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PUBLISHED
SEMI-MONTHLY.

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

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VOL. 6.

PETERBOROUGH, ONT., JANUARY 1, 1886.

NO. 1.

A BOOM IN BARK.

Something over two years ago the bottom dropped out of hemlock bark and some heavy dealers were driven to the wall. Heavy failures occurred at about the same time in the leather trade, which was kept in an unsettled and unsatisfactory state for months afterwards. The New England tanneries which are the chief consumers of the Canadian bark that is exported were run on a reduced scale, and that with the large stock of bark on hand made the outlook a poor one, and as it has proved kept the price of bark depressed for over two years. But the causes which inevitably bring about an improvement have been quietly at work for some time. The leather trade has picked up and the tanneries beginning to use more bark stock in New England yards have been perceptibly reduced. A few weeks ago there began to be a sharp inquiry for bark and prices began to harden. The fact is there is not a great supply of Canadian bark accessible. The low prices prevented peeling on anything like the old scale. Outside of what is held by Canadian tanners for their own use, the bark in sight in the Province of Quebec does not exceed 100,000 cords and is probably considerably under that figure. The chief holders are Church & Fee, who have about 37,000 cords, and Goodhue, of Danville, who owns from 25,000 to 30,000 cords. The price has gone up with a bound from \$4 to \$6 per cord and there is a combination to corner the market and kite values up to \$8 or \$9, and perhaps \$10, on the cars here. Now England tanners have become frightened and have agents picking up small lots in the hope of being able to tide over the scarcity till they can draw supplies from the new Pennsylvania bark next season, say in July or August. The holders of the Canadian article, which was in the main purchased at a low figure, are in a position to net a handsome profit on their deal and recoup themselves for former losses.—*Waterloo Advertiser.*

LUMBER EXPORT DUTY.

The recommendation for the abolition of the import duty on Canadian lumber into the United States contained in President Cleveland's message to Congress is attracting great attention in this city. It is not the first time by several, that a similar suggestion has been thrown out, but hitherto the opposition of the Michigan and Wisconsin lumbermen, and the interest they can bring to bear on the members of the Legislative Assembly have hitherto proved fatal to the abolition of the tax. In view of the possibility of the recommendation being acted upon, a *Free Press* scribe waited on a number of Ottawa lumbermen, and asked their opinion of the effects of the remission of the duty. Mr. Bronson, jr., said it will be of great im-

portance in increasing the exportation of the coarser cuts of lumber. The greater parts of the finer cuts are imported from Montreal or Quebec, or to South America, passing through the United States in bond, these would not be affected; the coarser cuts, however, are entirely consumed either at home or in the United States. Upon those the producer here has to pay all charges, freight and duty, and no doubt the remission of the duty would increase the sale of these cuts considerably. Still I do not think the Canadian producers would get the benefit of the whole duty on their price. The duty is \$2 per thousand feet, and they perhaps would get the half, and the New York or American importer the other. You must understand that the general run of timber now made is coarser than it used to be. Lumber is made now which would not have been considered marketable years ago, but the pine trees are very scarce, having been first used and therefore the tendency of the lumber trade is towards coarser cuts.

Would the abolition of the duty make vital difference in Ottawa?

I can hardly say, but it is possible it might. Of course, the Michigan lumbermen would oppose it, lest we should cut them in price.

Mr. Pattee, of Messrs. Perley & Pattee, said: "Oh yes, I think it would make a considerable difference. I am not prepared say what difference it would make to Ottawa, but it would produce a boom in all lumber producing towns in Canada."

"The duty is a fixed duty of \$2 per 1,000 feet is it not?"

"Yes, it used to be an ad valorem duty, but that was found so confusing the fixed duty was substituted. The duty is the same all along the line. I think it would be a boon throughout the Dominion, and certainly Ottawa would come in for its share."

Mr. Booth was away from the works, but his representative said: "There is no doubt it would make a great increase in the export of the coarser kinds of lumber, and would bring more trade into the city. I would rather not say much about it just now, as I think any sign of halting the change would stir up the Michigan men to a more strenuous opposition. The duty does not effect the higher class of fine cuts."

"It runs sometimes to 50 per cent. on the coarser, does it not?"

"Nearly 33 and 40 per cent.; yes nearly 50, but I think it would be unwise to say much about it."

Mr. Cushman, manager for Mr. E. B. Eddy, said: "I do not think it will make any great difference; the consumer as a rule pays all charges, and so it does not come out of the Canadian lumberman's pocket; still there might be a division of the amount. If they

would take the duty of the manufactured article it would enable Canadians to make up their lumber at home instead of in the States. I do not see that it would greatly effect us here."

Mayor McDougal said: "It would be a great boon to Ottawa, it would increase her trade immensely. There is a class of lumber sold for somewhere about \$4 per 1,000, upon which the \$2 duty acts as a prohibitive one. It would not effect the trade in superior lumber, but would make an immense difference to the lower kinds."—*Ottawa Free Press.*

DURABILITY OF CROSS-TIE TIMBER.

In an investigation of this subject made by Mr. F. B. Hough for the Department of Agriculture, some interesting facts are brought out. The relative importance of the various kinds of timber for railway purposes are reported in the following order:—Oaks, pines, chestnuts, hemlock, cedars, tamarack, cypress, elms, ash, cherry, black walnut, firs, spruce, beech, locust, redwood, maple, butternut, coffeenut, mulberry, and musquit.

The average durability of oak, as reported in 32 cases, is 7.4 years, while the average prices of each cross-tie is 41.2 cents. The kind of oak is not specified. For whiteoak the average durability in 152 reported cases is 7.3 years, and the average price in the 173 cases is 40.6 cents. The average duration of a post oak tie is 7 years, and the average price 33 cents. For burr oak, durability, 7.4 years; price, 37 3/4 cents. Rock oak showed an average durability in 18 cases of 7 years; price 42 cents. In the case of red oak 5 years is the average durability, with an average cost of 27 cents. Chestnut oak is more durable, showing an average lifetime is a tie of 7 1/2 years, cost, 28 cents per tie. Black oak shows an average durability of 4 1/2 years; average price, 43 cents.

Long leaf or southern pine will last on an average 6 1/2 years; average cost per tie, 37 cents. White pine has about the same durability with less cost, the latter showing an average of 3 1/2 cents per tie.

Cedar shows the greatest average durability, being 1.18 years, with average cost of 34 cents, but is too soft to bear heavy freightage, and for that reason is not much employed in railway construction. Red cedar is more durable than white cedar, being in proportion of 11 to 7. Cypress shows greater durability than white oak, the former showing an average of 8.7 years. White ash and black ash rot very quickly, the former in 4.3 years, and the latter in 3.8 years. Cherry is a durable timber when used as cross ties, running from 6 to 10 years. All woods are much more lasting when hewn than when sawn.

The redwood of California makes very durable ties, lasting over eleven years, but allow-

ance must be made for the fact that they are used on the Pacific road in a dry climate, where the causes producing decay are not so great as in states east of the Rocky Mountains. The growth of the redwood is very slow. Trees 15 years old have a diameter of only 10 or 12 inches, and will make about three ties. When younger than this the wood is not durable. The redwood of the Santa Cruz Mountains furnishes the best ties it being much heavier and denser than when grown further north. The average cost of redwood ties is 40 cents. The total length of railway track in the United States approximated at 150,000 miles. Assuming that the average durability of ties is seven years, and the distance apart is three feet, there will be 2,640 to the mile, which is rather under than over the actual number employed, making the total number in use 396,000,000. Estimating one-seventh to be replaced every year, the annual demand to keep up the present railways will reach 56,571,428. Supposing that an acre will supply 100 ties, a liberal estimate, it will require 565,715 acres annually to furnish the ties required by the existing lines of railways. For each line of railway there will be an annual demand for 377 ties, requiring the cutting off of 3.77 miles. It will require 30 years on an average for trees to grow large enough for making cross-ties. The acres that must be kept in timber and growing will be 16,971,420 for supplying ties to the railway lines now in existence.

The increase in railway mileage, estimated by two decades, is about 4,150 miles annually. To construct the railways that will probably be built in the next ten years, 109,560,000 ties will be demanded, the product of 1,095,600 acres of woodland. Allow 30 years as the period of growth for ties, this would add 3,286,801 acres to the timber reserve for railways alone, making a total of 18,995,579 acres as the needful reserve. Evidently this question is one demanding roach of statesmanship and a careful preservation of our present timber supply. The time is not far distant when one of the largest items in the construction of expenses will be the one for cross-ties.

It is reported that Canadians are again scouring the woods of northern Michigan for rock elm ship timber for export. They pay from \$1.25 to \$1.50 for each tree standing. The sticks are hewed in the woods. Last season, it is estimated, there was 5,000,000 feet of rock elm timber shipped out of Michigan.

The schooner *Ottawa* started from Chicago for Georgian Bay, loaded with outfit, 16 horses and 40 men, for the establishment of logging camp. Encountering the great gale of December, 4th and 5th, the vessel had to put into Grand Haven, where she lay up, and the expedition was abandoned.

HOW SAP MOVES.

All plants obtain their nourishment in a liquid or gaseous form by imbibition through the cells of the younger roots or fibrils. The fluids and gases thus absorbed, probably mingling with other previously assimilated matter, are carried upwards from cell to cell, through the alburnum or sap-wood until they reach the buds, leaves and smaller twigs, where they are exposed to the air and light and converted into organizable matter. In this condition a part goes to aid in the prologation of the branches, enlargement of the leaves and the formation of buds, flowers and fruit, and other portions are gradually spread over the entire surface of the wood, extending downwards to the extremities of the roots. We often speak of the downward flow of sap and even of its circulation; but its movement in trees in no way corresponds with the circulation of blood in animals, neither does it follow any well defined channels; for it will, when obstructed, move laterally as well as lengthwise, or with the grain of the wood. The old idea that the sap of wood descends into the roots in the fall, remaining there through the winter, is an error with no foundation whatever. As the wood and leaves ripen in the autumn, the roots almost cease to imbibe sap, and for a while the entire structure seems to part with moisture, and doubtless does so through the exhalation from the ripening leaves, buds and smaller twigs; but as warm weather again approaches, the temperature of the soil increases, the roots again commence to absorb crude sap and force it upward where it meets soluble, organized matter, changing color, taste and chemical properties. If this not the case, we could not account for the saccharine properties of the sap of the maple or for the presence of various mucilaginous or resinous constituents of the sap of trees in early spring, because we find no trace of such substance in the liquids or crude sap as absorbed by them from the soil. The life of the tree, Mr. Fuller teaches, is all in the bark and sapwood, the heart being dead and serving the tree only to strengthen it mechanically, as shown in the fact that it may be removed entirely by decay, and still the tree grows on vigorously for centuries.—Fuller.

EXCESSIVE STUMPAGE.

The following is a sample of a number of letters that have been appearing in the press of New Brunswick:—

HIGH STUMPAGE.

"To the Editor of the Sun:

"Sir, I have noticed that there have been some discussion in the newspapers on the question of stumpage, and I don't think this question is brought up a day too soon.

"It is all very well for the Government to say that this tax is necessary for the purpose of revenue, but let them reduce expenses and do with less revenue. If they continue to insist on collecting this stumpage they will drive us, lumbermen, out of the country. The reason is because we cannot go into the woods and produce logs for sale to millmen without losing money.

"Every season some of us have to go greater distances, others have to incur additional expense in getting out their logs, and then, when we come to sell, we find that prices instead of being higher are lower, and we come out at the little end of the horn.

"I don't believe there is a practical lumberman in the country who does not agree with me.

"It is all very well for some of the papers to call attention to small purchases of licenses, but we know of hundred of miles of Crown lands that have been given up by the owners.

"I suppose it won't make much difference if I go elsewhere to earn my living, but if many others do the same thing people will begin to feel the effect on trade in the towns and the farmers in the settlements, for there is no doubt we support the various trades with our requirements for lumbering to a considerable extent.

"Yours,

"LUMBERMEN."

The steady advance in the rates of stumpage by the Provincial Government has led to much discontent among the lumbermen of New Brunswick. The log haulers are obliged to go

far away from the streams for the timber; the damming of streams is a more expensive item than formerly; wages have increased considerably of late years; the camp supplies are of a higher class and more costly; and, everything considered, the cost of producing the logs and delivering them in the booms near the sawmills, has been so seriously increased that only the prices of an extra good market would remunerate the lumbermen. But while the market in England—to which they are principally shut up—has been growing worse and worse through the competition of Norway woods and the pine and spruce deals of other parts of Canada, with the New Brunswick spruce deals, the Government of New Brunswick has been steadily increasing the lumbermen's burthens by increasing the stumpage charged on logs cut on Government lands. These rates are excessive when compared with the value of the material, —in most cases equal to 25 per cent. of the value. It is not surprising, under the circumstances, that there was a large falling off in the cut last season, and consequently a serious reduction in provincial exports. Most lumbermen have again reduced their operations for the current season, greatly to the loss of the farmers who depend largely upon the lumbering operations for a market for their surplus produce, and to the loss of the merchants whose transactions with the farming population are thus considerably curtailed. The towns are also sufferers, since there is less labor employed and less money disbursed in connection with sawing operations. It seems, too, that some lumbermen are leaving the province and looking elsewhere for a more congenial field, and we know of one large operator from that quarter who has recently made an extensive purchase of saw mills and timber limits on the Ottawa. If a reduction of the stumpage rates will prevent the ruin of lumbermen, and by reviving a prosperous industry tend to promote prosperity among the agriculturists and merchants, the Provincial Government should not hesitate as to the course it should pursue. It is manifestly its duty to relieve the industry of a least a portion of the special taxes imposed when the lumber business was in a prosperous condition. The charges were excessive even when spruce logs commanded their highest figures, and they should certainly be reduced now when they are out of all proportion to the logs' value. The lumbermen have a very strong case, and they will, no doubt, know how to press it vigorously.—Montreal Herald.

AN IMPORTANT MATTER.

On the question of lumber duties and the purchases of Canadian timber limits recently made by American lumbermen, the Montreal Journal of Commerce says:—

"The conservation of the timber supply of Canada is a matter of great moment to the future industries of the country. The part which wood of various kinds plays in these is so important that a diminution in its supply, or a large increase in its cost, would injure or destroy many branches of manufacture which now help to support a considerable proportion of the population.

"The lumber trade at present suffers somewhat from the duty exacted by the United States on the portion of the product exported there. We must always look to that quarter for a market for more or less of the cut, which, burdened with a duty of \$2 per M feet, has to compete with the lumber manufactured in Michigan and Wisconsin. The effect of this has practically been that the Americans supply their wants from our forests at little more than the cost of manufacturing and delivery. The value of the standing pine in Michigan to-day ranges from \$3 to \$5, or more, per 1,000 feet; our timber brings no more than \$1.50 to \$2 per 1,000 feet for the standing tree. If the duty of \$1 were removed by the United States it is not likely that the whole benefit would be reaped by manufacturers here. The object of the remission of the duty, and no doubt its effect to some extent, would be to reduce the price of lumber, and the benefit would probably be shared between the producer and the consumer. If such action increased the average price \$1 per 1,000 it would be added almost entirely to the value of the standing timber, since

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The Best Article Ever Offered to the Trade.

