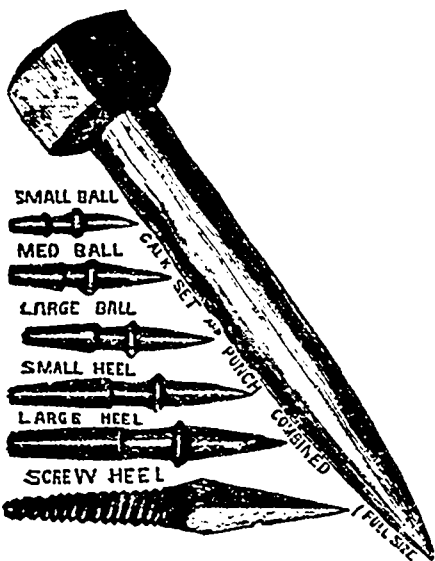
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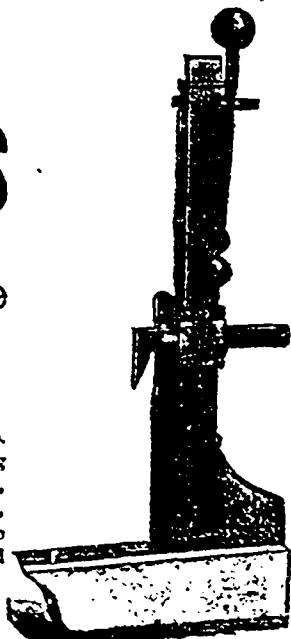
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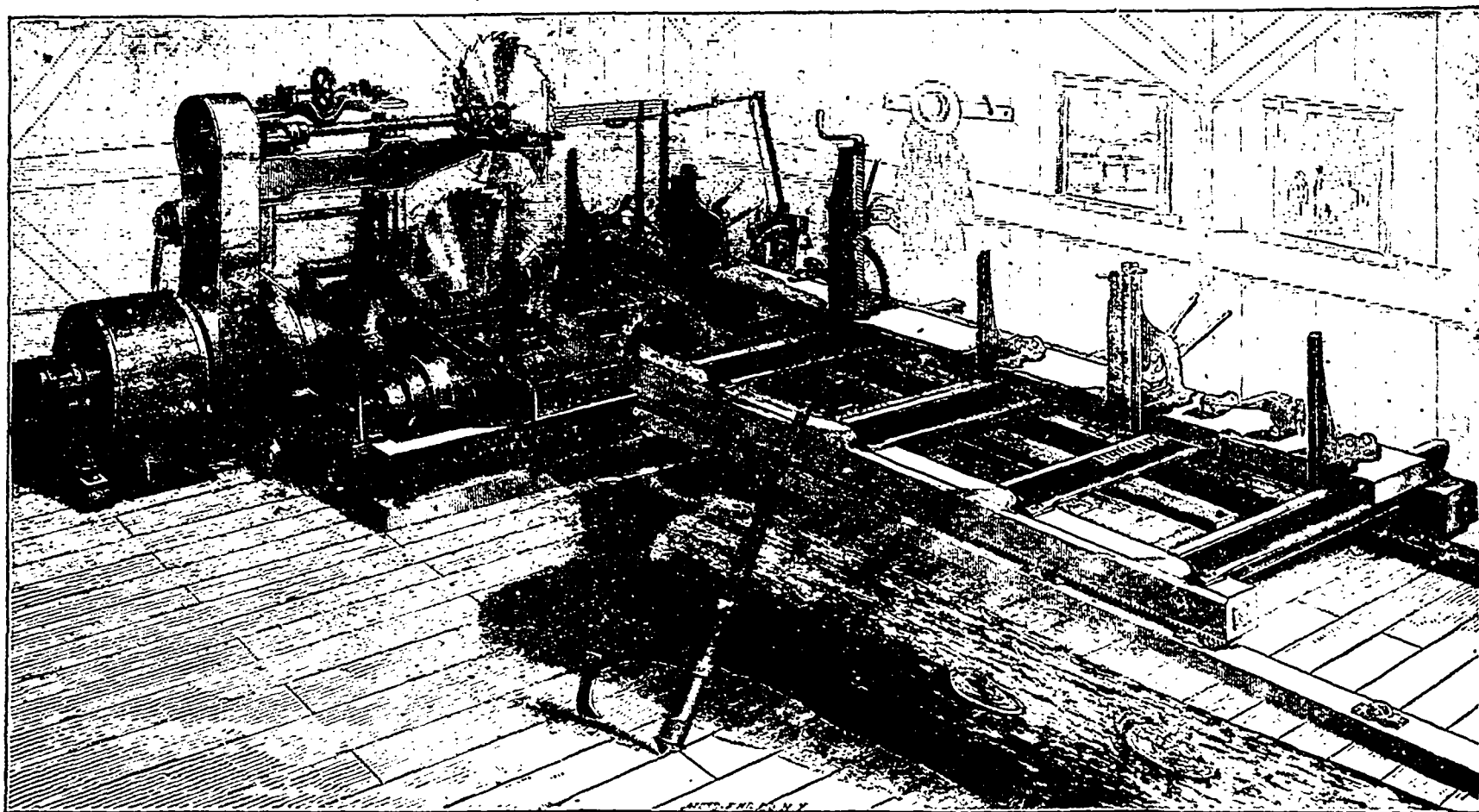
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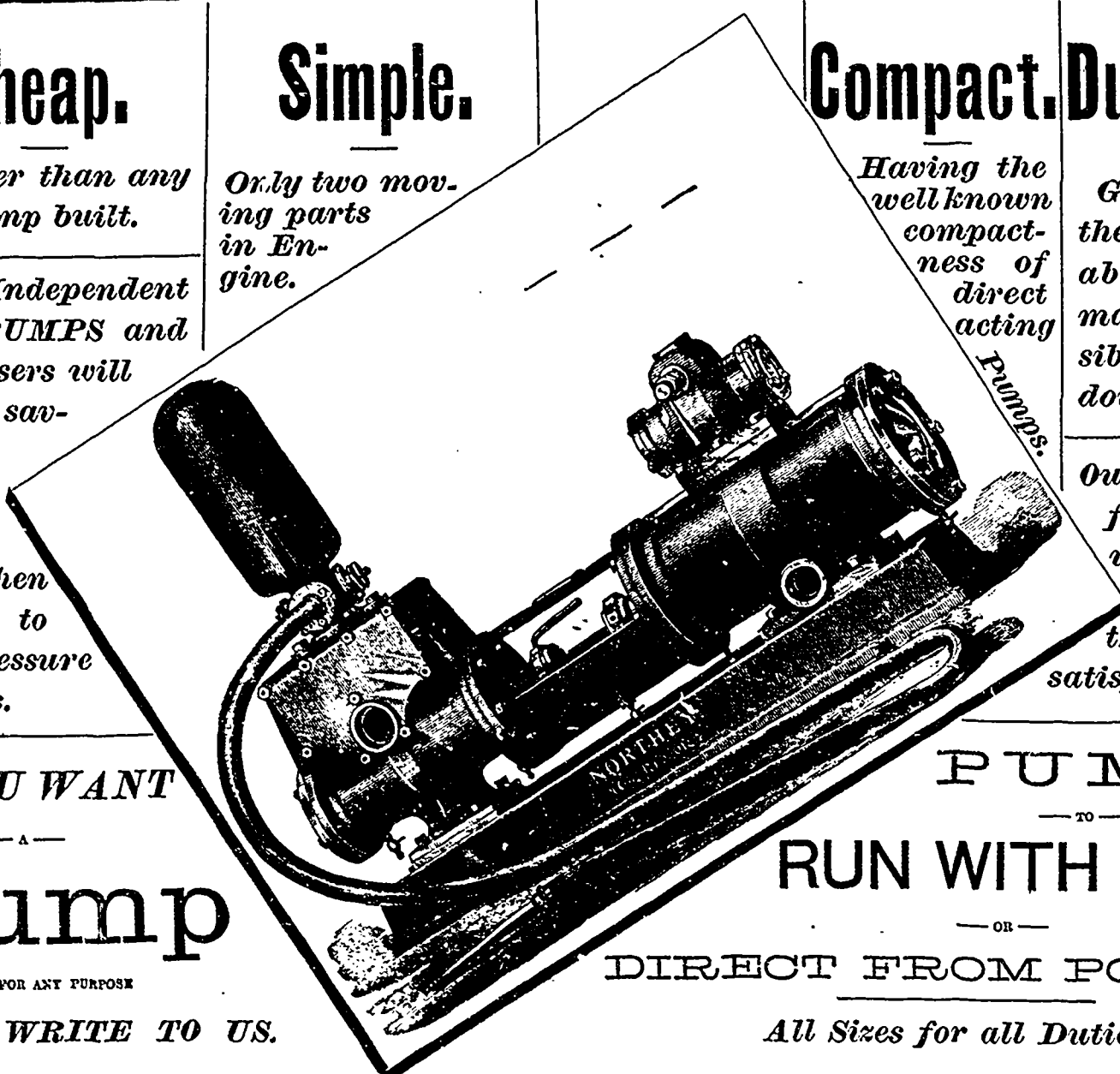
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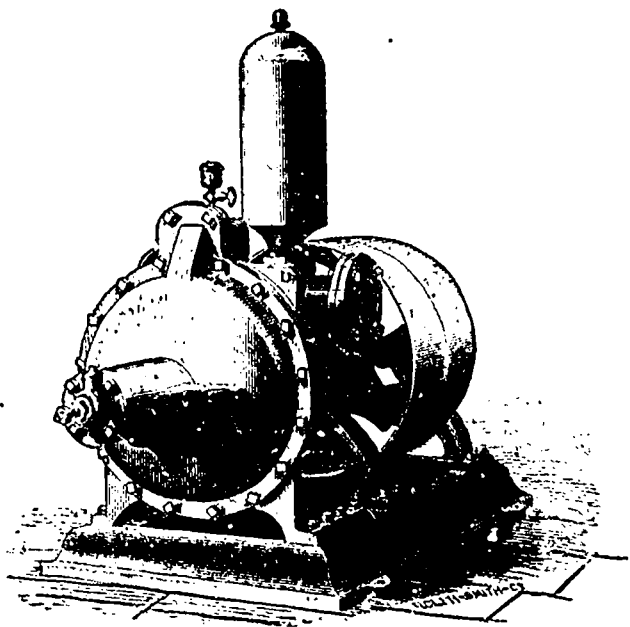