I have much pleasure in drawing attention to my WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use. These stoves are made of Heavy Sheet Iron, the top and lining of the fire-box being of Heavy Cast Metal and all the connecting parts of substantial Wrought Iron Work. The dimensions of these Stoves are as follows:

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 28x24x19. Fire box takes 28-inch wood.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 28x24x19. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I commenced manufacturing them. They are the names of gentlemen who are well known and reliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly,

THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly,

J. M. IRWIN

In addition to the above I can refer you to the following lumber firms who use my Wrought Iron Range exclusively in their camps:—

THE GEORGIAN BAY LUMBER CO.....Waubushene
THE LONGFORD LUMBER CO.....Longford Mills
MESSRS. GILMOUR & CO.....Trenton and Ottawa
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THE HENDERSON LUMBER CO. Limited.

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Dealers in, and manufacturers of, Dimension and Bridge Timber, Sawn Lumber, Clapboards, Shingles and Lath. Packing Cases and Boxes a Specialty.

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the cost of manufacture would remain unchanged, and the increase would represent additional profit to be got out of the stumpage. An appreciation of 50 per cent or more in the value of our standing timber would be an enormous increase to the national wealth.

"Whatever may be said for or against a protective policy generally, it will be generally admitted that, as far as possible, the working up of the timber supply should be carried on at our own mills, and furnish employment for our own capital and labor. Heretofore this has been almost the invariable rule, as far as logs are concerned, the exports of this class of goods having been comparatively trifling in amount. But of late indications of a change have been apparent.

"The mill-owners on the eastern side of the state of Michigan have in part exhausted their own supplies of standing timber, and the balance has been rapidly accumulating in a few strong hands, where it is held for the future supply of the owner's mills, or for future sale at greatly enhanced prices. This has caused those in need to go further afield, and purchasers from Michigan have been exploring the Georgian Bay and Lake Superior country, and have been buying up any suitable limits which they could obtain. The timber for these could be rafted to the Saginaw river and other lumber-

ing centres in Michigan, and all the benefit which this country will derive therefrom will be the export duty, at present \$1 per 1,000 feet.

"Here is, we think, a case in which the intervention of the Government is called for. If the United States will not take our lumber without imposing a duty of \$2 let us exact the same duty on the unsawn timber with which they would supply their mills. We should have free trade or fair trade in this article, if in any."

THE WEEPING BIRCH.

We have lately noticed, says a contemporary, how some trees have suffered in the very hot weather, especially in the London parks, and it is a pleasure to see the way in which the birch adds to its tiny shoots in the fiercest heat, and always looks as fresh as in May. The white (Betula alba) is, either in leaf or leafless, a handsome and graceful tree, and it is no less remarkable for its lightness and elegance than for its hardiness. It stands in no need of protection from other trees in no stage of its growth, and lives on the bleak mountain side and other exposed situations, which even the sturdy oak would shrink. It is a fast-growing, and rather short-lived tree, in favorable situations sometimes attaining a height of 80 feet, but generally not exceeding 30 feet or 40 feet.

It may not be out of place to mention a number of purposes to which the wood and bark of the tree are applied. Bread of birch bark from Lapland, made as long ago as 1867 shows one of the very many uses to which birch bark is or may be put. Shoes made of strips of bark, used by the peasants of Northern Sweden when at work in their distant meadow swamp; nut baskets in which they sell wild raspberries; and a specimen of the well known Alphon from Switzerland, by no means exhaust the enumeration of articles illustrating birch bark at Kew. It is a valuable tanning agent, and an oil obtained from it is largely used in the preparation of Russian leather; indeed, it is to this oil that the peculiar fragrance of that article is due. Formerly the Highlander used the outlayers for lighting purposes, and, before the invention of paper, the inner ones for writing upon. The sap is convertible into wine, vinegar and spirit; when fresh it form an agreeable beverage, and an intoxicating liquor when fermented. The wood is esteemed for light turnery work, and is at the present time largely employed in the manufacture of spools or cotton-reels.—*Gardening Illustrated.*

WOOD-WORKING PATENTS.

The following list of patents relating to the wood-working interests, granted by the United States Patent Office, December 15th, 1885, is specially reported by Franklyn H. Hough, solicitor of American and Foreign patents, 925 F. Street, N. W., Washington, D. C.

- 332,241—Lumber drier—O. A. Duke, Clanton, Ala.
 - 332,273—Saw guide—P. Miller, Norwich, Conn.
 - 332,365—Saw mill, band—S. Stephens, Indianapolis, Ind.
 - 332,691—Saw mill, circular—H. Wright, New Lisbon, Ohio.
 - 332,611—Saw mill, portable—H. Wright, New Lisbon, Ohio.
 - 332,611—Saw sharpening machine—D. W. Johns, New Albany, Ind.
 - 332,291—Sawing machine, scroll—A. D. Goodell, Millers Falls, Mass.
- PATENTS ISSUED DEC. 22.**
- 332,817—Lathe attachment—W. Middleditch, Detroit, Mich.
 - 332,806—Lathe tool holder—C. H. Kelley, Somerville, Mass.
 - 333,016—Lath turning—O. Kromer, Sandusky, Ohio.
 - 332,991—Lumber drying Platen—N. S. Bouton, Hyde Park, Ill.
 - 332,864—Measure, lumber—E. N. Barber, Kent, Ohio.
 - 332,714—Saw mill, circular—R. B. Holt, Guthrie, Ky.
 - 333,092—Saws, device for filing and jointing circular—A. Winkler, Oneonta, N. Y.

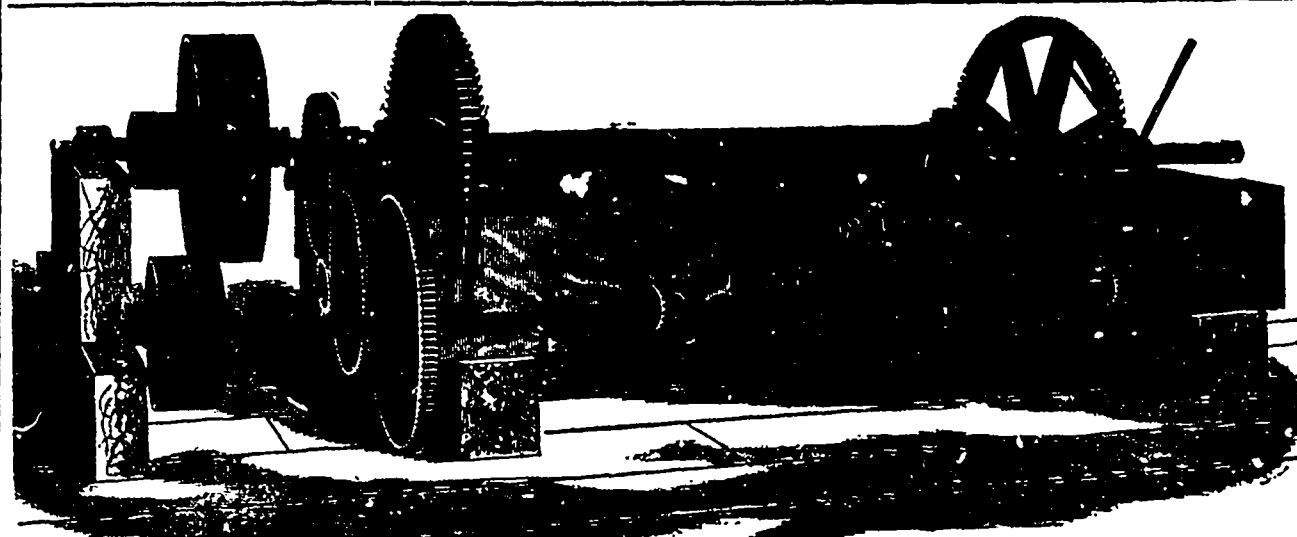
Shafting.

A firm which makes a speciality of the erection of shafting, states that its experience teaches that the loss of power due to improper conditions in the line shafting amounts to 50 per cent of the engine power employed, and that the defects most commonly found are as follows:—Shafting too light for the duty, crooked shafting, hangers too far apart, hanger bearings too short, pulleys too heavy and not properly balanced, hangers which are not adjustable and not self-adjusting and sometimes filled with spurious Babbitt metal, and improper proportion between two pulleys connected by the same belt.

Southwestern Lumber Pool

In April last the railroads centring in Chicago formed a pool on lumber, the provisions of which shut out the Kansas City markets and left the Nebraska markets open for competition. The arrangement was not so satisfactory to the Chicago road as was expected, for the Northwestern dealers floated their logs down the Mississippi to various points, where they were cut into lumber, and from these places the Burlington and Rock Island carried the lumber to market. It is estimated that Chicago lost 20 per cent of its Missouri lumber business by this arrangement.—*Lumber Trade Journal.*

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The Clyde Shipbuilding Trade.
During the past month 13,480 tons of new shipping was launched from the Clyde shipyards, compared with about the same quantity in November 1884, and 43,700 tons in the same month of 1883. The aggregate tonnage placed in the water in the course of the eleven months has been 171,084, being 91,838 tons below that of 1883, and no less than 193,600 tons short of the tonnage launched in the corresponding period of 1883. It is gratifying to notice that upwards of 30,000 tons of new contracts have been placed in the past month; but even with this very important addition to present orders, some of the yards remain practically empty, and a number of others are but scantily supplied with work. First-class steel screw steamers are constructed at £27 a ton; ditto, iron, £26 15s.; second-class screws, £22; cargo-carrying iron screws, £10 15s.; first-class iron sailing vessels, £11 7s. 6d.; second ditto, £11 2s. 6d.; third ditto, £9 15s.—*Ironmonger.*

Mrs. Barnhart, corner Pratt and Broadway has been a sufferer for twelve years through rheumatism and has tried every remedy she could hear of, but received no benefit until she tried Dr. Thomas' Electric Oil; she says she cannot express the satisfaction she feels at having her pain entirely removed and her rheumatism cured. There are base imitations of this medicine for sale; see that you get Dr. Thomas' Electric Oil.

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These Electro-Curative Belts, Insoles and Trusses are SUPERIOR TO ANY OTHER REMEDY.



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Is entirely overcome by using NORMAN'S ELECTRIC BELTS. No injury can result, and they are pleasant to wear. Try one and be cured. Guaranteed genuine. Circular and consultation free. A. Norman, 4 Queen Street East, Toronto.

Peterborough, 29th September, 1884.

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DR. E. O. WEST'S NERVE AND BRAIN TREATMENT, guaranteed specific for Hysteria, Dizziness, Convulsions, Fits, Nervous Neuralgia, Headache, Nervous Prostration caused by the use of alcohol or tobacco, Wakefulness, Mental Depression, Softening of the Brain resulting in Insanity and leading to misery, decay and death, Premature Old Age. One box will cure recent cases. Each box contains one month's treatment. One dollar a box, or six boxes for five dollars; sent by mail prepaid on receipt of price. We guarantee six boxes to cure any case. With each order received by us for six boxes, accompanied with five dollars, we will send the purchaser our written guarantee to refund the money if the treatment does not effect a cure. Guarantees issued only by J. D. TULLY Druggist, Sole Agent for Peterborough.

THE ADHESION OF A BELT.

Air and atmospheric pressure must have quite an influence on the driving capacity of a belt if a pulley must be turned perfectly true and left smooth for no other purpose than to allow the pressure of the atmosphere to hold the belt on the face of the wheel with all the crushing force of vacuum, but this idea doesn't seem to agree with the practice of cutting holes, or stripping up the belt to make air spacing to ventilate the belt and let out the cushion of air that is drawn under the belt while in motion. This cushion of air is observed when a surface plate is placed on another; the air between them holds them apart and they move on each other with ease. The cling of a belt is observed when a piece of leather is moistened and pressed on a flat surface, and if a string is attached in the centre the pressure of the atmosphere is made apparent, but it is doubtful if any such manifestations of aerial lubrication, or vacuum adhesion are to be seen with a driving belt. The surface plates that have such a treacherous movement while there is a thin layer of air between them, assume a different attitude when one of the plates is slid on to the other while in contact. The air is driven off from each plate by the other. The belt when at work meets the pulley, not by coming in contact with the whole arc of the wheel at once, but by rolling over its surface from one end to the other, driving out the air before it. The disk of leather that will rise so many pounds with ease when attachment is made in its centre, is drawn off with the slightest force when the pull is taken from its edges. On these two principles a belt can be made to cling with all the weight of the atmosphere, or held apart with an air cushion that the greatest tension will not expel, but these two elements cannot work together. If an inclosure is about to explode there is not much danger of a collapse. The air that is drawn under a belt is no doubt seeking for a means of escape so long as the layer is compressed, but when extended the reverse takes place and the influence of the atmospheric pressure becomes known. To follow these elements through one turn of the belt it will be easily seen that along the driving stretch both sides of the belt are affected alike by the air and meets with the same resistance from the atmosphere, but when it comes in contact with the driving wheel, the layer of air on the inside of the belt, which is moving nearly as fast as the wheel, is no doubt making every attempt to pass between the belt and pulley, but has only its inertia and surface friction for assistance with the tension of the belt to work against. The belt in passing from the tight to the slack side is relieved of a portion of its tension and is not inclined to lie as closely to the face of the wheel as it did at the beginning of the arc of contact, which must now feel the effects of the atmosphere, as there is a tendency for the air to find its way beneath the belt to fill the space that had become partially rarefied. A smooth-faced wheel has all advantages of coming in contact with the belt without entrapping a layer of air in every imperfection on the surface, and if there are any benefits to be derived from the atmosphere by resting with its whole weight on the outer surface of the belt it has the liberty to do so, but from experiments with belting under pressure, and in a vacuum, it is evident that not the difference that is shown by the surface plates or seen with the disk of leather, is manifested in the adhesion of a belt.—*Boston Journal of Commerce.*

THE MANUFACTURING SITUATION

The general manufacturing situation is what might naturally be expected toward the close of the year, although in many respects it is an improvement on the condition of things a year ago. Most manufacturers, in view of the fact that prices of their goods were close down to the cost of production, have pursued a very cautious and conservative policy during the last twelve months, not only in studying the economic or their business, but also in avoiding any large and unwieldy accumulations. Hence their stocks are now in better shape than for many years past, and they are not under the necessity of forcing immediate sales, or of resorting to the loan market, in order to bridge

over to the new year. Of course there is a little tendency to an accumulation in some lines of fabrics, as is always the case at this season; but it is so slight, and the demand from the trade for the spring business is so near at hand that it has no weakening effect upon the views of holders.

Many millowners are taking advantage of this dull, between-seasons period, in the way of putting in new machinery and making needed repairs, so as to be fully prepared for the next season's work. Not a few of them are introducing long-delayed improvements which were sadly needed in their business, and the effect of which must be to cheapen and facilitate processes as well as to widen their margin of profit. They have strong confidence in the future of values, from the fact that supply and demand have at length been brought to an equilibrium and that consumers are generally in better condition than for many years past. The large cotton, corn and hog crops give them assurance that our agricultural population will be able to take and pay for more than an average supply of manufactured goods.

They are also encouraged by the fact that but few goods will be carried over by the distributors, and that buyers will be early in the market to supply their immediate wants. Moreover, they see signs of returning confidence and increased business activity in the steady improvement of the stock market and the increased earnings of our railroad corporations, which are usually regarded as unfailing indications of a corresponding improvement in all branches of trade and industry.

Hence manufacturers are naturally looking for a good spring trade, as well as a gradual advance in prices of their products to a fairly remunerative point. Yet they do not propose to abandon their cautious policy, or to pile up goods in anticipation of the demand for them. Just now they are in the attitude of watching and waiting, watching the signs of the times as a basis for future business calculations, and waiting for orders for goods from early buyers, some of whom, from remote points of distribution, have already made their appearance, and bring favorable reports of the trade prospects in their respective localities. On the whole the business outlook for our skilled industries, if not entirely satisfactory, points in the right direction, and shows that matters on the mending hand.—*Manufacturers' Gazette.*

THICK AND THIN SAWS—SOLID v. INSERTED TEETH.

"F. McG" contributes the following remarks to an American contemporary:—

I have had experience with saws for the past ten years, saws thick and thin, with both solid and inserted teeth, and have learned that the first and most important point to attend to is to have the saw adapted to the mill. In fact the mill has as much to do with making the saw work successfully as the saw has with making the mill a good one.

With a large, solid mill, with ample and steady power, a thin saw can be run with excellent results. The teeth should be regulated by the amount of feed to be used to the revolution, with more teeth than would be necessary for a thicker one; but for a light mill, in which the power is apt to be unsteady, with slow feed, the saw should be thicker, with less teeth and hammered stiffer, and in every case the maker should know just what kind of a mill he is making the saw for, whether heavy or light power is required, and what the speed of mandrel and the feed is to be. Then if the mill is in proper shape, and the maker understands his business, the saw will give satisfaction.

The mill is often to blame. A poor mill will spoil a good saw very quickly, and then the blame is too frequently laid to the saw.

My experience is that each tooth should cut away one-sixteenth of an inch of timber to work easily. I believe that a tooth will cut one-sixteenth just as easily as, if not easier than, it would cut half of it.

With regard to solid and inserted tooth saws, the latter surely have the advantage. Still I am a friend to a solid tooth when it is in good order, but it is hard to keep the teeth regular and in proper shape and, as it is worn away;

the strain of the saw is being changed, which makes it necessary to have it hammered quite often. If an accident happens to a saw, if it has solid teeth, the operator has to go to work and modify the whole saw as well as the teeth that have been damaged, but if it has inserted teeth he probably puts in new teeth, increasing the size of his saw rather than making it less.

I have had experience in sawing iron. I ran a lumberman's clipper into a road spike full speed with 3 in. feed. It took every tooth out or off and the plate came in contact next; it bent nearly all the shoulders behind the teeth, and I don't know what would have happened if I had not reversed the carriage. I thought my saw was ruined, but I hammered it up as well as I knew how and on starting it it worked as well as, if not better, than ever. I have got in several other scrapes almost as bad with the same saw, and yet it is just as good and big now as ever. If it had been a solid-toothed saw it would have been worn and torn all to pieces. The inserted tooth, without doubt, runs easiest, as the tooth can be made sharper or more pointed, so as to cut into the wood like a chisel instead of scraping or scratching their way.

ROTATION SPEED OF MACHINERY.

The method of arranging this so that it will not produce vibrations has been explained to some extent in an article recently published in an American paper. As a vibration has a tendency to communicate itself to the objects to which the machines are attached or to the buildings in which they are placed, the importance of understanding this subject will be apparent. Whenever such vibrations are communicated there is a loss of power, and the quality of the work done is liable to be reduced. A few common cases of the methods of preventing injury from vibration to other structures besides the mill in which the machines are placed will make this the better understood. Railway trains are required to stop before going under the bridges built across large streams. By this means the vibrating motion that is often apparent in a train moving at full speed, is allowed to cease, otherwise it would be communicated to the bridge, and, increasing as the train proceeds onward, commence a process that must eventually terminate in its destruction.

It is for the same purpose that teams are not allowed to travel faster than a walk, and that soldiers marching in a body must break their ranks when crossing long bridges. Whenever two or more steam-engines, or any number of machines that have their power applied, in part at least, by means of a reciprocating motion, are located in the same building, their tendency to communicate vibrating motions to it may be counteracted by giving them rotation speeds that vary so that they cannot keep step. The principle by which this could be accomplished was fairly presented in the article referred to, but the mechanical calculation or the purpose of applying it practically in arranging their speed under different conditions was hardly made plain. Take, for illustration, the first example: "Thus 96 and 100 would not do, for each is equally divisible 4, and two would come together on a stroke every 96x100 divided by 4 = 2,400 turns." This is one of the processes for obtaining the least common multiple of the two numbers that represent their rotation speeds. But one travels faster than the other, and it cannot give the correct answer. Where two or more engines or machines are in use, and running at different speeds, the number of turns each will make from the time they start together on a stroke till they come together again may be ascertained by dividing the rotation speed of each by their greatest common divisor. In this way the 96 divided by 4 and the 100 by 4 gives 24 and 25 turns respectively. Where the engines or machines have rotation speeds which are "prime" to each other, that is neither of which are evenly divisible by any part of the other, they will when started on a stroke come together as often as each completes the number of strokes that represents its rotation speed, or with that at 99 and 100 they will come together when each has completed 99 and 100 turns respectively.

In arranging for the number of cogs in the cast gearing so commonly used for transmitting power, a factor should be taken into the account that bears some relation to the principle of running machines at different rotation speeds for the purpose of preventing the vibration that might result from allowing them to keep step.

That is the desirability of making their numbers "prime" to each other, whenever that is practicable, for the purpose of securing greater uniformity in the wearing away of the faces of the cogs, and of transmitting a steadier motion to the machinery driven. The relative speeds of wheels geared together are in proportion to the diameters to their pitch circles, and the calculations in regard to them are made from the number of their cogs. The common multiple of these, or the least common multiple, if they are not "prime," gives the number in each that will pass a given point between the time that two certain cogs starting together will come together again, and not the number of turns. That is ascertained for each wheel by dividing this result by the number of cogs. In the case given where one wheel has 288 and the other 256 cogs; the 288x256 divided by 32 = 2,304, the least common multiple. Dividing this by the number of cogs in each gives eight and nine turns respectively. Where these numbers are used, each cog in the large wheel engages with eight in the small one, and each in the small one with nine in the large wheel, and these eight and nine cogs come together in some way at every turn, and never engage with any of the other cogs in either wheel. Where their numbers are "prime," like 99 and 100, 33 and 75, or 287 and 288, each cog in one wheel will engage with every cog in the other before it will come around to the one from which it started, and the number of turns made by each wheel in doing it will be equal to the number of cogs in the other. By applying the same principle the number of turns each of three wheels geared together will make from the time they start together till they come together again may be ascertained. Take, for example, three wheels having 99, 100 and 101 cogs. Multiplying these numbers together, and dividing their product by the number in each wheel, gives 10,100, 9,999, and 9,900 for the number of turns each will make.

Unless we can make our technical education capable of practical application, we might as well continue to do our work by the old rule of "thumb."—*Timber Trades Journal.*

Lloyd's.

Application is intended to be made by the corporation of Lloyd's in the ensuing session of Parliament for an Act to extend and enlarge their powers as regards the "collection, publication, and diffusion of intelligence," and to provide that the publication and diffusion of any such intelligence shall be deemed to be privileged communication from them. By other clauses power will be sought for to authorize them to establish signal stations and to erect signal houses, with all requisite telegraph and telephone wires, appurtenances, &c., "at such places on the coast of Great Britain and Ireland and the islands appertaining or belonging thereto as they shall think fit, and to maintain and work the same," such powers, however together with the taking of lands or houses for the purpose, to be exercised only with the approval of the Board of Trade.

How to Test Leather Belting.

We believe a considerable quantity of so-called "cheap" German belting is sent into this country and sold under various names. As regards testing leather belting the best test, of course, is that of wear, but to find out if it has been properly tanned the following method is recommended by M. Eitner.—Cut a small piece of leather out of the belt and put it in vinegar. If the leather has been perfectly tanned, and therefore of good quality, it will remain immersed in the vinegar, even for several months without any other change than becoming a little darker colour. If, on the contrary, it is not well impregnated with tannin, the fibre will promptly swell, and after a short time become converted into a gelatinous mass.—*Timber Trades Journal.*

REVIEW OF THE LUMBER TRADE DURING THE PAST SEASON.

The Quebec Chronicle says:—Another shipping season is over and another winter has closed in upon us, and we may now offer a few supplementary remarks as we have gleaned them from manufacturers of square timber, merchants, mill-owners and others. To but few of these, as far as we can gather, has the season been a satisfactory one. Trade in England of every description has been very much depressed, and sales of timber during the past year have been very difficult to make and the prices obtained very meagre. Moreover, timber manufacturers on this side held their rafts for full prices, so that sales of square and waney white pine were not frequent, and only for immediate wants. Square pine—with the exception of a few early rafts of now timber, which brought good prices, selling at much the same figure as last year, and large first-class waney a little higher. Most of the stock of pine is still in first hands. Hardwoods have been very dull of sale. In oak there has been but very few sales, and at lower prices than last season; the shipments of oak plank from United States ports on terms with which Quebec cannot compete has greatly damaged the prospects of this wood in our market. The production of square timber last winter was very much larger than anticipated at this time last year and was quite unwarranted by the reports from the various markets. Deals have been in good demand in Great Britain, and most of the mill-owners on this side managed to dispose of their produce in full prices to the shipping merchants. A larger quantity than usual came from Michigan and were shipped at this port and in Montreal. A very large quantity of deals are now shipped from Montreal, most of which should be shipped from this port, and we learn that even some birch timber and walnut were this year sent to Montreal by barge to be there loaded in the steamer, instead of being placed on board here as she passed outwards, owing to the fact that the Ship Laborers will not allow the steamers to use their steam winches to take such timber over the side. It is to be hoped that the outcome of the recent conference at the Board of Trade rooms will be the doing away of some of these regulations which tend towards the avoidance of this port and the aggrandizement of others at our expense. On the whole the season has been a very dull and unsatisfactory one, and we learn that since the close of navigation the accounts from Great Britain have been worse than before and a very dull time is looked for in the trade. This should have due weight with manufacturers both of timber and deals and prevent the blocking of the markets by over-production, which can only result in anxiety and loss to themselves.

FREIGHTS.

As compared with last year there has been a slight increase of tonnage at this port.

SAILING VESSELS.			
By 1884.....	499 vessels	380,147 tons	
for 1885.....	502 "	382,826 "	
More this year....	3	2,679 "	
OCEAN STEAMERS.			
for 1884.....	238 steamers	427,834 tons	
for 1885.....	242 "	446,522 "	
More this year....	4	17,688 "	

Rates of freight have been about on a par with last year, ruling rather lower towards the latter part of the season, and have been anything but satisfactory to ship-owners, and even at these rates masters had some difficulty to find cargoes when they came out seeking. A large quantity of deals were shipped in Montreal not only by the regular liners but by outside steamers which the scarcity of produce at that port forced into the deal-carrying trade.

The following is a statement of prices current during the season:—

May.	Timber	Deals.
London to Liverpool	20s. 22s. 6d. 22s.	
London to River Plate		81s p m ft.
London to London		B. M.
London to Glasgow		4s.
London to Liverpool		47s. 6d.
London to London		50s.

June.

London	20s., 22s. 6d.	50s. 52s. 6d.
Liverpool	20s., 20s. 6d.	
Bristol		52s. 6d.
Greenock	17s. 6d., 19s., 18s., 18s. 6d.	
Cork	20s. 6d., 21s.	52s. 6d., 52s.
Montreal to east coast range of ports.....		5s.
Steam.—Pierroville to London.....		50s.
Montreal to Liverpool.		50s.

July.

Clyde.....	18s. 6d.	
Fleetwood.....	20s.	
Liverpool.....	21s.	
Cardiff	20s.	52s. 6d.
Belfast	22s.	
Bristol	21s.	
London	21s. 6d., 22s.	47s. 6d., 52s. 6d., 50s.
Montreal to East Coast		52s. 6d.
“ Liverpool.....		50s.
Steam.—Montreal to Liverpool.....		50s.
Montreal to London.....		50s., 51s.
Quebec to Bristol.....		50s.

August.

Liverpool	21s. 6d., 23s.	
Greenock	23s. 20s.	
Newport	20s.	50s.
Dublin.....	21s.	52s. 6d.
London	21s.	45s.
Montreal to River Plate.....		81s p m ft. B. M.

September.

Cork.....	22s. 6d.	52s. 6d.
Belfast.....	23s.	52s. 6d.
Leith.....	21s.	52s. 6d.
London.....	21s., 21s. 6d.	45s. 47s.
Liverpool.....	21s.	45s.
Greenock	17s. 6d., 16s. 9d. 17s.	
Dublin.....	20s.	50s.
Cardiff	17s.	50s. (longitudinals.)

Montreal to River Plate.....		81s.50 p m ft. B. M.
“ Buenos Ayres		81s p. m. ft. B. M.
Steam.—Montreal to Glasgow		45s.
October.		
London.....	20s.	45s., 46s., 47s.
Swansea.....	20s.	50s.
Liverpool.....	18s.	
Greenock.....	16s. 6d., 17s.	
Newport	19s.	50s.
Bristol.....	19s.	60s. (longitudinals.)
Belfast.....	15s.	60s. (longitudinals.)
Cardiff		

Montreal to River Plate.....		81s.50 p m ft. B. M.
“ Buenos Ayres		81s p. m. ft. B. M.
Steam.—Montreal to Glasgow		45s.
November.		
London.....	20s.	45s., 46s., 47s.
Swansea.....	20s.	50s.
Liverpool.....	18s.	
Greenock.....	16s. 6d., 17s.	
Newport	19s.	50s.
Bristol.....	19s.	60s. (longitudinals.)
Belfast.....	15s.	60s. (longitudinals.)
Cardiff		

Montreal to River Plate.....		81s p m ft. B. M.
“ Buenos Ayres		81s p m ft. B. M.
Steam.—Montreal to Glasgow		45s.
December.		
London.....	20s.	45s., 46s., 47s.
Swansea.....	20s.	50s.
Liverpool.....	18s.	
Greenock.....	16s. 6d., 17s.	
Newport	19s.	50s.
Bristol.....	19s.	60s. (longitudinals.)
Belfast.....	15s.	60s. (longitudinals.)
Cardiff		

A NASAL INJECTOR free with each bottle of Shiloh's Catarrh Remedy. Price 50 cents. For sale by Ormond & Walsh druggists Peterborough.

WEST'S WORLD'S WONDER of family liniment has proved to be one of the greatest blessings of the age. It is a never failing remedy for rheumatism, cuts, sprains and bruises. Call on J. D. Tully for a trial bottle and you will use no other.

Advice to Mothers.

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

MIRIMACHI SHIPMENTS.

Mirimachi shipments of lumber abroad for the year ended 31st December, 1885, verify the predictions of last year in showing a decided falling off. The shipments for the five years before averaged 131,460,000 s. f. per year. They were as follows—1880, 155,000,000 super feet; 1881, 128,000,000 ditto and for the three following years 117, 149, 108 million respectively, while there were this year only 87 million feet. The timber shipments of this season have been rather larger than those of last year, the totals being, 1884, 3 974 tons, and in 1885, 4,944 tons. Failings to the number of 3,207,444; 71,900 broom handles, 720 shovel shafts and 12 bundles of shingles were shipped. According to the *Advance*, the deals ends, scantling and boards went to the following countries:—

	Sup. Feet.
Great Britain	47,239,692
Ireland	24,934,538
France.....	10,223,213
Australia.....	1,634,672
Africa.....	2,262,193
Italy.....	1,005,715
Total.....	87,250,023

Geo. McLeod and J. B. Snowball are the largest shippers this year, Stewart & Ritchie's firms coming next.—*Monetary Times*.

The estimated cut for the year of the Eau Claire, Wis., mills is 228,550,000 feet of lumber and about 130,000,000 shingles, the smallest output since 1881.