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	Suction.	Discharge.			
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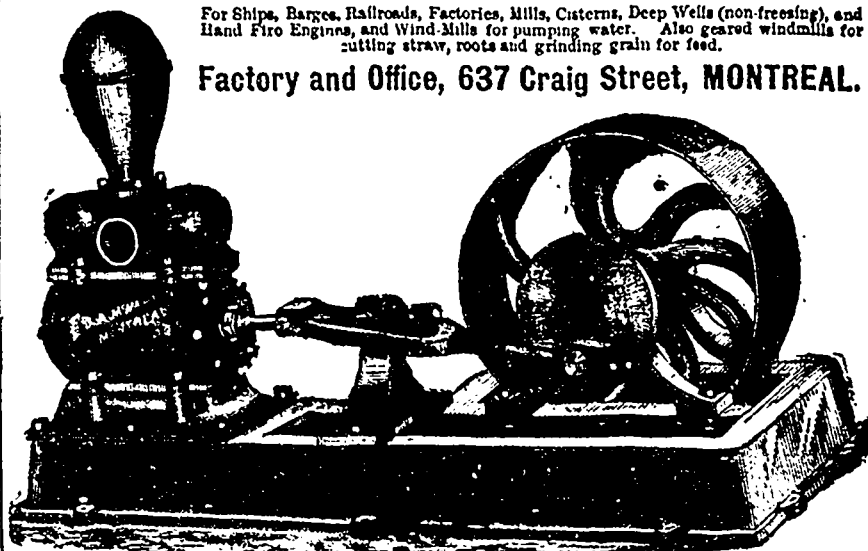
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Are made strong, neat and durable, knowing well the ever varying strain they are subjected to in driving a Saw Mill.