FOR SALE, TIMBER LIMITS & SAW MILL

THE MASKINONGE LUMBER COMPANY offer for sale their property consisting of Saw Mill at Maskinonge Bridge, P. Q., within quarter mile of N. S. Ry. Station, also good facilities for shipping by water. Capacity of Mill 50,000 feet per day, water and steam power; saws and belting all complete. Two hundred and forty square miles of limits situated about thirty miles from Mill, which are intersected by a number of good driving streams, and are rich in Pine, Spruce, Cedar, etc. Satisfactory reasons for selling out. For further particulars apply to MASKINONGE LUMBER CO. 6115 Maskinonge Bridge P. Q.



Notice to Contractors.

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Public Buildings at Peterborough, Ont.," will be received until TUESDAY, the 20th day of January next, inclusive for the erection of Public Buildings, for

THE POST OFFICE, AND THE CUSTOMS & INLAND REVENUE OFFICES AT PETERBOROUGH, ONT.

Plans and specifications can be seen at the Department of Public Works, Ottawa, and at the office of J. E. Belcher, Architect, Peterborough, on and after FRIDAY, the 18th day of December next. Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied and signed with their actual signatures. Tender for each building to be separate, and forms will be supplied for each. Each tender must be accompanied by accepted bank cheque, made payable to the order of the Honourable the Minister of Public Works, equal to five per cent of the amount of the tender, which will be forfeited if the party decline to enter in a contract when called upon to do so, or if he fail to complete the work contracted for. If the tender be not accepted the cheque will be returned. The Department does not bind itself to accept the lowest or any tender. By order, A GOBIEL, Secretary.

Department of Public Works, Ottawa, 7th December, 1885. 3x50

A GIFT Send 10 cents postage, and we will mail you free a royal, valuable, sample box of goods that will put you in the way of making more money at once, than anything else in America. Both sexes of all ages can live at home and work in spare time, or all the time. Capital not required. We will start you. Immense pay for sure for those who start at once. BURNETT & Co., Portland, Maine.

J. K. POST & CO. LUMBER MERCHANTS And Shipping Agents. OSWEGO, N. Y.

The American Hotel, BARRIE, ONT. Collier St., Adjoining Market.

RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS. Every accommodation for Commercial and LUMBERMEN. W. D. McDONALD, Proprietor.

J. T. LAMBERT, Lumber and Commission Agent.

ORDERS FOR DIMENSIONS AND ALL OTHER KINDS AND GRADES OF American Lumber PROMPTLY ATTENDED TO. Timber Limits and the Square Timber Trade a Specialty. Office, Wellington Street, OTTAWA. 1x10

Valuable Timber Limits AND SAW MILL PROPERTY.

THE SUBSCRIBER WILL SELL HIS TIMBER LIMITS and Saw Mill property, at Cowichan, British Columbia, and if purchased by a Company, will invest a large amount of price in shares. The Limits are supposed to contain about two hundred millions superficial feet. (An estimate is now being made.) The Timber is mostly Oregon Pine of an excellent quality. The average haul, only about half a mile to floatable water. The run thence to mill, 30 miles. Full particulars furnished on application. W. SUTTON Walkerton, Ont.

W. SUTTON Walkerton, Ont.

Johnston's Fluid Beef



The nourishing, palatable and warmth giving qualities of Johnston's Fluid Beef has caused this invaluable preparation to become a favorite and fashionable beverage for the winter season. It is now obtainable on draught at the leading hotels and restaurants throughout the Dominion.

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Examine the list of "FARMS FOR SALE" and "FARMS WANTED" in the DAILY AND WEEKLY MAIL. THE MAIL has become The Recognized Medium for Extra Advertisements. And contains more of them than any other Canadian paper combined. It has 50,000 readers of the right class. ADVERTISEMENTS of Farms for Sale and Farms Wanted. Stock or Seed for Sale or Wanted is served in THE WEEKLY MAIL. Five cents per word each insertion, or twenty cents per word for five insertions, or in THE DAILY MAIL, at 75c and a half cents per word each insertion. Address—THE MAIL Toronto, Canada.



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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 Messrs. SAUNDERS, DRACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., JAN. 1, 1886.

The Rainy Lake Lumber Company, of Rat Portage, Ont., and Winnipeg, Man., have made an assignment.

The schooner A. J. Ryan, laden with lumber from Toronto to Brockville, went ashore at Oak Point, during the snow storm recently. The lumber was shipped by the Rathbun Company.

A firm in New Brunswick has secured a large order for logs from a Boston concern, and will transport them next spring in rafts by sea, as was done two years ago in floating logs to New York.

The Timber Trades Journal says that Messrs. Bryant, Powis & Bryant have as usual arranged the prices for Gilmour's cut of next year. We are given to understand that the quantities and specification of this celebrated pine stock will be about the same as last year.

As a sample of the method of making money that has attended some of the pine lands traffic in Wisconsin and Michigan, a sale at Eau Claire is given. Thomas Carmichael paid \$8,000 for a tract of 880 acres, four years ago, and has just sold it for \$40,000.

Young Canadians complain that this season, says the Northwestern Lumberman, they came over the line to work in the logging camps, expecting to get from \$26 to \$30 a month, as formerly, and are surprised to have but \$16 to \$20 offered, and must show a certificate of vaccination to boot.

BURNHAM & STILL'S mill, East Saginaw, Mich., together with 200,000 feet of lumber, was burned December 10th. The origin of the fire was supposed to be incendiary. The mill was valued at \$22,000. The lumber was owned by different parties, and valued at \$3,600. The mill was insured for \$15,000.

MR. ANDREW ALLEN has been elected president of the Montreal Lumber Co., the annual meeting of which was held recently. Directors chosen for the ensuing year are:—Messrs. An-

drew Allan, Hugh A. Allan, Andrew A. Allan, O. D. Brydges, Jackson Rae, John Molson and Mr. Morris.

A CLOSE estimate of the lumber on the docks about Muskegon Lake places the total amount on the docks at from 92,000,000 to 100,000,000 feet. This estimate is from reliable sources and can be relied upon, as the situation on December 1st, 1885.

THE schooner Joseph Souther, at New York from Satilla, reports that on December 6th she passed a wreck with two topmasts out of water, holed up, and hanging by rigging. Soon after they passed considerable wreckage, deals, planks, etc., which leads to the belief that a lumber-laden vessel has been totally wrecked.

THE output of the Chaudiere mills, near Ottawa, Ont., this season, was 227,000,000 feet. Good lumber has sold well, but coarse has been slow to move. The season's trade has, on the whole, been considered good. Small and coarse logs, once left in the woods, to feed forest fires, are now taking to the mills for sawing.

THE newspapers of Winnipeg and the districts to the westward frequently mention what they term the building boom that is prevailing in numerous towns. The wheat crop of the Canadian Northwest begins to tell on the improvement of the country. It is likely that next spring it will be found that a large amount of lumber will be wanted along the Canadian Pacific and its branches.

HERE is something of interest to parties who are operating, or propose to operate, in the Spanish River district of Ontario. The Sable & Spanish Boom & Slide Company has applied to parliament for an act to confer on the company named the right to attach booms to the shores at the mouth of Spanish River, at points south and east of Rock Island, and to construct and maintain piers from a point or points on the north shore of the river, to the island, and from the island south and east to the main shore, and to use booms in connection therewith. Of course the company asks the right to collect tolls on logs and timber run through the works.—*Northwestern Lumberman.*

CONCERNING the failure of the Rainy Lake Lumber Company, of Rat Portage, Ont., a Canadian financial journal says:—"The Rainy Lake Lumber Company, limited, of Rat Portage and Winnipeg, is one of the many enterprises of great promise which began with the golden area of the Northwest, and drooped with the waning fortunes of the boom. The capital was \$350,000, in 3,500 shares of 100 each, of which \$312,000 was understood to have been paid up. Among the chief promoters were Messrs. J. Ross, C. P. R., contractor; L. J. Dawson, M. P.; W. J. Alloway, and Hugh Sutherland. During the boom the assets of the company were estimated roughly at \$1,000,000, and the local bank that knew them felt proud that they could boast of such a customer. Mr. Sutherland, who was the president, retired some time ago. The company had been endeavoring for some time past to issue bonds, but without much success, so that the recent assignment took no one by surprise. To add to their troubles their hands struck last June, as their wages were somewhat in arrear. The liabilities are in the vicinity of \$200,000."

OUR TIMBER RESOURCES.

DISCUSSING the proposal to increase the duty on logs exported from Canada, the *Lumberman's Gazette* says:—

"There would not be much gained by the adoption of such a prohibitory tax, except that the timber resources of the Dominion would be preserved. If there is any danger of such a tax being imposed Michigan men will cease purchasing Canadian timber limits and they will remain on the hands of the Government totally unproductive. The limits which Michigan men are purchasing are in a portion of the Dominion which will not very soon be brought under settlement unless the lumbermen prepare the way, which they will not soon do if the

matter be left to the development of the Canadian lumbermen."

THE *Gazette* has not an adequate conception of the energy of the men engaged in the lumber business in Canada, or of the capital invested, or capable of being employed in that trade. If it were a fact that the timber limits purchased by the Americans would remain unproductive if not sold to them, it would still be worth considering whether it would not be better to allow them to remain unproductive, or unremunerative, far the present, than to allow American lumbermen to drain our resources, to the disadvantage of our own manufacturers, while the timber resources of their own country were preserved and held until their value would be enhanced by the stripping of our limits.

BUT the position of the custom rates present the question in another light. The Canadian export duty on logs is half of the American import duty on lumber, which gives the American manufacturer who purchases Canadian limits and conveys the logs across the lines to be manufactured an advantage over the manufacturer who turns the logs into lumber in Canada and exports the manufactured article. The question is not, therefore, whether the limits are to remain unremunerative for a time, and increase in value, or be sold to Americans, but whether the Canadian authorities will so arrange the export duty on logs as to place the home manufacturers in as good a position as the Americans so that in the competition for business they will not, by custom duties, be placed at a disadvantage. The opinion that the timber limits will not be utilized at all, unless by Americans, is absurd in the face of the amount of capital employed in the lumber business in Canada, but even if the limits would not be stripped as quickly if left to Canadians alone the country would receive additional immediate benefit by having the lumber manufactured here and the prospective advantage of the increased value of the standing timber.

THE *Northwestern Lumberman* states that the stumpage is higher in Michigan than in Canada. This, if correct, would appear to neutralize the disadvantage of paying duty on lumber were the Michigan lumbermen to manufacture only the timber in their own state, but when they cut timber in Canada the stumpage is the same and when they carry the logs to Michigan and cut them there the duty is less.

THIS a question which should receive ample consideration and immediate attention, as it is not only the lumbermen themselves that are interested, but the whole country. As the lumbermen are primarily interested, however, they should take the initiative in endeavoring to have the disadvantage under which they are placed at present removed, either by increase of the export duty on logs or by some other means.

IN this connection the result of the negotiations for reciprocity will be awaited with interest.

LUMBER AND TIMBER.

THE outlook for sawn lumber is by no means unpromising. American advices show some good features. Building has been very active in American cities. Brooklyn, for example, has built 3,665 houses in eleven months of the present year against 3,050 in twelve months of last year. The tone of the Chicago market is firm and inquiry still frequent; but the abrupt closing of the season of navigation makes it nearly certain that the year's receipts will fall below those of last year. The *Northwestern Lumberman* predicts that values will remain steady till the February trade begins. Respecting the Saginaw Valley the same authority says:—"This fall find the logs in the Au Sable which will be hung up in 'pickets' and 'jams' less than 15,000,000 feet. Last year there was hung up, when the season ended, over 80,000,000 feet. This, of course calls for a large cut of logs the coming winter. Besides a small amount of logs to commence on next season, the docks contain not over 45,000,000 or 50,000,000 feet of lumber, being over 20,000,000 less than last year."

DEMAND for white pine in New York continues good, both for local use and export. House-builders and furnishers there are very busy, and buy in large quantities. Prices for

yellow pine are very low and the trade being done in that article is small compared to the total capacity of the market. Lumber stocks in Albany are fairly assorted, but are estimated at a fourth below that of last year. A prominent dealer of that city places the November distribution from that city at 20 per cent over the same month of 1884. Dealers are feeling confident, prices are not only sustained but advancing. In Boston, too, according to advices second week of the present month, the increase in price is felt more perceptibly every day.

WE hear from Ottawa that Gilmour & Co. have made definite arrangements for the disposal of the coming season's cut of their deals at satisfactory prices and we are told of one or two other mills which have arranged a basis with buyers for their whole "mill run." A topic of current conversation in lumber circles at the capital is the sale, now said to be about consummated, of the Levi Young estate to G. A. Grier, of Montreal, and R. A. & J. Stewart, of Newry, Ireland, and St. John and Miramichi, New Brunswick. The price mentioned is \$600,000. Application for incorporation as a joint stock concern has been made in the proper quarter by Messrs. Bronson & Weston, well-known Ottawa mill men. It is stated, besides, that another long-established concern in the manufacture of wood goods will follow suit before long.

THE timber market is at present comparatively stagnant; the season having closed, but little indication is given of present activity or enhanced prices. There is, however, in the minds of well-informed persons, a feeling that the spring will witness an improvement. This view is strengthened by the recent advance in the value of iron. The supply at Quebec is, besides, said to be distinctly less than in former seasons. Hardwood timber and lumber remain unchanged in price. The feeling is upward in maple, basswood and black ash, which are used for furniture making, but no change in price will be made till after the first of January proximo.—*Monetary Times.*

CUTTING PRICES.

Cutting of prices is a suicidal policy for all concerned; it never does any one any good, not even the purchaser, for he more than loses in the quality of the goods the small amount of cash that he is supposed to make on the purchase. Generally, however, the laborer that produces the goods is the first one to lose in this process. The manufacturer feels that he is obliged to lower his prices in order to compete with his rivals, and, as the cost of the goods is already as low as it possibly can be to allow any degree of profit, he finds that the easiest way to come out whole is to reduce the wages of his workmen, and this is the process usually employed. The only safe plan is for our manufacturers to combine and arrange a basis of rates for goods, according to the cost of production, allowing a reasonable profit, and then to stick to it. This is the safe plan, but we are afraid it will be a long time before they can be made to realize the destructiveness of the present plan to all concerned sufficiently to abolish it.—*The Furniture Worker.*

Improved Machinery.

NEVER before were the wood workers and lumber manufacturers of New England more anxious to secure the latest improvements in wood-working machinery. Future profit in the manufacture of lumber must consist in the most intelligent working up of the odds and ends, in reducing the bulk of the sawdust heap and the slab pile, and in the employment of such machinery as shall show the minimum labor bill and the maximum quality manufactured. The saw mills of the East are far behind those of the West in economical appointments and in actual capacity for business. The successful wood-worker of the future must keep abreast of the practical improvements of the day.

It is Simply Marvelous.

Mrs. Theron Burr, of Adrian, Michigan, writes that West's World's Wonder or Family Lotion cured her daughter of Rheumatism which she had been afflicted with from childhood. It is infallible. Price 25 and 50 cents per bottle. And sold by J. D. Tully.

HARRIS, HEENAN & Co.

124 AND 126 QUEEN STREET, . . . MONTREAL.

Patent Stitched—Steam Power Pressure Stretched—Oak Tanned

TESTIMONIAL
 IMA GOULD & SONS, CITY MILLS,
 Nov. 13th, 1884.
 Harris, Heenan & Co.
 Dear Sirs.—Your Patent Sewed Belt has been in use in our "City Mills" for some time. We are thoroughly convinced of its superiority over any belt, American or Canadian, we have used in an experience of over 30 years. It stretches so little, and gives so little trouble, that compared with riveted belting, the sewed belt saves double its price in time and labor saved. We heartily recommend it to manufacturers as the cheapest and most satisfactory belt in the market.
 Yours respectfully,
 W. C. MARSHALL, Mgr.



TESTIMONIAL.
 FACT, BERRY & Co., CASAL HOSE SHOES AND
 150, W. W. WORKS, MONTREAL, 16th Nov. 1884.
 Messrs. Harris, Heenan & Co., Montreal.
 I have pleasure in recommending the belting manufactured by Messrs. Harris, Heenan & Co. of this city. After thoroughly testing it, I find it greatly superior to any belting that has come under my notice and fully equal to all they claim for it, and certainly without an equal for cross or double belting.
 CHAS. R. MLLACOTT,
 Supt. H. S. & H. N. Dept.

LEATHER BELTING!

*The Best, therefore the Cheapest, Belt in the market.
 Replaces, when used, all others.
 More Pliable and Durable, especially at the splices.
 Single equals medium double.*

*Stretches but little, always retains its original width.
 Superior for Cross or Double Belts.
 Runs straight and true, does not start at the laps.*

25 per cent Stronger, 33. More Lasting, and 12½ Heavier, than any other Leather Belt.

TIMBER RESOURCES OF BRITISH COLUMBIA.

The extension of railways into wild and remote regions is the most practical way to develop their resources, whatever they may be. One country has a surplus of what another often very much requires, and the easy and rapid transit by railway enables commercial men and capitalists to visit places where the material they require, or the markets in which to sell, may be abundant. Lines of railways crossing over plains and mountains frequently save to the traveller thousands of miles, and reduce to the consumer the prices of commodities, that under other conditions would be very dear. In this moralizing the writer has before his mind the three or four great lines crossing the continent of America, the largest and most direct of them being the Canadian Pacific Railway, which traverses entirely British territory, and extends from the Atlantic to the Pacific ocean, a distance of 3,506 miles. In its course this great road cuts through many mighty forests, especially in the comparatively unknown timber country northwest of the noble Ottawa, and along the banks of the picturesque Rainy river, where our "only General" made his first reputation. The lumbering resources of this vast area are very great, and to some extent will doubtless before long be utilized; but compared with those further on in British Columbia they are almost insignificant. Unfortunately where there is an abundance of anything there is also a tendency to waste, and certainly that is the case with timber in all parts of Canada, more of it being burned and otherwise destroyed than reaches the market. England receives yearly from Germany, Sweden, Norway, and other European countries, large quantities of manufactured timber goods, which, with the cheap and easy transit there is now to the Atlantic coast, and then by rapid steamers to different points in the United Kingdom, might be readily supplied from the so-called waste of Canadian forests.

We are next summer to have in London a great Intercolonial Exhibition, and doubtless

any idea calculated to increase the volume of trade between England and her dependencies will at this great gathering, from all who are interested, receive due consideration. Canada is keenly alive to every thought and circumstance likely to be to her interest, and this question of manufacturing the goods rather than sending the raw material, is one to which she will probably give some attention. It is, however, with the almost limitless forests of British Columbia and their giant timber, that in this article we chiefly intend to deal. The entire length of that salubrious, but comparatively unknown Province, is now traversed by the Canadian Pacific railway, which, from the fertile prairies of Manitoba and the Northwest, crosses the Rocky Mountains, and enters British Columbia on its eastern border, descending the western slope to Port Hardy, on the Pacific Ocean. The iron horse now screeches through British Columbia forests, the timber of which is the largest on the surface of the globe, logs frequently squaring 40 inches at the Port Moody Mills. The following extract is from a popular work on this lumber:—"It is a tough, strong wood, well adapted for heavy beams, but it is also good for planks and deals. It makes excellent masts and yards, and is used for shipbuilding and housebuilding. It grows to the height of from 150 to 250 feet, and attains to a thickness of six to nine feet, and carries its size well up. Dressed masts of from 36 to 45 inches in diameter, at one third from butt, and with proportions for the required length, have been supplied from the Douglas fir forests of British Columbia. In Australia, New Zealand and Great Britain, this timber is known as Oregon pine, though Oregon does not export it to those markets. At present the chief seat of its export is British Columbia and Puget Sound, on the opposite shore of the Gulf of Georgia and on the bays and indentation along the Straits of San Juan, which a few years ago were in dispute between England and the United States, but on the award of the present Emperor of Germany, then King of Prussia, was given to the latter country. This magnificent timber is chiefly

found on the outside or Pacific coast front of the western range of the Cascade Mountains, as it would seem to require for its growth the warm, moist and salubrious climate peculiar to the sea line of those mighty hills. The Douglas pine forests are now difficult to explore, but being tapped by the railway, together with the general advance of progress, will doubtless soon overcome that difficulty. The railway will carry the manufactured lumber to the east of the Rockies, where it is very much wanted by settlers, who are now rapidly filling up Manitoba and the vast plains of the Northwest. Hitherto the product of British Columbia could only be brought to the eastern markets of America or to Europe by ship, coming around Cape Horn, or through the straits in the extreme south of Magellan, but now the Canadian Pacific railway is a direct communication between the forests of the Pacific coast province and the Atlantic ports, as well as to all the markets of Canada and of the United States east of the Rocky Mountains. In the valley of the Fraser, the largest river in British Columbia, there are many kinds of timber, but up to the present, commercially, they were of little value, simply because there was no outlet except by ships to countries on the other side of the Pacific ocean or to Europe. Now, however, a deal of this timber, which consists of oak, ash, spruce, cedar and fir, will be taken by the railway to the Manitoba plains, where it is much wanted, and some of it may even reach Quebec for shipment to England. To anyone anxious to preserve the world's timber supply, how sad to see its rapid destruction, often wantonly, by squatters and others in those countries where it is now so abundant. The great thing is to clear the soil, and a settler who may take up land on which there may be heavy timber, will often get rid of it the following cruel but somewhat ingenious fashion. He will take a large auger, and bore two holes into the heart of the giant tree, one hole slanting up, the other down, and meeting inside in the great trunk. Then he will fill into the upper one small pieces of an inflammable substance and set fire to them. The

tree will soon catch, and the lower auger hole, acting as a blast pipe, will cause the fire to hiss and roar in the body of the doomed tree until it is destroyed. Let us, however, hope that the rapid settlement of population on the fertile prairies of Manitoba and the Northwest, and the growing requirements of civilization, will find other uses for this article so necessary for homes and comfort rather than in such a merciless way reduce it to ashes. With the depression existing in almost every branch of English trade, many a young fellow with a little capital, and a knowledge of the timber business, would do a worse than take a trip to British Columbia to see if its mighty forests do not offer a field for profitable investment in the near future.—Timber.

QUEBEC CULLERS' OFFICE.

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

	1883.	1884.	1885.
Waney White Pine	3,781,742	2,198,547	2,876,753
White Pine	7,405,523	3,707,150	2,820,045
Red Pine	498,111	327,735	73,766
Oak	1,010,822	772,290	1,566,908
Elm	800,631	657,010	1,019,932
Ash	262,448	451,984	237,695
Bass wood	2,244	4,544	96
Butternut	1,119	2,134	3,265
Tamarac	37,730	10,280	3,622
Birch & Maple	138,803	202,440	381,085
Spars	— pcs	41 pcs	17 pcs

Quebec, Nov. 20.

JAMES PATTON,
 Supervisor of Cullers.

Advice to Mothers.

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

LIVERPOOL STOCKS.

From the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Dec. 1st 1884 and 1885, and also the Consumption for the month of Nov. 1884 and 1885:—

	Stock, Dec. 1st 1884.	Stock, Dec. 1st 1885	Consumption for the month of Nov. 1884.	Consumption for the month of Nov. 1885.
Quebec Square Pine.....	315,000 ft.	230,000 ft	144,000 ft	151,000 ft
Waney Board.....	425,000 "	455,000 "	8,000 "	4,000 "
St. John Pine.....	25,000 "	28,000 "	12,000 "	8,000 "
Other Ports Pine.....	70,000 "	81,000 "	3,000 "	1,000 "
Red Pine.....	57,000 "	31,000 "	3,000 "	91,000 "
Pitch Pine.....	602,000 "	419,000 "	40,000 "	110,000 "
" Sawn.....	305,000 "	562,000 "	127,000 "	8,000 "
Planks.....	51,000 "	90,000 "	4,000 "	1,000 "
Dantle, &c., Fir.....	59,000 "	59,000 "	4,000 "	13,000 "
Sweden and Norway Fir.....	43,000 "	65,000 "	7,000 "	78,000 "
Oak, Canadian and American.....	277,000 "	333,000 "	32,000 "	71,000 "
" Planks.....	177,000 "	204,000 "	7,000 "	0,000 "
" Baltic.....	0,000 "	5,000 "	15,000 "	14,000 "
Elm.....	22,000 "	45,000 "	3,000 "	7,000 "
Ash.....	41,000 "	26,000 "	2,000 "	64,000 "
Hlarch.....	04,000 "	102,000 "	20,000 "	0,000 "
East India Teak.....	36,000 "	172,000 "	30,000 "	0,000 "
Greenheart.....	28,000 "	115,000 "	3,000 "	2,000 "
N. B. & N. S. Spruce Deals.....	27,674 stds	21,411 stds.	0,000 stds.	0,000 stds.
" Pine.....	1,028 "	440 "	6,727 "	9,056 "
Quebec Pine Deals & boards.....	6,717 "	7,761 "	3,756 "	3,259 "
" Spruce.....	860 "	770 "	878 "	878 "
Baltic Deals, &c.....	3,895 "	4,553 "	80 "	18 "
Baltic Boards.....	31 "	325 "	766 "	324 "
Prepared Flooring.....	2,059 "	1,624 "		

TIMBER FOR SINGLE TREES

The *Wheelerwright* says:—It is exceedingly important that buggy singletrees should be sawed properly, especially if they have been turned green. If the sawing is not done properly the ends will be all kinds of sizes and shapes. In fact not the ends only but the whole singletree will shrink in seasoning so as to make a variety of shapes and sizes. Many of them will be ill-shaped, scarcely resembling the original design. The grain should be uniform, that is, it should cross each singletree the same way. If this point is not attended to the shrinkage tending so much more to decrease the circle of the grain than to contract the grain will have results known to the trade. It is better to have the grain cross each singletree in the same direction even if they are to be seasoned before turning. We do not attempt to say they will be stronger through the arrangement referred to, but it will certainly prevent much warping and twisting if the grain is either square across, what is better known as bastard, or if the grain crosses the singletree thin way up and down.

Singletrees for buggies and carriages, especially second-growth timber, should not be kiln-dried to season it. Yet it is necessary to use a kiln for a day or two unless these pieces can be loosely cross-piled in the open air protected from the sun and rain. If the temperature is not summer heat, or the timber has been cut some little time, it will stain, giving the all-white wood a reddish cast so strongly resembling the red or heart wood as to be so classified by the inexperienced. One or two days heat will not injure the fibre, but to thoroughly season the singletree in a kiln, with dry heat, will surely deteriorate the strength. The older and brasher the fibre the greater the injury, especially if overheated a little. The injury is sustained even if from a young and thrifty second-growth tree, but possessing superior vitality, it is less noticeable. In the rapid processes for seasoning lumber, steam or other means of artificial dampening is always adapted. This is practically impossible with a class of goods where the moisture would stain and injure the wood. Kiln drying will not injure the fibre if the heat is kept at a mild summer heat, but with this temperature it would require several weeks, whereas the modern way seems to be to take the timber from the log and ship it out bone dry in one week's time. This quick seasoning simply means to crust over the outside and bake the exterior until its life is seriously injured, often almost totally destroyed.

Singletrees are graded into three qualities—second growth, mixed second growth, and forest. The mixed second growth is a half-red and white or all red, but second growth many of them more serviceable than the all white. The forest is a common grade of timber not thrifty enough to be classified with the two better grades. Some manufacturers grade their singletrees second-growth, select forest, and forest; the second growth grade will take the half-red and white and the choicest of all-red that are strictly second growth. The select

forest differs from the mixed second growth only in taking in what the name implies, a "select forest," but not second growth. In classifying as second growth, select forest and forest, the distinction is not made as clearly and justly as in substituting mixed second growth for the select forest. Selecting the best of the forest can but weaken the forest grade. The mixed second growth are sold at a price dividing the difference between the second growth and forest. When turned from green timber the warpig, twisting and springing form no small per cent. of the whole. The percentage is greater with small, young, tough, thrifty growth than with the larger trees and an ordinary growth. This percentage is farther increased by careless sawing. The grain crossing the singletree diagonally makes a very undesirable singletree, especially if turned green. These singletrees that have sprung out of shape in seasoning need not be thrown away, but can be straightened by using the singletree as a lever with the fulcrum at the centre of the point needed to be straightened. With a quick pressure exert sufficient strength to force the singletree to or a little beyond a straight line, and the wood will retain this shape. If badly sprung and a very tough fibre it will be necessary to first steam the singletrees. This discolors the wood somewhat and takes the additional time. Singletrees and spokes that are practically dry will spring to some extent if stored or exposed to an unnatural or excessive heat.

Waggon-makers or repairers can save their stock from worms by oiling with linseed oil. Singletrees, doubletrees, neck-yokes, spokes and cross-bars that are of white hickory and are kept in stock for a year or more will be eaten by worms or kept in a dark place or protected as above. Coal and kerosene oil are good also, and the expense of applying is but little. Linseed oil is preferable, as it acts to some extent as a wood filler, filling the pores, thus aiding the painting which follows in its proper place. A boy can take a rag dipped in the oil and go over a large number of pieces in a day's time or a rat can be used long enough to admit of several dozen at a time being put in and picked out one at a time, and put where they can drip for one or two minutes. The expense of this is much less than those who have not had the experience might imagine, and far less than the loss of stock by worms. Some manufacturers oil all their white hickory stock before shipping, it being applied with a belt similar to other belting processes. The flat part of the buggy singletree is left unbelted by some factories to give the carriage-maker more timber to work on. This is a good plan aside from the unfinished look of the goods. But it will never do to ignore look even if they do cost something.

JONATHAN BOICE, of Grand Rapids, Mich., lately purchased of O. P. Pillsbury & Co., a tract of pine in Roscommon county, same state, estimated to cut 50,000,000 feet, at \$210,000. The logs will go into Muskegon river, and be floated to Muskegon for manufacture.

MAINE TIMBER.

Lumbering operations have been prosecuted vigorously for years in Maine and the impression is quite general that the forests of the state are quite denuded of merchantable timber. But year after year large amounts of logs are run down the stream, and we believe the Penobscot has contributed about 300,000,000 feet to the general stock this year. The hardy lumbermen of that state are again in the woods lifting up their axes against the trees, and a paragraph in the *Bangor Commercial* states that "there will be more lumber cut on the south branch of the Dead river the coming winter than ever before in one winter." The names of a number of lumbermen and the amounts they will cut are given, and the *Commercial* adds:—"One can judge of the density of our Maine forests, by considering that this whole amount of lumber, viz.: From 15,000,000 to 19,000,000 feet, will be cut from a strip about 12 miles long and seven miles wide." Michigan contains forests which are capable of turning out a good deal more lumber from an equal extent of territory, but it cannot be denied that the Dead river country is a pretty good lumbering district, considering that Maine has been extensively lumbered for 50 or 60 years. If Michigan shall be capable of doing as well after she has been undergoing the process so long, it will be very fortunate for those who inhabit the state a quarter of century hence. It will be able to do so if care is taken not to destroy the young pines, and the advance of agriculture does not result in bringing under cultivation too great an extent of forest land. Maine has been favored by having a large amount of forest land that could not be profitably cultivated and the forests, left to nature, have been rehabilitated. Michigan has some, but not so great an extent of such land; it might be fortunate if she had more.—*Lumberman's Gazette.*

QUEBEC SHIPPING INTERESTS.