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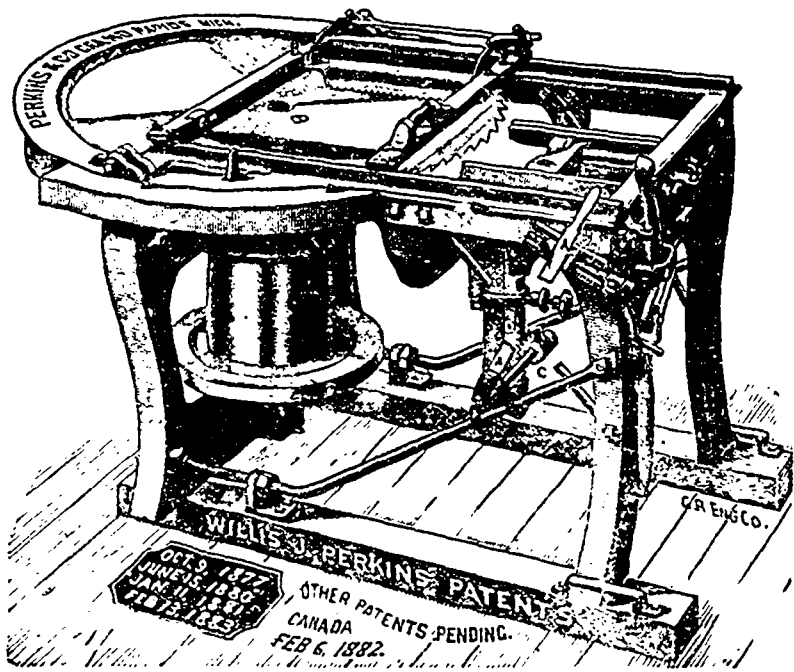
of the Best Material and workmanship.