A comparative statement of the number and tonnage of sailing vessels and steamers which entered at Quebec, inwards and outwards for the years ending December 31st, 1884 and 1885, which was prepared by Mr. L. G. Belleau, is published by the *Chronicle*. The exhibit for 1885 shows a slight increase in the volume of business done when compared with the figures of the previous year. In 1885, sixteen more vessels visited Quebec than in the preceding shipping season. The total amount of tonnage in 1884, was 640,365 against 667,112 in 1885, making a difference in the way of increase of 747 tons. In 1834, on the contrary, the decrease over the returns of 1883 was 139,407.

In British ships arriving in Quebec, we may note a total of 306 in the year lately closed, as against 317 in the year 1884,—a loss of 11 ships from the United States, Italy, Belgium and Austria we had no ships last year, but there were sent us one from France, 28 from the German Empire, 239 from Norway and Sweden, one from Denmark, three from Russia, one from Holland, and one from the Argentine Republic. The increase in the number of Norwegian and Swedish ships arriving here in 1885, as compared with the number returned in 1884, was 35; there is also an increase in the tonnage from the German Empire, of one vessel over that of the previous year. Russia, which sent us four ships in 1884, sent us only three in the season just closed. A decrease may also be mentioned in the tonnage from France, which sent three vessels last year, and only one this year,—and Denmark which sent us three in 1884 and but one in 1885. The number of men employed in 1884 was 17,080, as against 15,990 in 1885,—a decrease of 1,090 men.

Mr. Belleau's statistics also show the date of the opening of navigation at the port of Quebec in each year since 1830 to the present time, as well as the date when navigation closed. In 1885, the first Montreal steamer of the season arrived here on the 7th of May, while vessels from sea reached this port on the 5th May. The last ships sailed for sea on the 21st of November. The return showing the number of vessels entered inwards and outwards at this port from 1849 to 1885, inclusive, is instructive and worthy of attention. In 1885, inwards 580; outwards, 479.

WHEN TO BLOW OUT.

Our *Rothsay* correspondent propounds this question: "Is it advisable to blow out a boiler under 35 or 40 pounds pressure?" and doubtless engineers throughout the State will give sufficient answers. It is to be remembered first of all that the steam boiler is subject to expansion and contraction, and under an established and known margin of safety both these operations, incidental to the working of a boiler, will regulate themselves without giving anxiety to those in charge. Every engineer should have definite information regarding, not only the average capabilities in ordinary service of the appliances he uses, but also of whatever extra strain they will bear or energy they may be required to exert, under unusual circumstances. Thus it may be frequently found necessary to blow out mud from the drum of a boiler, and this must sometimes be done without reference to steam pressure. It is done with from 30 to 45 pounds pressure. An accumulation of mud in the drums is to be avoided; unless removed it will dry up and form a crust or cake which will prove injurious. Experienced engineers advise blowing out under these circumstances. On the other hand, when it is intended to shut down for the purpose of cleaning out the boiler, the practice of blowing out under such pressure should be avoided. It should never be forgotten that a steam-boiler requires careful handling, and a careful engineer would not blow out under excessive pressure, because he ought to know that when a boiler is subjected to sudden contraction it will be injured to a more or less extent. No absolute rule can be made; the thing to do is to know all that can be known and follow one's best judgment.—*Wood and Iron.*

A TIMBER LADEN SHIP ON FIRE

QUEBEC, Dec. 11.—Captain Simpson, of the ship *Coringa*, from London, at New York, reports on November 17th at noon in lat. 43.57, long. 33 20, sighted a bark in the northward, showing signals of distress; lay to until he ran down to us, proving to be the bark *Nora* Hansen, from Quebec for London with deals, 28 days out. She was dismasted, had seven feet of water in the hold; the pumps were broken, and the captain wished to be taken off as the ship was becoming water-logged. The crew, consisting of 18 men all told, came off in their own boats. I sent men back in the boat and boarded the bark to get all the provisions we could from her, and then as night was coming on and the wind and sea increasing, set fire to the wreck and proceeded on our course. The bark *Nora*, Capt. Hansen, cleared at the Quebec Custom House on the 19th October for London with the following cargo by Messrs. Bryant, Powis & Bryant: 7,206 bright pine deals, 1,320 spruce deal ends, 22,023 spruce deals. The *Nora* was 953 tons burden, built in 1857 at Alton, Germany, and hailed from Drammen, Norway, where she was owned by G. Samuelson and others, and partly insured.

The Greatest Inventor

In reply to "A Pupil," we should certainly say by far the most prolific inventor in connection with wood-working machinery was the late Sir S. Benthams, whose patent specifications of 1791 and 1793 are marvels of their kind, and either describe or foreshadow nearly all the wood-working operations in vogue at the present day; in fact several of his inventions have been patented again during the last twenty years. In point of fact there is little doubt that Sir Samuel Benthams was a most remarkable man, although he does not by any means occupy that "niche in the temple of fame" to which his inventive genius undoubtedly entitled him.—*Timber Trades Journal.*

LATE figures in the *Toronto Globe* make it appear that receipts of lumber at that point this year had been 11,000,000 feet less than in 1884. A correspondent to the same paper explains the apparent deficiency by the fact that receipts this year for local consumption, not being reported with receipts for shipment, have been sufficient to raise the total to about that of last year.

Chips.

It is reported in Eau Claire that H. C. Putnam has sold 800 acres of pine land on the Red Cedar, to Thos. Carmichael, for \$40,000.

LUMBER to the amount of 15,000,000 feet has been shipped from Duluth this season that passed out of Lake Superior by way of the Sault Ste. Marie canal.

IN some of the camps in Michigan vaccination is being required. In Thompson Smith's Sons' camps, Cheboygan county, a physician went the rounds and treated all the arms that had never before been sore.

THE receipts of Lumber at Oswego, N. Y., in November amounted to 18,500,000 feet, an increase of 6,000,000 feet over the same month last year, and 170,000,000 feet have been received since the opening of navigation, being 20,000,000 feet less than during the same period last year.

GEN. SMITH, of the Barnhart Lumber Company, at Duluth, has been instrumental in the breaking up and arrest of a gang of thieves, who stole lumber from the companies piles, ran it off in small boats, and sold it, and committed other depredations of a serious character.

A SPECIAL timber agent has been investigating the Northern Pacific and the Manitoba Improvement Company timber trespass cases. He reports to Commissioner Sparks that these corporations have caused to be cut from the public domain 45,100,000 feet of lumber and bridge timber, 84,744 railway ties, 15,400,000 shingles, 32,035 cords of wood, and 20,000 cedar posts, valued in all at \$613,400.—*Winnipeg Commercial.*

A FOSSIL oak has been discovered in the bed of the Rhone—dark as ebony, hard as iron, supposed to have been 3,000 years in the bed of the river. This tree is 150 feet high, 58 feet cube, and considerably over 120,000 pounds in weight. This reminds one of other phenomenal trees. As, for example, the oak of Allouville, bearing a chapel in its branches; the chestnut of Aetna, covering 30 horsemen; the tree of Augustus, in the hollow of which Caligula gave a dinner to 40 guests; the plantain of Xerxes, which sheltered himself and 100 guardsmen; the plantain of Cos, whose trunk measures 30 feet in circumference, and whose branches are propped up by marble columns. In the churchyard of La Haye de Routot, in Normandy, there is an immense yew that once covered the whole cemetery. It is 1,80 years old and grows every day.—*Laclede, in Montreal Gazette.*

As the schooner Mercury, lumber laden, was making the passage from Ludington to Chicago, during the great snow storm and gale of last week, the deck load was washed overboard, but the vessel was kept on her course, and stood up well. About midnight, John Anderson, one of the crew, was swept overboard by a huge wave. It was impossible to round to and pick the man up, and the schooner was kept on her way, though the cries for help of the unfortunate sailor could be heard above the howling of the sea. The captain was at the helm, and after a few minutes had elapsed he was astonished to see Anderson hanging on to a fender and trying to climb on board. He was quickly rescued from his perilous position. He had at first been swept some distance from the schooner, but little ahead, and managed to swim until he could get hold of the fender. His escape in such a sea seems like a miracle. The Mercury arrived at this port after a perilous passage.—*Northwestern Lumberman.*

SHINGLES AS SUBSTITUTES FOR SIDING.

"Why are the walls of all these old houses in Nantucket and, for that matter all along the coast, covered with shingles instead of clapboards?"

"Probably because they have such high winds here and the shingles are warmer; I suppose most likely they are cheaper, too."

"At any rate they are perfectly lovely to look at, so delightfully quaint and old-fashioned."

"I think they are just horrid. They make

all the houses look like poverty stricken pig-pens."

We do not see fit to set the speakers right either in the interests of building or of aesthetics. As a matter of fact the reason given for the use of the ancient shingles instead of the modern "siding" or clapboards, were almost the only ones that could have been hit upon that were not correct. In itself a covering of shingles is not as warm or impervious to the stormy winds that rage along the New England coast as a layer of clapboards properly put on and well painted. The reasons for the change in this particular item in building are not of much practical consequence now but the change itself is interesting as an instance of the natural evolution that obtains in building as in everything else.

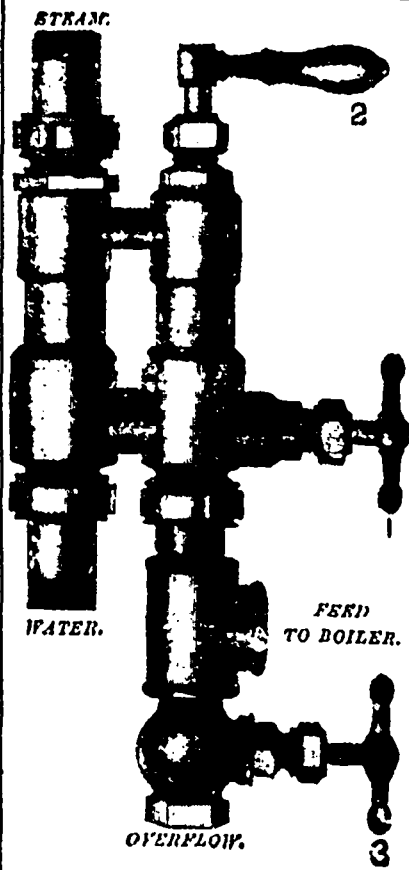
Hands were made before forks or saw mills, and shingles were doubtless used in former times because they could be made "by hand." The cross-cut saw with a man at each end was the first and for a long time the only saw mill extant. It was much easier to cut logs across the grain into short blocks, split the blocks into thin pieces, and with a "draw shave" on a rude horse reduce them to the tapering shape required, than to saw the logs into long thin boards one man above the log and the other in the saw pit beneath. Moreover after the boards were sawed, unless they were well seasoned and painted, they would split and check when exposed to the weather. There was no time to wait for lumber to season and paint was among the luxuries. In the case of the shingles, too, it was of less importance what kind of wood was used, anything that would split true and freely and shave easily would answer, although the latter quality was of less consequence, for muscle was cheap in the old times. Only a few years ago in hill towns of New England, chestnut shingles were made—they may be still for all we know—and served an excellent purpose, barring their propensity to stain the work below them and to kick up at the corners, the latter habit imparting a roughness to appearance that might now-a-days be reckoned a merit rather than a defect.

These old shingled walls are far more common along the seaboard than inland for which there is doubtless a natural reason. Among the hills in the fresh water regions, there is hardly a mountain brook large enough for a three years old trout to turn around in that will not be found at some part of its course bestridden by the ruined skeleton of a primitive saw mill, in which the "up and down" saw in its unwieldy frame impelled by an "overshot" or some other kind of shot-wheel, made frantic plunges through the rough log at the rate of one stroke every second, more or less, according to the size of the log through which the jagged teeth were gnawing their way and the flow of water. Along the coast and especially on the islands this local motive power was lacking and transportation from the interior was by no means as easy as in the present year of grace.

Doubtless shingles will last longer than clapboards, especially if both are unpainted, but it is not to be assumed that our venerated ancestors took this durability into account. These same ancestors of ours had so many shining virtues that it is not necessary or fair to ascribe to them more than their due. It was stern necessity, not pure wisdom that prompted them to use shingles. In applying clapboards the nail heads are left exposed while the overlapping courses of the shingles cover them; perhaps this exposure of the iron to the salt atmosphere has been one reason why the old fashioned over garment has been maintained along the coast, but this is more probably the result of the imitation and conservatism that make certain styles of architecture and modes of buildings seem to be indigenous in certain localities.

Finally and in conclusion, sawed shingles—sawed by machines each one of which does the work of 100 men—cost somewhat more than the usual cost of horizontal siding; other things being equal they will last longer, if they are well lined with building paper.

As for the respective merits of the two materials in point of looks, that question is respectfully referred to the speakers who began this discussion, and to others whose opinions are equally well-founded.—*The Builder.*



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MONTREAL, QUE.

CEDAR.

It occurs to us that if red cedar was properly introduced in this market, and its merits once thoroughly known to the consumer, it would become a very important factor in the lumber interests of the city. It is a matter worthy of comment that red cedar fence posts and red cedar dimension is in less demand in this market than in any other of the country; and this, too, in the very face of the fact that, of all timber that grows, there is none possessing such lasting, such imperishable properties, if you please, as red cedar for fence posts. We recognize the fact that it cannot be secured in this market, so as to be sold to the consumer at anything like the prices for which white cedar is offered, but we see no economy in paying 15 cents for a white cedar post that will last but five years when for 30 cents a red cedar one can be had that will last a generation of years.

We were not a little surprised to know that some time since a couple of Tennessee gentlemen shipped a car load of red cedar posts to this city, and came in person to dispose of them and, if possible, lay a foundation for future trade, but their experiment resulted in a deplorable failure, not only to receive a consideration for them that justified them in bringing them to this market, but in making any arrangement for future trade.

We cannot understand why it is that a wood possessing such valuable merits, not only for posts, but for the building of clothes-closets in dwellings, is so little in demand. Where cedar is used in interior work vermin and moth will be unknown, and it is susceptible of beautiful finish that adds to its value as a wood for house-building purposes.—*Lumber Trade Journal.*

Market Reports.

TORONTO.

From Our Own Correspondent.

DEC. 24.—The lumber trade during the last two weeks has been nearly as brisk as during the summer months. Owing to the fine open weather building both in brick and wood have gone on with but little diminution, but during the holidays we do not look for much trade. The amount of lumber piled off at the railway yards has not varied much for the last month past, except in some particular lines. Good cull boards are tending upwards in price. The quantity here now is much smaller than when I wrote you last, and no large stock remaining at any of the mills north of this place. The demand for this grade of lumber is good, owing to the number of speculative buildings in course of erection. The most difficult class of lumber to make sale of at present, on this market, is the coarser grades of shipping cull boards. The cause for this is obvious, builders can use a good grade of mill culls to as good advantage, and save from two to three dollars per M by so doing. I feel convinced, however, that on the opening of the spring of 1886, it will be found that we have no overstock of any kind of lumber, above the legitimate requirements of the trade on our own local markets, of course it will be understood I refer to that already cut and in stock. It would be premature at the present time to speculate as to the probable cut of logs during the present winter; this much, however, is certain, that owing to the lack of sufficient frost to harden the swamps, thus far hauling has been slow and unsatisfactory, and but small progress has been made up to the present time, so that the crop of logs for next season's cut may not prove as large as anticipated.

Efforts will be made by the lumbermen here to get the shunting of cars made free during the next season to all sidings westward of the points of arrival. This concession should certainly be granted, as it is manifestly unfair on the part of the railroad companies to perform the same service eastward free, and charge from \$1 to \$2.50 for a similar service westwards. In fact I have never heard any defence made by the railroad companies in regard to such charges, and most certainly no reason that will bear discussion can be made, and in the interests of dealers and consumers alike it is to be hoped that this concession will be granted.

Mill cull boards and scantling	\$10 00
Shipping cull boards, promiscuous widths	12 00
Stocks	13 00
Scantling and joist, up to 16 ft.	14 00
" " " " 18 ft.	15 00
" " " " 20 ft.	16 00
" " " " 22 ft.	17 00
" " " " 24 ft.	18 00
" " " " 26 ft.	19 00
" " " " 28 ft.	20 00
" " " " 30 ft.	21 00
" " " " 32 ft.	22 50
" " " " 34 ft.	23 00
" " " " 36 ft.	24 00
" " " " 38 ft.	25 00
" " " " 40 ft.	26 00
Cutting up planks to dry boards	20 00
Round dressing stocks	16 00
Picks Am. inspection	30 00
Three uppers, Am. inspection	35 00
B. M.	
1 1/2" flooring, dressed	25 00
1 1/2" " " rough	24 00
1 1/2" " " dressed	23 00
1 1/2" " " undressed	14 00
1 1/2" " " dressed	16 00
1 1/2" " " undressed	12 00
1 1/2" " " dressed	18 00
1 1/2" " " undressed	13 00
Beaded Sheeting, dressed	12 50
Clapboarding, dressed	2 75
XXX sawn shingles, # M	2 25
Sawn Lath	20 00
Red oak	20 00
White	18 00
Barnwood, No. 1 & 2	25 00
Cherry, No. 1 & 2	25 00
White ash 1 & 2	20 00
Black ash 1 & 2	20 00

OTTAWA

The Canadian Journal of Commerce says—Now that the saving season may be said to be practically over, it is possible to estimate correctly the amount of business done this season by the Chaudiere mill proprietors. Most of these mills have been working for seven months, one having started as early as the 25th of April; and, though the count in the various offices is not quite complete, it is gleaned that the total cut will foot up about 277,000,000 feet. Thus it is somewhat less than last year, but it is stated notwithstanding, that sales have been fairly good.

Lumbermen on the Chaudiere say that, in this season's sales, quality has largely regulated the market; first-class stuff going off steadily at good figures, while poorer qualities were slow, and only saleable at figures much lower in proportion. Knotty and rough lumber has not been in such demand as last year, and consequently the net cash returns have not been so great; but good first-class lumber has been readily disposed of at satisfactory figures. An examination of the percentage of good and rough lumber shows that, on an average of all the season's cut, not more, and perhaps not so much, as 90 per cent. can be classed as first class, while the remainder is divided into lower grades. The season's trade has been on the whole good, and dealers claim that the outlook for a good season next year is promising, unless some unforeseen event should mar the prospect.

CHICAGO.

AT THE YARDS.

The Northwestern Lumberman of Dec. 26th says:—It would be unreasonable to look for numerous orders and heavy shipments this month, and especially in the heel of it, when the members of the trade are divided in their minds and their time between closing up the year's business and the holiday festivities. Yet there are dealers who are inclined to complain because there is not a lively demand and heavy shipments. It is safe to say that there was never a time in the history of the Chicago trade—not even in the booming year 1882—when shipments to the country were not comparatively meagre in the last half of December. The current month is no exception to the general rule. And yet there is a considerable movement of lumber. The local requirement is being to a great degree maintained by the late moderate weather.

But the city and suburban demand is not taking all the lumber that is now being sold. There are good trains pulled out of the district every day, loaded with lumber bound for all points of the compass. Though rates to eastern points are high, they do not operate as a complete bar to eastward movement.

It can, however, be intimated this season that it is quite possible that trade will take an earlier start than has been usual in former years. Conditions are a little peculiar. Last year the yards in the southwest were loaded up on a 5-cent rate Kansas city and common points. The result was that the spring trade in that direction was to a large extent anticipated, for the retail yards in Kansas and Western Missouri were filled up with stock that has been carried over the winter. This year there has been no loading up in the southwest or anywhere else. It is thus likely that the spring trade will start earlier than common; a condition that will be emphasized if the winter should continue so open as to permit of outdoor consumption of lumber. Dealers can keep their weather eye on this view of the situation, so as to be ready to jump into the breach when it is open; but they should not jump too soon.

It is also possible that the retail dealers of the interior may send in their orders for the spring trade unusually early, for fear that there may be a rise of prices later on. This will depend on several things that may appear after January 1st. If it shall then be seen that the aggregate of stocks is larger than was anticipated, that the logging season promises a full crop, and that the general outlook is not favorable, there will be a continuance of the hesitating, hand-to-mouth manner of buying. But, on the contrary, if the open winter should promise a limited log crop, the lumber in sight should be less than was anticipated, and railroad building boom larger for the year to come, everybody holding lumber would tighten his grip on prices, and buying of stock for the spring trade would evince an anxiety to put in supplies before a possible advance in values.

It is claimed by some of the wholesale dealers that the expectation of break in freight rates throughout the fall prevented many heavy retail yards from stocking up in November. The break did not come, and there was no extraordinary movement of lumber. If this outcome is to be regretted, because there is

more stock remaining in the yards here than there otherwise would have been, some consolation can be extracted from the fact that what lumber was not moved in November will have to go forward after January 1st.

During the week two strikes of Chicago, Burlington & Quincy employes have slightly interrupted the handling of cars in the Twenty-second street district. There was a little strike of the engineers, and another of the switchmen. Both fared off quickly, and the pulling and the switching was resumed after a brief stoppage.

STOCK ON HAND NOV. 1.

	1885.	1884.
Lumber & timber	685,050 130	689,067,336
Shingles	338,319,180	321,981,625
Lath	76,214,168	70,742,042
Pickets	2,789,250	1,830,118
Cedar posts	637,435	400,805

EASTERN FREIGHT RATES.

FROM CHICAGO AND COMMON POINTS ON CAR LOAD LOAD OF HARD AND SOFT LUMBER. IN EFFECT NOV. 1.

To New York	35c.
Boston	40c.
Philadelphia	35c.
Baltimore	32c.
Washington	32c.
Albany	32c.
Troy	32c.
Buffalo and Pittsburgh	30c.
Shenectady	20c.
Wheeling	20c.
Suspension Bridge	20c.
Salamanca	20c.
Black Rock	20c.
Dunkirk	20c.
Eric	20c.
Toronto	20c.

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, # M	\$33 00
Pine, clear, # M	48 00
Pine, select	45 00
Pine, select	22 00
Pine, good box	11 00
Pine, common box	00 23
Pine, 10-in. plank, each	00 42
Pine, 10-in. plank, culls, each	00 28
Pine boards, 10-in.	00 16
Pine, 10-in. boards, culls	00 00
Pine, 10-in. boards, 18 ft., # M	23 00
Pine, 12-in. boards, 18 ft.	23 00
Pine, 12-in. boards, 13 ft.	23 00
Pine, 1 1/2-in. siding, select	40 00
Pine, 1 1/2-in. siding, common	15 00
Pine, 1 1/2-in. siding, select	40 00
Pine, 1 1/2-in. siding, common	13 00
Pine, inch siding, each	00 00
Spruce, boards, each	00 00
Spruce, plank, 1 1/2-in., each	00 00
Spruce, plank, 2-in., each	00 12
Spruce, wall strips, each	00 00
Hemlock, boards, each	00 00
Hemlock, joist, 4x8, each	00 00
Hemlock, joist, 2x4, each	00 00
Hemlock, wall strips, 2x4, each	00 00
Black walnut, 3 in.	80 00
Black walnut, 4 in.	00 00
Scaymore, 1-inch	21 00
Scaymore, 1 1/2-inch	23 00
White wood, 1-inch and thicker	23 00
White wood, 1-inch	23 00
Ash, good, # M	40 00
Ash, second quality, # M	25 00
Cherry, good, # M	60 00
Cherry, common, # M	25 00
Oak, good, # M	40 00
Oak, second quality, # M	20 00
Basswood, # M	25 00
Hickory, # M	40 00
Maple, Canada, # M	35 00
Maple, American, per M	38 00
Chestnut, # M	00 00
Shingles, shaved, pine, # M	0 00
" " 2nd quality, # M	4 30
" " extra, sawed, pine	0 00
" " clear	0 00
" " cedar, mixed	0 00
" " cedar, XXX	2 25
" " hemlock	0 00
Lath, hemlock, # M	0 00
Lath, spruce	0 00

BUFFALO.

We quote cargo lots —

Uppers	\$15 00
Common	17 00
Culls	12 50

OSWEGO, N.Y.

From Our Own Correspondent

Dealers are busy piling up late receipts. The demand is very light and business is almost at a standstill.

Three uppers	\$42 00
Picking	22 00
Cutting up	24 00
Fine Common	14 00
Common	11 00
Culls	16 00
Mill run lots	30 00
Sidings, selected, 1 in	32 00
" " " " 1 1/2 in.	32 00
Mill run, 1x10, 13 to 16 ft.	16 00
Selected	21 00
Shippers	14 00
Mill run, 1x10	17 00
Selected	21 00
Shippers	14 00
Mill run, 1 & 1 1/2 in. strips	15 00
Selected	22 00
Culls	11 00
1x7 selected for clapboards	25 00
Shingles, XXX, 13 in. pine	3 10
XXX Cedar	2 25
Lath 1 1/2, No 1	1 50
No 2	1 00

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	\$42 00
Common	18 00
Culls	10 00

LIVERPOOL.

The Timber Trades Journal of Dec. 12th says:—Although the recent excitement consequent upon the elections is rapidly waning, if indeed it be not practically dead, there has been, so far, no evidence of any desire to return to business on the part of buyers, whose unwillingness to give out any orders of importance is as strongly marked this year as it has recently been. Neither do the merchants on the spot here, if we may judge from the auction sale held on Wednesday appear inclined to speculate in any extensive buying at present.

Fortunately the arrivals of timber and deals continue light, and with only a small quantity on the quays there is no necessity for putting on undue pressure to effect sales. Should the early part of the new year bring with it that resumption of good trade which all have so long hoped was near at hand, but which has been so disappointingly deferred, we ought to see some advance in prices, especially in spruce deals and other leading articles of the trade, as the stocks, though sufficient for the demands likely to be made upon them at the present rate of consumption, are not above an average.

The only public sale held since my last communication was that of Wednesday, the 9th inst., above referred to, when Messrs. Farnworth & Jardine offered the cargo of spruce and pine deals now landing ex Annabella, from Dalhousie. The company present was limited in number, few buyers from the country being present. The proceedings were very slow, and though the auctioneer went through the catalogue twice, his patience was not rewarded as it ought to have been, and about one-half the spruce deals were withdrawn, as were also the 3rd quality pine deals, the pine scantling and pine deal ends.

The parcel of birch timber withdrawn at the last sale from the cargo per Henriette, from Capo Breton, consisting of 873 logs, was again brought forward, but no acceptable bid was made for it; but we believe a line of it was subsequently sold on private terms.

LONDON.

The Timber Trades Journal of Dec. 12th says:—There was really nothing fresh to report in Wednesday's sale. The bulk of the goods were offered under reserve, of which, as far as we could make out, only a couple of lots were sold.

Of the unreserved parcels there was nothing particular to attract attention. The pine boards, ex York City, in small lines, excited some competition, but, we consider, without much advantage to the price, each bidder drawing the line at previous values for similar goods. The goods ex Queen of the North also hung at prices which similar realized a short time back; in fact, the cautious way that goods are now bought at public sales is strongly indicative of an overdone market.

Though Canadian wood is not heavy in the market, pine, in batton and board sizes, comes in contact with North of Europe wood in the better qualities, and these selling for almost nominal values has an unfavorable influence on Quebec stuff.

With the feeble prices Archangel sold at last week, £14 15s. for 1 1/2x7 Quebec 1st pine is by no means a bad price. The various little odd lots sold low, and 4th Goffe 1x7 yellow at £5 5s. is about 20s under cost. Some Wyborg submitted, 1st quality, 2x8, at £9 15s., seemed about level with prices of a month ago. In one of the November sales 2x7 felled £6, so that the present would rather incline toward an improvement. These small parcels are, however, very unsafe guides to market changes; but 3x11 Wyborg at £7 10s. is not so bad.

Of the St. John's yellow pine sold at Messrs. Churchill & Sim's sale on Thursday we need hardly make any comment, the low prices realized speak for themselves, and 3x11 to 15 in., in lengths from 10 to 22 feet at £5 10s. is significant of the low estimation the wood was held in.

BRISTOL.

The *Timber Trades Journal* of Dec. 12th says:—Quebec sawn longitudinals are mostly imported this year, instead of railway timber. This is an advantage to the merchants, as the slab trade was very injurious generally. Stocks all around are moderate, there not being apparently a great excess of any class of goods. A cargo of Stettin oak (mostly butts) has arrived, and met with a very fair sale.

TYNE.

The *Timber Trades Journal* of Dec. 12th says:—The past seven days show a very short list of arrivals, and none of them call for any special comment. The weather has been extremely stormy, a very severe frost having come on, followed now by a snow storm of some severity, the two combined being amply sufficient to stop all outdoor employments, and in consequence thereof business has been practically suspended. Most of the saw mills are only partially employed, many of them working three-quarter time only. With the advent of winter in its severest form, a great number of men are out of employment, and the distress reported is very great. If not so great as last year, it is certainly sufficient to excite the sympathy of the more fortunate, and already in the city and neighborhood relief committees are being formed to cope with it if possible.

No ships of much importance are reported as being due, and in all probability we shall not have many more during the present season.

LEITH.

The *Timber Trades Journal* of Dec. 12th says:—The arrivals of wood cargoes during the week have not been numerous, but they include a cargo yellow pine timber, deals, etc., per Almedia, from Quebec, for Messrs. James Duncan & Co., and a large cargo pitch pine timber per Lanarkshire, from Pascagoula, for Messrs. Ferguson, Davidson & Co. The Almedia is the last cargo expected at this port from Quebec this season.

Business continues very quiet, and the trade from the yards is very restricted, the keen frost which has prevailed for the last few days being rather against orders being received from the builders.

Messrs. Wm. Thomson & Co. held a public sale on Tuesday, 8th inst., at which they offered the balance of the yellow pine timber, oak, elm and birch, recently landed ex Alagua, from Quebec, and thereafter a varied assortment of Baltic deals and battens. There was a fair attendance of buyers, but a great lack of competition in the bidding, and the waxy board yellow pine was with difficulty cleared out at an average price of 2s. 6d. per cubic foot.

GLASGOW.