We wish again to call the attention of our Canadian Lumbermen to our First Class IMPROVED SAW MILL MACHINERY, Heavy and Light Circular Mills; our Pat Twin Circular, with Steam Back or Rope Feed for Slabbing; Iron Oscillating Gang Mills of the most improved designs, besides our Patent Improved Long Cylinder Steam Feed. We would call attention to Cunningham's Oscillating Twin Engines for Feeding Long Carriages with Rack or Rope, our Patent Wrought Iron Jack Chain with Short Trucks; Heavy Wrought Iron Refuse and Sawdust Chains Trimmers and Slab Cutting Tables; Lath Mills and Bolters, Lumber Markers, Trout's Patent Automatic Log Counter, to count the Logs as they come into the mill; Covel's Patent Saw Sharpener; Saw Swages and Improved Bench for Dressing and Hammering Saws; Perkins' Patent Shingle Mills; Bolters; Sappers; Jointers; Drag Saws; and Packers. We also forge a very superior ANCHOR for Lumbermen

We are now introducing to those requiring Small Mills our IMPROVED SEMI-PORTABLE MILL, got up strong and durable, and are now adding to the many Machines for cutting Lumber. MILNE'S IMPROVED HEAVY BAND SAW for cutting Lumber out of large logs. The small carfe these Mills take out in using a No. 18 Gauge Blade, is a very important point in saving Lumber, besides the small amount of power required to drive it, making it a favourite in sawing lumber—capacity from 25 to 30 thousand per day.