The *Timber Trades Journal* of Dec. 12th says:—A public sale of deals, result of which is given below, took place here on the 9th inst. The catalogue comprised large parcels of Michigan and Quebec pine deals, Dalhousie pine and spruce deals, California redwood, also birch and whitewood logs, &c. There was a numerous company, but very little disposition to bid was shown, and of the large variety of goods offered only a small portion was sold. Some transactions, however, were made privately at the close of the public sale. The trade, it is likely, will be better prepared for purchasing at the opening of the year.

Recent deliveries of deals and planks from Yorkhill yards, Glasgow, show a falling off compared with last year, the figures being: October and November, 1885, 163,271 pieces, and October and November, 1884, 194,447 pieces.

Cargoes from Canada have now all arrived here for the season, the import list for the past week comprising the closing arrivals from Quebec, viz., those per Magnificent and Choise. Other imports at Greenock for the week have been a cargo of teak and one of pitch pine. The Glasgow arrivals consist chiefly of birch timber and spruce deals. Considering the stock on hand, the import of birch is in excess of the market's requirements.

AUCTION SALE.

On 9th inst., at Glasgow, Messrs. Singleton, Dunn, & Co., brokers:

Quebec 3rd pine deals— 13 ft. 11x3	per c. ft. 1s. 2d.
Dalhousie, N. B., pine scantlings— 0 to 22 ft. 4/8x3	11/4d.
Dalhousie, N. B., pine deal ends— 8 ft. 7/12x3	10d.
5 to 7 " 7/12x3	9d. to 9 1/2d.
3 & 4 " 6/12x3	7 1/2d. & 8 1/2d.
Dalhousie, N. B., spruce deals— 9 to 20 ft. 11/18x4	10 1/2d.
12 to 22 " 9/10x4	10 1/2d.
9 to 22 " 7/9x4	10 1/2d.
9 to 23 " 13/15x3	10 1/2d.
9 to 24 " 7x3	8 1/2d.
Dalhousie, N. B., spruce battens— 10 to 21 ft. 7x2 1/2	8d.
Dalhousie, N. B., spruce scantlings— 9 to 21 ft. 4/8x3 & 2 1/2	8d.
Dalhousie, N. B., spruce ends— 3 to 8 ft. 4/15x3	7 1/2d.
Cambelltown, N. B., pine deals— 9 to 23 ft. 7/15x3	10d.
Campbelltown, N. B., spruce deals— 15 to 18 ft. 11x3	10d.
10 logs Quebec whitewood (weathered)— 1s. 2 1/2d. to 1s. 9d.	

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of Nov., 1885, and also for the 11 months ending Nov., 1885:

MONTH ENDED 30TH NOV., 1885.		
Timber (Heavn).	Quantity Loads.	Value. £.
Russia	14,770	27,922
Sweden and Norway.....	34,400	49,587
Germany.....	10,919	32,571
United States.....	4,540	17,168
British India.....	2,796	37,746
British North America.....	27,249	110,419
Other Countries.....	31,746	43,865
Total.....	126,420	319,558

TIMBER (SAWN OR SPLIT, PLANED OR DRESSED).		
Russia	114,632	233,165
Sweden and Norway.....	125,104	256,195
British North America.....	112,378	239,353
Other Countries.....	13,709	46,507
Total.....	365,903	829,222

STAVES, (ALL SIZES).		
Russia	11,152	50,920
Mahogany (tons).....	2,931	25,330
Total of Heavn and Sawn.....	402,333	1,149,780

ELEVEN MONTHS ENDED NOV. 30TH, 1885.		
Timber (Heavn).	Quantity Loads.	Value. £.
Russia	252,351	425,918
Sweden and Norway.....	515,534	724,640
Germany.....	279,553	663,977
United States.....	132,482	447,993
British India.....	37,392	505,678
British North America.....	244,263	1,063,153
Other Countries.....	375,552	521,033
Total.....	1,537,623	4,379,002

TIMBER (SAWN OR SPLIT, PLANED OR DRESSED).		
Russia.....	1,156,320	2,493,715
Sweden and Norway.....	1,671,508	3,500,693
British North America.....	928,834	2,286,062
Other Countries.....	312,937	937,603
Total.....	4,069,599	9,218,098

Catarrh—A New Treatment.
Perhaps the most extraordinary that success has been achieved in modern science has been attained by the Dixon treatment for Catarrh. 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 Catarrh 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 Catarrh in this manner, and no other treatment has ever cured Catarrh. 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 Catarrh.—*Montreal Star.* 1912.

ARE you made miserable by Indigestion, Constipation, Dizziness, Loss of Appetite, Yellow skin? Shiloh's Vitalizer is a positive cure. For sale by Ormond & Walsh, druggists, Peterborough.

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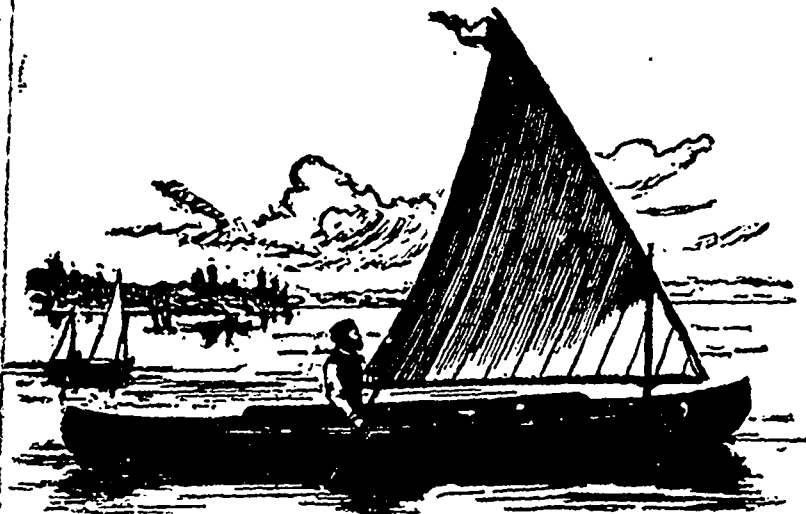
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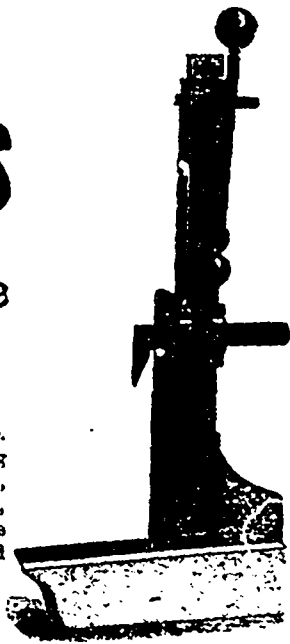
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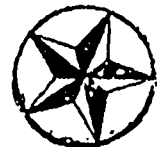
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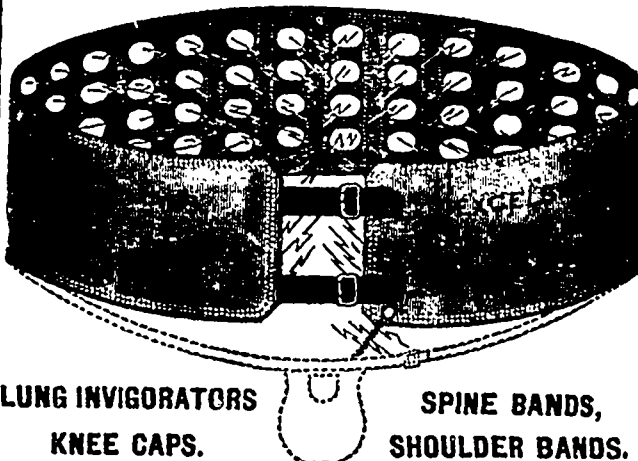
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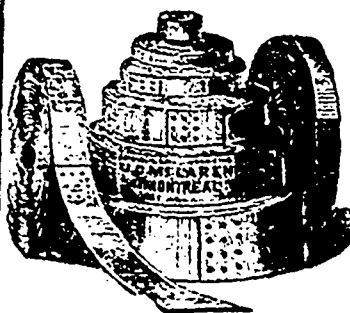
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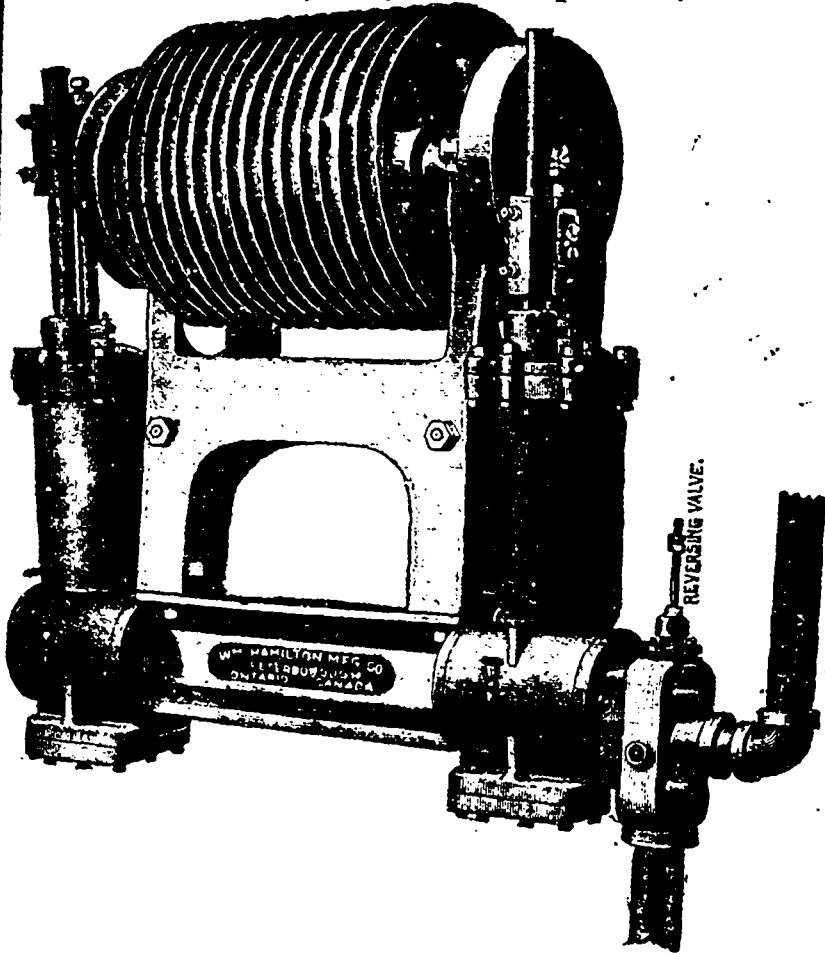
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This Engine has practically but two moving parts, aside from cranks and shafts. The whole array of eccentrics, valves, valve rods, connecting rods, cross heads, slides, levers, rock shafts, bell cranks, etc., is done away with, and the very perfection of simplicity, compactness, durability and cheapness attained.



The above engraving illustrates the Twin Engine, 10x16, for Rope Feed, for Saw Mill Carriages. The spool is 27 in. diameter, 30 in. face, is grooved 2 in. pitch for 1½ in. rope. The shaft is steel, 4½ in. diameter, with disk cranks. No connecting rods, eccentrics or valve rods to get loose and out of order. The ports are in the trunions, and worked by an oscillation of the cylinders, and are held in their place in the downward motion by a steam cushion below. The sawyer's valve is a perfect balance, and by moving this valve the engine can be reversed, stopped or started almost instantaneously if necessary, as the sawyer has perfect control of it by his lever either to go fast or slow. Should the sawyer let go of his lever either by mistake or any other cause, it is balanced so that the valve will come to the centre and cut the steam off both cylinders and stop the feed. When standing, the lever is locked or fastened, so that it is impossible for it to start off itself. The engine stands upright below the carriage, and bolted to two upright beams, placed on the mill for the purpose. When a rack is preferred in place of the rope, we put on a steel wheel 30 in. in diameter, and the engine placed high enough to work into the rack on carriage bar, or if the beams come in the way, an idler wheel can be used between engine and rack segs; or, the engine can be placed at a distance and have a shaft

from it to the carriage; or it can be placed in the engine room, where it is under the control of the engineer for oiling, thence by shaft and pinion to carriage rack bars. These engines are well adapted for cutting long logs, or where the logs are mixed, the advantage of this feed will be apparent to mill men. When the carriages are used in two or more sections, the coupling and uncoupling of each section is quick and simple.

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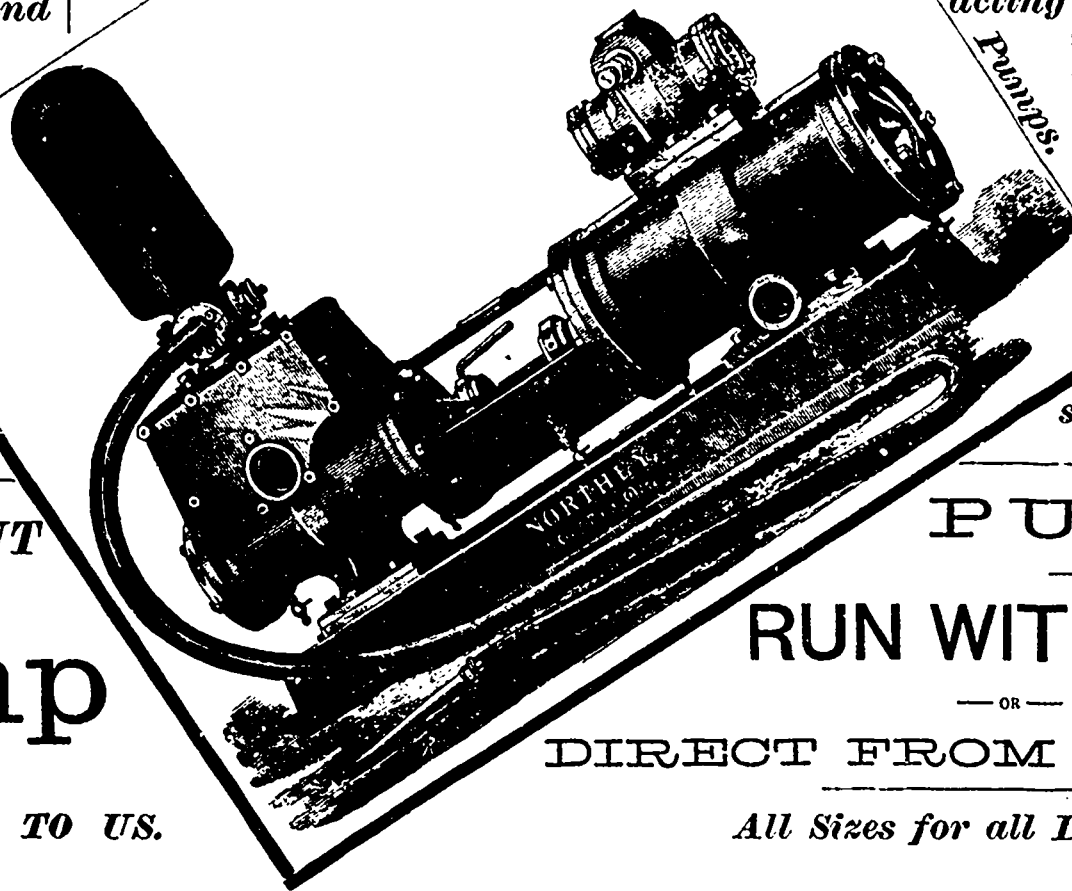
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