We are prepared to submit plans and specifications, together with any information our many years of close application to the Saw Mill Business may have suggested to us; also when required to enter into contract for supplying the machinery and all material complete.

Communication from anyone intending to build Saw Mills solicited.

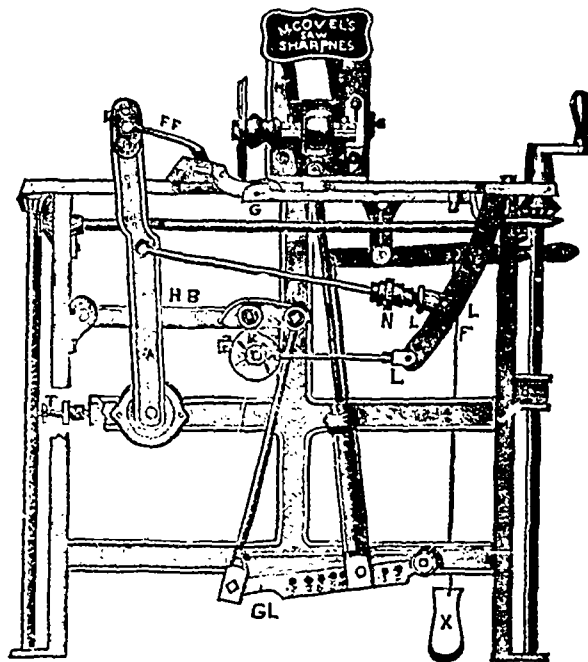


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The only Horizontal Saw Machine on which a thick slab can be cut from the bolt. SECOND CUT ALWAYS A SHINGLE. Knots, ruts, hearts, bolt squared rift ways, and all irregularities cut off at one clip. This improvement will pay price of the whole machine every season by increase of quality and quantity cut.

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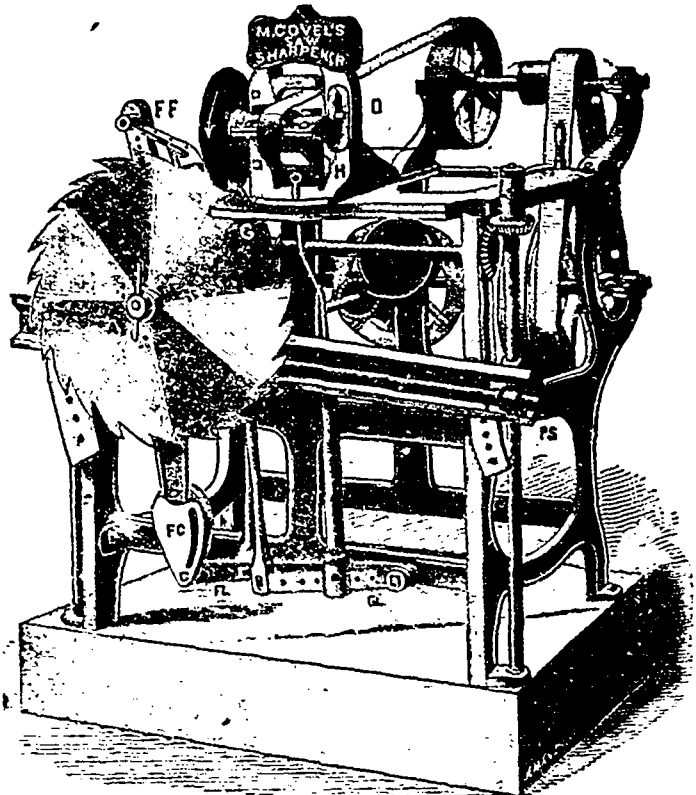


SAW SHARPENER

IS NOW READY FOR SHIPMENT.

They are now so well-known to the Lumberman, that their utility requires no comment.

The above Cut No. 1 shows some very important changes that have lately been made, which makes the machine far less complicated for new beginners to operate. Cut No. 2 shows this machine with a circular saw upon it ready for operation.



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